

TOWERS, PERRIN, FORSTER & CROSBY

2850 METRO DRIVE
MINNEAPOLIS, MINNESOTA 55420
(612) 854 1155

May 18, 1981

Mr. Charles McKusick
President
Fridley Firefighters Relief Association
6431 University Avenue Northeast
Fridley, Minnesota 55432

Dear Chuck:

We have completed the January 1, 1981 Actuarial Valuation of the benefits provided by the Fridley Volunteer Firefighters Relief Association. The valuation results presented below are based on the plan provisions outlined in ATTACHMENT I and the actuarial assumptions in ATTACHMENT II to this letter. As we indicated to you on the phone, we have also shown the normal cost, actuarial or accrued liability and minimum required contribution for each increase of \$1 in the base service pension. This should help you to determine the amount of benefit level increases in 1982 without undertaking an actuarial valuation of the plan.

1. Number of Members

Active	32
Retired	11
Disabled	1
Deferred Vested	<u>1</u>
Total	45

2. Normal Cost

	<u>Current Benefit Level</u>	<u>Each Increase of \$1 per month* in Base Service Pension</u>
- Service retirement and post-retirement survivors' benefits	\$18,599	\$ 97
- Pre-retirement survivors' benefits	3,373	18
- Permanent disability benefits	1,152	6
- Temporary disability benefits	<u>1,089</u>	<u>N/A</u>
	\$24,213	\$121

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3. Actuarial or Accrued Liability

- Actives

- Service retirement and post-retirement survivors' benefits	\$317,010	\$1,651
- Pre-retirement survivors' benefits	6,942	36
- Permanent disability benefits	6,307	33
- Temporary disability benefits	<u>5,445</u>	<u>N/A</u>
Total	\$335,704	\$1,720

4. Actuarial or Accrued Liability

- Inactives

- Retired and disabled members	\$367,365	\$1,913
- Deferred vested members	<u>29,040</u>	<u>151</u>
Total	\$396,405	\$2,064
5. Total Actuarial or Accrued Liability (3) + (4)	\$732,109	\$3,784
6. Actuarial Value of Assets	<u>734,392</u>	N/A
7. Unfunded Liability or (Surplus)	(2,283)	N/A
8. Minimum Required Contribution (chapter 201 of Minnesota Statutes)		
- Normal Cost	\$ 24,213	121
- Amortization of Unfunded Liability	<u>0</u>	<u>289</u>
Total	\$ 24,213	\$ 410
9. 1980 Level of Support	\$ 55,640	

* assumes no increase in temporary disability benefit

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The surplus of \$2,283 (excess of assets over actuarial or accrued liability) does not leave much room for benefit improvement, while avoiding an unfunded liability as of January 1, 1981. However, your 1980 level of support of \$55,640 is approximately \$31,000 above the 1981 required contribution. This \$31,000 could justify an increase in the base service pension to \$200 per month for active and inactive members, since the increase in both the normal cost and actuarial or accrued liability (due to this benefit increase) is approximately \$31,000 as shown below. Therefore, the unfunded liability would be eliminated in 1981.

	<u>\$200 Base Service Pension*</u>
1. Normal Cost	\$ 25,181
2. Actuarial or Accrued Liability	
- Actives	349,464
- Inactives	412,917
- Total	<u>762,381</u>
3. Actuarial Value of Assets	734,392
4. Unfunded Liability (2) - (3)	27,989
5. Normal Cost	25,181
Unfunded Liability	<u>27,989</u>
Total	<u>53,170</u>
6. 1980 Level of Support	55,640

* assumes no increase in temporary disability benefit

The maximum amount of increase in the base service pension (and all other benefits except temporary disability) is a 41% increase to \$270 per month. The minimum required contribution (as required by the Minnesota Statutes) is \$56,032. This compares with a 1980 level of support of \$55,640. The normal cost, accrued or actuarial liability and the unfunded liability for this benefit level are shown below:

