SAN JOSE FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Actuarial Report
as of July 1, 1989

C&B CONSULTING GROUP

November 30, 1989

Board of Administration
Federated City Employees'
Retirement System
801 North First Street
San Jose, California 95110

Ladies and Gentlemen:

Pursuant to our agreement with you, we have completed an actuarial valuation of the Federated City Employees' Retirement System as of July 1, 1989. We are pleased to hand you herewith our report on the results of the valuation.

The study was based upon employee data furnished by the Retirement Office.

This report describes in detail both the results and the recommendations arising from the study.

We look forward to discussing this report with the Board and wish to express our appreciation for the cooperation extended to us by the Administrator of the System and the members of his staff during the course of this survey.

Respectfully submitted,

Drew A. James, F.S.A., M.A.A.A.
Senior Consulting Actuary

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Enclosure

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SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

July 1, 1989

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SECTION I

SUMMARY OF RESULTS

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Summary of Results
As of July 1, 1989

Demographic Data

Actives:		
Number		3,069
Payroll	$	105,478,000
Retirees:		
Number		1,111
Annual Pension Roll	$	14,177,000

Assets

Book Value	$	342,136,000
Market Value		359,445,000
Adjusted Book Value		345,598,000

Funded Status

GASB #5 Pension Benefit Obligation (PBO)	$	373,600,000
Ratio of Assets at Book to PBO		91%

Contribution Rates	City	Employees
Current Contributions:		
Rates	14.22%	6.39%
Annual Amount based on July 1, 1989 Payroll	$ 14,999,000	$ 6,740,000
Recommended Contributions:		
Rates	12.86%	5.85%
Annual Amount based on July 1, 1989 Payroll	$ 13,565,000	$ 6,171,000

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Summary of Assumptions and Funding Methods

Assumptions

Valuation Interest Rate	9%
Post-Retirement Mortality	
(a) Service	
Males	1983 Group Annuity Mortality Table for Males
Females	1983 Group Annuity Mortality Table for Females
(b) Disability	1981 Disability Mortality Table
Pre-Retirement Mortality	Based upon the 7/1/89 Experience Analysis
Withdrawal Rates	Based upon the 7/1/89 Experience Analysis
Disability Rates	Based upon the 7/1/89 Experience Analysis
Service Retirement Rates	Based upon the 7/1/89 Experience Analysis
Salary Scale	Total increases of 6-3/4% per year (5-3/4% inflation plus merit and longevity scale based on age)
Assets	At Adjusted Book Value

Funding Methods

The City's liability for pension benefits is being funded on the Entry Age Normal Method with a Supplemental Present Value. The amortization period for the Supplemental Present Value is 48 years from the July 1, 1989 valuation date except for the portion due to the 1987 Early Retirement Incentive Program which is being funded over 28 years from July 1, 1989.

Liabilities for medical and dental benefits are partially funded. Anticipated costs for the next ten years are amortized on a level percentage of the next 10-year anticipated payroll.

SECTION II

STATISTICAL INFORMATION

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Summary of Statistical Information

Our July 1, 1989 and July 1, 1987 actuarial valuations of your System are based on the following data:

	July 1, 1989	July 1, 1987	Percentage Increase During the Two-year Period
Active Members			
Number	3,069	2,977	3%
Total annual payroll*	$ 105,478,000	$ 94,189,000	12%
Average monthly salary*	$ 2,864	$ 2,637	9%
Retired Members			
Number	1,111	913	22%
Total annual pension roll (Basic)	$ 11,984,000	$ 8,411,000	42%
Average monthly allowance (Basic)	$ 899	$ 768	17%
Total annual pension roll (Basic and C.O.L.)	$ 14,177,000	$ 9,953,000	42%
Average monthly allowance (Basic and C.O.L.)	$ 1,063	$ 908	17%
Inactive Vested Members			
Number	132	124	6%
Assets at Book Value			
Basic Retirement Fund	$ 265,482,000	$ 217,353,000	22%
Cost of Living Fund	76,654,000	59,283,000	29%
Total Fund	$ 342,136,000	$ 276,636,000	24%

*The salary for part-time employees reflects the actual pay rate.

Exhibits 1, 2, and 3 on the following pages show more detail of the active and retired data.

SAN JOSE
FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM
TOTAL ANNUAL SALARY* AND MEMBERSHIP DISTRIBUTION
AS OF JUNE 30, 1989

MALE

PRESENT AGE	YEARS OF SERVICE							
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & OVER	TOTAL
BELOW 20								
	42	2						44
20 - 24	1,023,422	64,376						1,087,798
	162	42	1					205
25 - 29	4,637,012	1,271,144	36,587					5,944,743
	129	94	41					264
30 - 34	4,133,565	3,253,777	1,377,441					8,764,783
	110	84	82	24				300
35 - 39	3,964,400	3,208,402	2,844,544	867,384				10,884,730
	95	56	83	93	14			341
40 - 44	3,743,457	2,182,834	3,097,664	3,883,495	528,947			13,436,397
	49	33	47	63	39	23		254
45 - 49	2,063,046	1,445,372	1,932,139	2,684,870	1,865,455	1,039,420		11,030,302
	36	22	42	33	32	25	2	192
50 - 54	1,303,910	923,335	1,809,856	1,366,085	1,377,172	1,086,283	109,679	7,976,320
	16	14	31	18	14	11	3	107
55 - 59	572,832	609,877	1,131,943	718,497	597,276	483,019	143,707	4,257,151
	9	4	15	20	4	6	3	61
60 - 64	353,393	171,974	573,586	862,661	166,380	257,900	161,241	2,547,135
	2	2	4	7	2	1	1	19
65 - 69	74,942	87,735	183,601	230,297	96,180	51,459	77,958	802,172
70 &				1			1	2
OVER				14,619			43,410	58,029
	650	353	346	259	105	66	10	1,789
TOTAL	21,869,979	13,218,826	12,987,361	10,627,908	4,631,410	2,918,081	535,995	66,789,560

AVERAGE AGE	41.25
AVERAGE SERVICE	9.25
AVERAGE ENTRY AGE	32.00

*The salary for part-time employees reflects the actual rate.

SAN JOSE
FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM
TOTAL ANNUAL SALARY* AND MEMBERSHIP DISTRIBUTION
AS OF JUNE 30, 1989

FEMALE

PRESENT AGE	YEARS OF SERVICE 0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & OVER	TOTAL
BELOW 20								
	34	3						37
20 - 24	809,097	83,928						893,025
	118	27	2					147
25 - 29	2,993,601	740,142	58,344					3,792,087
	98	48	22					168
30 - 34	2,787,096	1,445,598	685,217					4,917,911
	113	46	50	16				225
35 - 39	3,601,659	1,523,232	1,550,519	461,997				7,137,407
	96	50	39	34	8			227
40 - 44	2,917,033	1,533,381	1,357,242	1,234,156	270,607			7,312,419
	66	47	27	24	16	6		186
45 - 49	2,025,152	1,481,625	970,777	885,332	573,458	195,851		6,132,195
	38	26	20	17	9	6	4	120
50 - 54	1,058,168	814,289	608,649	518,830	328,606	181,107	183,164	3,692,813
	22	11	32	12	3	4	3	87
55 - 59	561,820	338,936	923,741	360,547	123,427	133,826	112,839	2,555,136
	5	11	19	13	3	1	2	54
60 - 64	124,986	325,498	530,067	367,496	102,524	33,342	56,784	1,540,697
		3	11	5	2			21
65 - 69		75,483	238,981	154,876	61,048			530,388
70 &	1		4	2	1			8
OVER	10,091		75,488	65,811	33,342			184,732
	591	272	226	123	42	17	9	1,280
TOTAL	16,888,703	8,362,112	6,999,025	4,049,045	1,493,012	544,126	352,787	38,688,810

AVERAGE AGE	41.50
AVERAGE SERVICE	7.50
AVERAGE ENTRY AGE	34.00

*The salary for part-time employees r flects the actual rate.

SAN JOSE

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Summary of Members on Pension Roll and Amounts of Allowances by Type of Retirement

Option	Number	Basic Monthly Allowances	Cost of Living		Total Monthly Allowances
			Regular	Permanent	
		SERVICE RETIREMENT			
1	75	$ 36,167	$ 13,160	$ 3,546	$ 52,873
2	33	9,593	3,229	867	13,689
3	13	4,718	3,250	1,199	9,167
4	4	3,334	2,726	742	6,802
5	729	794,518	113,469	0	907,987
8	0	0	0	0	0
9	23	5,852	3,589	1,027	10,468
Total	877	$ 854,182	$ 139,423	$ 7,381	$ 1,000,986
		DISABILITY RETIREMENT			
1	11	$ 15,699	$ 429	$ 0	$ 16,128
2	0	0	0	0	0
3	1	204	145	61	410
4	0	0	0	0	0
5	126	96,082	18,953	0	115,035
8	2	0	565	117	682
9	0	0	0	0	0
Total	140	$ 111,985	$ 20,092	$ 178	$ 132,255
		BENEFICIARIES			
Total	94	$ 32,531	$ 12,916	$ 2,703	$ 48,150
Grand Total	1,111	$ 998,698	$ 172,431	$ 10,262	$ 1,181,391

SECTION III

ACTUARIAL ASSUMPTIONS

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Noneconomic Assumptions

Probabilities of Separation from Service Prior to Retirement

A study was made, based upon each member's sex and attained age as of the valuation date, to determine, the probability of members leaving the System on account of withdrawal, death, disability, deferred vested or service retirement.

