

June, 2002



Van Iwaarden Associates 840 Lumber Exchange Ten South Fifth Street Minneapolis MN 55402-1010 612.596.5960 *f:* 612.596.5999 www.vaniwaarden.com

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December 31, 2001 Actuarial Valuation

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December 31, 2001 Actuarial Valuation

#### **Introduction**

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

This report presents the results of the December 31, 2001 valuation and benefit study for the Fairmont Policemen's Relief Association. Its primary purposes are:

- to determine the funded status as of December 31, 2001,
- to determine the amortization payment for 2001, and
- to present information required to be disclosed under General Accounting Standards Board Statement No. 25 (GASB 25) as of December 31, 2001.

### Sources of Data

The Relief Association supplied December 31, 2001 data for all active and retired 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, 2000. The actuarial assumptions and methods used to prepare this report are identical to those used in the 2000 report. The annual benefit value per unit increased from \$588.20 on December 31, 2000 to \$643.65 on December 31, 2001, a 9.43% increase.

### Summary of Valuation Results

The funded status of the plan decreased slightly from 99.0% on December 31, 2000 to 91.9% on December 31, 2001. The decrease in funded status was caused by actuarial losses both in assets and liabilities over the past year: the investment return was less than assumed (1.53% versus 5%), and the benefit increase was greater than assumed (9.43% versus 3.5%). These results have caused the amount of the amortization payment to increase from \$10,095 last year, to \$90,321 this year.

FAIRMONT POLICEMEN'S RELIEF ASSOCIATION December 31, 2001 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,

Mark D. Meyer, FSA, MAAA Consulting Actuary

Paul D. Krueger, JD, EA Consulting Actuary

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# Summary of Results

<ul> <li>A. Plan participant data</li> <li>1. Number of participants <ul> <li>a. Active employees</li> <li>b. Terminated vested employees</li> <li>c. Retirees</li> <li>d. Spouses and children</li> <li>d. Total</li> </ul> </li> </ul>	December 31, 2000 0 12 3 15	December 31, 2001 0 0 11 3 14
<ul> <li><i>B. Amortization payments</i></li> <li>1. Unfunded actuarial accrued liability</li> <li>2. Amortization payment</li> </ul>	75,342 10,095	612,953 90,321
<ul> <li><u>C. Value of plan assets</u></li> <li>1. Market value</li> <li>2. Actuarial value (for calculating contributions)</li> <li>3. Investment return on actuarial value of assets</li> </ul> <b>D. Benefit liabilities</b>	December 31, 2000 7,106,264 7,169,851 7.09%	December 31, 2001 6,757,468 6,960,424 1.53%
1. Present value of future benefits 2. Actuarial accrued liability	7,245,193 7,245,193	7,573,377 7,573,377
<i>E. Funded status</i> 1. Actuarial value of assets as a % of liabilities 2. Market value of assets as a % of liabilities	99.0% 98.1%	91.9% 89.2%

December 31, 2001 Actuarial Valuation

### **Funding Basis**

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

#### A. Unrealized gain

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Year Ending	Market	Book	Unrealized Gain
December 31:	<u>Value</u>	<u>Value</u>	(Market - Book)
1998	6,947,227	6,058,438	888,789
1999	7,081,591	7,128,750	(47,159)
2000	7,106,264	7,201,645	(95,381)
2001	6,757,468	7,061,902	(304,434)

# **B.** Actuarial value of assets

1. Book value

2. One-third of unrealized gain

3. Actuarial value (1. + 2.)

December 31, 2000 December 31, 2001

7,201,645	7,061,902
(31,794)	(101, 478)
\$7,169,851	\$6,960,424

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December 31, 2001 Actuarial Valuation

# **Summary of Member Data**

December 3	. 2000	December	31	2001

A. Active members		
1. Number		
a. Fully vested	0	0
b. Nonvested	<u>0</u>	<u>0</u>
c. Total	0	0
2. Average age	-	-
3. Average years of service	-	-
4. Total annual payroll for the year beginning on valuation date	<u>-</u>	-
5. Average annual salary	801 870	-
6. Present value of future salaries	-	-
B. Vested terminated members		
1. Number	0	0
2. Total annual deferred benefits	\$0	\$0
C. Retirees		
1. Age & service	12	11
2. Disability	0	0
3. Total	12	11
4. Total annual benefits	\$394,369	\$395,201
5. Average annual benefit	\$32,864	\$35,927
<u>D. Beneficiaries</u>		
1. Spouses	3	3
2. Children	0	0
3. Total	3	3
4. Total annual benefits	\$61,761	\$67,583
5. Average annual benefit	\$20,587	\$22,528
	Ψ20,207	Ψ22,720
<u>E. Total number of members (A.1. + B.1. + C.3. + D.3.)</u>	15	14

