

---

**The Report of the  
December 31, 2002 Actuarial Valuation  
of the Employees' Retirement Fund  
of the City of Dallas**



**Gabriel, Roeder, Smith & Company**



**Actuaries & Consultants**

---



**GABRIEL, ROEDER, SMITH & COMPANY**

**Consultants & Actuaries**

One Towne Square • Suite 800 • Southfield, Michigan 48076 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

August 8, 2003

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, 2002.

This valuation provides information on the funding status of ERF. In addition, it includes a determination of the actuarially calculated contribution level for the 2003 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 used was unaudited.

The actuarial assumptions and cost method are those used in the prior actuarial valuation of ERF.

To the best of my knowledge, this report is complete and accurate and was conducted in accordance with standards of practice by the Actuarial Standards Board and in compliance with the provisions of the ordinance. The actuarial assumptions used for the valuation produce results which, in the aggregate, are reasonable. The valuation was produced under the supervision of a Member of the American Academy of Actuaries with significant experience valuing public employee retirement systems.

Respectfully submitted,



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

NSL:cml

# Table of Contents

---

## Page

### *Summary of the Valuation*

|     |                                     |
|-----|-------------------------------------|
| 1   | Purposes of the Actuarial Valuation |
| 1   | Report Highlights                   |
| 2   | Total Actuarial Contribution        |
| 2   | Funding Process                     |
| 2-3 | Actuarial Assumptions               |
| 3   | ERF Benefits                        |
| 3-4 | Experience During 2002              |
| 4   | Asset Information                   |
| 4-5 | Funding Status                      |
| 5   | GASB Disclosure                     |

### *Appendix A Asset Information*

|   |  |
|---|--|
| 6 | Table 1 - Net Assets Available for Benefits        |
| 7 | Table 2 - Change in Assets Available for Benefits  |
| 8 | Table 3 - Development of Actuarial Value of Assets |

### *Appendix B Membership Data*

|    |  |
|----|--|
| 9  | Table 4 - Summary of Data Characteristics            |
| 10 | Table 5 - Distribution of Active Members and Payroll |
| 11 | Table 6 - Distribution of Benefit Recipients         |

### *Appendix C Actuarial Determinations*

|    |  |
|----|--|
| 12 | Table 7 - Summary of Actuarial Values – All Actuarial Assumptions                      |
| 13 | Table 7a - Summary of Actuarial Values – No Pay Increases 2003 and 2004                |
| 14 | Table 8 - Development of 2003 Actuarial Contribution – All Actuarial Assump.           |
| 15 | Table 8a - Development of 2003 Actuarial Contribution – No Pay Increases 2003 and 2004 |
| 16 | Table 9 - Analysis of Change in Unfunded Actuarial Accrued Liability                   |
| 17 | Table 10 - Analysis of Actuarial Gains and Losses in 2002                              |

### *Appendix D Information for GASB No. 25 & No. 27*

|    |   |
|----|---|
| 18 | Table 11 - Schedule of Funding Status         |
| 19 | Table 12 - Schedule of Employer Contributions |
| 20 | Table 13 - Information for Trend Data Notes   |

### *Appendix E Analysis of 2002 Experience*

|    |  |
|----|--|
| 21 | Table 14 – Pay Experience                      |
| 22 | Table 15 – Retirement Experience               |
| 23 | Table 15a – Retirement Experience – Age Groups |
| 24 | Table 16 – Turnover Experience                 |
| 25 | Table 17 – Active Mortality Experience         |
| 26 | Table 18 – Disability Experience               |

27 Table 19 – Retiree Mortality Experience

*Appendix F Actuarial Method and Assumptions*

28 Actuarial Method

29-32 Actuarial Assumptions

33-35 *Appendix G Summary of Benefit Provisions*

## 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, 2002.

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 2003.

## Report Highlights

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

|  | (\$ in 000's)   |                 |
|--|-----------------|-----------------|
|  | 2002            | 2003            |
| <b>Contribution Rates (% of Payroll)</b>           |                 |                 |
| Normal Cost (including administrative expense)     | 16.93%          | 17.12%          |
| Total Actuarial Contribution Rate                  | 21.41%          | 27.03%          |
| Total Support Rate                                 | 17.50%          | 17.50%          |
| Excess of Actuarial Contribution over Support Rate | 3.91%           | 9.53%           |
| Total Projected Actuarial Contribution             | \$71,246        | \$86,429        |
| <br><b>Funding Status</b>                          | <b>12/31/01</b> | <b>12/31/02</b> |
| Actuarial Accrued Liability                        | \$2,276,488     | \$2,399,569     |
| Actuarial Value of Assets                          | 2,017,041       | 1,863,701       |
| Unfunded Actuarial Accrued Liability               | 259,447         | 535,868         |

## **Total Actuarial Contribution**

The Total Actuarial Contribution Rate developed in this actuarial valuation is 27.03% of active member payroll. This rate is 5.62% higher than that developed in the prior valuation.

## **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. Under this process the total contribution rate would change every three years thereafter. The general election to ratify this portion of the new funding process has not yet been held.

At its January 2003 meeting, the Board acted to change the October 2003 date to October 2005. However, this action has not as yet been addressed by the city council.