The probability of each of these were developed to reflect the actual experience that took place during the two-year investigation period, ending June 30, 1989. The rates of separation used in the previous valuation were compared with those developed for the current study, and all necessary adjustments were made. As in previous studies, and because of the differences in characteristics, the male and female membership experience was tested separately.

Withdrawal (Refunds)

The results of the active investigation of the System showed that the number of withdrawals from the System was lower than expected at the younger ages and higher than expected at the older ages. The new rates reflect this experience.

Service Retirement

No adjustments were made to the rates of service retirement. The experience was not indicative of long-term trends due to the early retirement incentive program.

Disability Retirement

During the investigation period, the incidence of ordinary disability was lower than expected for the male members. Ordinary disability rates for males were reduced to reflect this experience. No adjustments were necessary in the ordinary disability rates for females at this time.

Duty disablement rates were lower than expected for females. These rates were lowered to reflect the experience. No adjustments to the duty disablement rates for males were necessary.

A reduction in disability rates results in lower costs to the System.

Death Before Retirement

Based on the results of the experience analysis of the System, no changes were necessary in the ordinary death and death while eligible rates for male and female members.

Vested Termination

Based upon the results of the experience analysis probabilities of vested withdrawal were increased for female members. No adjustments were necessary in the probabilities of vested withdrawals for male members.

Summary of Probabilities of Separation

The changes in the rates of separation from active service resulting from the experience analysis have been discussed in the foregoing paragraphs. However, it is difficult to obtain the meaning of the various changes in the probabilities of separation by examining each one of them separately. This is because these probabilities are interdependent. For example, if there is more turnover, there will be fewer retirements. Because of this interdependency, it is helpful to develop another table which takes this into account.

Exhibits 4 and 5 show, for each of the groups, the expected number of present active members who will separate in the future from each of the various causes of termination. Exhibit 4 is based on the old assumptions and Exhibit 5 reflect the new set of assumptions. Exhibit 6 offers a graphic comparison of the expected separations on the old and new assumptions. By referring to these exhibits, it is easier to see the effects of the recommended changes in the probabilities of separation from the System. The probabilities used to develop Exhibit 5 are the new recommended rates shown in Exhibits 7 and 8.

Mortality after Service Retirement

At the time of the last actuarial study of the Retirement System, the bases for mortality after service retirement were the 1983 Male Group Annuity Mortality Table and the 1983 Female Group Annuity Mortality Table.

During the two years prior to the valuation date, 35 members who either had retired for service or were beneficiaries died. Based upon the mortality tables used in the last actuarial study, 33 deaths were expected. Based on this experience and on that of the other public systems we serve, we believe that the 1983 Group Annuity Mortality Table for both Males and Females are still appropriate for your group.

The life expectancies based on these tables are shown in Exhibit 9.

Mortality after Disability Retirement

At the time of the last actuarial study, the 1981 Disability Mortality Table was used to measure mortality after disability retirement for both males and females.

During the last two years 8 members who were retired for disability died. Based on the current mortality table, the number expected was also 8.

Because the disability experience for your System corresponds closely to the 1981 table, we recommend continuing the use of this table at this time. The life expectancies based on this table are shown in Exhibit 10.

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Expected Number to Eventually Separate for Indicated Cause
(Based on Current Assumptions)

MALE MEMBERS

Present Age	Number of Actives	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Disability	Terminated Vested
20-24	44	34	0	1	6	0	1	2
25-29	205	123	2	5	53	3	6	13
30-34	264	109	4	9	104	5	10	23
35-39	300	72	5	13	159	8	15	28
40-44	341	47	6	16	218	10	18	26
45-49	254	16	4	13	190	7	14	10
50-54	192	4	3	10	158	5	11	1
55-59	107	1	1	6	90	2	7	0
60-64	61	0	1	3	53	1	3	0
65 & OVER	21	0	0	0	20	0	1	0
TOTAL	1,789	406 (22.7%)	26 (1.5%)	76 (4.2%)	1,051 (58.7%)	41 (2.3%)	86 (4.8%)	103 (5.8%)

FEMALE MEMBERS

20-24	37	31	0	0	4	0	0	2
25-29	147	107	1	2	24	1	2	10
30-34	168	101	1	3	45	2	3	13
35-39	225	101	2	5	90	3	6	18
40-44	227	66	3	7	124	4	7	16
45-49	186	34	2	7	125	3	6	9
50-54	120	12	1	5	94	2	4	2
55-59	87	3	1	4	75	1	3	0
60-64	54	0	0	2	49	1	2	0
65 & OVER	29	0	0	0	29	0	0	0
TOTAL	1,280	455 (35.5%)	11 (.9%)	35 (2.7%)	659 (51.5%)	17 (1.3%)	33 (2.6%)	70 (5.5%)

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Expected Number to Eventually Separate for Indicated Cause
(Based on New Assumptions)

MALE MEMBERS

Present Age	Number of Actives	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Disability	Terminated Vested
20-24	44	33	0	1	7	0	1	2
25-29	205	123	2	4	54	3	6	13
30-34	264	112	4	7	102	6	10	23
35-39	300	80	5	10	155	8	14	28
40-44	341	57	6	12	212	10	18	26
45-49	254	24	4	10	185	7	14	10
50-54	192	9	3	7	157	5	10	1
55-59	107	2	1	4	91	2	7	0
60-64	61	0	0	2	54	1	4	0
65 & OVER	21	0	0	0	21	0	0	0
TOTAL	1,789	440 (24.6%)	25 (1.4%)	57 (3.2%)	1,038 (58.0%)	42 (2.3%)	84 (4.7%)	103 (5.8%)

FEMALE MEMBERS

20-24	37	31	0	0	4	0	0	2
25-29	147	108	1	1	23	1	2	11
30-34	168	102	1	3	43	1	3	15
35-39	225	104	2	5	86	3	5	20
40-44	227	72	2	7	118	3	6	19
45-49	186	36	2	7	123	3	5	10
50-54	120	12	1	5	94	2	4	2
55-59	87	3	1	4	75	1	3	0
60-64	54	0	0	2	49	1	2	0
65 & OVER	29	0	0	0	29	0	0	0
TOTAL	1,280	468 (36.6%)	10 (.8%)	34 (2.6%)	644 (50.3%)	15 (1.2%)	30 (2.3%)	79 (6.2%)

Exhibit 6

SAN JOSE
FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM
Expected Percentage to Eventually Separate for Indicated Cause