December 31, 2001 Actuarial Valuation

# Summary of Changes in Membership

	Actives	Vested Terminees	Retirees	Beneficiaries	Total
A. Number of members on December 31, 2000	0	0	12	3	15
<b>B.</b> Changes in membership					
1. Retirements					0
2. Vested terminations					0
3. Deaths			(1)		(1)
4. Expiration of surviving child benefits					0
5. Corrections					0
6. Total changes	0	0	(1)	0	(1)
C. Number of members on December 31, 2001	0	0	11	3	14

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December 31, 2001 Actuarial Valuation

# Funding Basis

# Actuarial Values Used to Determine Contribution

### December 31, 2000 December 31, 2001

A. Actuarial present value of projected benefits (the value of all future benefits		
to be paid to the current group of members)	\$0	\$0
1. Active members	0 20	0 0
2. Vested terminated members		6,817,754
3. Retired members	6,525,388	755,623
4. Spouses and children receiving benefits	719,805	
5. Disabled members receiving benefits	$\frac{0}{7.245,102}$	<u>0</u> 7,573,377
6. Total present value of projected benefits	7,245,193	1,2,2,7,7
<u>B. Actuarial accrued liability (the cost allocated to all prior years)</u>		
1. Active members	\$0	\$0
2. Vested terminated members	0	0
3. Retired members	6,525,388	6,817,754
4. Spouses and children receiving benefits	719,805	755,623
5. Disabled members receiving benefits	<u>0</u>	<u>0</u>
6. Total actuarial accrued liability	7,245,193	7,573,377
C. Amortization of unfunded actuarial accrued liability		
1. Total actuarial accrued liability (A.7.)	\$7,245,193	\$7,573,377
2. Actuarial value of assets	7,169,851	6,960,424
3. Unfunded actuarial accrued liability (1 2.)	75,342	612,953
4. Funded status $(2. / 3.)$	99.0%	91.9%
5. Years left in amortization period	9	8
6. Amortization payment	10,095	90,321
D. Normal cost (the cost allocated to the current year)		
1. Present value of future normal costs	\$0	\$0
2. Normal cost as a dollar amount		
a. Total normal cost	0	0
b. Expected member contributions	0	0
c. Employer normal cost (a b.)	0	0
3. Payroll for year ending on valuation date	0	0
4. Normal cost as a percent of active payroll		
a. Total normal cost	0.00%	0.00%
b. Expected member contributions	0.00%	0.00%
c. Employer normal cost (a b.)	0.00%	0.00%
E. Key economic assumptions	E 000/	5.00%
1. Funding interest rate	5.00%	3.50%
2. Annual benefit increase rate	3.50%	3.30%

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December 31, 2001 Actuarial Valuation

#### **Funding Basis**

## **Changes in the Unfunded Actuarial Accrued Liability**

A. Expected unfunded actuarial accrued liability	
1. Unfunded actuarial accrued liability (AAL) on December 31, 2000	
a. Actuarial accrued liability	\$7,245,193
b. Actuarial value of assets	<u>7,169,851</u>
c. Unfunded actuarial accrued liability (a b.)	75,342
2. Normal cost for the year ending December 31, 2001	0
3. Interest to December 31, 2001 on 1. and 2.	3,767
4. Total of 1., 2. and 3.	79,109
5. Relief Association contributions for year ending December 31, 2001	10,095
6. Interest to December 31, 2001 on 5.	254
7. Total of 5. and 6.	10,349
8. Expected unfunded AAL on December 31, 2001 (4 7.)	68,760
B. Actual unfunded actuarial accrued liability	
1. Actuarial accrued liability	7,573,377
2. Actuarial value of assets	<u>6,960,424</u>
3. Unfunded AAL on December 31, 2001 (1 2.)	612,953
C. Changes in the unfunded actuarial accrued liability	
1. Expected unfunded AAL on December 31, 2001	68,760
2. Changes	
a. Actuarial (gain) or loss	544,193
b. Changes in plan provisions	0
c. Changes in actuarial methods and assumptions	<u>0</u>
d. Total change	544,193
3. Unfunded AAL on December 31, 2001	612,953

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December 31, 2001 Actuarial Valuation

# Accounting Basis

## Statement of Plan Net Assets - Market Value

	December 31, 2000	December 31, 2001
A. Assets		
1. Cash	\$11,614	\$24,085
2. Short-term investments	<u>0</u>	<u>0</u>
3. Total	11,614	24,085
B. Receivables		
1. Accrued interest	9,838	7,566
2. Distributions	3,115	989
3. Accrued contributions	<u>0</u>	<u>0</u>
4. Total	12,953	8,555
<u>C. Accounts payable</u>	0	0
D. Investments, at fair value		
1. Daily passport trust	19,650	81,306
2. Mutual funds	3,157,204	
3. Asset and mortgage backed securities	2,784,786	
4. Unit trusts	518,704	
5. Corporate bonds	192,874	
6. Government securities	341,702	372,051
7. GNMA mortgage certificate	17,819	10,530
8. Limited partnerships	<u>48,958</u>	
9. Total	7,081,697	6,724,828
E. Net assets held in trust for pension benefits	7,106,264	6,757,468



