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## FAIRMONT POLICEMEN'S RELIEF ASSOCIATION

December 31, 2004 Actuarial Valuation

#### HV 8148 .F32 F34a 2004

# VAN IWAARDEN

Minn. Stat. 69.77 Subd. 10 -

December 31, 2004 Actuarial Valuation

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June, 2005

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December 31, 2004 Actuarial Valuation

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#### **Introduction**

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

This report presents the results of the December 31, 2004 valuation and benefit study for the Fairmont Policemen's Relief Association. Its primary purposes are:

- to determine the funded status as of December 31, 2004,
- to determine the amortization payment for 2004, and
- to present information required to be disclosed under General Accounting Standards Board Statement No. 25 (GASB 25) as of December 31, 2004.

#### Sources of Data

The Relief Association supplied December 31, 2004 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, 2003. The actuarial assumptions and methods used to prepare this report are the same as those used in the 2003 report. The annual benefit value per unit increased from \$703.06 on December 31, 2003 to \$761.17 on December 31, 2004, an 8.27% increase, 4.77% more than the assumed increase of 3.5%.

#### Summary of Valuation Results

The funded status of the plan decreased from 84.3% on December 31, 2003 to 81.4% on December 31, 2004. The decrease in funded status was caused principally by the benfit increase described above. This caused the amount of the amortization payment to increase from \$218,835 last year, to \$323,808 this year.

The market value of assets and the actuarial value of assets both increased from last year, though the total increase in market value (\$168,194) was greater than the increase in actuarial value (\$43,924). The return on the actuarial value of assets (about 7.8%) was better than the assumed return of 5.0%, and this reduced the unfunded liability.

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#### **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,

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Paul D. Krueger, JD, EA Consulting Actuary

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Sandra Brunspok

Sandra L. Bruns, FSA, EA Consulting Actuary

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## Summary of Results

	<u>A. Membership data*</u> 1. Liability Duration	December 31, 2003	December 31, 2004
k	a. Average annuity factor b. Average life expectancy	14.7	14.2
	2. Number of members	14.7	14.1
	a. Retirees b. Surviving spouses	10 <u>4</u>	10 4
	c. Total	14	14
	B. Amortization payments		
	1. Unfunded actuarial accrued liability	1,166,279	1,472,016
	2. Amortization payment	218,835	323,808
	C. Value of plan assets	December 31, 2003	December 31, 2004
	1. Market value	6,569,640	6,737,834
	2. Actuarial value (for calculating contributions)	6,393,853	6,437,777
	3. Investment return on actuarial value of assets	11.03%	7.76%
	<u>D. Benefit liabilities</u>		
	1. Present value of future benefits	7,560,132	7,909,793
	2. Actuarial accrued liability	7,560,132	7,909,793
	E. Funded status		
	1. Actuarial value of assets as a % of liabilities	84.6%	81.4%
	2. Market value of assets as a % of liabilities		
	2. Market value of assets as a 70 of flaofifules	86.9%	85.2%

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

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### Funding Basis

#### **Actuarial Value of Assets**

#### A. Unrealized gain

Year Ending	Market	Book	Unrealized Gain
December 31:	Value	Value	(Market - Book)
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
2004	6,737,834	6,287,748	450,086

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

1. Book value

2. One-third of unrealized gain

3. Actuarial value (1. + 2.)

December 31, 2003 December 31, 2004

6,305,960	6,287,748
<u>87,893</u>	150,029
\$6,393,853	\$6,437,777

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December 31, 2004 Actuarial Valuation

Summary of Member Data

December 31.	2003	December 31.	2004

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A. Retirees 1. Age & service 2. Total annual benefits 3. Average annual benefit 4. Average age	10 \$396,526 \$39,653 64.4	10 \$429,300 \$42,930 65.4
<ul> <li>B. Beneficiaries</li> <li>1. Surviving spouses</li> <li>2. Total annual benefits</li> <li>3. Average annual benefit</li> <li>4. Average age</li> </ul>	4 \$98,428 \$24,607 72.0	4 \$106,564 \$26,641 73.0
C. Total number of members (A.1. + B.1.)	14	14

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

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December 31, 2004 Actuarial Valuation

## Summary of Changes in Membership

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	Retirees	Beneficiaries	Total
A. Number of members on December 31, 2003	10	4	14
B. Changes in membership			
1. Deaths			0
2. Corrections			0
3. Total changes	0.	0	0
C. Number of members on December 31, 2004	10	4	14

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December 31, 2004 Actuarial Valuation