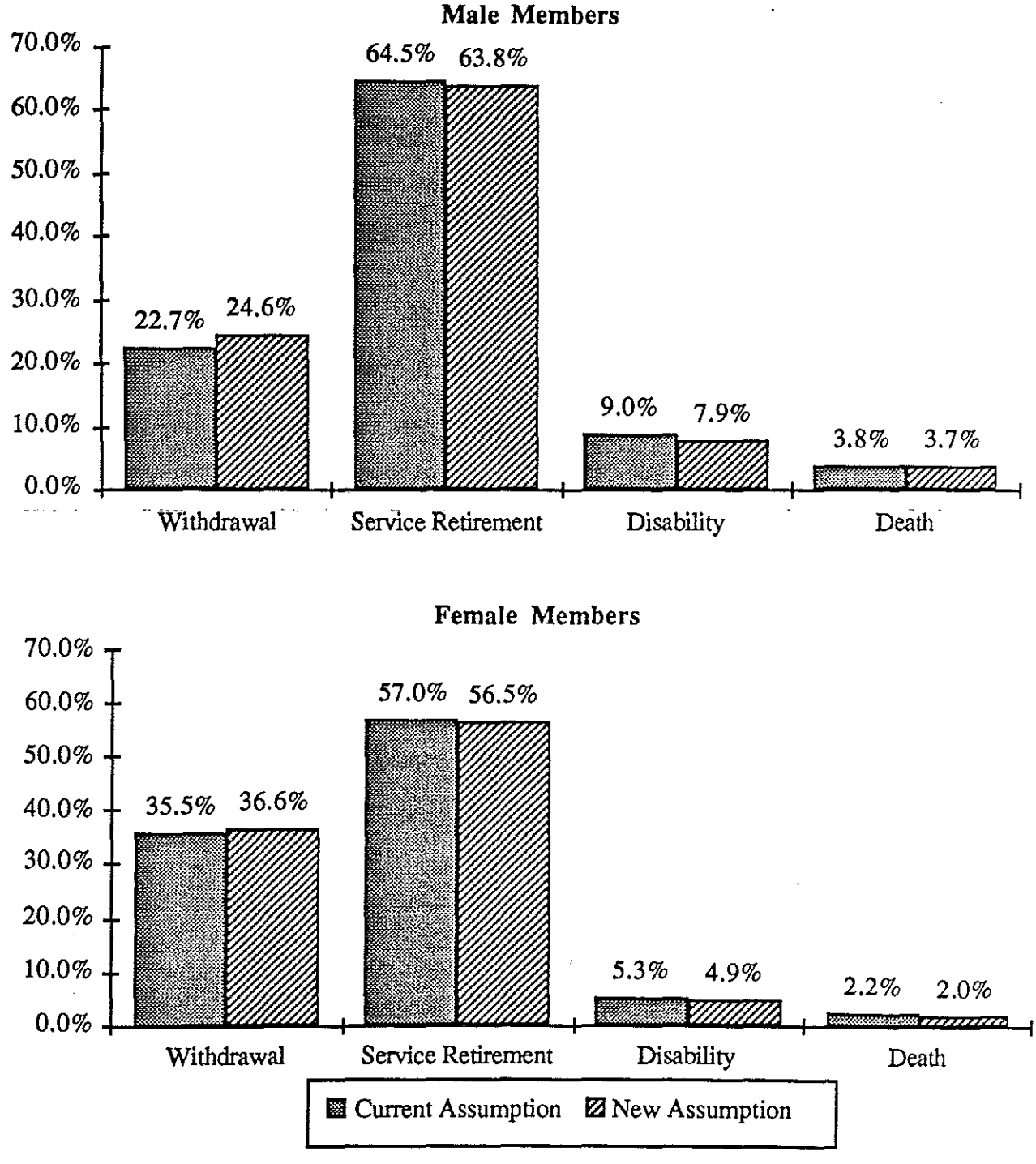

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EXHIBIT 7

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Probabilities of Separation Prior to Retirement for Male Members

Age	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Disability	Terminated Vested
20	.1500	.0003	.0000	.0000	.0000	.0005	.0000
21	.1400	.0003	.0000	.0000	.0000	.0005	.0000
22	.1310	.0003	.0000	.0000	.0000	.0005	.0000
23	.1220	.0003	.0000	.0000	.0000	.0005	.0000
24	.1130	.0003	.0000	.0000	.0000	.0005	.0000
25	.1050	.0003	.0002	.0000	.0002	.0005	.0014
26	.0970	.0003	.0002	.0000	.0002	.0006	.0015
27	.0900	.0003	.0002	.0000	.0002	.0006	.0016
28	.0830	.0004	.0002	.0000	.0002	.0007	.0017
29	.0770	.0004	.0002	.0000	.0002	.0007	.0018
30	.0710	.0004	.0002	.0000	.0002	.0007	.0020
31	.0650	.0004	.0002	.0000	.0002	.0007	.0023
32	.0600	.0004	.0002	.0000	.0002	.0007	.0027
33	.0550	.0005	.0002	.0000	.0003	.0007	.0031
34	.0500	.0005	.0002	.0000	.0003	.0008	.0034
35	.0450	.0005	.0003	.0000	.0003	.0008	.0039
36	.0400	.0005	.0003	.0000	.0004	.0008	.0045
37	.0360	.0006	.0004	.0000	.0004	.0008	.0054
38	.0320	.0006	.0005	.0000	.0004	.0009	.0064
39	.0280	.0006	.0005	.0000	.0005	.0009	.0072
40	.0240	.0007	.0006	.0000	.0005	.0009	.0079
41	.0220	.0007	.0006	.0000	.0006	.0010	.0089
42	.0200	.0007	.0006	.0000	.0006	.0010	.0098
43	.0190	.0007	.0006	.0000	.0007	.0010	.0096
44	.0170	.0008	.0007	.0000	.0009	.0010	.0092
45	.0160	.0008	.0008	.0000	.0010	.0010	.0091
46	.0150	.0008	.0009	.0000	.0012	.0011	.0089
47	.0140	.0009	.0009	.0000	.0014	.0012	.0087
48	.0130	.0009	.0010	.0000	.0015	.0013	.0082
49	.0120	.0010	.0012	.0000	.0016	.0014	.0074
50	.0110	.0011	.0014	.0100	.0018	.0016	.0061
51	.0100	.0012	.0017	.0050	.0019	.0020	.0043
52	.0090	.0013	.0019	.0050	.0021	.0024	.0025
53	.0080	.0014	.0024	.0050	.0022	.0030	.0013
54	.0070	.0015	.0029	.0100	.0023	.0037	.0008
55	.0060	.0015	.0034	.2500	.0025	.0044	.0000
56	.0060	.0016	.0040	.0800	.0028	.0052	.0000
57	.0060	.0017	.0047	.0900	.0030	.0062	.0000
58	.0060	.0018	.0055	.1000	.0033	.0075	.0000
59	.0060	.0019	.0064	.1000	.0037	.0093	.0000
60	.0000	.0020	.0074	.1000	.0040	.0115	.0000
61	.0000	.0021	.0085	.1100	.0042	.0138	.0000
62	.0000	.0022	.0097	.3500	.0045	.0166	.0000
63	.0000	.0023	.0110	.1200	.0049	.0202	.0000
64	.0000	.0024	.0125	.1500	.0052	.0244	.0000
65	.0000	.0025	.0140	.2000	.0054	.0290	.0000
66	.0000	.0026	.0000	.4000	.0057	.0000	.0000
67	.0000	.0027	.0000	.4000	.0061	.0000	.0000
68	.0000	.0028	.0000	.4500	.0064	.0000	.0000
69	.0000	.0029	.0000	.5000	.0067	.0000	.0000
70	.0000	.0000	.0000	1.0000	.0000	.0000	.0000

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EXHIBIT 8

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Probabilities of Separation Prior to Retirement for Female Members

Age	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Disability	Terminated Vested
20	.1500	.0001	.0000	.0000	.0000	.0003	.0000
21	.1400	.0001	.0000	.0000	.0000	.0003	.0000
22	.1300	.0001	.0000	.0000	.0000	.0003	.0000
23	.1210	.0001	.0000	.0000	.0000	.0003	.0000
24	.1130	.0001	.0000	.0000	.0000	.0003	.0000
25	.1060	.0001	.0002	.0000	.0001	.0003	.0035
26	.1010	.0001	.0002	.0000	.0001	.0003	.0038
27	.0960	.0001	.0002	.0000	.0001	.0003	.0040
28	.0910	.0002	.0002	.0000	.0001	.0003	.0042
29	.0860	.0002	.0002	.0000	.0001	.0004	.0045
30	.0820	.0002	.0002	.0000	.0001	.0004	.0049
31	.0790	.0002	.0002	.0000	.0001	.0004	.0052
32	.0760	.0002	.0002	.0000	.0001	.0004	.0055
33	.0730	.0003	.0002	.0000	.0001	.0004	.0057
34	.0700	.0003	.0002	.0000	.0001	.0004	.0059
35	.0670	.0003	.0002	.0000	.0001	.0004	.0061
36	.0640	.0003	.0002	.0000	.0002	.0005	.0063
37	.0600	.0003	.0002	.0000	.0002	.0005	.0065
38	.0560	.0004	.0002	.0000	.0002	.0005	.0068
39	.0530	.0004	.0002	.0000	.0002	.0005	.0071
40	.0500	.0004	.0002	.0000	.0002	.0005	.0075
41	.0470	.0004	.0002	.0000	.0003	.0005	.0081
42	.0440	.0005	.0002	.0000	.0003	.0005	.0087
43	.0410	.0005	.0003	.0000	.0004	.0005	.0095
44	.0390	.0005	.0003	.0000	.0004	.0005	.0103
45	.0330	.0006	.0003	.0000	.0005	.0005	.0100
46	.0300	.0006	.0004	.0000	.0005	.0006	.0095
47	.0270	.0007	.0004	.0000	.0006	.0006	.0090
48	.0250	.0007	.0005	.0000	.0006	.0007	.0085
49	.0230	.0007	.0005	.0000	.0007	.0007	.0080
50	.0210	.0008	.0006	.0025	.0008	.0008	.0075
51	.0190	.0008	.0008	.0025	.0009	.0009	.0070
52	.0180	.0008	.0011	.0025	.0010	.0010	.0065
53	.0170	.0009	.0015	.0025	.0011	.0012	.0060
54	.0160	.0009	.0020	.0025	.0012	.0015	.0050
55	.0150	.0009	.0026	.1750	.0013	.0018	.0000
56	.0140	.0010	.0033	.0600	.0014	.0022	.0000
57	.0130	.0010	.0041	.0700	.0016	.0027	.0000
58	.0120	.0011	.0050	.0750	.0018	.0033	.0000
59	.0110	.0011	.0060	.0800	.0020	.0040	.0000
60	.0000	.0012	.0071	.0750	.0022	.0048	.0000
61	.0000	.0012	.0083	.0800	.0024	.0060	.0000
62	.0000	.0013	.0096	.2350	.0026	.0073	.0000
63	.0000	.0013	.0110	.0550	.0028	.0089	.0000
64	.0000	.0014	.0125	.0600	.0030	.0120	.0000
65	.0000	.0015	.0140	.2000	.0032	.0160	.0000
66	.0000	.0016	.0000	.3000	.0034	.0000	.0000
67	.0000	.0017	.0000	.4000	.0036	.0000	.0000
68	.0000	.0018	.0000	.4500	.0039	.0000	.0000
69	.0000	.0019	.0000	.5000	.0042	.0000	.0000
70	.0000	.0000	.0000	1.0000	.0000	.0000	.0000

