
**The Report of the
December 31, 2001 Actuarial Valuation
of the Employees' Retirement Fund
of the City of Dallas**



Gabriel, Roeder, Smith & Company



Actuaries & Consultants

July 10, 2002

Board of Trustees
Employees' Retirement Fund of the City of Dallas
600 North Pearl Street
Suite 2450
Dallas, Texas 75201

Dear Members of the Board:

We are pleased to present the report of the actuarial valuation of the Employees' Retirement Fund of the City of Dallas ("ERF") as of December 31, 2001.

This valuation provides information on the funding status of ERF. In addition, it includes a determination of the actuarially calculated contribution level for the 2002 calendar year.

This valuation is based on the provisions of ERF in effect as of the valuation date, data on the ERF membership and information on the asset value of the trust fund as of that date. All member data and asset information were provided by ERF staff. While certain checks for reasonableness were performed, the data was used unaudited.

The actuarial cost method is that used in the prior actuarial valuation of ERF. Based on an analysis of assumptions presented to the Board at its April 2001 meeting, a set of new actuarial assumptions has been adopted. Results are shown herein based on that set of assumptions.

To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,

Norman S. Losk, F.S.A.
Senior Consultant

Scott A. Terando
Consultant

NSL:cml

Table of Contents

Page	
	<i>Summary of the Valuation</i>
2	Purposes of the Actuarial Valuation
2	Report Highlights
3	Total Actuarial Contribution
3	Funding Process
4	Actuarial Assumptions
4	ERF Benefits
4	Experience During 2001
5	Asset Information
6	Funding Status
6	GASB Disclosure
	<i>Appendix A Asset Information</i>
7	Table 1 - Net Assets Available for Benefits
8	Table 2 - Change in Assets Available for Benefits
9	Table 3 - Development of Actuarial Value of Assets
	<i>Appendix B Membership Data</i>
10	Table 4 - Summary of Data Characteristics
11	Table 5 - Distribution of Active Members and Payroll
12	Table 6- Distribution of Benefit Recipients
	<i>Appendix C Actuarial Determinations</i>
13	Table 7 - Summary of Actuarial Values – All Actuarial Assumptions
14	Table 7a - Summary of Actuarial Values – No Pay Increase 2002
15	Table 8-Development of 2001 Actuarial Contribution–All Actuarial Assump.
16	Table 8a-Development of 2001 Actuarial Contribution–No Pay Increase
17	Table 9 - Analysis of Change in Unfunded Actuarial Accrued Liability
18	Table 10 - Analysis of Actuarial Gains and Losses in 2001
	<i>Appendix D Information for GASB No. 25 & No. 27</i>
19	Table 11 - Schedule of Funding Status
20	Table 12 - Schedule of Employer Contributions
21	Table 13 - Information for Trend Data Notes
	<i>Appendix E Analysis of 2001 Experience</i>
22	Table 14 – Pay Experience
23	Table 15 – Retirement Experience
24	Table 15a – Retirement Experience – Age Groups
25	Table 16 – Turnover Experience
26	Table 17 – Active Mortality Experience
27	Table 18 – Disability Experience
28	Table 19 – Retiree Mortality Experience

Appendix F Actuarial Method and Assumptions

29	Actuarial Method
30	Actuarial Assumptions

34	<i>Appendix G Summary of Benefit Provisions</i>
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Summary of the Valuation

Purposes of the Actuarial Valuation

At your request we have performed the actuarial valuation of the Employees' Retirement Fund of the City of Dallas ("ERF") as of December 31, 2001.

The purposes of an actuarial valuation are as follows:

- To determine the funding status of ERF as of the valuation date, and
- To develop the actuarially determined level of contributions for ERF for the calendar year 2002.

Report Highlights

The following is a set of key results for the prior year valuation and for the current year:

	2001	2002	
Contribution Rates (% of Payroll)		All	No 2002 Pay
		<u>Assumptions</u>	<u>Increase</u>
Normal Cost (including administrative expense)	16.80%	16.93%	16.58%
Total Actuarial Contribution Rate	17.58%	21.41%	20.43%
Total Support Rate	16.00%	17.50%	17.50%
Excess of Actuarial Contribution over Support Rate	1.58%	3.91%	2.93%
Total Projected Actuarial Contribution	\$52,535	\$71,246	\$66,072
Funding Status	<u>12-31-00</u>	<u>12-31-01</u>	<u>12-31-01</u>
Actuarial Accrued Liability	\$2,038,078	\$2,276,488	\$2,240,316
Actuarial Value of Assets	1,997,828	2,017,041	2,017,041
Unfunded Actuarial Accrued Liability	40,250	259,447	223,275

It should be noted that there were unusually large pay increases in last year. These increases have had a significant impact on the results of this valuation. Since it is expected that there will be little or no

pay increases in 2002, we have developed an additional set of results based a modified pay increase assumption. This modification assumes that there will be no pay increases in 2002 and that, thereafter, the pay increases will continue in accordance with our normal assumptions. All other assumptions remain unchanged. While the official results of the valuation are those based on “All Actuarial Assumptions”, results based on the modified pay increase assumption (“No 2002 Pay Increase”) are provided to give a more balanced view of the current status of funding.