## **Actuarial Assumptions**

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

In prior years, the total compensation for the year ending at the valuation date has been used to project

future pay levels which affect projected amounts payable to future benefit recipients and future contributions by and on behalf of active members. In the past year, Service Incentive Pay ("SIP"), which is reflected in total compensation, has been reduced significantly for members of ERF. As a result, we have used the 2002 pay, adjusted by the difference between our estimates of old and new SIP amounts, as the measure of compensation from which future pay levels are projected in the valuation process.

While the results of this valuation are based on all actuarial assumptions, it is expected that there will be no increases in pay rates for at least the 2003 and 2004 calendar years. As a result, we have also developed actuarial results based on the assumption that there will be no pay increases for those two years. Those results are set out in Tables 7a and 8a in Appendix C.

## ERF Benefits

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

## Experience During 2002

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 2002. This year's overall ERF actuarial loss amounted to about \$258 million.

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

|   | 1999       | 2000      | 2001     | 2002     |
|---|------------|-----------|----------|----------|
| 1) Actuarial (Gain)/Loss on Assets      | (\$146.80) | (\$20.00) | \$113.80 | \$279.54 |
| 2) Actuarial (Gain)/Loss on Liabilities | 7.00       | 51.40     | 109.90   | (21.08)  |
| 3) Total Actuarial (Gain) or Loss (1+2) | (139.80)   | 31.40     | 223.70   | 258.46   |



There was an actuarial loss of nearly \$280 million from investment return. For the third consecutive year, the fund earned negative returns at market value. The rate of return at actuarial value for 2002 was -5.33%. This result 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 2002, there was an actuarial gain of about \$21 million from demographic assumptions and non-investment economic assumptions. This gain includes a gain from salary increases of over \$45 million.

It should be noted that the actuarial gain from liabilities amounts to only about 0.93% of actuarial accrued liabilities at the beginning of the year.

## **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 to \$1,555 million as of December 31, 2002. The markets, which produced several years of huge investment gains during the late 1990's, have turned downward significantly in the last three 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.

The actuarial value of assets has been reduced from \$2,017 million to \$1,864 million during 2002. The rate of investment return for 2002 on actuarial value of assets was -5.33% compared to 2.76% in 2001, 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 to 88.6% as of December 31, 2001, and to 77.7% as of December 31, 2002.

The UAAL increased from \$11 million at December 31, 1999 to \$40 million at December 31, 2000 to \$259 million at December 31, 2001, to \$536 million at December 31, 2002.

## **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, 2001</u> | <u>December 31, 2002</u> |
|--|--------------------------|--------------------------|
| <b>Assets</b>                            |                          |                          |
| Cash & Short-Term                        | \$219,896                | \$206,206                |
| <b>Receivables</b>                       |                          |                          |
| Accrued Investment Income                | 9,394                    | 9,004                    |
| Securities Sold                          | 5,266                    | 13,043                   |
| Employer Contribution                    | 574                      | 660                      |
| Employee Contribution                    | 337                      | 390                      |
|  | <u>15,571</u>            | <u>23,097</u>            |
| <b>Investments</b>                       |                          |                          |
| Index Funds                              | 605,245                  | 491,277                  |
| Fixed Income                             | 535,557                  | 501,220                  |
| Equities                                 | 623,534                  | 569,906                  |
| Real Estate                              | 0                        | 0                        |
| Venture Capital                          | 681                      | 507                      |
|  | <u>1,765,017</u>         | <u>1,562,910</u>         |
| <b>Total Assets</b>                      | 2,000,484                | 1,792,213                |
| <b>Liabilities</b>                       |                          |                          |
| Accounts Payable                         | 8,441                    | 4,295                    |
| Investment Transactions                  | 222,351                  | 233,125                  |
|  | <u>230,792</u>           | <u>237,420</u>           |
| <b>Net Assets Available For Benefits</b> | <u><u>1,769,692</u></u>  | <u><u>1,554,793</u></u>  |

**TABLE 2**  
**Change in Assets Available for Benefits**  
**Fiscal Year Ending December 31, 2002**  
**(\$ in 000's)**

|  | <u>2001</u>             | <u>2002</u>             |
|--|-------------------------|-------------------------|
| <b>1 Assets Available at Beginning of Year</b>           | \$1,908,371             | \$1,769,692             |
| Adjustment   | 387                     | 217                     |
|  | <u>1,908,758</u>        | <u>1,769,909</u>        |
| <br><b>2 Revenues</b>                                    |                         |                         |
| a. Employer Contributions                                | 35,182                  | 36,606                  |
| b. Employee Contributions                                | 20,814                  | 21,771                  |
| c. Investment Income (includes realized gains)           | 47,928                  | 43,354                  |
| d. Investment Expense                                    | (4,805)                 | (4,855)                 |
| e. Unrealized Capital Gains (Losses)                     | (146,937)               | (210,331)               |
| f. Other   | 120                     | 153                     |
| Total Revenues   | <u>(47,698)</u>         | <u>(113,302)</u>        |
| <br><b>3 Expenses</b>                                    |                         |                         |
| a. Benefits  | 87,054                  | 97,363                  |
| b. Refunds   | 2,434                   | 2,551                   |
| c. Administration Expense                                | 1,880                   | 1,900                   |
| Total Expense  | <u>91,368</u>           | <u>101,814</u>          |
| <br><b>4 Assets Available at End of Year (1 + 2 - 3)</b> | <u><u>1,769,692</u></u> | <u><u>1,554,793</u></u> |