Exhibit 9

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Years of Life Expectancy after Service Retirement

Age	Years of Life Expectancy		Age	Years of Life Expectancy	
	Male	Female		Male	Female
50	29.18	34.91	80	7.64	10.20
51	28.30	33.97	81	7.21	9.63
52	27.42	33.03	82	6.91	9.09
53	26.55	32.10	83	6.43	8.57
54	25.68	31.16	84	6.07	8.06
55	24.82	30.23	85	5.73	7.58
56	23.97	29.31	86	5.41	7.11
57	23.13	28.39	87	5.10	6.66
58	22.29	27.48	88	4.82	6.23
59	21.46	26.57	89	4.54	5.81
60	20.64	25.67	90	4.28	5.40
61	19.83	24.78	91	4.04	5.02
62	19.02	23.89	92	3.80	4.66
63	18.23	23.01	93	3.58	4.31
64	17.45	22.15	94	3.37	3.98
65	16.69	21.28	95	3.16	3.67
66	15.95	20.43	96	2.98	3.37
67	15.23	19.59	97	2.80	3.10
68	14.52	18.76	98	2.62	2.84
69	13.84	17.94	99	2.45	2.59
70	13.18	17.13	100	2.28	2.36
71	12.54	16.34	101	2.11	2.14
72	11.92	15.56	102	1.95	1.93
73	11.31	14.81	103	1.78	1.74
74	10.72	14.08	104	1.61	1.55
75	10.15	13.37	105	1.43	1.37
76	9.60	12.69	106	1.26	1.19
77	9.08	12.03	107	1.09	1.03
78	8.57	11.39	108	.92	.87
79	8.10	10.78	109	.74	.71
			110	.50	.50

1983 GA (x) (y)

Exhibit 10

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Years of Life Expectancy after Disability Retirement

Age	Male & Female	Age	Male & Female	Age	Male & Female
20	38.73	50	21.08	80	7.00
21	37.98	51	20.59	81	6.63
22	37.26	52	20.11	82	6.27
23	36.56	53	19.63	83	5.94
24	35.87	54	19.16	84	5.63
25	35.19	55	18.68	85	5.34
26	34.53	56	18.21	86	5.06
27	33.87	57	17.75	87	4.80
28	33.23	58	17.29	88	4.55
29	32.60	59	16.83	89	4.31
30	31.98	60	16.37	90	4.09
31	31.37	61	15.91	91	3.87
32	30.76	62	15.45	92	3.66
33	30.17	63	14.99	93	3.46
34	29.58	64	14.53	94	3.26
35	29.00	65	14.07	95	3.07
36	28.43	66	13.60	96	2.89
37	27.87	67	13.13	97	2.71
38	27.31	68	12.66	98	2.54
39	26.76	69	12.18	99	2.37
40	26.21	70	11.70	100	2.20
41	25.67	71	11.21	101	2.04
42	25.14	72	10.72	102	1.88
43	24.61	73	10.22	103	1.72
44	24.09	74	9.73	104	1.55
45	23.57	75	9.24	105	1.38
46	23.06	76	8.76	106	1.21
47	22.56	77	8.28	107	1.04
48	22.06	78	7.83	108	.88
49	21.57	79	7.41	109	.71

1981 Disability Table

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Economic Assumptions

Interest Rate Assumption

Economic theory holds that the total nominal rate of return on an investment is comprised of two components:

- Inflation
- Real rate of return

In order for an investment to be marketable, it must be expected to provide a hedge against inflation. In addition, there must be some premium reflective of the risk that the investor takes in holding the security.

Inflation

The inflationary component provides a measure of the anticipated debasement of the dollar. It affects benefit amounts in the form of salary increases and cost of living adjustments.

Inflationary salary and wage increases are granted to maintain the purchasing power of salaries and wages earned by employees over time. Since retirement benefits are linked to compensation, inflationary increases affect the projected amount of benefit an employee will receive upon retirement.

Pension benefits for members are automatically adjusted for at least a portion of the increases that occur in the Consumer Price Index (CPI) after retirement up to a maximum of 3% annually. These cost-of-living adjustments directly impact the amount of benefits paid from the System, thus they must be anticipated in the actuarial valuation process.

As an illustration of the historical inflation rates exhibited by the U.S. economy, Table 1, shown below, provides the average compound rates of increase in the Consumer Price Index over selected periods. As can be seen from this table, the average compound inflation rates averaged above 6% over the last 20 years.

Table 1

Historical CPI Increases

Period	Average
Last 90 Years	3.0%
Last 70 Years	2.9%
Last 50 Years	4.4%
Last 30 Years	4.9%
Last 20 Years	6.3%
Last 10 Years	6.0%

We believe that the current 6-1/2% inflation assumption is not unreasonable when compared with the actual level of 6.3% averaged over the last 20 years. Furthermore, when these assumptions were put into effect there was a trend towards higher inflation, i.e., as of the last valuation, the "Last 10 Years" figure in Table 1 was 6.6%. That trend towards higher inflation rates is no longer evident, as can be seen from the last 10 year average. Based on these results, an expected level over a long period of time of 5-3/4% is more appropriate. The 5-3/4% level reflects the 50-year average adjusted for the trend towards higher averages experienced over the last 10, 20, and 30 years.

The inflationary salary assumptions used by the 1937 Act Counties are shown below in Table 2. As can be seen in Table 2, the average assumption is 5.30%.

Table 2

Current Long-Term Inflationary Assumptions Used by 1937 Act Counties

Retirement System	Salary
Alameda	5.50%
Contra Costa	5.50%
Fresno	5.75%
Imperial	3.50%
Kern	6.00%
Los Angeles	5.00%
Marin	5.00%
Mendocino	5.75%
Merced	6.25%
Orange	4.25%
Sacramento	5.50%
San Bernardino	4.50%
San Diego	5.00%
San Joaquin	6.00%
San Mateo	5.50%
Santa Barbara	5.50%
Sonoma	5.75%
Stanislaus	6.25%
Tulare	5.75%
Ventura	4.75%
Average	5.30%

Rate of Return

In order to develop an appropriate real (inflation free) rate of return, it is first necessary to determine how assets will be allocated among the various investment classes: stocks, bonds and other fixed income, real estate, and cash equivalents.

The target asset allocation presently adopted and the current level utilized by the System are shown in Table 3. We understand that your investment advisors will be recommending an increase in the stock target in the near future.

Table 3

Federated City Employees' Asset Allocation as of 6/30/89

	Target	Current
Stocks	30%	25%
Fixed Income/Bonds	60%	50%
Real Estate Equity	10%	7%
Cash	0%	18%

Many empirical studies have been carried out to measure historical real rates of return on various types of investments. One of the most notable is that by Roger Ibbotson and Rex A. Sinquefield, titled Stocks, Bonds and Inflation: Simulations of the Future. Table 4 provides the Ibbotson - Sinquefield measure of the real rates of return for the 62 years ending in 1986. Investment consulting firms utilize this and other studies to derive expected long-term real rates of return for use in asset allocation models. These models serve as an aid to retirement plan fiduciaries in determining what proportion of the plans' investment portfolio to place in various classes of securities. In Table 5 we show a range of real rates of return used by some of the large investment firms.

Table 4

Ibbotson - Sinquefield
Real Rates of Return of Investments

	(1925-1986)
Stocks	7.0%
Long-term corporate bonds	2.0%
Long-term government bonds	1.4%
Treasury bills	0.5%

Table 5

Real Returns Used by Investment Consultants

Stocks	6.5% to 7.5%
Bonds	2.5% to 3.0%
Real Estate	4.0% to 4.5%
Cash	0.0%

Applying the target asset allocation (Table 3) to the information in Table 5 results in a real rate of return in the range of 3.9% to 4.5%.