Total Actuarial Contribution

The Total Actuarial Contribution Rate developed in this actuarial valuation, based on “All Assumptions”, is 21.41% of active member payroll. This rate is 3.83% higher than that developed in the prior valuation.

The investment gains of 1997-99 have evaporated in the last two years. In addition, the large pay increases implemented in late 2000 and 2001 were fully felt in this valuation. The combined impact of the large actuarial losses from investments and from pay increases has produced a huge effect on the funding level of the system and the actuarially calculated contribution rate for 2002.

Funding Process

Based on the work of the Joint ERF/City Working Group that has been ratified by both the ERF membership and the City Council, a new funding process commenced October 1, 2000. As of that date, the City contribution rate increased from 8.50% of pay to 9.75% and the member contribution rate increased from 5.00% to 5.75%. On October 1, 2001, the City contribution rate increased to 11.00% of pay and the member contribution rate increased to 6.50%.

Subject to voter approval, member and City contribution rates may be adjusted as of October 2003 based on the results of the actuarial valuation as of December 31, 2002. The contribution rates will be adjusted upward if that valuation produces a total contribution level exceeding 19.50%. They will be

adjusted downward if that valuation produces a contribution rate less than 15.50%. About 63% of the change will be borne by the City and the remaining 37% by the members.

This process will recur every three years thereafter.

Actuarial Assumptions

The actuarial method and actuarial assumptions used in this valuation are identical to those disclosed in the prior valuation report.

ERF Benefits

There have been no changes in the benefit provisions of ERF since the prior valuation.

Experience During 2001

Actuarial Gain and Loss Analysis reviews the effects of experience that differs from that assumed on actuarial results. If such a difference increases assets or reduces liabilities, we have an actuarial gain. The reverse is an actuarial loss.

ERF experienced an overall actuarial loss in 2001, for the second consecutive year. This year's overall ERF actuarial loss amounted to about \$224 million.

The total actuarial loss is the net of the gain from assets and the loss from liabilities. The total loss is broken down as follows (\$ in millions):

	1998	1999	2000	2001
1. Actuarial (Gain)/Loss on Assets	\$(94.0)	\$(146.8)	\$(20.0)	\$113.8
2. Actuarial (Gain)/Loss on Liabilities	<u>(35.9)</u>	<u>7.0</u>	<u>51.4</u>	<u>109.9</u>
3. Total Actuarial (Gain) or Loss (1+2)	(129.9)	(139.8)	31.4	223.7

There was an actuarial loss of \$113.8 million from investment return. For the second consecutive year, the fund earned negative returns at market value. Due to the smoothing technique used in developing the actuarial value of assets, the return at actuarial value was 2.76%. This result, while positive, was substantially less than the 8.50% assumption. In addition, it should be noted that the actuarial value of assets is significantly higher than the market value. Thus, it will take substantial return at market in the next few years to produce gains from assets.

In addition, during 2001, there was an actuarial loss of \$109.9 million from demographic assumptions and non-investment economic assumptions. Pay increases account for \$100.6 million of the loss from liabilities.

It should be noted that the actuarial loss from liabilities amounts to about 5.40% of actuarial accrued liabilities at the beginning of the year. This impact was nearly double that of the previous largest gain or loss from liabilities since 1996.

Asset Information

The market value of the assets of the fund, which are available for benefits, has dropped from \$2,019 million as of December 31, 1999 and \$1,908 million as of December 31, 2000 to \$1,770 million as of December 31, 2001. The markets, which produced several years of huge investment gains during the late 1990's, have turned downward significantly in the last two years.

The assets recognized for actuarial purposes (actuarial value of assets) are the product of a smoothing technique. The purpose of such a technique is to allow the use of market values, but to dampen the effect of market volatility. See Table 3 for the determination of the actuarial value of assets.

As a result of this technique, the actuarial value of assets has grown from \$1,998 million to \$2,017 million during 2001. The rate of investment return for 2001 on actuarial value of assets was 2.76% compared to 9.6% in 2000 and 17.7% in 1999. The detailed determinations of asset values utilized in this valuation and asset growth in the last year are set out in Appendix A.

