# Fairmont Policemen's <br> Relief Association 

December 31, 2003
Actuarial Valuation

June, 2004

LCP \& R JUL O1 2004

# FAIRMONT POLICEMEN'S RELIEF ASSOCIATION 

December 31, 2003 Actuarial Valuation

## Table of Contents

Page
Introduction
Introduction and actuarial certification ..... 1
Summary of results. ..... 3
Valuation data - plan assets and members
Actuarial value of assets. ..... 4
Summary of member data. ..... 5
Summary of changes in membership. ..... 6
Valuation results - actuarial values
Actuarial values used to determine contribution. ..... 7
Changes in the unfunded actuarial accrued liability. ..... 8
Accounting basis results - GASB disclosure information
Statement of plan net assets - market value ..... 9
Statement of changes in plan net assets. ..... 10
Schedule of funding progress. ..... 11
Schedule of employer contributions ..... 12
Historical tables
Historical funding ratio schedule. ..... 13
History of employer contributions ..... 14
Comparative schedule of active members ..... 15
Comparative schedule of inactive members. ..... 16
Supplementary information
Actuarial assumptions and methods ..... 17
Summary of plan provisions ..... 18

FAIRMONT POLICEMEN'S RELIEF ASSOCIATION
December 31, 2003 Actuarial Valuation

## Introduction

## Purpose

This report presents the results of the December 31, 2003 valuation and benefit study for the Fairmont Policemen's Relief Association. Its primary purposes are:

- to determine the funded status as of December 31, 2003,
- to determine the amortization payment for 2003, and
- to present information required to be disclosed under General Accounting Standards Board Statement No. 25 (GASB 25) as of December 31, 2003.


## Sources of Data

The Relief Association supplied December 31, 2003 census data for all members. Roessler, Nuss \& Co., P.A. provided audited asset data for the Special Fund. We have relied on this data in preparing this report.

## Changes from the Previous Valuation

The prior actuarial valuation of the plan was prepared as of December 31, 2002. The actuarial assumptions and methods used to prepare this report are the same as those used in the 2002 report. The annual benefit value per unit increased from $\$ 687.56$ on December 31, 2002 to $\$ 703.06$ on December 31,2003 , a $2.25 \%$ increase, $1.25 \%$ less than the assumed increase of $3.5 \%$.

## Summary of Valuation Results

The funded status of the plan increased from $82.1 \%$ on December 31, 2002 to $84.3 \%$ on December 31, 2003. The increase in funded status was caused by actuarial liability gains over the past year: the benefit increase was smaller than assumed ( $2.25 \%$ versus $3.50 \%$ ). This caused the amount of the amortization payment to decrease from $\$ 230,291$ last year, to $\$ 218,835$ this year.

Note that although the market value of assets increased from last year $(\$ 6,178,561$ to $\$ 6,569,640)$, the actuarial value, which is based on book value, actually declined (from $\$ 6,431,374$ to $\$ 6,393,853$ ). Nonetheless, the favorable investment returns kept the actuarial value higher than it otherwise would have been.

## FAIRMONT POLICEMEN'S RELIEF ASSOCIATION

December 31, 2003 Actuarial Valuation

## Introduction (continued)

## Actuarial Certification

We certify that the actuarial valuation has been prepared in accordance with Minnesota Statutes
$\S \$ 356.20-.23$ and $\$ 69.77$ as they relate to local police department relief associations in general and the Fairmont Policemen's Relief Association in particular.