Variations in Return Rates - Annual real rates of return have varied substantially over the years. For example, even if we expect the averages displayed in Table 5 to be a reasonable estimate of real returns in the future, we know there is some likelihood that future real rates will fall below historical averages.

In order to quantify this one would need to know what is referred to statistically as the standard error of the estimate. As an approximation of this quantity, we have utilized historical information available as to the expected variation in real rates of return. If we make certain assumptions about the statistical nature of the average real returns, the

results are that in order to be about 75% certain that the actual return is no less than our estimate, it would be necessary to use a value about 1% below that derived above. It should be noted that this derived margin is only approximate since the U.S. economy is a complex, dynamic system.

Based on the above, we believe that a real rate of return of 3-1/4% is reasonable for use with a 5-3/4% inflation rate. A 2-1/2% real rate of return is more appropriate for a 6-1/2% inflation assumption based on published empirical studies of how real rates of return vary with the level of inflation*.

The average investment yields as well as the rates of return assumed by the Fund over the past ten years were as follows:

Table 6

Federated City Employees' Yields vs Assumed Rate of Returns

Year Ended June 30	Yield Including Realized Profits & Losses	Assumed Rate of Return
1980	8.0%	7.00%
1981	9.0%	7.00%
1982	10.0%	8.00%
1983	10.0%	8.00%
1984	9.8%	8.50%
1985	11.4%	8.50%
1986	11.0%	9.00%
1987	12.7%	9.00%
1988	9.5%	9.00%
1989	10.4%	9.00%
10 year average	10.2%	8.30%

Figures differ from respective annual reports.

*One such study ("The Impact of Inflation on Returns to Securities," Nicholas A. Michas, Ph.D. and Richard C. Keating) provided an analysis of real rates of return for both equities and corporate bonds over selected ranges of inflation in the period 1900-1980 inclusive. The results show that real rates of return fall appreciably after a particular level of inflation is reached.

Salary Scale Assumption

The salary scale assumption is comprised of two components:

- Inflation
- Merit and Longevity

Inflation

The same factor that has caused interest earnings to rise in the past (inflation) has also caused both the members' salaries and the CPI to rise. We therefore, show in Table 7 a summary of the CPI for San Francisco, Oakland, and San Jose as well as the average increase in members' salaries over the last 10 years.

Table 7

Year Ended June 30	Average Annual CPI Index Increase	Average Salary Increase
1980	11.7%	14.5%
1981	14.5%	14.5%
1982	.3%	12.5%
1983	4.3%	12.5%
1984	5.0%	6.0%
1985	3.0%	6.0%
1986	1.7%	4.5%
1987	4.8%	4.5%
1988	4.0%	4.5%
1989	5.0%	4.5%
10 year average	5.4%	8.4%

Table 7 provides an illustration of inflation and the average salary increase for City employees. Average salary increases reflect changes in the salary structure as well as inflation.

Merit and Longevity Increases

The second component of the salary scale assumption is the merit and longevity increase. Employees receive this increase over their careers as a result of promotions and advances in their pay grades.

For your City the "merit and longevity" increases range from 5% to 1/2% per year depending on the member's age and classification. The effect of the merit and longevity increase is to add an additional 1% per year to the inflationary salary projections. Salary increases used in our studies are shown as Exhibit 11 on the next page.

Actuarial Value of Assets

A modified book value of the Fund's assets has been used for purposes of calculating the required contribution rates. Under this approach, more recognition is given each year to total earnings to the Fund.

The approach used for your System is to spread the unrealized gains and losses over five years. In other words, only 20% of unrealized gains and losses are recognized in any one year.

These modified assets, which we called the Adjusted Book Value, were arrived at as follows:

1. Unrealized Gains (Losses):

Date	Total Unrealized Gains and (Losses) 100%	Total Unrealized Gains and (Losses) 20%	Total Unrealized Gains and (Losses) Recognized to 6/30/89
6/30/89	$ 17,309,000	$ 3,462,000	$ 3,462,000

2.	Total Recognized Gains (Losses) to June 30, 1989	$ 3,462,000
3.	Book Value as of June 30, 1989	$ 342,136,000
4.	(2) + (3)	$ 345,598,000
5.	Adjusted Book Value Ratio (4) ÷ (3)	1.0101

The ratio of 1.0101 is used to adjust only the reserves used in arriving at the Employer contribution rates. The Retirement Fund Contingency Reserve, SRBR and accounts payable are not increased, resulting in a total net Adjusted Book Value of $327,770,000.

Each year for the next four years, 20% of the fiscal year 6/30/89 unrealized gain or $3,462,000, will be subtracted from your Adjusted Book Value. In addition, 20% of the new unrealized gains or losses will also be recognized from now on under this method.

Furthermore, the adjusted assets cannot at any time exceed the Market Value by more than 20%, or be less than 80% of the Market Value. As of June 30, 1989, the Adjusted Book Value of assets is at about 96% of the market Value ($359,445,000) which is well within the 20% corridor.

Multiple Studies

In connection with this survey, we are again performing three valuations of the System by varying the interest rates and the corresponding inflation components of the salary scales used. The purpose of this is to analyze the effect of these changes on the City and member contribution rates. The three studies we are proposing are as follows:

Study #1 - A valuation using 9% interest along with salary scales reflecting merit, longevity, and 6-1/2% inflation. This set of economic assumptions is presently in effect.

Study #2 - A valuation using 9% interest along with salary scales reflecting merit, longevity, and 5-3/4% inflation.

Study #3 - A valuation using 8-3/4% interest along with salary scales reflecting merit, longevity, and 5-1/2% inflation.

We show in Exhibit 11 a detailed listing of each of the above salary scales.

We recommend the Study #2 economic assumptions in order to reflect the trend towards lower inflation rates.

SAN JOSE

Exhibit 11

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Ratio of Current Compensation to Compensation Anticipated at Retirement Age

AGE	Study #1	Study #2	Study #3
20	.017	.024	.026
21	.018	.026	.029
22	.021	.029	.032
23	.023	.032	.036
24	.026	.035	.039
25	.028	.039	.043
26	.032	.043	.048
27	.035	.048	.053
28	.039	.052	.058
29	.043	.058	.064
30	.048	.063	.070
31	.053	.069	.076
32	.058	.076	.083
33	.063	.082	.090
34	.069	.089	.097
35	.075	.096	.105
36	.082	.104	.113
37	.089	.113	.122
38	.097	.122	.131
39	.105	.131	.141
40	.115	.142	.152
41	.124	.153	.163
42	.135	.164	.176
43	.146	.177	.189
44	.159	.190	.203
45	.172	.205	.217
46	.185	.220	.232
47	.200	.235	.248
48	.215	.252	.265
49	.232	.269	.283
50	.249	.287	.301
51	.268	.307	.321
52	.288	.327	.341
53	.309	.349	.363
54	.332	.371	.386
55	.355	.395	.409
56	.381	.421	.435
57	.408	.447	.461
58	.437	.476	.490
59	.468	.506	.519
60	.502	.539	.551
61	.538	.573	.586
62	.576	.609	.621
63	.617	.648	.659
64	.661	.690	.700
65	.709	.734	.743
66	.759	.780	.788
67	.813	.830	.836
68	.871	.883	.888
69	.933	.940	.942
70	1.000	1.000	1.000

Study #1 = 9.00% interest with salary scale of merit and longevity plus 6.50% for inflation.
Study #2 = 9.00% interest with salary scale of merit and longevity plus 5.75% for inflation.
Study #3 = 8.75% interest with salary scale of merit and longevity plus 5.50% for inflation.

SECTION IV

VALUATION RESULTS

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Contribution Rates

Retirement contribution requirements are divided into two major categories: City and Employee contribution rates. Furthermore, the City of San Jose Municipal Code states that part of the pension liabilities under the System is to be shared by the members and the City on a 3:8 ratio, part is to be shared on a 42:58 ratio, and the balance is the responsibility of the City alone. The requirements are further divided into basic and cost of living and retiree health and dental insurance contribution rates.

A comparison of total basic, cost of living and health dental insurance City and employee contribution rates follows. This comparison shows rates and annual dollar amounts currently contributed, as well as those resulting from our new study based on three sets of long-term economic assumptions.

	Basic, Cost of Living, and Health & Dental Insurance Contribution Rates			
	City		Employee	
	% of Payroll	Annual Amount*	% of Payroll	Annual Amount*
Current rates @ 9% interest	14.22%	$ 14,999,000	6.39%	$ 6,740,000
Recalculated rates:				
Study #1 rate @ 9% interest and 6-1/2% inflationary salary scale assumption	13.80%	$ 14,556,000	6.41%	$ 6,761,000
Study #2 rate @ 9% interest and 5-3/4% inflationary salary scale assumption	12.86%	$ 13,565,000	5.85%	$ 6,171,000
Study #3 rate @ 8-3/4% interest and 5-1/2% inflationary salary scale assumption	13.43%	$ 14,166,000	6.19%	$ 6,529,000

* Based on June 30, 1989 total payroll of $105,478,000.