Funding Status

The funding status of ERF is measured by the Funding Ratio and the Unfunded Actuarial Accrued Liability (UAAL). The Funding Ratio is the ratio of the actuarial value of assets available for benefits to the actuarial accrued liability (AAL) of the Fund. Thus, it reflects the portion of the AAL that is covered by ERF assets. The UAAL is the difference between these items.

A funding ratio of 100% means that the funding of ERF is precisely on schedule. By monitoring changes in the funding ratio each year we can determine whether or not funding progress is being made.

Based on the actuarial value of assets, the ERF funding ratio fell from 99.4% at December 31, 1999 to 98.0% at December 31, 2000 and to 88.6% as of December 31, 2001

The UAAL increased from \$11 million at December 31, 1999 to \$40 million at December 31, 2000 to \$259 million at December 31, 2001.

GASB Disclosure

GASB Statements Numbers 25 and 27 set out the current accounting standards for ERF. Tables 11, 12, and 13 in Appendix D provide footnotes and/or Required Supplemental Information tables required to be disclosed by those statements.

Appendices

Appendix A

Asset Information

TABLE 1**Net Assets Available for Benefits
(\$ in 000's)**

	<u>December 31, 2000</u>	<u>December 31, 2001</u>
ASSETS		
Cash & Short-Term	\$ 239,676	219,896
RECEIVABLES		
Accrued Investment Income	12,144	9,394
Securities Sold	1,592	5,266
Employer Contribution	371	574
Employee Contribution	<u>217</u>	<u>337</u>
	14,324	15,571
INVESTMENTS		
Index Funds	650,056	605,245
Fixed Income	594,262	535,557
Equities	648,067	623,534
Real Estate	260	0
Venture Capital	<u>1,156</u>	<u>682</u>
	1,893,801	1,765,017
TOTAL ASSETS	2,147,801	2,000,484
LIABILITIES		
Accounts Payable	4,898	8,441
Investment Transactions	<u>234,532</u>	<u>222,351</u>
	239,430	230,792
NET ASSETS AVAILABLE FOR BENEFITS	<u>\$1,908,371</u>	<u>\$1,769,692</u>

TABLE 2

**Change in Assets Available for Benefits
Fiscal Year Ending December 31, 2001
(\$ in 000's)**

	<u>2000</u>	<u>2001</u>
1. Assets Available at Beginning of Year	\$2,018,680	\$1,908,371
Adjustment	<u>7</u>	<u>387</u>
	2,018,687	1,908,758
2. Revenues		
a. Employer Contributions	27,847	35,182
b. Employee Contributions	16,460	20,814
c. Investment Income (includes realized gains)	61,747	47,928
d. Investment Expense	(16,316)	(4,805)
e. Unrealized Capital Gains (Losses)	(111,890)	(146,937)
f. Other	<u>(2,430)</u>	<u>120</u>
Total Revenues	(24,582)	(47,698)
3. Expenses		
a. Benefits	81,006	87,054
b. Refunds	2,971	2,434
c. Administration Expense	<u>1,756</u>	<u>1,880</u>
Total Expenses	85,734	91,368
4. Assets Available at End of Year (1 + 2 - 3)	<u>\$1,908,371</u>	<u>\$1,769,692</u>

TABLE 3

**Development of Actuarial Value of Assets
As of December 31, 2001
(\$ in 000's)**

	<u>Market Value</u>	<u>Actuarial Value</u>
1. Value of Assets @ 12-31-00	\$1,908,758	\$1,997,828
2. Non-Investment Cash Flows during 2001		
a. Employer Contributions	35,182	35,182
b. Employee Contributions	20,814	20,814
c. Benefits (including refunds)	(89,489)	(89,489)
d. Administrative Expenses	<u>(1,880)</u>	<u>(1,880)</u>
Total	(35,372)	(35,372)
3. Expected Investment Returns @ 8.5%	168,344	168,344
4. Expected Assets @ 12-31-01 (1 + 2 + 3)	2,041,730	2,130,800
5. Actual Assets Available for Benefits	1,769,692	
6. Gain / (Loss) From Investment Returns (5 - 4)	(272,038)	
7. Recognition of Gains / (Losses)		
a. One-third of Gain/(Loss) (33% of 6)		(90,679)
b. One-third of 2000 Gain/(Loss)		(75,163)
c. One-third of 1999 Gain/(Loss)		<u>52,083</u>
Total		(113,759)
8. Actuarial Value of Assets @ 12-31-01 (4+7)		<u>\$2,017,041</u>