**TABLE 3**  
**Development of Actuarial Value of Assets**  
**As of December 31, 2002**  
**(\$ in 000's)**

|   | <b>Market Value</b> | <b>Actuarial Value</b> |
|---|---------------------|------------------------|
| <b>1 Value of Assets @ 12/31/2001</b>                 | \$1,769,692         | \$2,017,041            |
| <b>2 Non-Investment Cash Flows during 2002</b>        |                     |                        |
| a. Employer Contributions                             | 36,606              | 36,606                 |
| b. Employee Contributions                             | 21,771              | 21,771                 |
| c. Benefits (including refunds)                       | (99,914)            | (99,914)               |
| d. Administrative Expenses                            | (1,900)             | (1,900)                |
| Total   | (43,437)            | (43,437)               |
| <b>3 Expected Investment Returns @ 8.5%</b>           | 169,640             | 169,640                |
| <b>4 Expected Assets @ 12-31-2002 (1 + 2 + 3)</b>     | 1,895,895           | 2,143,244              |
| <b>5 Actual Assets Available for Benefits</b>         | 1,554,793           |                        |
| <b>6 Gain/ (Loss) From Investment Returns (5 - 4)</b> | (341,102)           |                        |
| <b>7 Recognition of Gains / (Losses)</b>              |                     |                        |
| a. One-third of Gain/(Loss) (33% of 6)                |                     | (113,701)              |
| b. One-third of 2001 Gain/(Loss)                      |                     | (90,679)               |
| c. One-third of 2000 Gain/(Loss)                      |                     | (75,163)               |
| Total   |                     | (279,543)              |
| <b>8 Actuarial Value of Assets @ 12-31-2002 (4+7)</b> |                     | 1,863,701              |

# Appendix B

## Membership Data

---



**TABLE 4**  
**Summary of Data Characteristics**

|   | <u>December 31,<br/>2000</u> | <u>December 31,<br/>2001</u> | <u>December 31,<br/>2002</u> |
|---|------------------------------|------------------------------|------------------------------|
| <b>Active Members</b>                                       |                              |                              |                              |
| Number  | 8,160                        | 8,093                        | 7,588                        |
| Total Annualized Earnings of Members<br>as of 12/31 (000's) | \$299,827                    | \$335,965                    | \$312,130                    |
| Average Earnings  | 36,744                       | 41,513                       | 41,135                       |
| <b>Benefit Recipients</b>                                   |                              |                              |                              |
| Number  | 4,288                        | 4,389                        | 4,608                        |
| Total Annual Retirement Income (000's)                      | \$74,440                     | \$82,913                     | \$94,670                     |
| Total Annual Health Supplement (000's)                      | \$6,432                      | \$6,583                      | \$6,829                      |
| Average Total Annual Benefit                                | \$18,860                     | \$20,391                     | \$22,027                     |
| <b>Inactive Members</b>                                     |                              |                              |                              |
| Number  | 424                          | 412                          | 457                          |

**TABLE 5**  
**Distribution of Active Members and Payroll by Age and Years of Service**  
**as of December 31, 2002**

| Age           | Years of Service |            |            |            |            |            |            | Totals      |
|---------------|------------------|------------|------------|------------|------------|------------|------------|-------------|
|               | Under 1          | 1-4        | 5-9        | 10-14      | 15-19      | 20-24      | 25-29      |             |
| Under 20      | -                | -          | -          | -          | -          | -          | -          | -           |
| 20-24         | 13               | 83         | 3          | -          | -          | -          | -          | 99          |
|               | 178,352          | 2,171,894  | 75,731     | 2          | -          | -          | -          | 2,425,979   |
| 25-29         | 47               | 303        | 103        | 2          | -          | -          | -          | 455         |
|               | 843,083          | 9,088,446  | 3,328,686  | 69,156     | -          | -          | -          | 13,329,371  |
| 30-34         | 31               | 345        | 270        | 65         | 1          | -          | -          | 712         |
|               | 395,252          | 10,820,378 | 9,542,196  | 2,512,561  | 47,987     | -          | -          | 23,318,374  |
| 35-39         | 36               | 364        | 305        | 177        | 150        | 14         | -          | 1,046       |
|               | 621,111          | 12,161,034 | 11,193,092 | 7,886,815  | 6,579,709  | 662,370    | -          | 39,104,131  |
| 40-44         | 32               | 337        | 287        | 229        | 300        | 194        | 15         | 1,394       |
|               | 678,473          | 11,666,443 | 11,046,295 | 10,128,911 | 14,281,533 | 9,040,061  | 742,776    | 57,584,492  |
| 45-49         | 21               | 278        | 274        | 177        | 263        | 312        | 152        | 1,491       |
|               | 294,533          | 10,744,168 | 10,975,811 | 8,070,272  | 12,762,688 | 15,872,838 | 7,936,639  | 67,386,913  |
| 50-54         | 17               | 206        | 205        | 157        | 240        | 272        | 148        | 1,303       |
|               | 327,935          | 7,623,846  | 8,206,595  | 7,346,390  | 11,583,811 | 14,034,632 | 7,728,484  | 59,959,765  |
| 55-59         | 8                | 112        | 119        | 103        | 167        | 126        | 49         | 724         |
|               | 164,039          | 4,353,555  | 4,944,128  | 4,766,114  | 7,758,449  | 6,172,308  | 2,508,995  | 33,125,905  |
| 60-64         | 3                | 53         | 65         | 53         | 58         | 23         | 15         | 280         |
|               | 144,029          | 2,017,645  | 2,618,066  | 2,525,829  | 2,761,634  | 984,683    | 678,710    | 12,289,014  |
| 65 & Over     | -                | 11         | 15         | 13         | 17         | 11         | 8          | 84          |
|               | -                | 328,540    | 593,034    | 550,450    | 837,236    | 550,140    | 300,028    | 446,445     |
| <b>Totals</b> | 208              | 2,092      | 1,646      | 976        | 1,196      | 952        | 387        | 7,588       |
|               | 3,646,807        | 70,975,949 | 62,523,634 | 43,856,500 | 58,633,047 | 47,317,032 | 19,895,632 | 312,129,817 |

