

Gabriel Roeder Smith & Company Consultants & Actuaries

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VIRGINIA FIRE DEPARTMENT RELIEF ASSOCIATION ANNUAL ACTUARIAL VALUATION AS OF DECEMBER 31, 2009 - REVISED

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20 North Clark Street Suite 2400 Chicago, IL 60602-5111

May 26, 2010

Board of Trustees Virginia Fire Department Relief Association Virginia, Minnesota

Submitted in this report are the revised results of the December 31, 2009, 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, 2011.

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. Furthermore, the undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinion herein.

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

Respectfully submitted, Gabriel, Roeder, Smith & Company

Sincerely,

Lance J. Weiss, E.A. Senior Consultant

Dana Woolfrey, A.S.A.

Dana Woolfrey, A.S.A. ( Consultant

# **SECTION A** VALUATION RESULTS

	Decer	nber 31, 2009	Decer	nber 31, 2008
Employee Data				
Number of Age & Service Retirees		9		10
Number of Disabled Retirees		1		1
Number of Surviving Spouses		5		5
TOTAL		15		16
Actuarial Accrued Liability				
Age & Service Retirees	\$	1,687,536	\$	1,792,500
Disabled Retirees		227,592		230,964
Surviving Spouses		478,836		489,216
TOTAL	\$	2,393,964	\$	2,512,680
Actuarial Value of Assets at Valuation Date	\$	2,299,267	\$	2,542,216
Unfunded (Overfunded) Actuarial Accrued Liability	\$	94,697	\$	(29,536)
Funded Position of Plan's Actuarial Accrued Liability*		96.0%		101.2%

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

# SUMMARY OF ACTUARIAL VALUATION RESULTS (CONTINUED)

### Calculation of Contribution for Calendar Year Effective January 1, 2011

(1) Unfunded actuarial accrued liability	\$ 94,697
(2) Amortization payment on UAAL*	11,680
(3) Total normal cost	-
(4) 2009 administrative expenses paid from the fund $\times$ 1.035	 16,552
(5) Total financial requirements [(2)+(3)+(4)]	\$ 28,232
(6) Employee contributions	\$ -
(7) State amortization aid	\$ -
(8) Estimated State Fire Aid	 
(9) Estimated total contributions from other sources $[(6)+(7)+(8)]$	 
(10) Employer's minimum obligation if payment is made in equal installments throughout the year [(5)-(9)]	
<ul><li>(11) Employer's minimum obligation if payment is made at year end</li><li>[(10)*1.0247]</li></ul>	

\* In accordance with Minnesota State Statutes, the unfunded liability was amortized using a 10-year leveldollar amortization.

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

#### AGE & SERVICE RETIREMENT

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.

Attained	Age & Service	Disability		
Ages	Retirees	Retirees	Beneficiaries	Total
60-64				0 \$0
65-69	1 2,310			1 2,310
70-74		1 1,794		1 1,794
75-79	3 6,392		3 3,538	6 9,930
80-84	2 4,037			2 4,037
85 and Over	3 7,508		2 1,867	5 9,375
Total	9 \$20,247	1 \$1,794	5 \$5,405	15 \$27,446

### STATEMENT OF PLAN NET ASSETS MARKET VALUE

	December 31, 2009		Decen	nber 31, 2008
Assets:				
Cash and short-term investments	\$	333,482	\$	202,142
Receivables:				
Accrued interest		-		-
Employer contribution		14,824		-
Accounts Payable:		-		-
Investments, at fair value:				
Common Stocks		761,598		627,402
Mutual Funds				-
Mortgages		229,595		300,986
Bonds		833,561		1,121,706
Real Estate		-		-
Total	\$	1,824,754	\$	2,050,094
Net assets held in trust for pension benefits	\$	2,173,060	\$	2,252,236

### STATEMENT OF CHANGES IN PLAN NET ASSETS

	Decer	December 31, 2009		<b>December 31, 2008</b>		
Additions:						
Contributions						
Employer	\$	48,343	\$	82,755		
Plan members		-		-		
Total		48,343		82,755		
Investment Income		209,383		(220,009)		
Total Additions	\$	257,726	\$	(137,254)		
Deductions:						
Benefits Paid	\$	320,910	\$	345,549		
Refund of Contributions		-		-		
Administrative Expenses		15,992		17,116		
Total Deductions	\$	336,902	\$	362,665		
Net Increase	\$	(79,176)	\$	(499,919)		
Net assets held in Trust Fund:						
Beginning of year	\$	2,252,236	\$	2,752,155		
End of year	\$	2,173,060	\$	2,252,236		

1. Market value of assets at 12/31/2008

\$ 2,252,236

Expected Return on Market Value of Assets for Prior Y

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

Prior Year		<b>T</b> 4			Weight for Timing		Veighted Amount		
	· · ·	Item ber Contributions tributions	<u> </u>	- 48,343	50.00% 50.00%	\$	- 24,172		
	(c) Misc	ellaneous Revenue fit Payments		- (320,910)	50.00% 50.00%		- (160,455)		
	• •	inistration		(15,992)	50.00%	\$	(7,996) (144,279)		
	3. Market	value of assets adjuste	ed for a	actual incom	e disbursements	s [(1)	+ (2)(f)]	\$2	,107,957
	4. Assumed	l rate of return on pla	an asset	ts for the yea	ar				5.00%
	5. Expected	d return [(3) * (4)]						\$	105,398
Actual Return		value of assets at 12/.						\$2	2,252,236
on Market	7. Income	(less investment incor	ne) for	prior plan y	ear				48,343
Value of		ements paid in prior y							336,902
Assets for		value of assets at 12/2		9				2	2,173,060
Prior Year	10. Actual R	teturn [(9) + (8) - (7)]	- (6)]						209,383
Gain/(Loss)	11. Investme	ent Gain/(Loss) for Pi	rior Ye	ar [(10) - (5	5)]			\$	103,985
Actuarial Value of	12. Market	value of assets at 12/	31/200	19				2	2,173,060
Assets as of 12/31/2009		l investment gains and			Percent	]	Deferred		
		n Year Beginning		in/(Loss)	Deferred	<i>.</i>	Amount		
	a)	2006	\$	63,225	20.0%	\$	12,645		
	b)	2007		(29,173)	40.0%		(11,669)		
	c)	2008		(350,619)	60.0%		(210,371)		
	d)	2009		103,985	80.0%		83,188		
	e)	Total	\$	(212,582)		\$	(126,207)		
	14. Actuaria	al Value of Plan Asse	ts at 12	2/31/2009 [(	[12) - (13e)]				2,299,267

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 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.* In accordance with Minnesota State Statutes, the unfunded liability was amortized using a 10-year level-dollar amortization.

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 \$2,393,964, together with investment earnings, will be just sufficient to pay the 15 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.

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.

	Single I	Life Retireme				
Sample Attained _	Level	for Life	Increasing	3.5% Yearly	Future Expectancy	
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

This information is presented in draft form for review by the City's auditor. Please let us know if there are any changes so that we may maintain consistency with the City's financial statements.

### 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]
12/31/2004	\$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	124	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
12/31/2009	2,299	2,394	95	96.0	0	N/A

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

Valuation Date	Fiscal Year	Annual Required Contribution (a)	Total Employer Contribution (b)	Percentage Contributed (b / a)
12/31/2004	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	48,343	100.0
12/31/2008	2010	14,761	TBD	TBD
12/31/2009	2011	28,232	TBD	TBD