1971 ACTUARIAL REPORT

for

BLOOMINGTON FIRE DEPARTMENT RELIEF ASSOCIATION

May 21, 1971



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Section 1. A Brief Summary of the Census Data

The data on which this actuarial valuation is based is summarized below. Information on each member and beneficiary included in the valuation is presented in Appendix D.

Active Members

| Number | 79 |
|---|-----------|
| Aggregate Salary (on Which Retirement Benefits are Based) | \$906,288 |
| Employee Contributions for Past Plan Year | 13,827 |
| Prospective Annual Retirement Annuities | 529,437 |

Other Members

| | Number | Annual Annuity Payments |
|------------------------------|--------------|-------------------------|
| Retired Members | 17 | \$ 62,016 |
| Disabled Members | 2 | 7,296 |
| Widows of Deceased Members | 2 | 5,136 |
| Children of Deceased Members | - | 74448 |
| Deferred Annuitant Members | 1 | 3,648* |

^{*}Prospective Retirement Annuities

Section 2. The Actuarial Valuation

The results of the valuation on December 31, 1970, are shown below.

| 1. | Accrued Liability | \$3,782,027 |
|----|---|-------------|
| 2. | Assets | 516,377 |
| 3. | Unfunded Accrued Liability (Prior Service Deficit) | \$3,265,650 |
| 4. | Normal Cost for Current Year | \$ 385,009 |
| 5. | Normal Cost as a Level Percentage of Current and Projected Future Participating Payroll | 42.482% |
| 6. | Current Participating Payroll Used for Valuation | \$ 906,288 |

The actuarial assumptions will be found in Appendix A.

Section 3. Contributions

The contributions outlined below are the support rates required on an annual basis to meet the level of funding indicated. The amounts shown are based on the payroll used in the current valuation. The Normal Cost portion has been determined as a level per cent of the payroll used in determining benefits and will fluctuate in dollar amounts in future years as the participating payroll fluctuates. The support rates shown assume payment as of the valuation date.

Contribution to Amortize Unfunded Accrued Liability (Prior Service Deficit) by 2007

| 1. | Normal Cost for Current Year | \$385,009 |
|----|--|-----------|
| 2. | Amortization Payment on Unfunded Accrued Liability (Prior Service Deficit) | 143,029 |
| 3. | Total Contribution | \$528,038 |

Section 4. The Preparation of the Report

This report has been prepared in accordance with generally accepted actuarial principles and practices. This actuarial survey was made in accordance with the requirements of Chapter 729 of Minnesota Laws 1967. The usual care has been exercised in making the calculations and presenting the results. The contents of this report are, therefore, believed to be a correct appraisal of the state of affairs of the Plan.

Respectfully submitted,

HEWITT ASSOCIATES

Rodger R. Patrick, ASA

Robger A Petrick

May 21, 1971

Actuarial Method

APPENDIX A

ACTUARIAL ASSUMPTIONS

| Mortality Rates | The mortality rates used are based on | |
|-----------------|--|---|
| | the United States Life Table, 1959-61, | |
| | White Males and White Females. Thes | e |

tables were used for both active and retired members and for survivors.

Withdrawal Rates
The rate of withdrawal of .030 at age 20 decreasing uniformly to zero at age 50

with no withdrawal after that age.

Disability Rates

These rates are based on "Intermediate

Rates of Disablement" that were used by the Social Security Administration in their 1962 cost estimating procedures.

Retirement Age

The assumed average retirement age for this fund is age 53.

Salary Scale

A 3% annual increase in the salary on which

retirement benefits are based has been assumed.

assumed.

Interest Rate Three per cent compounded annually.

The Entry Age Normal Cost Method has been used to determine the Unfunded Prior Service Cost. The Normal Cost has been determined as a level percentage of current and future participating payroll on which

the retirement benefits are based.

APPENDIX B

SUMMARY OF PLAN PROVISIONS

| Requirements | for | Benefits |
|--------------|-----|----------|
| | | |

Retirement

Twenty years of service and 50 years

of age.

Disability

In Line of Duty: None.

Not in Line of Duty: None.

Vesting

Twenty years of service. Benefit is

deferred to the attainment of age 50.

Amount of Benefit

Retirement

Benefit When Minimum Requirements

Are Met: 33-1/3% of the last three years' average pay of a Police Patrol-

man (escalator).

Disability

In Line of Duty: 33-1/3% of last three

years' average salary of a Police

Patrolman.

Not in Line of Duty: Same as for In

Line of Duty.

Vesting

Same as for Retirement benefit.

Widow's Benefit

Twenty-five per cent of last three years' average salary of a Police Patrolman. Maximum family benefit is 33-1/3% of the last three years' average salary of

a Police Patrolman.

Children of Deceased

Members

Four per cent of the last three years' average salary of a Police Patrolman.

Other Death Benefits

\$500 funeral benefit.

APPENDIX B

SUMMARY OF PLAN PROVISIONS (Continued)

Salary Basis for Benefits Last three years' average salary of a

Police Patrolman. For the year 1970,

this average was \$10,264 per year.

<u>Unit Value</u> Not applicable.

Member Contribution \$144 per year payable semi-annually.