Appendix B

Membership Data

TABLE 4**Summary of Data Characteristics**

	<u>December 31, 1999</u>	<u>December 31, 2000</u>	<u>December 31, 2001</u>
ACTIVE MEMBERS			
Number	8,581	8,160	8,093
Total Annualized Earnings of Members as of 12/31 (000's)	\$282,178	\$299,827	\$335,965
Average Earnings	32,884	36,744	41,513
BENEFIT RECIPIENTS			
Number	4,191	4,288	4,389
Total Annual Retirement Income (000's)	\$69,889	\$74,440	\$82,913
Total Annual Health Supplement (000's)	\$6,287	\$6,432	\$6,583
Average Total Annual Benefit	\$18,176	\$18,860	\$20,391
INACTIVE MEMBERS			
Number	388	424	412

TABLE 5
Distribution of Active Members and Payroll by Age and Years of Service
as of December 31, 2001

Age	Years of Service								Totals
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over	
Under20	3	-	-	-	-	-	-	-	3
	26,978	-	-	-	-	-	-	-	26,978
20-24	48	99	13	-	-	-	-	-	160
	815,800	2,606,400	326,681	-	-	-	-	-	3,748,881
25-29	94	282	144	11	-	-	-	-	531
	1,873,467	8,560,010	4,363,889	365,633	-	-	-	-	15,162,999
30-34	83	330	278	103	12	-	-	-	806
	2,024,698	10,458,771	9,802,485	3,819,655	556,407	-	-	-	26,662,016
35-39	90	306	271	207	238	35	-	-	1,147
	2,312,589	9,982,877	9,921,756	9,261,162	10,178,221	1,668,964	-	-	43,325,569
40-44	78	280	233	215	354	299	17	-	1,476
	2,284,579	9,394,886	8,863,357	9,583,301	17,466,069	13,629,325	849,744	-	62,071,261
45-49	48	227	206	150	326	341	220	31	1,549
	1,156,529	8,277,807	8,090,710	6,891,839	15,842,745	17,133,445	11,421,555	1,656,522	70,471,152
50-54	31	151	133	146	275	273	222	107	1,338
	1,479,265	5,954,168	5,360,360	6,867,370	13,572,878	14,151,269	11,901,907	5,805,079	65,092,296
55-59	23	81	91	92	171	131	74	55	718
	1,146,918	3,061,291	3,702,092	4,546,109	8,097,994	6,139,934	3,858,166	3,056,542	33,609,046
60-64	3	47	46	37	59	37	17	22	268
	38,672	2,005,199	2,004,607	1,561,195	2,709,535	1,542,960	707,843	1,180,979	11,750,990
65&Over	-	8	14	11	24	16	10	14	97
	-	247,801	495,517	411,798	1,051,101	733,682	469,056	635,062	4,044,017
Totals	501	1,811	1,429	972	1,459	1,132	560	229	8,093
	13,159,495	60,549,210	52,931,454	43,308,062	69,474,950	54,999,579	29,208,271	12,334,184	335,965,205

TABLE 6**Distribution of Benefit Recipients
as of December 31, 2001**

Age	Number	Annual Benefit*	Annual Average Benefit
Under 50	119	1,196,088	10,051
50-54	330	10,111,326	30,640
55-59	476	13,595,106	28,561
60-64	619	13,970,114	22,569
65-69	666	12,953,492	19,450
70-74	686	12,114,873	17,660
75-79	550	8,646,923	15,722
80-84	525	6,513,314	12,406
85-89	273	2,654,585	9,724
90 & Over	145	1,156,824	7,978
Total	4,389	82,912,644	18,891

** Does not include Health Supplement.*

Appendix C

Actuarial Determinations

TABLE 7

**Summary of Actuarial Values
As of December 31, 2001
All Actuarial Assumptions
(\$ in 000's)**

	APV* of Projected Benefits	Entry Age Actuarial Values		
		Actuarial Accrued Liability (AAL)	Normal Cost \$	Normal Cost % of Pay
1. Active Members				
a. Retirement	1,445,644	1,168,006	39,016	11.72%
b. Death	47,862	28,358	2,851	0.86%
c. Disability	18,559	9,661	1,258	0.38%
d. Termination	109,888	43,129	9,200	2.77%
e. Health Subsidy	<u>48,895</u>	<u>31,948</u>	<u>2,129</u>	<u>0.64%</u>
Total	1,670,848	1,281,102	54,454	16.37%
2. Benefit Recipients	947,059	947,059		
3. Other Inactive	48,327	48,327		
4. Total Actuarial Values of Benefits	2,666,234	2,276,488	54,454	16.37%
5. Actuarial Value of Assets		2,017,041		
6. Unfunded Actuarial Accrued Liability (4 - 5)		259,447		
7. Funding Ratio		88.60%		