In comparing current rates with those resulting from Study #1, both based on the same economic assumptions, we note a decrease in the City rates and an increase in the employee rates.

Basic, Cost of Living and dental contribution rates declined, while health contribution rates increased. This caused employee rates to increase since health rates make up a higher proportion of their rates.

The most important factors which led to the decrease in the Basic and Cost of Living contribution rates were lower than expected salary increases, recognition of a portion of unrealized gains through use of adjusted book value, and experience gains, including higher than expected yield on investments, over the last two years.

The determination of the City's basic and cost of living contribution rates is made according to the Entry Age Normal Cost actuarial funding method. Under this method, part of the cost of benefits (normal cost) is being paid over the future working lifetimes of the members, and part (the supplemental past service cost) is being amortized over a fixed number of years. The part of the supplemental past service cost for the 1987 Golden Handshake is amortized over 30 years, with 28 years remaining from the valuation date, while the remainder is amortized over 60 years, with 48 years remaining from the valuation date. Member basic and cost of living contributions are payable over the employees' future working lifetimes.

The health insurance premium benefit is being partially funded over the next ten years and the cost is shared equally between the City and the employees. The dental insurance premium benefit is also being partially funded over the next ten years with costs being shared on a 3:8 basis between the employees and the City.

The Board adopted the economic assumptions of Study #2. As a result, the remainder of this report develops costs and liabilities only under those assumptions.

Recommended Contribution Rates

We recommend that the Study #2 contribution Rates be adopted. The total contribution rates resulting from Study #2 are as follows:

	Total Contribution Rates			
	City		Employee	
	% of Payroll	Annual Amount*	% of Payroll	Annual Amount*
Recommended Study #2 rate @ 9% interest and 5-3/4% inflationary salary scale assumption				
a. Basic	8.18%	$ 8,628,000	3.15%	$ 3,323,000
b. C.O.L.	3.06	3,228,000	1.35	1,424,000
c. Health Insurance	1.19	1,255,000	1.19	1,255,000
d. Dental Insurance	.43	454,000	.16	169,000
e. Total	12.86%	$ 13,565,000	5.85%	$ 6,171,000

* Based on June 30, 1989 total payroll of $105,478,000

A breakdown of the contribution rates into the various components is shown in Table A on the following page. Tables B and C show the procedure used to arrive at the health and dental insurance premium costs.

Table A

SAN JOSE FEDERATED CITY EMPLOYEE'S RETIREMENT SYSTEM

Procedure Used in Establishing Contribution Rates

Study #2 - 9% interest; merit, longevity and 5-3/4% inflation salary scale

Employer:Employee Contribution Basis	Net Present Value (without adjustments)		Contribution Rates Based on Net Present Value (without adjustments)		Contribution Rates (adjusted for future employee withdrawal and 48-year amortization of past liability)	
	Employer	Employee	Employer	Employee	Employer	Employee
58:42						
a. Basic	$ 1,034,000	$ 749,000	.09%	.06%	.04%	.08%
b. C.O.L.	1,923,000	1,392,000	.16	.12	.07	.14
c. Total (a. + b.)	$ 2,957,000	$ 2,141,000	.25%	.18%	.11%	.22%
100:0						
a. Basic	$ 15,763,000	$ 0	1.35%	0%	.59%	0%
b. C.O.L.	11,304,000	0	.97	0	.42	0
c. Total (a. + b.)	$ 27,067,000	$ 0	2.32%	0%	1.01%	0%
d. Early Incentive	$ 6,190,000	$ 0	.53%	0%	.31%**	0%
8:3						
a. Basic	$ 81,008,000	$ 30,378,000	6.92%	2.60%	7.32%	3.07%
b. C.O.L.	31,854,000	11,945,000	2.72	1.02	2.49	1.21
c. Total (a. + b.)	$ 112,862,000	$ 42,323,000	9.64%	3.62%	9.81%	4.28%
d. Dental Insurance*	$ 3,816,000	$ 1,431,000	.33%	.12%	.43%	.16%
50:50						
a. Health Insurance*	$ 10,133,000	$ 10,133,000	.86%	.86%	1.19%	1.19%
Total						
a. Basic	$ 97,805,000	$ 31,127,000	8.36%	2.66%	7.95%	3.15%
b. C.O.L.	45,081,000	13,337,000	3.85	1.14	2.98	1.35
c. Health Insurance*	10,133,000	10,133,000	0.87	.87	1.19	1.19
d. Dental Insurance*	3,816,000	1,431,000	0.33	.12	.43	.16
e. Early Incentive	6,190,000	0	0.53	0	.31**	0
f. Total	$ 163,025,000	$ 56,028,000	13.94%	4.79%	12.86%	5.85%

*The Dental and Health Insurance Premium Benefit liability represents level funding of the liability for 10-years' worth of premiums. Thus, figures shown do not reflect the entire liability of the Retirement System.

**Reflects 28-year amortization.

Table B

SAN JOSE FEDERATED CITY EMPLOYEE'S RETIREMENT SYSTEM

Retiree Health Insurance 10-Year Cost Projection

Year	(1) Annual Cost Per Retiree	(2) Number of Insured Retirees	(3) Annual Cost (1) x (2)	(4) Total Covered Payroll	(5) Cost as a Percentage of Payroll (50:50 Basis) Actual Percentage	(6) Cost as a Percentage of Payroll (50:50 Basis) Level Percentage
7/1/89	$ 2,253*	748	$ 1,685,000	$ 105,478,000	.87%	1.19%
7/1/90	2,445	808	1,976,000	111,543,000	.96%	1.19%
7/1/91	2,653	873	2,316,000	117,957,000	1.06%	1.19%
7/1/92	2,879	943	2,715,000	124,740,000	1.18%	1.19%
7/1/93	3,124	1,018	3,180,000	131,913,000	1.31%	1.19%
7/1/94	3,390	1,099	3,726,000	139,498,000	1.45%	1.19%
7/1/95	3,678	1,187	4,366,000	147,519,000	1.60%	1.19%
7/1/96	3,991	1,282	5,116,000	156,001,000	1.78%	1.19%
7/1/97	4,330	1,385	5,997,000	164,971,000	1.97%	1.19%
7/1/98	4,698	1,496	7,028,000	174,457,000	2.18%	1.19%

Actuarial Assumptions

Investment Yield:	9.00% per annum.
Growth in Covered Payroll:	5.75% per annum.
Health Premium Cost Increases:	8.50% per year.
Growth in Retiree Rolls:	Based on actual experience.
Funding:	Partial 10-year funding.

*Average cost as of July 1, 1989.
**An estimated reserve of $3,600,000 of assets is available towards the payment of future health insurance premiums.

SAN JOSE FEDERATED CITY EMPLOYEE'S RETIREMENT SYSTEM

Retiree Dental Insurance 10-Year Cost Projection

Year	(1) Annual Cost Per Retiree*	(2) Number of Insured Retirees	(3) Annual Cost (1) x (2)**	(4) Total Covered Payroll	(5) Cost as a Percentage of Payroll (3:8 Basis) Actual Percentage Employee	(5) Actual Percentage City	(6) Level Percentage Employee	(6) Level Percentage City
7/1/89	$ 480	1,111	$ 533,000	$ 105,478,000	.15%	.39%	.16%	.43%
7/1/90	521	1,200	625,000	111,543,000	.16%	.43%	.16%	.43%
7/1/91	565	1,296	732,000	117,957,000	.18%	.47%	.16%	.43%
7/1/92	613	1,400	858,000	124,740,000	.20%	.52%	.16%	.43%
7/1/93	665	1,512	1,005,000	131,913,000	.22%	.58%	.16%	.43%
7/1/94	722	1,633	1,179,000	139,498,000	.24%	.65%	.16%	.43%
7/1/95	783	1,764	1,381,000	147,519,000	.27%	.71%	.16%	.43%
7/1/96	850	1,905	1,619,000	156,001,000	.30%	.79%	.16%	.43%
7/1/97	922	2,057	1,897,000	164,971,000	.33%	.87%	.16%	.43%
7/1/98	1,000	2,222	2,222,000	174,457,000	.36%	.97%	.16%	.43%

Actuarial Assumptions

Investment Yield:	9.00% per annum.
Growth in Covered Payroll:	5.75% per annum.
Dental Premium Cost Increases:	8.50% per year.
Growth in Retiree Rolls:	Based on actual experience.
Funding:	Partial 10-year funding.

*Premium amounts starts at $40 per month.
**An estimated reserve of $2,300,000 of assets is available towards the payment of future dental insurance premiums.