**TABLE 6**  
**Distribution of Benefit Recipients**  
**as of December 31, 2002**

| <u>Age</u>           | <u>Number</u> | <u>Annual Benefit*</u> | <u>Annual Average Benefit</u> |
|----------------------|---------------|------------------------|-------------------------------|
| <b>Under 50</b>      | 121           | 1,483,696              | 12,262                        |
| <b>50-54</b>         | 435           | 14,412,641             | 33,133                        |
| <b>55-59</b>         | 565           | 17,478,203             | 30,935                        |
| <b>60-64</b>         | 659           | 15,501,761             | 23,523                        |
| <b>65-69</b>         | 702           | 14,256,786             | 20,309                        |
| <b>70-74</b>         | 690           | 12,429,513             | 18,014                        |
| <b>75-79</b>         | 535           | 8,715,294              | 16,290                        |
| <b>80-84</b>         | 501           | 6,594,798              | 13,163                        |
| <b>85-89</b>         | 262           | 2,716,800              | 10,369                        |
| <b>90 &amp; Over</b> | 138           | 1,080,152              | 7,827                         |
| <b>Total</b>         | 4,608         | 94,669,645             | 20,545                        |

\* Does not include Health Supplement.

# Appendix C

## Actuarial Determinations

---

**TABLE 7**  
**Summary of Actuarial Values**  
**As of December 31, 2002**  
**All Actuarial Assumptions**  
**(\$ in 000's)**

**Entry Age Actuarial Values**

|   | APV* of<br>Projected<br>Benefits | Entry Age Actuarial Values                 |                   |                         |
|---|----------------------------------|--|-------------------|-------------------------|
|   |                                  | Actuarial<br>Accrued<br>Liability<br>(AAL) | Normal Cost<br>\$ | Normal Cost<br>% of Pay |
| <b>1 Active Members</b>                                   |                                  |  |                   |                         |
| a. Retirement   | \$ 1,395,306                     | \$ 1,142,847                               | \$ 36,344         | 11.45%                  |
| b. Death  | 45,452                           | 27,648                                     | 2,668             | 0.84%                   |
| c. Disability   | 19,370                           | 10,393                                     | 1,302             | 0.41%                   |
| d. Termination  | 108,585                          | 36,421                                     | 10,202            | 3.22%                   |
| e. Health Subsidy   | 44,209                           | 33,045                                     | 1,841             | 0.59%                   |
| <b>Total</b>  | <u>1,612,922</u>                 | <u>1,250,354</u>                           | <u>52,357</u>     | <u>16.51%</u>           |
| <b>2 Benefit Recipients</b>                               | 1,112,754                        | 1,112,754                                  |                   |                         |
| <b>3 Other Inactive</b>                                   | 36,461                           | 36,461                                     |                   |                         |
| <b>4 Total Actuarial Values<br/>of Benefits</b>           | 2,762,137                        | 2,399,569                                  | 52,357            | 16.51%                  |
| <b>5 Actuarial Value of Assets</b>                        |                                  | 1,863,701                                  |                   |                         |
| <b>6 Unfunded Actuarial<br/>Accrued Liability (4 - 5)</b> |                                  | 535,868                                    |                   |                         |
| <b>7 Funding Ratio</b>                                    |                                  | 77.67%                                     |                   |                         |

\* APV - Actuarial Present Value

**TABLE 7a**  
**Summary of Actuarial Values**  
**As of December 31, 2002**  
**No Pay Increase 2003 and 2004**  
**(\$ in 000's)**