* APV – Actuarial Present Value

TABLE 7a

**Summary of Actuarial Values
As of December 31, 2001
No Pay Increase 2002
(\$ in 000's)**

	APV* of Projected Benefits	Entry Age Actuarial Values		
		Actuarial Accrued Liability (AAL)	Normal Cost \$	Normal Cost % of Pay
1. Active Members				
a. Retirement	1,388,410	1,133,407	36,806	11.38%
b. Death	45,699	27,531	2,732	0.84%
c. Disability	17,710	9,420	1,208	0.37%
d. Termination	105,130	42,316	8,897	2.75%
e. Health Subsidy	<u>48,894</u>	<u>32,256</u>	<u>2,120</u>	<u>0.66%</u>
Total	1,605,843	1,244,930	51,763	16.00%
2. Benefit Recipients	947,059	947,059		
3. Other Inactive	48,327	48,327		
4. Total Actuarial Values of Benefits	2,601,229	2,240,316	51,763	16.00%
5. Actuarial Value of Assets		2,017,041		
6. Unfunded Actuarial Accrued Liability (4 - 5)		223,275		
7. Funding Ratio		90.03%		

* APV – Actuarial Present Value

TABLE 8

**Development of 2001 Actuarial Contribution
All Actuarial Assumptions**

(\$ in 000's)

	<u>\$</u>	<u>% of Pay</u>
1. Actuarial Requirement		
a. Payment to Amortize UAAL over 30 Years	\$14,880	4.47%
b. Normal Cost for 2001	54,486	16.37%
c. Administrative Expense	<u>1,880</u>	<u>0.56%</u>
Total	\$71,246	21.41%
2. Contribution Support Rate		
a. City	\$36,613	11.00%
b. Employee	<u>21,635</u>	<u>6.50%</u>
Total	\$58,248	17.50%
3. Excess of Actuarial Requirement over Support Rate	\$12,998	3.91%

TABLE 8a

**Development of 2001 Actuarial Contribution
No Pay Increase 2002
(\$ in 000's)**

	<u>\$</u>	<u>% of Pay</u>
1. Actuarial Requirement		
a. Payment to Amortize UAAL over 30 Years	\$ 12,443	3.85%
b. Normal Cost for 2001	51,749	16.00%
c. Administrative Expense	<u>1,880</u>	<u>0.58%</u>
Total	\$66,072	20.43%
2. Contribution Support Rate		
a. City	\$35,577	11.00%
b. Employee	<u>21,023</u>	<u>6.50%</u>
Total	\$56,600	17.50%
3. Excess of Actuarial Requirement over Support Rate	\$9,472	2.93%

TABLE 9

**Analysis of Change in Unfunded
Actuarial Accrued Liability
For the Year Ending December 31, 2001
(\$ in 000's)**

1. UAAL as of December 31, 2000		\$40,249
2. Expected Change in UAAL during 2001		
a. Normal Cost for 2001	\$ 48,355	
b. Contributions 2001	(55,996)	
c. Interest adjustments on 1, 2a, & 2b to Year End @ 8.5%	3,103	
d. Expected change in UAAL		<u>(4,538)</u>
3. Net Actuarial (Gains) & Losses		223,737
4. UAAL as of December 31, 2001		259,447

Table 10

**Analysis of Actuarial Gains and Losses
In 2001 and the Two Prior Years**

	<u>1999</u>	<u>2000</u>	<u>2001</u>
Investment Return	\$ (146,811)	\$ (20,010)	\$113,759
Salary Increase	(1,838)	61,646	100,654
Age and Service Retirement	22,540	36,603	(2,623)
General Employment Termination	(4,879)	(40,695)	13,772
Disability Incidence	(135)	(871)	8
Active Mortality	(117)	(337)	(1,092)
Benefit Recipient Mortality	(8,545)	(4,902)	(651)
Total Actuarial (Gain) Loss	\$ (139,785)	\$ 31,434	\$223,737

Appendix D
Information for GASB No. 25 & 27

TABLE 11

Schedule of Funding Status
(\$ in 000's)

End of Year	Actuarial Value of Assets (a)	AAL (b)	UAAL (b-a)	Funding Ratio (a/b)	Payroll* (c)	UAAL as % of Payroll ((b-a)/c)
1992	\$854,000	\$1,107,000	\$253,000	77.15%	\$200,000	126.5%
1993	945,000	1,123,000	178,000	84.15%	200,000	89.0%
1994	991,000	1,199,000	208,000	82.65%	208,000	100.0%
1995	1,176,000	1,459,000	283,000	80.60%	243,357	116.3%
1996	1,310,081	1,585,081	275,000	82.65%	257,169	106.9%
1997	1,437,533	1,673,761	236,228	85.89%	261,799	90.2%
1998	1,617,468	1,750,430	132,962	92.40%	275,547	48.3%
1999	1,862,644	1,873,998	11,353	99.39%	282,127	4.0%
2000	1,997,828	2,038,078	40,250	98.03%	298,355	13.5%
2001	2,017,041	2,276,488	259,447	88.60%	332,842	77.9%

* *Projected to following year.*

Note: Data for years prior to 1997 are based on prior actuarial work product.