Respectfully submitted,


Paul D. Krueger, JD, EA
Consulting Actuary


Sandra L. Bruns, FSA, EA
Consulting Actuary

## Summary of Results

| A. Membership data* | December 31,2002 | December 31, 2003 |
| :---: | :---: | :---: |
| 1. Liability Duration |  |  |
| a. Average annuity factor | 16.4 | 15.8 |
| b. Average life expectancy | 15.7 | 15.1 |
| 2 . Number of members |  |  |
| a. Retirees | 11 | 10 |
| b. Surviving spouses | 3 | 4 |
| c. Total | 14 | 14 |
| B. Amortization payments |  |  |
| 1. Unfunded actuarial accrued liability | 1,399,178 | 1,166,279 |
| 2. Amortization payment | 230,291 | 218,835 |
| C. Value of plan assets | December 31, 2002 | December 31, 2003 |
| 1. Market value | 6,178,561 | 6,569,640 |
| 2. Actuarial value (for calculating contributions) | 6,431,374 | 6,393,853 |
| 3. Investment return on actuarial value of assets | -2.66\% | 11.03\% |
| D. Benefit liabilities |  |  |
| 1. Present value of future benefits | 7,830,552 | 7,560,132 |
| 2. Actuarial accrued liability | 7,830,552 | 7,560,132 |
| E. Funded status |  |  |
| 1. Actuarial value of assets as a \% of liabilities | 82.1\% | 84.6\% |
| 2. Market value of assets as a \% of liabilities | 78.9\% | 86.9\% |

*This is a closed group, all membesr have retired, so there are only retirees and beneficiaries.

December 31, 2003 Actuarial Valuation

## Funding Basis

## Actuarial Value of Assets

## A. Unrealized gain

| Year Ending <br> December 3l: | Market <br> Value | Book <br> Value | Unrealized Gain <br> (Market - Book) |
| :---: | :---: | :---: | :---: |
| 2000 |  |  |  |
| 2001 | $7,106,264$ | $7,201,645$ | $(95,381)$ |
| 2002 | $6,757,468$ | $7,061,902$ | $(304,434)$ |
| 2003 | $6,178,561$ | $6,557,781$ | $(379,220)$ |
|  | $6,569,640$ | $6,305,960$ | 263,680 |

December 31, 2002 December 31, 2003

## B. Actuarial value of assets

1. Book value
2. One-third of unrealized gain
3. Actuarial value $(1 .+2$.)

| $6,557,781$ | $6,305,960$ |
| ---: | ---: |
| $(126,407)$ | $\underline{87,893}$ |
| $\$ 6,431,374$ | $\$ 6,393,853$ |

## Summary of Member Data

December 31, 2002 December 31, 2003

| A. Retirees |  |  |
| :--- | ---: | ---: |
| 1. Age \& service | 11 | 10 |
| 2. Total annual benefits | $\$ 422,162$ | $\$ 396,526$ |
| 3. Average annual benefit | $\$ 38,378$ | $\$ 39,653$ |
| 4. Average age | 63.6 | 64.4 |
|  |  |  |
| B. Beneficiaries |  |  |
| 1. Surviving spouses | $\$ 72,194$ | $\$ 98,428$ |
| 2. Total annual benefits | $\$ 24,065$ | $\$ 24,607$ |
| 3. Average annual benefit | 73.3 | 72.0 |
| 4. Average age |  |  |
|  | 14 | 14 |
| C. Total number of members (A.l. + B.1.) |  | 10 |

This is a closed group, all membesr have retired, so there are only retirees and beneficiaries.

## Summary of Changes in Membership

|  | Retirees | Beneficiaries | Total |
| :--- | :---: | :---: | :---: |
| A. Number of members on December 31, 2002 | 11 | 3 | 14 |
| B. Changes in membership |  |  |  |
| 1. Deaths <br> 2. Corrections <br> 3. Total changes <br> C. Number of members on December 31, 2003 | $(1)$ | 1 | 0 |

Funding Basis

## Actuarial Values Used to Determine Contribution

December 31, 2002 December 31, 2003

| A. Actuarial present value of projected benefits (the value of all future benefits |  |  |
| :---: | :---: | :---: |
| to be paid to the current group of members) |  |  |
| 1. Active members | \$0 | \$0 |
| 2. Vested terminated members | 0 | 0 |
| 3. Retired members | 7,056,977 | 6,439,195 |
| 4. Spouses and children receiving benefits | 773,575 | 1,120,937 |
| 5. Disabled members receiving benefits | $\underline{0}$ | $\underline{0}$ |
| 6. Total present value of projected benefits | 7,830,552 | 7,560,132 |
| B. Actuarial accrued liability (the cost allocated to all prior years) |  |  |
| 1. Active members | \$0 | \$0 |
| 2. Vested terminated members | 0 | 0 |
| 3. Retired members | 7,056,977 | 6,439,195 |
| 4. Spouses and children receiving benefits | 773,575 | 1,120,937 |
| 5. Disabled members receiving benefits | $\underline{0}$ | 0 |
| 6 . Total actuarial accrued liability | 7,830,552 | 7,560,132 |
| C. Amortization of unfunded actuarial accrued liability |  |  |
| 1. Total actuarial accrued liability (A.7.) | \$7,830,552 | \$7,560,132 |
| 2. Actuarial value of assets | 6,431,374 | 6,393,853 |
| 3. Unfunded actuarial accrued liability (1.-2.) | 1,399,178 | 1,166,279 |
| 4. Funded status (2. /3.) | 82.1\% | 84.6\% |
| 5. Years left in amortization period | 7 | 6 |
| 6. Amortization payment | 230,291 | 218,835 |
| E. Key economic assumptions |  |  |
| 1. Funding interest rate | 5.00\% | 5.00\% |
| 2. Annual benefit increase rate | 3.50\% | 3.50\% |