|   | APV* of<br>Projected<br>Benefits | Entry Age Actuarial Values                 |                   |                         |
|---|----------------------------------|--|-------------------|-------------------------|
|   |                                  | Actuarial<br>Accrued<br>Liability<br>(AAL) | Normal Cost<br>\$ | Normal Cost<br>% of Pay |
| <b>1 Active Members</b>                                   |                                  |  |                   |                         |
| a. Retirement   | \$ 1,289,688                     | \$ 1,075,421                               | \$ 32,384         | 10.78%                  |
| b. Death  | 41,636                           | 26,054                                     | 2,458             | 0.82%                   |
| c. Disability   | 17,745                           | 9,880                                      | 1,204             | 0.40%                   |
| d. Termination  | 100,008                          | 35,306                                     | 9,606             | 3.20%                   |
| e. Health Subsidy   | 44,205                           | 33,690                                     | 1,807             | 0.60%                   |
| <b>Total</b>  | <u>1,493,282</u>                 | <u>1,180,351</u>                           | <u>47,459</u>     | <u>15.80%</u>           |
| <b>2 Benefit Recipients</b>                               | 1,112,754                        | 1,112,754                                  |                   |                         |
| <b>3 Other Inactive</b>                                   | 36,461                           | 36,461                                     |                   |                         |
| <b>4 Total Actuarial Values<br/>of Benefits</b>           | 2,642,498                        | 2,329,567                                  | 47,459            | 15.80%                  |
| <b>5 Actuarial Value of Assets</b>                        |                                  | 1,863,701                                  |                   |                         |
| <b>6 Unfunded Actuarial<br/>Accrued Liability (4 - 5)</b> |                                  | 465,866                                    |                   |                         |
| <b>7 Funding Ratio</b>                                    |                                  | 80.00%                                     |                   |                         |

\* APV – Actuarial Present Value

**TABLE 8**  
**Development of 2003 Actuarial Contribution**  
**All Actuarial Assumptions**  
**(\$ in 000's)**

|  | <b>\$</b>       | <b>% of Pay</b> |
|--|-----------------|-----------------|
| <b>1 Actuarial Requirement</b>                                 |                 |                 |
| a. Payment to Amortize UAAL over 30 years                      | \$32,172        | 9.91%           |
| b. Normal Cost for 2003  | 52,357          | 16.51%          |
| c. Administrative Expense                                      | 1,900           | 0.61%           |
| <b>Total</b>   | <b>\$86,429</b> | <b>27.03%</b>   |
| <br><b>2 Contribution of Support Rate</b>                      | <br>\$35,708    | <br>11.00%      |
|  | 21,100          | 6.50%           |
|  | <b>\$56,808</b> | <b>17.50%</b>   |
| <br><b>3 Excess of Actuarial Requirement over Support Rate</b> | <br>\$29,621    | <br>9.53%       |

**TABLE 8a**  
**Development of 2003 Actuarial Contribution**  
**No Pay Increases for 2003 and 2004**  
**(\$ in 000's)**

|  | <u>\$</u>       | <u>% of Pay</u> |
|--|-----------------|-----------------|
| <b>1 Actuarial Requirement</b>                             |                 |                 |
| a. Payment to Amortize UAAL over 30 years                  | \$27,969        | 8.62%           |
| b. Normal Cost for 2003                                    | 47,459          | 15.80%          |
| c. Administrative Expense                                  | 1,900           | 0.61%           |
| <b>Total</b>   | <u>\$77,328</u> | <u>25.02%</u>   |
| <br>   |                 |                 |
| <b>2 Contribution of Support Rate</b>                      | \$35,708        | 11.00%          |
|  | 21,100          | 6.50%           |
|  | <u>\$56,808</u> | <u>17.50%</u>   |
| <br>   |                 |                 |
| <b>3 Excess of Actuarial Requirement over Support Rate</b> | \$20,521        | 7.52%           |



**TABLE 9**  
**Analysis of Change in Unfunded**  
**Actuarial Accrued Liability**  
**For the Year Ending December 31, 2002**  
**(\$ in 000's)**

|   |          |                  |
|---|----------|------------------|
| <b>1 UAAL as of December 31, 2001</b>                     |          | <b>\$259,447</b> |
| <b>2 Expected Change in UAAL during 2002</b>              |          |                  |
| a. Normal Cost for 2002                                   | \$54,454 |                  |
| b. Contributions 2002                                     | (58,377) |                  |
| c. Interest adjustments on 1, 2a, & 2b to Year End @ 8.5% | 21,886   |                  |
| d. Expected change in UAAL                                | 17,963   |                  |
| <b>3 Net Actuarial (Gains) &amp; Losses</b>               |          | <b>258,458</b>   |
| <b>4 UAAL as of December 31, 2002</b>                     |          | <b>535,868</b>   |

**TABLE 10**  
**Analysis of Actuarial Gains and Losses**  
**For 2002**  
**(\$ in 000's)**

|                                    | 2002              |
|------------------------------------|-------------------|
| Investment Return                  | \$ 279,528        |
| Salary Increase                    | (45,407)          |
| Age and Service Retirement         | 17,493            |
| General Employment Termination     | (10,435)          |
| Disability Incidence               | 57                |
| Active Mortality                   | (1,439)           |
| Benefit Recipient Mortality        | (3,532)           |
| Other                              | 22,193            |
| <b>Total Actuarial (Gain) Loss</b> | <b>\$ 258,458</b> |