TABLE 12

**Schedule of Employer Contributions
(\$ in 000's)**

Year	Total ARC*	Member Contributions	Net City ARC	Actual City Contributions	City Cont. as Percent of Net ARC
1997	\$58,095	\$13,193	\$44,902	\$22,404	49.90%
1998	61,339	14,001	47,338	23,762	50.20%
1999	57,159	14,932	42,227	25,217	59.72%
2000	50,142	16,460	33,682	27,847	82.68%
2001	52,535	20,814	31,728	35,182	110.91%
2002	71,246	21,635**	49,611**		

* ARC - Annual Required Contribution as defined in GASB Statements No. 25 and No. 27.

** Estimated.

Note 1: Data for years prior to 1998 are based on prior actuarial work product.

Note 2: GASB Statements 25 and 27 are standards for accounting for retirement systems.

They are not designed to limit the funding decisions of plan sponsors.

TABLE 13

Information for Trend Data Notes

Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Open
Remaining Amortization Period (Years)	30
Asset Valuation Method	3-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return*	8.50%
Projected Salary Increases*	4.5% - 11.5%
Cost-of-Living Adjustments	4.00%

* Includes Inflation at 4.0%.

Appendix E

Analysis of 2001 Experience

TABLE 14**Pay Experience for Employees who are Active at
Beginning and End of Year****Analyzed by Years of Service**

Service Beginning of Year	Experience for 2001			
	Number	Expected Pay	Actual Pay	Ratio A/E
Under 5	2,533	77,146,628	86,845,015	112.57%
5-9	1,315	49,269,622	53,381,106	108.34%
10-14	995	43,893,963	47,009,297	107.10%
15-19	1,352	60,905,123	65,986,381	108.34%
20-24	807	38,116,941	40,996,306	107.55%
25-29	396	19,486,967	21,337,303	109.50%
30 & Over	87	4,607,092	4,976,543	108.02%
Total	7,485	293,426,336	320,531,951	109.24%
Over 10 Years	3,637	167,010,086	180,305,830	107.96%

TABLE 15**Analysis of Retirement Experience**

Age	2001 Retirements		
	Actual	Expected	Ratio A/E
48	-	3.44	0.00%
49	7	3.59	195.09%
50	20	14.00	142.86%
51	10	17.51	57.11%
52	12	16.80	71.43%
53	3	14.73	20.37%
54	14	17.16	81.59%
55	14	11.51	121.63%
56	5	9.78	51.14%
57	10	11.27	88.70%
58	10	11.38	87.86%
59	9	9.08	99.08%
60	13	18.74	69.37%
61	8	8.85	90.40%
62	7	7.43	94.28%
63	9	5.85	153.85%
64	5	4.13	121.21%
65	7	5.89	118.85%
66	4	4.18	95.69%
67	-	1.14	0.00%
68	1	1.75	57.31%
69	1	1.33	75.19%
70 & Over	<u>7</u>	<u>30.00</u>	<u>23.33%</u>
Total	176	229.54	76.68%
Total Under 70	169	199.54	84.70%

TABLE 15a

**Analysis of Retirement Experience
Age Groups**

Age Group	2001 Retirements		
	Actual	Expected	Ratio A/E
Under 55	66	87.23	75.66%
55-59	48	53.03	90.52%
60-64	42	44.99	93.35%
65-69	13	14.29	91.00%
70 & Over	<u>7</u>	<u>30.00</u>	<u>23.33%</u>
Total	176	229.54	76.68%
Total Under 70	169	199.54	84.70%

Table 16

Analysis of Turnover Experience

Years of Service	2001 Quits		
	Actual	Expected	Ratio A/E
0-4	302	325.45	92.80%
5-9	71	60.77	116.83%
10-14	30	32.76	91.58%
15-19	46	31.94	144.02%
20-24	25	7.74	322.93%
25-29	<u>12</u>	<u>2.59</u>	<u>462.83%</u>
Total	486	461.25	105.37%