This is a closed group, all membesr have retired, so thereis no normal cost.

## Changes in the Unfunded Actuarial Accrued Liability

A. Liability gain or loss for the year ending on December 31, 2003

1. Expected actuarial accrued liability (AAL)
a. AAL as of December 31, 2002\$7,830,552
b. Normal cost as of December 31, 2002 ..... 0
c. Interest to December 31, 2003 on the AAL and normal cost ..... 391,528
d. Expected benefit payments for the year (excluding post-retirement benefits)
e. Interest on benefit payments ( $1 / 2$ year)$(459,539)$
f. Expected AAL on December 31, 2003 (sum of a. through e.)$(11,488)$
2. Actual AAL on December 31, 2003
a. Before any assumption or plan changes ..... 7,393,459
b. After assumption changes, but before any unit value changes ..... 7,393,459
c. After assumption and unit value changes ..... 7,560,132
3. Liability (gain) or lossa. Due to plan experience different from that expected (2a. - 1f.)$(357,594)$
b. Due to changes in actuarial assumptions (2b. -2 a .) ..... 0
c. Due to changes in unit value ( $2 \mathrm{c} .-2 \mathrm{~b}$.) ..... 166,673d. Total (a. + b. + c.)(190,921)
B. Asset gain or loss for the year ending on December 31, 2003
4. Expected actuarial value of assets
a. Actuarial value of assets on December 31, 2002 ..... 6,431,374
b. Actual benefit payments and expenses for the year$(509,508)$
c. Contributions for the year ..... 230,291
d. Expected return on assets ..... 314,588
e. Expected actuarial value of assets on December 31, 2003 (sum of a. through d.) ..... 6,466,746
5. Actual actuarial value of assets on December 31, 2003
6. Asset (gain) or loss (1e. -2.)6,393,85372,892
C. Changes in the unfunded AAL
7. Expected unfunded AAL on December 31, 2003 ..... 1,284,307
8. Changes
a. Actuarial (gain) or loss other than change in unit value ..... $(284,702)$
b. Change in unit value different from expected ..... 166,673
c. Changes in actuarial methods and assumptions ..... 0
d. Total change
9. Unfunded AAL on December 31, 2003 ..... 1,166,279

## Accounting Basis

Statement of Plan Net Assets - Market Value

December 31, 2002 December 31, 2003

| A. Assets |  |  |
| :--- | ---: | ---: |
| 1. Cash | $\$ 0$ | $\$ 0$ |
| 2. Short-term investments | 0 | 0 |
| 3. Total | 0 | 0 |
|  |  |  |
| B. Receivables | 7,554 | 5,113 |
| 1. Accrued interest | 4,906 | 1,873 |
| 2. Distributions | 0 | 0 |
| 3. Acrued contributions | 12,460 | 6,986 |
| 4. Total | 0 | 0 |
|  |  |  |
| C. Accounts payable |  |  |
|  |  |  |
| D. Investments, at fair value | 88,072 | 41,185 |
| 1. Daily passport trust | $2,499,830$ | $2,926,411$ |
| 2. Mutual funds | 573,250 | $2,124,167$ |
| 3. Asset and mortgage backed securities | 58,211 | 818,567 |
| 4. Unit trusts | 509,596 | 0 |
| 5. Corporate bonds | 40,866 | 578,872 |
| 6. Government securities | 38,628 | 30,087 |
| 7. GNMA mortgage certificate | $6,166,101$ | $\mathbf{4 3 , 3 6 5}$ |
| 8. Limited partnerships | $6,562,654$ |  |
| 9. Total | $6,178,561$ | $6,569,640$ |

