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Gabriel Roeder Smith & Company Consultants & Actuaries

VIRGINIA FIRE DEPARTMENT RELIEF ASSOCIATION ANNUAL ACTUARIAL VALUATION AS OF DECEMBER 31, 2008

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February 11, 2008

Board of Trustees Virginia Fire Department Relief Association Virginia, Minnesota

Submitted in this report are the results of the December 31, 2008, actuarial valuation of the assets, actuarial values and contribution requirements associated with the benefits provided by the Virginia Fire Department Relief Association.

The valuation results contained in Section A provide the actuarial information needed to determine the employer's "minimum obligation" effective January 1, 2010.

The valuation was based upon information furnished by the Association concerning benefits, financial transactions, retirees and beneficiaries. Data was checked for year to year consistency but was not otherwise audited by us. This information is summarized in Section B.

A description of the actuarial funding method and the experience assumptions used is contained in Section C. The economic experience assumptions and actuarial funding method are established by state law.

Information needed to comply with Statement No. 25 of the Governmental Accounting Standards Board is contained in Section D.

To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice.

We will be pleased to review this report with you at your convenience.

Respectfully submitted, Gabriel, Roeder, Smith & Company

Sincerely,

Michl R &\_\_\_

Michael R. Kivi, F.S.A. Senior Consultant

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Dana Woolfrey, A.S.A. Senior Analyst

## SECTION A VALUATION RESULTS

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### SUMMARY OF ACTUARIAL VALUATION RESULTS

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	Decen	nber 31, 2008	Decen	nber 31, 2007
Employee Data				
Number of Age & Service Retirees		10		12
Number of Disabled Retirees		1		1
Number of Surviving Spouses		5		4
TOTAL .		16		17
Actuarial Accrued Liability				
Age & Service Retirees	\$	1,792,500	\$	2,229,084
Disabled Retirees		230,964		232,992
Surviving Spouses		489,216		363,948
TOTAL	\$	2,512,680	\$	2,826,024
Actuarial Value of Assets at Valuation Date	\$	2,542,216	\$	2,767,815
Unfunded (Overfunded) Actuarial Accrued Liability	\$	(29,536)	\$	58,209
Funded Position of Plan's Actuarial Accrued Liability*		101.2%		97.9%

\* Equals the ratio of the actuarial value of assets to the total gross actuarial accrued liability

## SUMMARY OF ACTUARIAL VALUATION RESULTS (CONTINUED)

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### Calculation of Contribution for Calendar Year Effective January 1, 2010

(1) Unfunded actuarial accrued liability	\$	(29,536)
(2) Amortization payment on UAAL (one-tenth of surplus)	\$	(2,954)
(3) Total normal cost		-
(4) 2008 administrative expenses paid from the fund $\times$ 1.035		17,715
(5) Total financial requirements $[(2)+(3)+(4)]$	\$	14,761
(6) Employee contributions	\$	-
(7) State amortization aid	\$	17,580
(8) Estimated State Fire Aid	<del></del>	
(9) Estimated total contributions from other sources $[(6)+(7)+(8)]$		
<ul><li>(10) Employer's minimum obligation if payment is made in equal installments throughout the year [(5)-(9)]</li></ul>		
<ul><li>(11) Employer's minimum obligation if payment is made at year end</li><li>[(10)*1.0247]</li></ul>		

## **SECTION B** BENEFIT PROVISIONS AND VALUATION DATA

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### **BRIEF SUMMARY OF PLAN PROVISIONS**

### AGE & SERVICE RETIREMENT

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*Eligibility*. 20 years of service and 50 years of age.

*Amount*. For the first 20 years of service, 45% of final year's salary. For each year in excess of 20, an additional 1% is added to a maximum of 50% of final year's salary for 25 or more years of service. For each year over 25, an additional 1/2% of base pay is added to the benefit. (The latter additional benefit is not subject to the post-retirement adjustments provisions).

#### **DISABILITY RETIREMENT**

*Eligibility.* Totally or partially disabled to the extent that no longer able to perform duties of a fireman before being eligible for age & service retirement.

### Amount,

Total Disability. 50% of final year's salary. Partial Disability. 35% of final year's salary.

### MEMBER'S DEATH WHILE ACTIVE, OR IN DEFERRED STATUS, OR RETIRED

### Eligibility.

*Spouse*. Legally married to member before separation from service and residing with member at time of death. Benefits are payable for life.

*Child*. Younger than age 18.