TABLE 17**Analysis of Active Mortality Experience for
Active Members**

Age	2001 Deaths		
	Actual	Expected	Ratio A/E
20-24	-	0.11	0.00%
25-29	1	0.30	332.58%
30-34	-	0.47	0.00%
35-39	1	1.00	100.19%
40-44	1	1.88	53.18%
45-49	1	3.23	30.94%
50-54	1	4.25	23.53%
55-59	3	3.26	91.93%
60 and Over	-	<u>2.54</u>	<u>0.00%</u>
Total	8	17.04	46.94%

TABLE 18**Analysis of Active Disability Experience**

Age	2001 Disabilities		
	Actual	Expected	Ratio A/E
20-24	-	0.02	0.00%
25-29	-	0.09	0.00%
30-34	-	0.21	0.00%
35-39	-	0.51	0.00%
40-44	1	1.22	81.65%
45-49	1	2.57	38.91%
50-54	2	3.34	59.94%
55-59	-	2.18	0.00%
60 and Over	<u>0</u>	<u>0.0</u>	<u>N/A</u>
Total	4	10.14	39.45%

TABLE 19**Analysis of Retiree Mortality Experience**

Age	2001 Experience		
	Actual	Expected	Ratio A/E
Under 60	4	3.90	102.47%
60-64	7	6.64	105.41%
65-69	18	11.92	151.02%
70-74	23	18.70	122.98%
75-79	28	22.13	126.54%
80-84	34	27.96	121.59%
85-89	28	17.69	158.26%
90 & over	<u>24</u>	<u>13.55</u>	<u>177.06%</u>
Total	166	122.50	135.51%

Appendix F

Actuarial Method and Assumptions

Entry Age Method

The Entry Age Method is the actuarial valuation method used for all purposes under ERF.

The concept of this method is that funding of benefits for each employee should be effected as a, theoretically, level contribution (as a percentage of pay) from entry into ERF to termination of active status.

The Normal Cost (NC) for a fiscal year under this method is determined as described in the prior paragraph for each employee. The ERF NC for the year is the total of individual normal costs determined for each active employee.

The Actuarial Accrued Liability (AAL) under this method is the theoretical asset balance such normal costs would have accumulated to date based on current assumptions. To the extent that the assets of the fund are insufficient to cover the AAL, an Unfunded Actuarial Accrued Liability (UAAL) develops.

The actuarially calculated contribution for a year is the NC for that year plus an amount to amortize the UAAL over 30 years as a level percentage of pay.

ACTUARIAL ASSUMPTIONS (ADOPTED MAY, 2001)

Rate of Investment Return. For all purposes under the system the rate of investment return is assumed to be 8.5% per annum, net of investment expenses.

Annual Compensation Increases. Each member's compensation is assumed to increase in accordance with a table based on ERF experience. Sample rates follow.

Years of Service	Merit, Promotion, Longevity	General	Total
0	7.50%	4.50%	12.00%
1	6.50	4.50	11.00
2	5.00	4.50	9.50
3	3.00	4.50	7.50
4	2.75	4.50	7.25
5	2.50	4.50	7.00
6	1.50	4.50	6.00
7-8	0.50	4.50	5.00
9 & Over	0.00	4.50	4.50

For the purpose of amortizing the UAAL, the payroll of the entire system is assumed to increase at 4% each year.

Mortality:

Disabled Lives: 85% of the 1965 Railroad Retirement Board Disabled Annuitants Mortality Table (ultimate rates). A sample follows (rate per 1,000):

Age	Disability Mortality Rate
20	37
30	37
40	37
50	39
60	45
70	63
80	110
90	204

ACTUARIAL ASSUMPTIONS

Other Benefit Recipients: A table based on the Unisex Pension Mortality Table for 1984 with female ages set back 4 years with the following adjustments:

<u>Age</u>	<u>Male</u>	<u>Female</u>
0-55	.750	.700
56-59	Grade to .900	.700
60-77	.900	.850
78-80	Grade to .825	.850
80-99	.825	1.000
100 and Over	1.000	1.000

Sample Rates follow (rate per 1,000):

<u>Age</u>	<u>Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
30	.8	.8
40	1.6	1.1
50	4.2	2.6
60	12.4	8.4
70	31.3	21.1
80	67.0	57.8
90	150.5	132.2

Active Members: A table based on the Unisex Pension Mortality Table for 1984 with female ages set back 4 years. The following adjustments apply to those rates:

<u>Age</u>	<u>Male</u>	<u>Female</u>
0-69	70%	50%
70-99	85	75
100+	100	100

ACTUARIAL ASSUMPTIONS

Sample rates follow (rate per 1,000):

Age	Mortality Rate	
	Male	Female
30	0.8	0.6
40	1.5	0.8
50	3.9	1.9
60	9.9	4.9
70	29.5	18.6
80	69.1	43.3
90	155.1	99.1