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Funding Progress of the System

A comparison of the measurement of the funding progress of the System in successive valuations is an important criterion for determining the soundness of a pension system. There are various methods of measuring the progress of the System's funding, but we believe the most useful measure is the ratio of the System's assets to its obligation for benefits earned to date. Unless amendments are made to the System, actuarial assumptions are strengthened, or actuarial losses are incurred, assets typically increase at a greater rate than the liabilities for benefits earned to date. This will have the effect of increasing the funding progress ratio in future years.

Funding Ratio - "Plan Termination" Assumption

At the time of each valuation we compute the ratio of the assets of the System to the obligation for benefits earned to date based on a plan termination assumption. To this end, we include below a comparison of the funding ratios based on the current and new interest rate assumptions.

		Previously Calculated	Recalculated
(1)	Assets as of valuation date*	$ 271,556,000	$ 338,939,000
(2)	Present value of benefits earned to date assuming immediate 100% vesting	$ 217,467,000	$ 270,979,000
(3)	Ratio of assets to benefits earned to date (1) ÷ (2)	125%	125%

*Excludes accounts payable.

The present value figure includes all liabilities of the System for basic and cost of living benefits granted to members and beneficiaries already on the pension roll. All basic and cost of living liabilities are included for every year of service already earned at the valuation date and assume immediate 100% vesting. The recalculated liabilities are based on the salaries of the members as of July 1, 1989. In calculating the funding progress of the System, we have used undistributed earnings.

A funding ratio of 100% or more at a valuation date does not mean that future contributions are unnecessary. It does, however, mean that, if the Plan were to be terminated as of that date, there would be enough money on hand to pay off all of the obligations accrued through that date.

GASB #5 - "Plan Continuation" Assumption With Future Salary Increases

Reporting requirements were promulgated by the Governmental Accounting Standards Board (GASB) under Statement #5, effective for plan years starting after December 15, 1986. The GASB #5 liabilities assume an ongoing plan, that is, they include future withdrawals, deaths and disability retirements. In addition, future projected salary increases are included in these figures. The pension benefit obligation includes all liabilities of the System for basic and cost of living benefits granted to members and beneficiaries already on the pension roll. All basic and cost of living liabilities of active and vested inactive members are included for every year of service already earned at the valuation date and assume immediate 100% vesting.

The Statement #5 liabilities based on the 9% interest rate and 7-1/2% salary scale assumptions as of July 1, 1987 and on the 9% interest rate and 6-3/4% salary scale assumptions as of July 1, 1989 are as follows:

		Interest rate 9% and Salary scale of 7-1/2%	Interest rate 9% and Salary scale of 6-3/4%
(1)	Pension Benefit Obligation		
	a. Current Retirants and Beneficiaries	$ 114,767,000	$ 165,370,000
	b. Terminated vested Participants	3,875,000	4,145,000
	c. Active Participants'Accumulated Contributions	43,526,000	68,697,000
	d. Active Participants'Employer Financed Portion:		
	Vested	138,408,000	113,054,000
	Nonvested	15,221,000	16,388,000
	e. Other	3,129,000	5,900,000
	f. Total Pension Benefit Obligation	$ 318,926,000	$ 373,554,000
(2)	Net assets available at book value*	$ 271,556,000	$ 338,939,000
(3)	Funding ratio (2) ÷ (1)	85%	91%

* Excludes accounts payable.

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Actuarial Balance Sheet

One of the purposes of an Actuarial Balance Sheet is to enable the Board, by reference to periodic statements of this nature, to determine whether or not the contributions are adequate to provide the benefits without impairment to the Fund. The following is a descriptive listing of the items which make up the Actuarial Balance Sheet for basic and cost of living benefits under the System.

Item Number	Explanation
1.	The total assets in the Retirement Fund as of June 30, 1989, at Actuarial Adjusted Book Value.
2.	The present value of the basic and cost of living pension contributions, as well as the contributions toward health insurance benefits after retirement it is anticipated will be made by present members after July 1, 1989, until their separation from the System as active members.
3.	The present value of future contributions that will be required of the City in order to fully provide the basic and cost of living pension benefits anticipated for present active, inactive, and retired members. The present value of future contributions required of the City to pay for health insurance premiums for current and future retirees over the next 10 years is also included here.
5.	The present value of the basic and cost of living allowances which are currently being paid to retired members and beneficiaries for service and disability retirements and survivor benefits. This includes the value of the $500 lump sum death benefit after retirement.
6.	The present value of retirement allowances (basic and cost of living) for anticipated future service and disability retirements, to active and inactive members, including continuance to their spouses.
7.	The present value of benefits payable due to the death of currently active or inactive members.
9.	The present value of termination benefits payable due to the withdrawal (refund) of currently active or inactive members.
10.	The reserves held for future adverse experience.

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET*
As of July 1, 1989

ASSETS

		Basic	C.O.L.	Total
1.	Total assets now held @ Adjusted Book Value	$268,163,000	$ 77,428,000	$ 345,591,000
2.	Present value of future contributions by members:			
	a) Retirement (Basic 3.15%; C.O.L. 1.35%)	36,871,000	15,802,000	52,673,000
	b) Health and dental insurance (1.35%)	12,473,000	0	12,473,000
3.	Present value of future contributions by City on account of:			
	a) Retirement			
	i) Normal cost (Basic 7.63%; C.O.L. 2.32%)	89,309,000	27,155,000	116,464,000
	ii) Unfunded supplemental cost (Basic .55%; C.O.L. .74%)	16,827,000	19,773,000	36,600,000
	b) Health and Dental insurance (1.62%)	14,968,000	0	14,968,000
4.	Total actuarial assets	$438,611,000	$140,158,000	$ 578,769,000

LIABILITIES

		Basic	C.O.L.	Total
5.	Present value of retirement allowances payable to present retired members	$110,653,000	$ 54,636,000	$ 165,289,000
6.	Present value of retirement allowances to be granted:			
	a) Service retirement	229,573,000	68,829,000	298,402,000
	b) Ordinary disability	10,969,000	3,181,000	14,150,000
	c) Duty disability	14,481,000	4,258,000	18,739,000
7.	Present value of death benefits to be granted	8,958,000	2,827,000	11,785,000
8.	Present value of members' contributions to be returned upon withdrawal or death before retirement			
	a) Past contributions	10,002,000	2,942,000	12,944,000
	b) Future contributions	6,802,000	2,710,000	9,512,000
9.	Present value health & dental**	33,341,000	0	33,341,000
10.	Contingency reserve - undistributed earnings	11,410,000	0	11,410,000
11.	Accounts payable	2,422,000	775,000	3,197,000
12.	Total actuarial liabilities	$438,611,000	$140,158,000	$ 578,769,000

*Based on 9% interest and 6-3/4% total salary scale assumptions.
**Includes $5,900,000 as estimated health and dental reserves.

SECTION V

SPECIAL STUDIES

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Special Studies

As part of our study, we were also asked to determine the costs for various additional benefits. The results of our studies are shown in this Section.

1. Retiree Health Insurance - Partial Benefits

Currently, members retiring with less than 15 years of service pay for all medical benefits. We were requested to determine the cost to have the City pick up one third of the medical premiums for retirees with at least 5 years but less than 10 years of service and two-thirds of the medical premiums for retirees with at least 10 years of service but less than 15 years of service. Following is the additional cost to the City to provide this benefit when expressed as a level percentage of total payroll.

Years of Service	Benefit	Additional Cost (50:50 Basis) City	Member
5 - 9	1/3 of Premium	.11%	.11%
10 - 14	2/3 of Premium	.20%	.20%
Total Additional Cost		.31%	.31%

Tables 1 and 2 display the cost projections used as a basis for calculating the additional costs of this benefit.

2. 100% Continuance

Under the present plan, a surviving spouse of a member is eligible to receive 50% of the member's benefit upon death. We have been requested to determine the additional cost of increasing the continuance to 100% of the member's benefit. We have calculated the additional cost of this benefit for both the current retired membership and all future retirees. The additional costs are as follows:

	48 - Year Amortization City	Member	30 - Year Amortization City	Member
Basic	1.09%	.71%	1.28%	.71%
COL	.70%	.48%	.80%	.48%
Total	1.79%	1.19%	2.08%	1.19%

$2.2M $1.3M

3. **Final Average Salary Base to One Year**

Does not include 4/5 limitation

The current plan provides that a member's pension is based upon his or her three year average salary. We have been asked to provide the cost of changing this salary base to a one year average. This additional cost for future retirees only expressed as a level percentage of payroll is as follows:

	48 - Year Amortization		30 - Year Amortization	
	City	Member	City	Member
Basic	.71%	.44%	.78%	.44%
COL	.21%	.14%	.23%	.14%
Total	.92%	.58%	1.01%	.58%

4. **$10,000 Death Benefit**

The current plan provides a lump-sum post-retirement death benefit of $500. We were requested to provide the cost of changing this benefit to $10,000

48 - Year Amortization		30 - Year Amortization	
City	Member	City	Member
.12%	.04%	.15%	.04%

5. **Update in Death Benefit to Reflect Inflation**

The current plan provides a lump-sum post-retirement death benefit of $500. We were requested to provide the cost of changing this benefit to reflect cost of living increases. We show costs below for a benefit of $2,250, which reflects changes in the cost of living since 1960, and $3,000 which assumes an additional 5-year increase in the future at our valuation inflation assumption of 5-3/4%.

