December 31, 2003 Actuarial Valuation

June, 2004



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Van Iwaarden

December 31, 2003 Actuarial Valuation

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December 31, 2003 Actuarial Valuation

#### Introduction

#### <u>Purpose</u>

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.

December 31, 2003 Actuarial Valuation

#### Introduction (continued)

#### Actuarial Certification

We certify that the actuarial valuation has been prepared in accordance with Minnesota Statutes §§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

Sandra L. Bruns, FSA, EA Consulting Actuary

December 31, 2003 Actuarial Valuation

### Summary of Results

A. Membership data* 1. Liability Duration	December 31, 2002	December 31, 2003
a. Average annuity factor	16.4	15.8
b. Average life expectancy	10.4	15.8
2. Number of members	1.5.7	1.3.1
a. Retirees	11	10
b. Surviving spouses	3	4
c. Total	14	14
<b>B.</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		
<b>D.</b> Benefit liabilities 1. Present value of future benefits	7 830 552	
1. Present value of future benefits	7,830,552 7,830,552	7,560,132
	7,830,552 7,830,552	
<ol> <li>Present value of future benefits</li> <li>Actuarial accrued liability</li> </ol> <i>E. Funded status</i>	7,830,552	7,560,132
<ol> <li>Present value of future benefits</li> <li>Actuarial accrued liability</li> </ol>		7,560,132

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

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December 31, 2003 Actuarial Valuation

#### **Funding Basis**

### **Actuarial Value of Assets**

### <u>A. Unrealized gain</u>

Year Ending December 31:	Market <u>Value</u>	Book <u>Value</u>	Unrealized Gain (Market - Book)
2000	7,106,264	7,201,645	(95,381)
2001	6,757,468	7,061,902	(304,434)
2002	6,178,561	6,557,781	(379,220)
2003	6,569,640	6,305,960	263,680

#### **B.** Actuarial value of assets

1. Book value

2. One-third of unrealized gain

3. Actuarial value (1. + 2.)

#### December 31, 2002 December 31, 2003

6,557,781	6,305,960
(126,407)	<u>87,893</u>
\$6,431,374	\$6,393,853



December 31, 2003 Actuarial Valuation

#### Summary of Member Data

	December 31, 2002 Dec	ember 31, 2003
<ul> <li><u>A. Retirees</u></li> <li>1. Age &amp; service</li> <li>2. Total annual benefits</li> <li>3. Average annual benefit</li> <li>4. Average age</li> </ul>	11 \$422,162 \$38,378 63.6	10 \$396,526 \$39,653 64.4
<ul> <li><u>B. Beneficiaries</u></li> <li>1. Surviving spouses</li> <li>2. Total annual benefits</li> <li>3. Average annual benefit</li> <li>4. Average age</li> </ul>	3 \$72,194 \$24,065 73.3	4 \$98,428 \$24,607 72.0
<u>C. Total number of members (A.1. + B.1.)</u>	14	14

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

December 31, 2003 Actuarial Valuation

### 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	(1)	1	0
2. Corrections			0
3. Total changes	(1)	1	0
C. Number of members on December 31, 2003	10	4	14

December 31, 2003 Actuarial Valuation

#### 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	<u>0</u>	<u>0</u>
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	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 there is no normal cost.

December 31, 2003 Actuarial Valuation

### 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)	(459,539)
e. Interest on benefit payments (1/2 year)	(11,488)
f. Expected AAL on December 31, 2003 (sum of a. through e.)	7,751,053
2. Actual AAL on December 31, 2003	1,101,005
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 loss	, , ,
a. Due to plan experience different from that expected (2a 1f.)	(357,594)
b. Due to changes in actuarial assumptions (2b 2a.)	0
c. Due to changes in unit value (2c 2b.)	166,673
d. Total $(a. + b. + c.)$	(190,921)
B. Asset gain or loss for the year ending on December 31, 2003	
1. 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
2. Actual actuarial value of assets on December 31, 2003	6,393,853
3. Asset (gain) or loss (1e 2.)	72,892
C. Changes in the unfunded AAL	
1. Expected unfunded AAL on December 31, 2003	1,284,307
2. Changes	1,204,507
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	Ŭ
3. Unfunded AAL on December 31, 2003	1,166,279
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December 31, 2003 Actuarial Valuation

### Accounting Basis

### Statement of Plan Net Assets - Market Value

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	December 31, 2002	December 31, 2003
A. Assets		
1. Cash	\$0	\$0
2. Short-term investments	0	0
3. Total	0	0
B. Receivables		
1. Accrued interest	7,554	5,113
2. Distributions	4,906	1,873
3. Accrued contributions	0	0
4. Total	12,460	6,986
C. Accounts payable	0	0
D. Investments, at fair value		
1. Daily passport trust	88,072	41,185
2. Mutual funds	2,499,830	2,926,411
3. Asset and mortgage backed securities	2,357,640	2,124,167
4. Unit trusts	573,258	818,567
5. Corporate bonds	58,211	0
6. Government securities	509,596	578,872
7. GNMA mortgage certificate	40,866	30,087
8. Limited partnerships	38,628	43,365
9. Total	6,166,101	6,562,654
E. Net assets held in trust for pension benefits	6,178,561	6,569,640