Disability: A table of disability incidence with sample rates follows (rate per 1,000):

Age	Disability Rate
30	0.3
40	0.6
50	2.4
60	6.0

Retirement: Upon eligibility, active members are assumed to retire as follows (rate per 1,000):

Age	First Year Eligible	Thereafter
48-49	313	188
50	500	375
51-54	500	313
55-59	438	313
60	263	250
61-64	225	150
65-69	225	188
70	1000	1000

ACTUARIAL ASSUMPTIONS

General Turnover: A table of termination rates based on ERF experience. A sample of the ultimate rates follows:

Years of Service	Terminations (per 1,000)
0	192
1	145
2	130
3	120
4	112
5	75
6	70
7	62
8-9	52
10-14	35
15-19	25
20 and Over	10

Refunds of Contributions: Vested members terminating before retirement who elect a refund of contributions (per 1,000).

Age	Service			
	5 – 9	10 – 14	15 – 19	20+
20-30	1000	1000	N/A	N/A
31-40	950	900	600	0
41-50	800	650	400	0
51-60	700	450	0	0

Operational Expenses: The amount of estimated administrative expenses expected in the next year is supplied by ERF staff and incorporated in the Normal Cost.

Marital Status: 80% of members are assumed to be married.

Spouse Age: The female spouse is assumed to be 3 years younger than the male spouse.

APPENDIX G
Summary of Benefit Provisions

SUMMARY OF KEY PROVISIONS
Employees' Retirement Fund of the City of Dallas
as of December 31, 2001

Membership An employee becomes a member upon permanent employment and contributes to the Retirement Fund.

Contributions Member: 5% of compensation, increasing to 5.75% effective October 1, 2000, and 6.50% effective October 1, 2001.

City: The City contributes an amount not less than the amount contributed by its employees, currently 8.5% of member wages. This rate will increase to 9.75% effective October 1, 2000, and 11.00% effective October 1, 2001.

Definitions Final Average Salary: Average monthly salary over the member's highest three years of service.

Credited Service: Length of time an employee of the City of Dallas and while making contributions to the Fund.

Retirement Pension Eligibility:

- a. Attainment of age 60; or
- b. Attainment of age 55 (if credited service began before May 9, 1972);
or
- c. At any age after completion of 30 years of credited service with a reduced benefit before age 50.
- d. Attainment of age 50, if the sum of an active member's age and credited service is at least 78.

Retirement Benefits: The retirement benefit equals 2-3/4% multiplied by average monthly earnings multiplied by credited service limited to a maximum of 36.3636 years plus \$125 health supplement (prorated for service less than 5 years).

Form of Payment: An unreduced pension under a joint and one half survivor option or a ten-year certain and life option. An actuarially equivalent joint and full survivor option is also available.

Deferred Retirement

Eligibility: Deferred retirement pension commencing at age 60 or at age 55, if employment commenced prior to May 9, 1972, with at least five years of credited service, and accumulated contributions are left on deposit with the Fund.

Monthly Benefit: The deferred retirement is equal to the retirement pension based on earnings and credited service at the time of termination.

Disability Retirement Pension

Non-Service Disability:

1. Eligibility: Five years of service and totally and permanently incapacitated for duty.
2. Monthly Benefit: Computed based on average monthly earnings and credited service at time of disability but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

Service Disability:

1. Eligibility: Totally and permanently incapacitated from the further performance of duty as a result of injury while in the course of employment for the City.
2. Monthly Benefit: Calculated as a non-service disability pension but not less than \$500 per month.

Death Benefits

Form: Benefit paid in accordance with the option on file, or the eligible option, or if no eligible beneficiary, a lump sum equivalent of 10 years of benefit payments to the member's estate.

Monthly Benefit: Based on average monthly earnings and credited service at death but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

Minimum Service Death Benefit: Not less than \$500 per month if death resulted from a service related injury.

Return of Accumulated Contributions

A member at the time of terminations is entitled to be paid accumulated contributions without interest.

Cost-of-Living Adjustments

A cost-of-living adjustment to the base pension shall be made based on the greater of:

The percentage of change in the price index for October of the current year over October of the previous year up to 5%, or

The percentage of annual average change in the price index for the 12-month period ending with the effective date of the adjustment, up to 5%.

May 28, 2001

Mr. John Kloehr
Employees' Retirement Fund
of the City of Dallas
1500 Marilla, Room 6AS
Dallas, Texas 75201

Dear Mr. Kloehr:

We are forwarding under separate cover 15 copies of the report of the December 31, 2001 Annual Actuarial Valuation for the Employees' Retirement Fund of the City of Dallas.

Sincerely yours,

Norman S. Losk, F.S.A.

NSL:cml