#### Funding Basis

#### **Actuarial Values Used to Determine Contribution**

### December 31, 2003 December 31, 2004

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A. Actuarial present value of projected benefits (the value of all future benefits				
to be paid to the current group of members)	<b>\$</b> \$			
1. Active members	\$0	\$0		
2. Vested terminated members	0	0		
3. Retired members	6,439,195	6,745,859		
4. Spouses and children receiving benefits	1,120,937	1,163,934		
5. Disabled members receiving benefits	<u>0</u>	Q		
6. Total present value of projected benefits	7,560,132	7,909,793		
<b>B.</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	6,439,195	6,745,859 1,163,934		
4. Spouses and children receiving benefits	1,120,937			
5. Disabled members receiving benefits	0	1,100,751		
6. Total actuarial accrued liability	7,560,132	7,909,793		
C. Amortization of unfunded actuarial accrued liability				
1. Total actuarial accrued liability (A.7.)	\$7,560,132	\$7,909,793		
2. Actuarial value of assets	6,393,853	6,437,777		
3. Unfunded actuarial accrued liability (1 2.)	1,166,279	1,472,016		
4. Funded status (2. / 3.)	84.6%	81.4%		
5. Years left in amortization period	6	5		
6. Amortization payment	218,835	323,808		
E. Key economic assumptions				
1. Funding interest rate	5.00%	5.00%		
2. Annual benefit increase rate	3.50%	3.50%		
	5.5070	5.5070		

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

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December 31, 2004 Actuarial Valuation

## Changes in the Unfunded Actuarial Accrued Liability

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A. Liability gain or loss for the year ending on December 31, 2004	
1. Expected actuarial accrued liability (AAL)	
a. AAL as of December 31, 2003	\$7,560,132
b. Normal cost as of December 31, 2003	0
c. Interest to December 31, 2004 on the AAL and normal cost	378,007
d. Expected benefit payments for the year (excluding post-retirement benefits)	(494,802)
e. Interest on benefit payments (1/2 year)	(12,370)
f. Expected AAL on December 31, 2004 (sum of a. through e.)	7,430,967
2. Actual AAL on December 31, 2004	
a. Before any assumption or plan changes	7,561,674
b. After assumption changes, but before any unit value changes	7,561,674
c. After assumption and unit value changes	7,909,793
3. Liability (gain) or loss	, ,
a. Due to plan experience different from that expected (2a 1f.)	130,707
b. Due to changes in actuarial assumptions (2b 2a.)	0
c. Due to changes in unit value (2c 2b.)	348,119
d. Total ( $a. + b. + c.$ )	478,826
	110,020
<u>B. Asset gain or loss for the year ending on December 31, 2004</u>	
1. Expected actuarial value of assets	
a. Actuarial value of assets on December 31, 2003	6,393,853
b. Actual benefit payments and expenses for the year	(529,995)
c. Contributions for the year	218,835
d. Expected return on assets	<u>311,914</u>
e. Expected actuarial value of assets on December 31, 2004 (sum of a. through d.)	6,394,607
2. Actual actuarial value of assets on December 31, 2004 (sum of a. through d.)	
	6,437,777
3. Asset (gain) or loss (1e 2.)	(43,170)
C. Changes in the unfunded AAL	
1. Expected unfunded AAL on December 31, 2004	1,036,360
2. Changes	1,030,300
6	07 527
a. Actuarial (gain) or loss other than change in unit value	87,537
b. Change in unit value different from expected	348,119
c. Changes in actuarial methods and assumptions	0
d. Total change	1 400 61 6
3. Unfunded AAL on December 31, 2004	1,472,016

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## Accounting Basis

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## Statement of Plan Net Assets - Market Value

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<b>,</b>	December 31, 2003	December 31, 2004
<u>A. Assets</u>		
1. Cash	\$0	\$0
2. Short-term investments	<u>0</u>	0
3. Total	0	0
B. Receivables		
1. Accrued interest	5,113	4,277
2. Distributions	1,873	236
3. Accrued contributions	<u>0</u>	<u>0</u>
4. Total	6,986	4,513
C. Accounts payable	0	0
D. Investments, at fair value		
1. Money market	41,185	12,134
2. Mutual funds	2,926,411	3,188,682
3. Asset and mortgage backed securities	2,124,167	1,612,927
4. Unit trusts	818,567	871,035
5. Corporate bonds	0	71,250
6. Government securities	578,872	948,153
7. GNMA mortgage certificate	30,087	16,892
8. Limited partnerships	43,365	12,248
9. Total	6,562,654	6,733,321
E. Net assets held in trust for pension benefits	6,569,640	6,737,834

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December 31, 2004 Actuarial Valuation