Accounting Basis<br>Statement of Changes in Plan Net Assets

December 31, 2002 December 31, 2003

| A. Additions |  |  |
| :---: | :---: | :---: |
| 1. Contributions |  |  |
| a. Employer | \$90,321 | \$230,291 |
| b. Plan members | 0 | 0 |
| c. Total | 90,321 | 230,291 |
| 2. Investment income |  |  |
| a. Interest and dividends | 286,339 | 272,363 |
| b. Partnership income | 3,804 | 7,404 |
| c. Realized gain (loss) | $(397,070)$ | $(252,371)$ |
| d. Change in unrealized appreciation (depreciation) | $(75,939)$ | 642,900 |
| e. Total | $(182,866)$ | 670,296 |
| 3. Total additions | $(92,545)$ | 900,587 |
| B. Deductions |  |  |
| 1. Service pensions | 386,727 | 378,615 |
| 2. Survivors pensions | 68,131 | 98,380 |
| 3. Distributions to members | 11,918 | 11,918 |
| 4. Professional services | 9,365 | 9,475 |
| 5. Salaries | 1,724 | 5,834 |
| 6. Other expenses | 8,497 | 5,286 |
| 7. Total deductions | 486,362 | 509,508 |
| C. Net increase | $(578,907)$ | 391,079 |
| D. Adjustments | 0 | 0 |
| E. Net assets held in special fund |  |  |
| 1. Beginning of year | \$6,757,468 | \$6,178,561 |
| 2. End of year | \$6,178,561 | \$6,569,640 |
| F. Investment return |  |  |
| 1. Market value of assets | -2.79\% | 11.10\% |
| 2. Actuarial value of assets | -2.66\% | 11.03\% |

## Accounting Basis

## Schedule of Funding Progress

(Dollar amounts in thousands)

| As of <br> December 31: | Actuarial <br> Value of <br> Assets | Actuarial <br> Accrued <br> Liability (AAL) | Unfunded <br> AAL <br> (UAAL) | Funded <br> Ratio | Covered <br> Payroll | UAAL as a \% <br> of Covered <br> Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1992 | $\$ 4,179$ | $\$ 5,952$ | $\$ 1,773$ | $70.2 \%$ | $\$ 218$ | $813.3 \%$ |
| 1993 | 4,570 | 5,781 | 1,211 | $79.1 \%$ | 223 | $543.0 \%$ |
| 1994 | 4,828 | 5,987 | 1,159 | $80.6 \%$ | 243 | $477.0 \%$ |
| 1995 | 5,274 | 6,066 | 792 | $86.9 \%$ | 200 | $396.0 \%$ |
| 1996 | 5,808 | 6,179 | 371 | $94.0 \%$ | 210 | $176.7 \%$ |
| 1997 | 6,516 | 6,164 | $(352)$ | $105.7 \%$ | 163 | $-216.0 \%$ |
| 1998 | 6,355 | 6,835 | 480 | $93.0 \%$ | 118 | $407.0 \%$ |
| 1999 | 7,113 | 7,174 | 61 | $99.1 \%$ | - | - |
| 2000 | 7,170 | 7,245 | 75 | $99.0 \%$ | - | - |
| 2001 | 6,960 | 7,573 | 613 | $91.9 \%$ | - | - |
| 2002 | 6,431 | 7,831 | 1,399 | $82.1 \%$ | - | - |
| 2003 | 6,394 | 7,560 | 1,166 | $84.6 \%$ | - | - |

## VANIWAARDEN

December 31, 2003 Actuarial Valuation

## Accounting Basis

Schedule of Employer Contributions

| Year Ended <br> December 31: | Annual Employer <br> Contributions |
| :---: | ---: |
| 1992 | $\$ 286,563$ |
| 1993 | 243,556 |
| 1994 | 243,726 |
| 1995 | 208,626 |
| 1996 | 163,177 |
| 1997 | 257,828 |
| 1998 | 5,829 |
| 1999 | 0 |
| 2000 | 7,529 |
| 2001 | 10,095 |
| 2002 | 90,321 |
| 2003 | 230,291 |