Death Benefit	48 - Year Amortization		30 - Year Amortization	
	City	Member	City	Member
$ 2,250	.03%	.01%	.04%	.01%
3,000	.04%	.01%	.05%	.01%

Table 1

SAN JOSE FEDERATED CITY EMPLOYEE'S RETIREMENT SYSTEM

Retiree Health Insurance 10-Year Cost Projection

Year	(1) Annual Cost Per Retiree*	(2) Number of Insured Retirees	(3) Annual Cost (1) x (2)**	(4) Total Covered Payroll	(5) Cost as a Percentage of Payroll (50:50 Basis) Actual Percentage	(6) Cost as a Percentage of Payroll (50:50 Basis) Level Percentage
7/1/89	$ 751	177	$ 133,000	$ 105,478,000	.07%	.11%
7/1/90	815	191	156,000	111,543,000	.08%	.11%
7/1/91	884	206	182,000	117,957,000	.08%	.11%
7/1/92	959	222	213,000	124,740,000	.09%	.11%
7/1/93	1,041	240	250,000	131,913,000	.10%	.11%
7/1/94	1,129	259	292,000	139,498,000	.11%	.11%
7/1/95	1,225	280	343,000	147,519,000	.13%	.11%
7/1/96	1,329	302	401,000	156,001,000	.14%	.11%
7/1/97	1,442	326	470,000	164,971,000	.15%	.11%
7/1/98	1,565	352	551,000	174,457,000	.17%	.11%

Actuarial Assumptions

Investment Yield:	9.00% per annum.
Growth in Covered Payroll:	5.75% per annum.
Health Premium Cost Increases:	8.50% per year.
Growth in Retiree Rolls:	Based on actual experience.
Funding:	Partial 10-year funding.

*Benefit is 1/3 of the full premium level as of July 1, 1989.

Table 2

SAN JOSE FEDERATED CITY EMPLOYEE'S RETIREMENT SYSTEM

Retiree Health Insurance 10-Year Cost Projection

Year	(1) Annual Cost Per Retiree	(2) Number of Insured Retirees	(3) Annual Cost (1) x (2)	(4) Total Covered Payroll	(5) Cost as a Percentage of Payroll (50:50 Basis) Actual Percentage	(6) Cost as a Percentage of Payroll (50:50 Basis) Level Percentage
7/1/89	$ 1,502	160	$ 240,000	$ 105,478,000	.12%	.20%
7/1/90	1,630	173	282,000	111,543,000	.14%	.20%
7/1/91	1,769	187	331,000	117,957,000	.15%	.20%
7/1/92	1,919	202	388,000	124,740,000	.17%	.20%
7/1/93	2,082	218	454,000	131,913,000	.19%	.20%
7/1/94	2,259	235	531,000	139,498,000	.21%	.20%
7/1/95	2,451	254	623,000	147,519,000	.23%	.20%
7/1/96	2,659	274	729,000	156,001,000	.25%	.20%
7/1/97	2,885	296	854,000	164,971,000	.28%	.20%
7/1/98	3,130	320	1,002,000	174,457,000	.31%	.20%

Actuarial Assumptions

Investment Yield:	9.00% per annum.
Growth in Covered Payroll:	5.75% per annum.
Health Premium Cost Increases:	8.50% per year.
Growth in Retiree Rolls:	Based on actual experience.
Funding:	Partial 10-year funding.

*Benefit is 2/3 of the full premium level as of July 1, 1989.

SECTION VI

APPENDIX

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Major Plan Provisions of the Present 1975 System

Briefly summarized below are the major provisions of the Federated City Employees' Retirement System, as amended through June 30, 1989.

Return of Contributions

If a member should resign or die without being eligible for an allowance, his or her contributions plus interest will be refunded. A member terminating with at least 5 years of service may elect to leave his or her contributions and receive a deferred retirement benefit at age 55.

Death Benefit Before Retirement

a. If the member's death is service connected, or, if non-service connected, and the member has at least 5 years of service, the spouse receives an allowance of 2½% times final average salary times years of service (minimum of 40% of final average salary and maximum of 75% of final average salary). If there is no spouse, 25% of the surviving spouse's benefit is paid to each child under age 18, but the maximum benefit to the children as a group cannot exceed 75% of the surviving spouse's benefit.

b. If there are no family members eligible for an allowance, the beneficiary receives the return of the member's contributions plus one month's salary for each year of service up to 6 years.

Death Benefit After Retirement

a. If a member dies after retirement, a lump sum amount of $500 is paid to the beneficiary or estate.

b. On the death of the retired member, 50% of the member's allowance is continued to the surviving spouse for life. If there is no spouse, 25% of the surviving spouse's benefit is paid to each child under age 18, but the maximum benefit to the children as a group cannot exceed 75% of the surviving spouse's benefit.

Disability Retirement

a. Requirement

(1) Members with at least 5 years of service and under age 55 are eligible for non-service connected disability.

(2) If the disability is service connected, the member may retire regardless of length of service.

b. Benefit

(1) The minimum amount of non-service connected disability benefit is 40% of final average salary, but not less than the service retirement benefit. The benefit is subject to a reduction equal to 1/2% of final average salary for each year of age (or fraction thereof) under age 55.

(2) The benefit for service-connected disability is 40% of final average salary, offset by Worker's Compensation benefits.

Service Retirement

a. Requirement

Members with at least 5 years of service, who have attained the age of 55, or at any age with 30 years of service, are eligible to retire.

b. Benefit

The retirement allowance payable is the final average salary (highest 3 consecutive years) multiplied by 2½% per year. The maximum benefit is 75% of final average salary.

Cost of Living

The maximum increase in retirement allowance is 3% per year, based on the Consumer Price Index for the month of December.

Post-Retirement Health and Dental Insurance

Post-retirement health and dental insurance benefits are also payable by the City's Retirement Fund. The health benefit provides the retirees with fully paid health insurance premiums for the lowest cost medical plan offered by the City. Only retirees with 15 years of service or those receiving service connected disability, or receiving an allowance of at least 37½% of final compensation, are eligible. The dental insurance is payable to retirees with 5 or more years of service.

The City and the members each contribute towards the post-retirement health and dental insurance programs.

Members' Retirement Contributions

The members' contribution rates are recalculated on an actuarial basis at each actuarial study. The members presently contribute at the rate of 6.39% of pay.

City Retirement Contributions

The City presently contributes at a rate of 14.22% of pay of all members. The City rate is the percentage of salary necessary, on an actuarial basis, to provide for the payment of the benefits promised, also taking into account the contributions being made by the members and the assets on hand. These rates are changed in accordance with the results of each actuarial study.

SAN JOSE FEDERATED CITY
EMPLOYEES' RETIREMENT SYSTEM

Accounting Balance Sheet
As of June 30, 1989

		Basic Retirement Fund	Cost of Living Fund	Combined Retirement System
	Assets			
1.	Cash in bank	$ 295,000	$ 0	$ 295,000
2.	Contributions receivable:			
	a. Employee	101,000	30,000	131,000
	b. Employer	222,000	66,000	288,000
3.	Receivable from brokers	1,604,000	73,000	1,677,000
4.	Accrued interest receivable	2,510,000	798,000	3,308,000
5.	Investments (Book Value)	260,733,000	75,683,000	336,416,000
6.	Other assets	17,000	4,000	21,000
7.	Total Assets	$ 265,482,000	$ 76,654,000	$ 342,136,000
	Liabilities and Reserves			
8.	Accounts payable	$ 2,422,000	$ 775,000	$ 3,197,000
9.	Employee contributions	54,058,000	14,639,000	68,697,000
10.	Employer contributions	57,675,000	33,867,000	91,542,000
11.	Retired reserve	116,219,000	3,628,000	119,847,000
12.	Benefits payable reserve	23,134,000	0	23,134,000
13.	Supplemental retiree benefit reserve	564,000	0	564,000
14.	Undistributed earnings*	11,410,000	23,745,000	35,155,000
15.	Total Liabilities & Reserves	$ 265,482,000	$ 76,654,000	$ 342,136,000

*$3,428,000 of the undistributed earnings in the Basic Retirement Fund and all of the undistributed earnings in the Cost of Living Fund are used as assets in calculating the required contribution rates.