#### Amount.

*Spouse*. 50% of benefit deceased was receiving or would have been eligible to receive. Based on minimum of 20 years of service.

*Child*. \$300 per child per year.

Maximum Family Benefit. Amount deceased was receiving or would have been eligible to receive.

**VESTED DEFERRED.** 20 years of service and separated before age 50. Payment beginning is deferred to attainment of age 50.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

**POST-RETIREMENT ADJUSTMENTS ("ESCALATOR").** Benefit payments to retired members at age 55 and eligible surviving spouses are increased each January by the lesser of the following percentages: (1) 3-1/2% or (2) the preceding year's percentage increase in the salary of a first grade firefighter.

**MEMBER CONTRIBUTIONS.** 8% of salary. Total contributions are refundable, without interest, if no monthly benefit is payable upon separation from service. Upon the death of an active or retired member with no surviving spouse or dependent children, any unused remaining member contributions shall be paid to a surviving designated beneficiary or estate in monthly amounts equal to the surviving spouse's benefit.

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### SCHEDULE OF MONTHLY BENEFIT PAYMENTS

Attained Ages	Age & Service Retirees	Disability Retirees	Beneficiaries	Total
60-64				0 \$0
65-69	1 2,243			1 2,243
70-74		1 1,742		1 1,742
75-79	3 6,207		3 3,436	6 9,643
80-84	2 3,921			2 3,921
85 and Over	4 8,646		2 1,814	6 10,460
Total	10 \$21,017	1 \$1,742	5 \$5,250	16 \$28,009

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### STATEMENT OF PLAN NET ASSETS MARKET VALUE

	Dece	mber 31, 2008	December 31, 2007		
Assets:					
Cash and short-term investments	\$	202,142	\$	367,532	
Receivables:					
Accrued interest		-		196	
Employer contribution		-		-	
Accounts Payable:		-		-	
Investments, at fair value:					
Common Stocks		627,402		1,057,198	
Mutual Funds		-		-	
Mortgages		300,986		173,841	
Bonds		1,121,706		1,153,386	
Real Estate		-		-	
Total	\$	2,050,094	\$	2,384,425	
Net assets held in trust for pension benefits	\$	2,252,236	\$	2,752,155	

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## STATEMENT OF CHANGES IN PLAN NET ASSETS

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	Decer	nber 31, 2008	Decer	December 31, 2007	
Additions:			<b>U</b> MAA ka		
Contributions					
Employer	\$	82,755	\$	150,367	
Plan members		-		-	
Total		82,755		150,367	
Investment Income		(220,009)		109,058	
Total Additions	\$	(137,254)	\$	259,425	
Deductions:					
Benefits Paid	\$	345,549	\$	376,225	
Refund of Contributions		-		-	
Administrative Expenses		17,116		17,193	
Total Deductions	\$	362,665	\$	393,418	
Net Increase	\$	(499,919)	\$	(133,993)	
Net assets held in Trust Fund:					
Beginning of year	\$	2,752,155	\$	2,886,148	
End of year	\$	2,252,236	\$	2,752,155	

### **DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS**

1.	Market	value	ofassets	at	12/3	1/200	)7
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2,752,155 \$

Expected Return on Market Value of Assets for Prior Year

2. Actual income and disbursements in prior year weighted for timing:

	Item	Amount	Weight for Timing		Veighted Amount			
	(a) Member Contributions	<u>\$</u> -	50.00%	\$	-			
	(b) Contributions	82,755	50.00%		41,378			
	(c) Miscellaneous Revenue	-	50.00%		-			
	(d) Benefit Payments	(345,549)	50.00%		(172,775)			
	(e) Administration	(17,116)	50.00%		(8,558)			
	(f) Total			\$	(139,955)			
	3. Market value of assets adjuste	ed for actual incom	ne disbursements	[(1) -	+ (2)(f)]	\$2,612,200		
	4. Assumed rate of return on pla	n assets for the ye	ar			5.00%		
	5. Expected return [(3) * (4)]					\$ 130,610		
Actual Return	6. Market value of assets at 12/3	31/2007				\$2,752,155		
	7. Income (less investment incom	ie) for prior plan y	ear			82,755		
on Market						362,665		
on Market Value of	8. Disbursements paid in prior ye	ear						
	<ul><li>8. Disbursements paid in prior ye</li><li>9. Market value of assets at 12/3</li></ul>					2,252,236		

### DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS (CONTINUED)

Actuarial	12. Market value of assets at	12/31/2008
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#### 2,252,236

Value of

Assets as of

12/31/2008 13. Deferred investment gains and (losses) for last four years:

				Percent	Deferred
	Plan Year Beginning	G	ain/(Loss)	Deferred	 Amount
a)	2005	\$	(86,355)	20.0%	\$ (17,271)
b)	2006		63,225	40.0%	25,290
c)	2007		(29,173)	60.0%	(17,504)
d)	2008		(350,619)	80.0%	(280,495)
e)	Total	\$	(402,922)		\$ (289,980)

14. Actuarial Value of Plan Assets at 12/31/2008 [(12) - (13e)]

2,542,216

Note: The calculated value is determined by adjusting the market value of assets to reflect the investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last five years at the rate of 20% per year.

## **SECTION C** VALUATION PROCEDURES

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### **ACTUARIAL METHODS AND VALUATION ASSUMPTIONS**

*Actuarial Cost Method.* Minnesota statutes require that the Entry Age Normal actuarial cost method be used to determine the liabilities and normal cost. However, because the relief association retirement plan no longer includes active members, and all benefits are already accrued, the liabilities would be the same under any actuarial cost method.

*Financing of Unfunded Actuarial Accrued Liabilities.* One-tenth of surplus assets were applied to the required contribution.

Actuarial Value of Pension Plan Assets. The current market value of assets is reduced (increased) for the current year and each of three succeeding years, by a portion of the gain/(loss) in market value during the prior year. Such gain/(loss) is determined as the excess/(deficit) of the current market value of assets over the market value of assets as of the prior year, increased to reflect interest at the actuarial rate and adjusted to reflect contributions and benefit payments during the prior year. The portion of such gain/(loss) by which the current market value of assets is reduced (increased) shall be 80% in the current year; 60% in the first succeeding year, 40% in the second succeeding year and 20% in the third succeeding year.

*Discussion of Valuation Assumptions.* The actuarial accrued liability reported in section A indicates that \$2,512,680, together with investment earnings, will be just sufficient to pay the 16 annuitants for their remaining lifetimes. This assumes the annuitants live and die according to the mortality table, and the amount invested earns an average annual return of five percent over the remaining lifetimes of the annuitants. Actual experience of the Relief Association will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

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The assumed rate of investment return used, as required by state law, was 5.0 percent per annum compounded annually.

**The mortality table** used to measure retirement mortality was based on the 1984 Uninsured Pensioner Mortality Table set forward two years for males and set back three years for females.

	S	ingle Life Re					
Sample Attained	Level	for Life	Increasing	3.5% Yearly	Future Life Expectancy (years)		
Ages	Men	Women	Men	Women	Men	Women	
45	177.21	189.58	276.55	309.95	29.54	34.05	
50	163.12	177.21	242.82	276.55	25.24	29.54	
55	147.50	163.12	209.39	242.82	21.20	25.24	
60	130.52	147.50	176.80	209.39	17.46	21.20	
65	112.87	130.52	146.07	176.80	14.09	17.46	
70	95.20	112.87	117.93	146.07	11.13	14.09	
75	77.77	95.20	92.46	117.93	8.56	11.13	
80	61.71	77.77	70.67	92.46	6.43	8.56	

## **SECTION D** GASB STATEMENT NO. 25

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### SCHEDULE OF FUNDING PROGRESS (THOUSANDS OF DOLLARS)

Actuarial Valuation Date	GASB Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Payroll [(b – a)/c]
12/31/2003	\$2,489	\$3,247	\$758	76.6 %	\$0	N/A
12/31/2004	2,624	3,198	574	82.0	0	N/A
12/31/2005	2,808	3,040	232	92.4	0	N/A
12/31/2006	2,828	2,952	125	95.8	0	N/A
12/31/2007	2,768	2,826	58	97.9	0	N/A
12/31/2008	2,542	2,513	(30)	101.2	0	N/A

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

Valuation Date	Fiscal Year	Annual Required Contribution (a)	Total Employer Contribution (b)	Percentage Contributed (b / a)
12/31/2003	2005	\$ 145,782	\$ 308,263	211.5 %
12/31/2004	2006	129,406	273,190	211.1
12/31/2005	2007	80,232	150,367	187.4
12/31/2006	2008	62,027	82,755	133.4
12/31/2007	2009	48,343	TBD	TBD
12/31/2008	2010	14,761	TBD	TBD

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