## Historical Tables

Historical Funding Ratio Schedule
(Dollar amounts in thousands)

| As of <br> December 31: | Actuarial <br> Accrued <br> Liability | Actuarial <br> Value of <br> Assets | Percent <br> Funded |
| :---: | ---: | ---: | ---: |
| 1989\# | $\$ 5,474$ | $\$ 2,981$ | $54.5 \%$ |
| 1990 | 5,627 | 3,137 | $55.7 \%$ |
| 1991 | 5,803 | 3,874 | $66.8 \%$ |
| 1992 | 5,952 | 4,179 | $70.2 \%$ |
| 1993 | 5,781 | 4,570 | $79.1 \%$ |
| 1994 | 5,987 | 4,828 | $80.6 \%$ |
| 1995 | 6,066 | 5,274 | $86.9 \%$ |
| 1996 | 6,179 | 5,808 | $94.0 \%$ |
| 1997 | 6,164 | 6,516 | $105.7 \%$ |
| 1998 | 6,835 | 6,355 | $93.0 \%$ |
| 1999 | 7,174 | 7,113 | $99.1 \%$ |
| 2000 | 7,245 | 7,170 | $99.0 \%$ |
| 2001 | 7,573 | 6,960 | $91.9 \%$ |
| 2002 | 7,831 | 6,431 | $82.1 \%$ |
| 2003 | 7,560 | 6,394 | $84.6 \%$ |

\#After court ruling on definition of prevailing pay.


December 31, 2003 Actuarial Valuation

## Historical Tables

## History of Employer Contributions

| Valuation <br> December 31: | Normal Cost <br> as a Percent <br> of Payroll | Amortization <br> of Unfunded <br> Actuarial <br> Liability |
| :---: | :---: | :---: |
| 1989 | $36.55 \%$ | $\$ 195,178$ |
| 1990 | $36.40 \%$ | 201,066 |
| 1991 | $36.26 \%$ | 161,011 |
| 1992 | $35.13 \%$ | 153,456 |
| 1993 | $35.13 \%$ | 109,085 |
| 1994 | $35.24 \%$ | 108,913 |
| 1995 | $35.51 \%$ | 78,140 |
| 1996 | $35.54 \%$ | 38,541 |
| 1997 | $36.49 \%$ | 0 |
| 1998 | $37.21 \%$ | 56,447 |
| 1999 | - | 7,529 |
| 2000 | - | 10,095 |
| 2001 | - | 90,321 |
| 2002 | - | 230,291 |
| 2003 | - | 218,835 |

December 31, 2003 Actuarial Valuation

## Historical Tables

Comparative Schedule of Active Members

| Valuation December 31: | Number of Active Members | Valuation Payroll | Averages |  |  | \% Increase |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age | Service | Pay |  |
| 1989 | 6 | \$238,546 | 44.5 | 18.8 | \$39,758 | 36.6\% |
| 1990 | 6 | 246,839 | 45.5 | 19.8 | 41,140 | 3.5\% |
| 1991 | 6 | 254,243 | 46.5 | 20.8 | 42,374 | 3.0\% |
| 1992 | 5 | 217,830 | 46.8 | 21.9 | 43,566 | 2.8\% |
| 1993 | 5 | 223,316 | 47.8 | 22.9 | 44,663 | 2.5\% |
| 1994 | 5 | 243,049 | 48.8 | 23.9 | 48,610 | 8.8\% |
| 1995 | 4 | 199,651 | 49.5 | 24.5 | 49,913 | 2.7\% |
| 1996 | 4 | 209,607 | 50.5 | 25.5 | 52,402 | 5.0\% |
| 1997 | 3 | 163,423 | 51.0 | 25.5 | 54,474 | 4.0\% |
| 1998 | 2 | 117,841 | 52.5 | 27.4 | 58,921 | 8.2\% |
| 1999 | 0 | - | - | - | - | - |
| 2000 | 0 | - | - | - | - | - |
| 2001 | 0 | - | - | - | - | - |
| 2002 | 0 | - | - | - | - | - |
| 2003 | 0 | - | - | - | - | - |