1. Normal Cost	\$ 33,651
2. Actuarial or Accrued Liability	
- Actives	469,864
- Inactives	557,397
- Total	<u>\$1,027,261</u>


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3.	Actuarial Value of Assets	734,392
4.	Unfunded Liability	\$ 292,869
5.	Minimum Required Contribution	
	- Normal Cost	33,651
	- Amortization of Unfunded Liability	
	in 20 Years	22,381
	- Total	<u>\$ 56,032</u>
6.	1980 Level of Support	55,640

You will notice in ATTACHMENT I that we assumed that the benefit credit after 20 years of service is \$9.60, instead of \$4.00. We had agreeded to this change in our last conversation.

We certify that the valuation results are correct and calculated in accordance with the requirements of Chapter 201 of the Minnesota Statutes. Please call us if you have any questions.

Best regards,


Thomas J. Kuhlman, F.S.A.
Consultant


Thomas J. Holm, A.S.A.
Advanced Actuarial Analyst

TJK/TJH:cmf
Attachments

ATTACHMENT I

As of January 1, 1981, the Plan provided the following major benefits:

1. Retirement Benefit:

- a. Requirements for retirement:
 - 50 years of age
 - 20 years of serviceBenefit is \$192 per month after requirements are met
- b. Additional monthly annuity after minimum requirements are met:
 - 9.60 per year of service in excess of 20
 - (Maximum benefit \$288.00)

2. Permanent Disability Benefit:

- a. Requirements (years of service and age):
 - (1) In line of duty:
 - None for both full-time and volunteer members.
 - (2) Not in line of duty:
 - 10 years of service.
- b. Benefit:
 - (1) In line of duty:
 - \$192 per month.
 - (2) Not in line of duty:
 - \$103.68 plus \$8.83 for each year of service in excess of 10, deferred to age 50.
 - (Maximum benefit \$192)

3. Temporary Disability Benefit:

- Requirement: In line of duty.
- Benefit: After 20 days, 2-1/2 units,
 - maximum 30 weeks, may be extended by 2/3 vote of Board
- Requirement: Not in line of duty.
- Benefit: 2-1/2 units, maximum 30 weeks.
 - As of January 1, 1981, the unit value is \$3.00

4. Early Retirement Benefit:

- a. Requirements for retirement:
 - Between 10 and 20 years of service.
 - If not attained age 50, benefit is deferred to age 50.
- b. Benefit:
 - Lump Sum equal to 50% base service pension x 12, per year of service.

ATTACHMENT I (Continued)

5. Survivors' Benefit for Spouse (Monthly Annuity)

a. Before retirement of member:

(1) In line of duty:

\$103.68 to \$124.80 per month.

(2) Not in line of duty:

\$103.68 to \$124.80 per month provided deceased member had at least 10 years of service.

b. After retirement of member:

\$103.68 to \$124.80 per month.

6. Survivors' Benefit for Children (Monthly Annuity):

a. Before retirement of member:

\$42.24 per month payable until age 18.

b. After retirement of member:

Same.

7. Inactives' Benefits:

Same as level for active members.

ATTACHMENT II

ACTUARIAL ASSUMPTIONS AND METHODS
AS RECOMMENDED IN THE 1979 EXPERIENCE STUDY

Mortality:	1971 Group Annuity Mortality Table
Investment Rate:	5%
Withdrawal:	A rate of withdrawal of 7% from age 20 to 30 decreasing uniformly to 0 at age 45 with no withdrawal after that age.
Permanent Disability:	Rates of permanent disability were adopted from experience of the New York State Employees' Retirement System, graduated and extrapolated as required for this valuation. Rates of recovery and mortality for disabled lives were taken from tables used by the Pension Benefit Guaranty Corporation (PBGC) based on Social Security disability experience.
Temporary Disability:	1947-49 Basic Morbidity Table
Retirement Age:	The assumed age at retirement is the later of age 55 or the age when 20 years of service is achieved. (Average age at retirement has been approximately age 57)
Asset Basis:	Value reported by state auditor.
Cost Method:	Entry Age Normal