**Appendix D**  
**Information for GASB No. 25 & 27**

---

**TABLE 11**  
**Schedule of Funding Status**  
(\$ in 000's)

| End<br>of<br>Year | Actuarial<br>Value of<br>Assets<br>(a) | AAL<br>(b)  | UAAL<br>(b-a) | Funding<br>Ratio<br>(a/b) | Payroll*<br>(c) | UAAL as<br>% of Payroll<br>((b-a)/c) |
|-------------------|--|-------------|---------------|---------------------------|-----------------|--------------------------------------|
| 1992              | \$854,000                              | \$1,107,000 | \$253,000     | 77.15%                    | \$200,000       | 126.50%                              |
| 1993              | 945,000                                | 1,123,000   | 178,000       | 84.15%                    | 200,000         | 89.00%                               |
| 1994              | 991,000                                | 1,199,000   | 208,000       | 82.65%                    | 208,000         | 100.00%                              |
| 1995              | 1,176,000                              | 1,459,000   | 283,000       | 80.60%                    | 243,357         | 116.30%                              |
| 1996              | 1,310,081                              | 1,585,081   | 275,000       | 82.65%                    | 257,169         | 106.90%                              |
| 1997              | 1,437,533                              | 1,673,761   | 236,228       | 85.89%                    | 261,799         | 90.20%                               |
| 1998              | 1,617,468                              | 1,750,430   | 132,962       | 92.40%                    | 275,547         | 48.30%                               |
| 1999              | 1,862,644                              | 1,873,998   | 11,353        | 99.39%                    | 282,127         | 4.00%                                |
| 2000              | 1,997,828                              | 2,038,078   | 40,250        | 98.03%                    | 298,355         | 13.50%                               |
| 2001              | 2,017,041                              | 2,276,488   | 259,447       | 88.60%                    | 332,842         | 77.90%                               |
| 2002              | 1,863,701                              | 2,399,569   | 535,868       | 77.67%                    | 324,615         | 165.08%                              |

\* 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)

| <u>Year</u> | <u>Total ARC*</u> | <u>Member Contributions</u> | <u>Net City ARC</u> | <u>Actual City Contributions</u> | <u>City Cont. as Percent of Net ARC</u> |
|-------------|-------------------|-----------------------------|---------------------|----------------------------------|---|
| 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            | 21,771                      | 49,475              | 36,606                           | 73.99 %                                 |
| 2003        | 86,429            | 20,784 **                   | 65,645 **           |                                  |   |

\* 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**

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

*\* Includes Inflation at 4.0%.*

# Appendix E

## Analysis of 2002 Experience

---

---

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

| Service<br>Beginning<br>of Year | Experience for 2002 |                       |                       |               | Experience for 2001/2002 |                       |                       |                |
|---------------------------------|---------------------|-----------------------|-----------------------|---------------|--------------------------|-----------------------|-----------------------|----------------|
|                                 | Number              | Expected Pay          | Actual Pay            | Ratio A/E     | Number                   | Expected Pay          | Actual Pay            | Ratio A/E      |
| Under 5                         | 2,416               | \$ 86,264,424         | \$ 82,199,700         | 95.29%        | 4,949                    | \$ 163,411,052        | \$ 169,044,715        | 103.45%        |
| 5-9                             | 1,452               | 58,928,113            | 56,384,011            | 95.68%        | 2,767                    | 108,197,735           | 109,765,117           | 101.45%        |
| 10-14                           | 925                 | 45,066,594            | 42,247,111            | 93.74%        | 1,920                    | 88,960,557            | 89,256,408            | 100.33%        |
| 15-19                           | 1,314               | 66,982,404            | 62,823,021            | 93.79%        | 2,666                    | 127,887,527           | 128,809,402           | 100.72%        |
| 20-24                           | 865                 | 45,644,624            | 42,803,085            | 93.77%        | 1,672                    | 83,761,565            | 83,799,391            | 100.05%        |
| 25-29                           | 332                 | 18,779,578            | 17,624,420            | 93.85%        | 728                      | 38,266,545            | 38,961,723            | 101.82%        |
| 30 & Over                       | 76                  | 4,454,723             | 4,193,418             | 94.13%        | 163                      | 9,061,815             | 9,169,961             | 101.19%        |
| <b>Total</b>                    | <b>7,380</b>        | <b>\$ 326,120,459</b> | <b>\$ 308,274,765</b> | <b>94.53%</b> | <b>14,865</b>            | <b>\$ 619,546,795</b> | <b>\$ 628,806,716</b> | <b>101.49%</b> |
| <b>Over 10</b>                  | <b>3,512</b>        | <b>\$ 180,927,923</b> | <b>\$ 169,691,054</b> | <b>93.79%</b> | <b>7,149</b>             | <b>\$ 347,938,009</b> | <b>\$ 349,996,884</b> | <b>100.59%</b> |