December 31, 2003 Actuarial Valuation

### Accounting Basis

### 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	<u>0</u>	<u>0</u>
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	<u>8,497</u>	<u>5,286</u>
7. Total deductions	486,362	509,508
<u>C. Net increase</u>	(578,907)	391,079
<u>D. Adjustments</u>	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%

December 31, 2003 Actuarial Valuation

### Accounting Basis

## Schedule of Funding Progress

(Dollar amounts in thousands)

As of December 31:	Actuarial Value of <u>Assets</u>	Actuarial Accrued <u>Liability (AAL)</u>	Unfunded AAL (UAAL)	Funded <u>Ratio</u>	Covered <u>Payroll</u>	UAAL as a % of Covered <u>Payroll</u>
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%	-	<b>.</b>
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%	-	- 1

December 31, 2003 Actuarial Valuation

### Accounting Basis

### **Schedule of Employer Contributions**

Annual Employer
<b>Contributions</b>
\$286,563
243,556
243,726
208,626
163,177
257,828
5,829
0
7,529
10,095
90,321
230,291

December 31, 2003 Actuarial Valuation

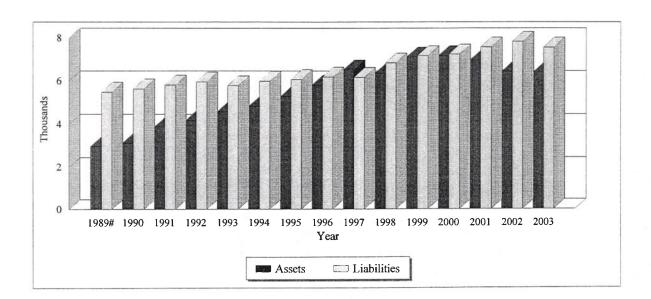
#### Historical Tables

# Historical Funding Ratio Schedule

(Dollar amounts in thousands)

As of December 31:	Actuarial Accrued <u>Liability</u>	Actuarial Value of Assets	Percent 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.



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#### Historical Tables

### **History of Employer Contributions**

Valuation December 31:	Normal Cost as a Percent of Payroll	Amortization of Unfunded Actuarial 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

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#### Historical Tables

### **Comparative Schedule of Active Members**

Valuation	Number of Active	Valuation		Averages		
December 31:	Members	Payroll	Age	Service	Pay	% Increase
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	-	-	-	(2 <u>1</u>	3 <u>-</u>
2000	0	-	-	-	<del></del>	<del>.</del> .
2001	0	-	-	-	2-	8 <b>-</b>
2002	0	-	-	_		32 <u>0</u>
2003	0	-	-	-	-	

December 31, 2003 Actuarial Valuation

#### **Historical Tables**

### **Comparative Schedule of Inactive Members**

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Number of Retirees and Beneficiaries					
As of	Added	Removed	On Valuation	Annual	Present Value
December 31:	to Rolls	from Rolls	Date	Benefits	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

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#### **Actuarial Methods and Assumptions**

1. Mortality

2. Withdrawal, disability, retirement age

3. Interest rate

4. Cost-of-living adjustment

5. Actuarial cost method

The UP-1984 Mortality Table set forward 2 years for males and set back 3 years for females.

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.

The Entry Age Normal Cost Method. Under this method, the normal cost for an individual member is the level annual dollar amount required, beginning on the date of joining the association, to accumulate the funds needed to pay the member's accrued benefits by their assumed retirement age. There is no normal cost for a member or beneficiary in pay status. The actuarial accrued liability is the accumulated value of these annual normal costs on a given date. For members or beneficiaries receiving monthly benefits, the accrued liability is the present value of future benefit payments. The normal cost and accrued liability for the plan is the total of these values for all members.

December 31, 2003 Actuarial Valuation

### **Summary of Plan Provisions**

1. Normal Retirement Benefit	50% of "base pay" with 20 years of service, increased 2% per year up to a maximum of 60%. "Base pay" is the prevailing pay of a first class patrolman for the City of Fairmont. All members are now retired. Their benefit is the benefit they are currently receiving, adjusted by 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 spouse married member after retirement, marriage must 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 to a maximum benefit of 25% of base pay if spouse is receiving benefits, or 50% if no spouse. Children are eligible until attainment of age 18.
5. Member Contributions	None. There are no active members.

# Van I<u>waarden</u>

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

Sandra Bruns, FSA, EA Consulting Actuary

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