#### Accounting Basis

#### **Statement of Changes in Plan Net Assets**

December 31, 2003 December 31, 2004 A. Additions 1. Contributions a. Employer \$230,291 \$218,835 b. Plan members 0 0 230,291 c. Total 218,835 2. Investment income a. Interest and dividends 272,363 303,318 b. Partnership income 7,404 2,613 c. Realized gain (loss) (252, 371)(12,980)642,900 d. Change in unrealized appreciation (depreciation) 186,403 e. Total 670,296 479,354 3. Total additions 900,587 698,189 **B.** Deductions 1. Service pensions 378,615 382,788 2. Survivors pensions 98,380 114,646 11,918 3. Distributions to members 11,918 9,475 4. Professional services 8,816 5. Salaries 5,834 6,423 5,286 6. Other expenses 5,404 7. Total deductions 509,508 529,995 391,079 C. Net increase 168,194 0 0 D. Adjustments E. Net assets held in special fund \$6,178,561 1. Beginning of year \$6,569,640 \$6,737,834 2. End of year \$6,569,640 F. Investment return 1. Market value of assets 11.10% 7.47% 2. Actuarial value of assets 11.03% 7.76%

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December 31, 2004 Actuarial Valuation

#### Accounting Basis

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### **Schedule of Funding Progress**

(Dollar amounts in thousands)

As of December 31:	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered P <u>ayroll</u>	UAAL as a % of Covered Payroll
1993	\$4,570	\$5,781	\$1,211	79.1%	\$218	555.5%
1994	4,828	5,987	1,159	80.6%	223	519.7%
1995	5,274	6,066	792	86.9%	243	325.9%
1996	5,808	6,179	371	94.0%	200	185.5%
1997	6,516	6,164	(352)	105.7%	210	-167.6%
1998	6,355	6,835	480	93.0%	163	294.7%
1999	7,113	7,174	61	99.1%	118	407.0%
2000	7,170	7,245	75	99.0%	-	-
2001	6,960	7,573	613	91.9%		-
2002	6,431	7,831	1,400	82.1%	-	-
2003	6,394	7,560	1,166	84.6%	-	-
2004	6,438	7,910	1,472	81.4%	-	-

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## Accounting Basis

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## Schedule of Employer Contributions

Year Ended December 31:	Annual Employer Contributions
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
2004	,
2001	218,835

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#### Historical Tables

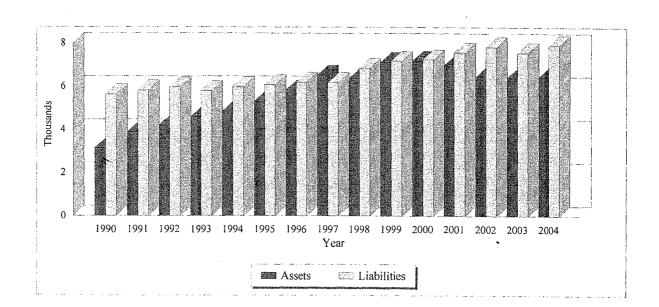
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### **Historical Funding Ratio Schedule**

(Dollar amounts in thousands)

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	Actuarial	Actuarial	
As of	Accrued	Value of	Percent
December 31:	Liability	Assets	Funded
1000	₽ <i>₣ (</i> <b>)</b> 7	¢2 127	
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%
2004	7,910	6,438	81.4%



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## Historical Tables

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### **History of Employer Contributions**

valuation	Normal Cost as a Percent	Amortization of Unfunded Actuarial
December 31:	<u>of Payroll</u>	Liability
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
2004	-	323,808

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### Historical Tables

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

	Number of					
Valuation	Active	Valuation		Averages		
December 31:	Members	Payroll	Age	Service	Pay	% Increase
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%
1 <b>999</b>	0	-	-	-	-	-
2000	0	-	-	-		-
2001	0	-	-	-	-	-
2002	0	-	-	-	-	-
2003	0	-	-	-	-	-
2004	0	-	-	-	-	-

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### Historical Tables

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

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	Number o	of Retirees and B	eneficiaries		
As of	Added	Removed	On Valuation	Annual	Present Value
December 31:	to Rolls	from Rolls	Date	<b>Benefits</b>	of Benefits
1990				\$252,417	\$3,526,812
1991	0	0	14	261,491	3,521,472
1992	0	0	14	287,546	3,944,772
1993	1	0	15	250,879	3,611,904
1994	0	2	13	242,682	3,504,876
1995	0	1	12	264,009	3,954,504
1996	2	1	13	262,615	3,848,304
1997	0	1	12	286,633	4,302,888
1998	2	1	13	342,613	5,418,324
1999	1	0	14	444,729	7,174,075
2000	2	0	16	452,326	7,245,193
2001	0	1	15	463,261	7,573,377
2002	0	1	14	494,356	7,830,552
2003	0	0	14	494,954	7,560,132
2004	0	0	14	535,864	7,909,793

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## Actuarial Methods and Assumptions

1. Mortality	The UP-1984 Mortality Table set forward 2 years for males and set back 3 years for females.
2. Withdrawal, disability, retirement age	As of December 31, 1999, there are no active members, and the plan is closed to new members.
3. Interest rate	5% compounded annually.
4. Cost-of-living adjustment	3.5% annually. Benefits for members retiring as lieutenants remain level until they equal the benefits of a first class patrolman.
5. Actuarial cost method	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.

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## Summary of Plan Provisions

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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.

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