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December 31, 2001 Actuarial Valuation

# Accounting Basis

## Statement of Changes in Plan Net Assets

December 31, 2000 December 31, 2001

A. Additions		
1. Contributions	×	<b>*</b> • • • • • <b>*</b>
a. Employer	\$7,529	\$10,095
b. Plan members	0	0
c. Total	7,529	10,095
2. Investment income		
a. Interest and dividends	533,767	371,230
b. Partnership income	4,389	4,525
c. Realized gain (loss)	(654)	(60,522)
d. Change in unrealized appreciation (depreciation)	(48,218)	(207,900)
e. Total	489,284	107,333
3. Total additions	496,813	117,428
B. Deductions		
1. Service pensions	363,649	371,077
2. Survivors pensions	77,378	63,632
3. Distributions to members	11,918	11,918
4. Professional services	10,395	9,875
5. Salaries	2,852	1,841
6. Other expenses	5,948	7,881
7. Total deductions	472,140	466,224
<u>C. Net increase</u>	24,673	(348,796)
D. Adjustments	0	0
E. Net assets held in special fund		
1. Beginning of year	\$7,081,591	\$7,106,264
2. End of year	\$7,106,264	\$6,757,468
<u>F. Investment return</u>		
1. Market value of assets	7.14%	1.56%
2. Actuarial value of assets	7.09%	1.53%

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# Accounting Basis

# 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 Payroll	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%	-	-
2000	7,170	7,245	75	99.0%	-	-
2001	6,960	7,573	613	91.9%	-	-

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#### Accounting Basis

# Schedule of Employer Contributions

Year Ended	Annual Employer
December 31:	<b>Contributions</b>
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

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### **Historical Tables**

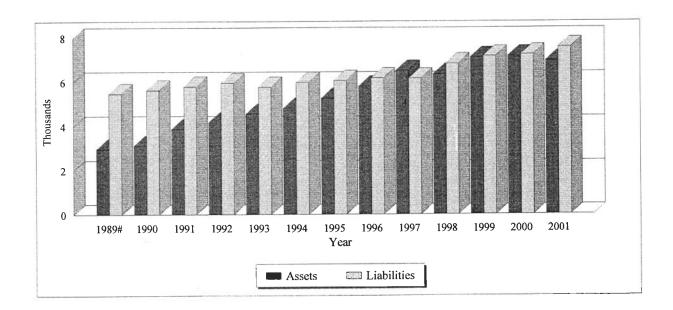
# Historical Funding Ratio Schedule

(Dollar amounts in thousands)

A a a f	Actuarial	Actuarial Value of	Percent
As of	Accrued		
December 31:	<u>Liability</u>	Assets	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%

#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 <u>Liability</u>
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
1 <b>995</b>	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

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## Historical Tables

# **Comparative Schedule of Active Members**

Valuation	Number of Active	Valuation		Averages		
December 31:	Members	Payroll	Age	Service	<u>Pay</u>	% 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	-	-	-	-	-
2000	0	-	5 <del></del>		-	-
2001	0	-	~	-	-	

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#### Historical Tables

# **Comparative Schedule of Inactive Members**

	Number o				
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

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#### Actuarial Methods and Assumptions

The UP-1984 Mortality Table set forward 2 years for 1. Mortality males and set back 3 years for females. As of December 31, 1999, there are no active members, 2. Withdrawal, disability, and the plan is closed to new members. retirement age 5% compounded annually. 3. Interest rate 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. The Entry Age Normal Cost Method. Under this method, 5. Actuarial cost 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, 2001 Actuarial Valuation

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# **Summary of Plan Provisions**

1. Normal Retirement Benefit	Members with 20 years of service receive 50% of base pay. Service years in excess of 20 receive an additional 2% of base pay to a maximum of 60% at 25 years. Benefit is payable on retirement after attainment of age 50 and completion of 20 years of service. No credit for service beyond age 55. Base pay is the prevailing pay of a first class patrolman. For members retiring as lieutenants, the retirement is based on lieutenant pay, but not adjusted for base pay increases until it equals base pay of a first class patrolman.
2. Deferred Vested Benefit	Annual benefit equal to the accrued normal retirement benefit, deferred to age 50 for members with at least 20 years of service.
3. Disability Benefit	On termination due to disability to the extent of being unable to perform duties of a police officer before becoming eligible for age & service retirement. Benefit amount is 50% of base pay.
4. 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.
5. 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.
6. Member Contributions	Members are required to contribute 8% of base pay per month until separation from service. Contributions are refundable, without interest, upon termination without benefit eligibility.