## Historical Tables

## Comparative Schedule of Inactive Members

|  | Number of Retirees and Beneficiaries <br> As of <br> December 31: |  |  | Added <br> to Rolls | Removed <br> from Rolls | On Valuation <br> Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Annual <br> Benefits | Present Value <br> of Benefits |  |  |  |
| 1989 | 0 | 0 | 14 |  | $\$ 245,520$ | $\$ 3,553,860$ |
| 1990 | 0 | 0 | 14 | 252,417 | $3,526,812$ |  |
| 1991 | 0 | 0 | 14 | 261,491 | $3,521,472$ |  |
| 1992 | 1 | 0 | 15 | 287,546 | $3,944,772$ |  |
| 1993 | 0 | 2 | 13 | 250,879 | $3,611,904$ |  |
| 1994 | 0 | 1 | 12 | 242,682 | $3,504,876$ |  |
| 1995 | 2 | 1 | 13 | 264,009 | $3,954,504$ |  |
| 1996 | 0 | 1 | 12 | 262,615 | $3,848,304$ |  |
| 1997 | 2 | 1 | 13 | 286,633 | $4,302,888$ |  |
| 1998 | 1 | 0 | 14 | 342,613 | $5,418,324$ |  |
| 1999 | 2 | 0 | 16 | 444,729 | $7,174,075$ |  |
| 2000 | 0 | 1 | 15 | 452,326 | $7,245,193$ |  |
| 2001 | 0 | 1 | 14 | 463,261 | $7,573,377$ |  |
| 2002 | 0 | 0 | 14 | 494,356 | $7,830,552$ |  |
| 2003 | 0 | 0 | 14 | 494,954 | $7,560,132$ |  |

## Actuarial Methods and Assumptions

1. Mortality
2. Withdrawal, disability, | The UP-1984 Mortality Table set forward 2 years for |
| :--- |
| males and set back 3 years for females. |
| retirement age |
| 3. Interest rate |
| As of December 31,1999 , there are no active members, |
| and the plan is closed to new members. |
| $5 \%$ compounded annually. |

3.5\% annually. Benefits for members retiring as
lieutenants remain level until they equal the benefits of a
first class patrolman.

## FAIRMONT POLICEMEN'S RELIEF ASSOCIATION

December 31, 2003 Actuarial Valuation

## Summary of Plan Provisions

| 1. Normal Retirement Benefit | $50 \%$ of "base pay" with 20 years of service, increased $2 \%$ <br> per year up to a maximum of $60 \%$. "Base pay" is the <br> prevailing pay of a first class patrolman for the City of <br> Fairmont. All members are now retired. Their benefit is <br> the benefit they are currently receiving, adjusted by <br> increases in base pay.. |
| :--- | :--- |
| 2. Deferred Vested Benefit | None. All members are retired. |
| 3. Surviving Spouse's Benefit | Annual benefit equal to $35 \%$ of base pay. If surviving <br> spouse married member after retirement, marriage must <br> have occurred at least five years before member's death. |
| 4. Surviving Children's Benefit | Annual benefit equal to $6.25 \%$ of base pay per child, up <br> to a maximum benefit of $25 \%$ of base pay if spouse is <br> receiving benefits, or $50 \%$ if no spouse. Children are <br> eligible until attainment of age 18. |
| 5. Member Contributions | None. There are no active members. |

# VANIWAARDEN 

Retirement planning for corporations

June 30, 2004

Office of the State Auditor
525 Park Street, Suite 400
St. Paul, MN 55103
Larry Martin
Director, LCPR
Room 55, State Office Building
St. Paul, MN 55155

Commissioner Peggy Ingison
Minnesota Department of Finance
638 Cedar Street
St. Paul, MN 55155
Legislative Reference Library
ATTN: Acquisitions Department
645 State Office Building
St. Paul, MN 55155-1050

## Re: 12/31/2003 Actuarial Valuation Report - Fairmont Policemen's Relief Association

We have enclosed for filing one copy of the December 31, 2003 actuarial valuation report for the Fairmont Policemen's Relief Association. Please inform us if you have any questions regarding the report or need additional copies.

Sincerely,


Sandra Bruns, FSA, EA
Consulting Actuary

> c: Harley Rosenberg - Fairmont Policemen's Relief Association
> Paul Krueger