**TABLE 15**  
**Analysis of Retirement Experience**

| Age                   | 2002 Retirement |               |                | 2001/2002 Retirement |               |                |
|-----------------------|-----------------|---------------|----------------|----------------------|---------------|----------------|
|                       | Actual          | Expected      | Ratio A/E      | Actual               | Expected      | Ratio A/E      |
| 46                    | 1               | -             | N/A            | 1                    | -             | N/A            |
| 47                    | 2               | -             | N/A            | 2                    | -             | N/A            |
| 48                    | 5               | 3.13          | 159.74%        | 5                    | 6.57          | 76.10%         |
| 49                    | 11              | 5.53          | 198.81%        | 18                   | 9.12          | 197.30%        |
| 50                    | 34              | 23.13         | 147.03%        | 54                   | 37.13         | 145.45%        |
| 51                    | 20              | 15.09         | 132.56%        | 30                   | 32.60         | 92.03%         |
| 52                    | 27              | 19.98         | 135.14%        | 39                   | 36.78         | 106.04%        |
| 53                    | 30              | 21.91         | 136.96%        | 33                   | 36.64         | 90.08%         |
| 54                    | 33              | 18.53         | 178.07%        | 47                   | 35.69         | 131.68%        |
| 55                    | 26              | 20.10         | 129.34%        | 40                   | 31.61         | 126.53%        |
| 56                    | 12              | 12.44         | 96.44%         | 17                   | 22.22         | 76.50%         |
| 57                    | 15              | 11.31         | 132.59%        | 25                   | 22.58         | 110.70%        |
| 58                    | 9               | 10.20         | 88.27%         | 19                   | 21.58         | 88.06%         |
| 59                    | 20              | 11.45         | 174.62%        | 29                   | 20.53         | 141.23%        |
| 60                    | 23              | 26.24         | 87.66%         | 36                   | 44.98         | 80.04%         |
| 61                    | 10              | 9.15          | 109.29%        | 18                   | 18.00         | 100.00%        |
| 62                    | 11              | 7.65          | 143.79%        | 18                   | 15.08         | 119.36%        |
| 63                    | 11              | 6.30          | 174.60%        | 20                   | 12.15         | 164.61%        |
| 64                    | 10              | 4.35          | 229.89%        | 15                   | 8.48          | 176.89%        |
| 65                    | 7               | 4.36          | 160.46%        | 14                   | 10.25         | 136.55%        |
| 66                    | 11              | 4.18          | 263.47%        | 15                   | 8.36          | 179.53%        |
| 67                    | 5               | 3.42          | 146.20%        | 5                    | 4.56          | 109.65%        |
| 68                    | 0               | 0.95          | 0.00%          | 1                    | 2.70          | 37.04%         |
| 69                    | 1               | 1.33          | 75.19%         | 2                    | 2.66          | 75.19%         |
| 70 & Over             | 8               | 28.00         | 28.57%         | 15                   | 58.00         | 25.86%         |
| <b>Total</b>          | <b>342</b>      | <b>268.73</b> | <b>127.27%</b> | <b>518</b>           | <b>498.27</b> | <b>103.96%</b> |
| <b>Total Under 70</b> | <b>334</b>      | <b>240.73</b> | <b>138.75%</b> | <b>503</b>           | <b>440.27</b> | <b>114.25%</b> |

**TABLE 15a**  
**Analysis of Retirement Experience**  
**Age Groups**

| Age Group             | 2002 Retirements |               |                | 2001/2002 Retirements |               |                |
|-----------------------|------------------|---------------|----------------|-----------------------|---------------|----------------|
|                       | Actual           | Expected      | Ratio A/E      | Actual                | Expected      | Ratio A/E      |
| Under 55              | 163              | 107.29        | 151.92%        | 229                   | 194.52        | 117.72%        |
| 55-59                 | 82               | 65.51         | 125.18%        | 130                   | 118.53        | 109.68%        |
| 60-64                 | 65               | 53.69         | 121.07%        | 107                   | 98.69         | 108.42%        |
| 65-69                 | 24               | 14.24         | 168.57%        | 37                    | 28.53         | 129.70%        |
| 70 & Over             | 8                | 28.00         | 28.57%         | 15                    | 58.00         | 25.86%         |
| <b>Total</b>          | <b>342</b>       | <b>268.73</b> | <b>127.27%</b> | <b>518</b>            | <b>498.27</b> | <b>103.96%</b> |
| <b>Total Under 70</b> | <b>334</b>       | <b>240.73</b> | <b>138.75%</b> | <b>503</b>            | <b>440.27</b> | <b>114.25%</b> |

TABLE 16

Analysis of Turnover Experience

| Years of Service | 2002 Quits |               |               | 2001/2002 Quits |               |               |
|------------------|------------|---------------|---------------|-----------------|---------------|---------------|
|                  | Actual     | Expected      | Ratio A/E     | Actual          | Expected      | Ratio A/E     |
| 0-4              | 249        | 339.34        | 73.38%        | 551             | 664.79        | 82.88%        |
| 5-9              | 76         | 67.05         | 113.35%       | 147             | 127.82        | 115.01%       |
| 10-14            | 27         | 31.64         | 85.34%        | 57              | 64.40         | 88.51%        |
| 15-19            | 20         | 31.22         | 64.06%        | 66              | 63.16         | 104.50%       |
| 20-24            | 18         | 8.86          | 203.16%       | 43              | 16.60         | 259.04%       |
| 25-29            | 10         | 2.24          | 446.43%       | 22              | 4.83          | 455.49%       |
| <b>Total</b>     | <b>400</b> | <b>480.35</b> | <b>83.27%</b> | <b>886</b>      | <b>941.60</b> | <b>94.10%</b> |

TABLE 17

Analysis of Active Mortality Experience

| Age          | 2002 Deaths |              |               | 2001/2002 Deaths |              |               |
|--------------|-------------|--------------|---------------|------------------|--------------|---------------|
|              | Actual      | Expected     | Ratio A/E     | Actual           | Expected     | Ratio A/E     |
| 20-24        | -           | 0.09         | 0.00%         | -                | 0.20         | 0.00%         |
| 25-29        | -           | 0.27         | 0.00%         | 1                | 0.57         | 175.44%       |
| 30-34        | -           | 0.46         | 0.00%         | -                | 0.93         | 0.00%         |
| 35-39        | -           | 0.94         | 0.00%         | 1                | 1.94         | 51.55%        |
| 40-44        | 2           | 1.89         | 105.82%       | 3                | 3.77         | 79.58%        |
| 45-49        | -           | 3.22         | 0.00%         | 1                | 6.45         | 15.50%        |
| 50-54        | 2           | 4.26         | 46.95%        | 3                | 8.51         | 35.25%        |
| 55-59        | 2           | 3.52         | 56.82%        | 5                | 6.78         | 73.75%        |
| 60 and Over  | 2           | 2.64         | 75.76%        | 2                | 5.18         | 38.61%        |
| <b>Total</b> | <b>8</b>    | <b>17.29</b> | <b>46.27%</b> | <b>16</b>        | <b>34.33</b> | <b>46.60%</b> |

TABLE 18

Analysis of Active Disability Experience

| Age          | 2002 Disabilities |              |               | 2001/2002 Disabilities |              |               |
|--------------|-------------------|--------------|---------------|------------------------|--------------|---------------|
|              | Actual            | Expected     | Ratio A/E     | Actual                 | Expected     | Ratio A/E     |
| 20-24        | -                 | 0.02         | 0.00%         | -                      | 0.04         | 0.00%         |
| 25-29        | -                 | 0.10         | 0.00%         | -                      | 0.19         | 0.00%         |
| 30-34        | -                 | 0.23         | 0.00%         | -                      | 0.44         | 0.00%         |
| 35-39        | -                 | 0.51         | 0.00%         | -                      | 1.02         | 0.00%         |
| 40-44        | 1                 | 1.28         | 78.13%        | 2                      | 2.50         | 80.00%        |
| 45-49        | 1                 | 2.69         | 37.17%        | 2                      | 5.26         | 38.02%        |
| 50-54        | 5                 | 3.51         | 142.45%       | 7                      | 6.85         | 102.19%       |
| 55-59        | 2                 | 2.54         | 78.74%        | 2                      | 4.72         | 42.37%        |
| 60 and Over  | 1                 | 0.00         | N/A           | 1                      | 0.00         | N/A           |
| <b>Total</b> | <b>10</b>         | <b>10.88</b> | <b>91.91%</b> | <b>14</b>              | <b>21.02</b> | <b>66.60%</b> |

**TABLE 19**  
**Analysis of Retiree Mortality Experience**

| Age          | 2002 Experience |               |                | 2001/2002 Experience |               |                |
|--------------|-----------------|---------------|----------------|----------------------|---------------|----------------|
|              | Actual          | Expected      | Ratio A/E      | Actual               | Expected      | Ratio A/E      |
| Under 60     | 9               | 4.06          | 221.83%        | 13                   | 7.96          | 163.38%        |
| 60-64        | 11              | 7.04          | 156.36%        | 18                   | 13.68         | 131.62%        |
| 65-69        | 19              | 11.95         | 158.96%        | 37                   | 23.87         | 154.99%        |
| 70-74        | 27              | 18.75         | 144.03%        | 50                   | 37.45         | 133.52%        |
| 75-79        | 26              | 21.81         | 119.21%        | 54                   | 43.94         | 122.89%        |
| 80-84        | 45              | 26.51         | 169.74%        | 79                   | 54.47         | 145.03%        |
| 85-89        | 26              | 19.30         | 134.72%        | 54                   | 36.99         | 145.99%        |
| 90 & over    | 18              | 12.50         | 144.05%        | 42                   | 26.05         | 161.26%        |
| <b>Total</b> | <b>181</b>      | <b>121.91</b> | <b>148.47%</b> | <b>347</b>           | <b>244.40</b> | <b>141.98%</b> |

# 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,<br>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> |
|---------------------|---------------|---------------|
| <b>0-55</b>         | 0.750         | 0.700         |
| <b>56-59</b>        | Grade to .900 | 0.700         |
| <b>60-77</b>        | 0.900         | 0.850         |
| <b>78-80</b>        | Grade to .825 | 0.850         |
| <b>80-99</b>        | 0.825         | 1.000         |
| <b>100 and Over</b> | 1.000         | 1.000         |

Sample Rates follow (rate per 1,000):

| <u>Age</u> | <u>Mortality Rate</u> |               |
|------------|-----------------------|---------------|
|            | <u>Male</u>           | <u>Female</u> |
| <b>30</b>  | 0.80                  | 0.80          |
| <b>40</b>  | 1.60                  | 1.10          |
| <b>50</b>  | 4.20                  | 2.60          |
| <b>60</b>  | 12.40                 | 8.40          |
| <b>70</b>  | 31.30                 | 21.10         |
| <b>80</b>  | 67.00                 | 57.80         |
| <b>90</b>  | 150.50                | 132.20        |

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> |
|--------------|-------------|---------------|
| <b>0-69</b>  | 70%         | 50%           |
| <b>70-99</b> | 85          | 75            |
| <b>100+</b>  | 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    | 1,000               | 1,000      |

## Actuarial Assumptions

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

| <u>Years of Service</u> | <u>Terminations<br/>(per 1,000)</u> |
|-------------------------|-------------------------------------|
| 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).

| <u>Age</u> | <u>Service</u> |                |                |            |
|------------|----------------|----------------|----------------|------------|
|            | <u>5 – 9</u>   | <u>10 – 14</u> | <u>15 – 19</u> | <u>20+</u> |
| 20-30      | 1,000          | 1,000          | 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%.