APPENDIX C

INCOME OF FUND DURING 1970

| Member's Contributions | \$ 13,827.00 |
|------------------------|--------------|
| Taxes or Public Funds | 121,904.64 |
| Other | - |
| Total Contributions | 135,731.64 |
| Investment Income | 81,929.19 |

APPENDIX D

CENSUS DATA

CENSUS DATA BLOOMINGTON FIRE DEPARTMENT

ACTIVE MEMBERS CURRENT SALARY IS THE SALARY ON WHICH RETIREMENT BENEFITS ARE BASED

| | C OD E NUMBER | AGE | SERVICE | SEX | CURRENT SALARY | PROSP ANNUAL ANNUITY |
|--|------------------|-----|---------|-----|-------------------|----------------------------|
| | 2 | 48 | 23 | M | 11472 | 4306 |
| an (2004) (Cita City, 1944) 1900 (City City) 1900 (City) 1900 (City) 1900 (City) 1900 (City) 1900 (City) 1900 | 12 | 47 | 14 | М | 11472 | 4435 |
| t | 17 | 47 | 17 | M | 11472 | 4435 |
| | 3 | 46 | 12 | М | 11472 | 4569 |
| | 18 | 45 | 11 | M | 11472 | 4707 |
| | 10 | 44 | 10 | М | 11472 | 4847 |
| | 29 | 43 | 9 | М | 11472 | 4993 |
| | 4 | 43 | 11 | М | 11472 | 4993 |
| | 20 | 43 | 11 | M | 11472 | 4993 |
| | 5 | 42 | 12 | М | 11472 | 5141 |
| EUP-MONEY/IN NO. 1010 10. IMA. 2010/2010/2010/2010/2010/2010/2010/2010 | 8 | 41 | 7 | М | 11472 | 5297 |
| | 26 | 41 | 9 | М | 11472 | 5297 |
| | 11 | 40 | 11 | М | 11472 | 5453 |
| n di kanada k | 19 | 40 | 8 | М | 11472 | 5453 |
| | 15 | 39 | 11 | M | 11472 | 5620 |
| | 39 | 39 | 4 | М | 11472 | 5620 |
| | 22 | 39 | 11 | Ινį | 11472 | 5620 |
| | 13 | 39 | 11 | М | 11472 | 5620 |
| | 14 | 39 | 10 | М | 11472 | 5620 |
| | 23 | 39 | 1.1 | M | 11472 | 5620 |
| and the second second second to the second s | 43 | 38 | 3 | М | 11472 | 5788 |
| | 35 | 38 | 7 | Μ | 11472 | 5788 |
| Allerian | 33 | 37 | 7 | М | 11472 | 5962 |
| | 7 | 37 | 2 | М | 11472 | 5962 |
| | | | | | | |

CENSUS DATA BLOOMINGTON FIRE DEPARTMENT

ACTIVE MEMBERS CURRENT SALARY IS THE SALARY ON WHICH RETIREMENT BENEFITS ARE BASED

| | CODE | ACE | CEDVICE | CEV | CURRENT | PROSP ANNUAL |
|--|--------|-----|---------|-----|---------|--|
| | NUMBER | AGE | SERVICE | SEX | SALARY | ANNUITY |
| | 64 | 36 | 2 | М | 11472 | 6140 |
| o de produktion kan kan se manusia 1986 - Northald (Norge - Northald Aren and Market Association) | 27 | 35 | 8 | М | 11472 | 6323 |
| | 28 | 35 | 3 | М | 11472 | 6323 |
| | 47 | 35 | 3 | М | 11472 | 6323 |
| all the residence and the second seco | 59 | 35 | 2 | М | 11472 | 6323 |
| The state of the s | 65 | 35 | .2 | М | 11472 | 6323 |
| A 36 Sec. 10 - 10 - 11 - 1 - 1 - 1 - 1 - 1 - 1 - | 75 | 35 | 0 | М | 11472 | 6323 |
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| | 51 | 34 | 2 | М | 11472 | 6512 |
| | 9 | 34 | 9 | М | 11472 | 6512 |
| They will also the contain six a second substitution | 76 | 34 | 0 | M | 11472 | 6512 |
| percentage to a contract of the second contra | 48 | 34 | 3 | М | 11472 | 6512 |
| | 49 | 34 | 3 | М | 11472 | 6512 |
| eli y St. y v 1966 v. y St. 1986 liste en Francespor, y personant anticestation | | 33 | 4 | М | 11472 | 6709 |
| | 25 | 33 | 11 | M | 11472 | 6709 |
| | 56 | 33 | 2 | M | 11472 | 6709 |
| Policiano indicatoria 1801, foi inferenzialia dalla para 1801, per esperazialia | 44 | 32 | 3 | M | 11472 | 6909 |
| | 21 | 32 | 3 | M | 11472 | 6909 |
| The second section | 32 | 32 | 7 | · M | 11472 | 6909 |
| s cartifol faith i 120 thair can an am means a suass ann albhrainn (allamath maillean | 36 | 32 | 5 | М | 11472 | 6909 |
| | 45 | 32 | 3 | М | 11472 | 6909 |
| | 50 | 32 | 2 | М | 11472 | 6909 |
| The same of the sa | 55 | 32 | 4 | М | 11472 | 6909 |
| 74 | 58 | 31 | 2 | М | 11472 | 7117 |
| <u> </u> | | | | | | and the state of t |

CENSUS DATA BLOOMINGTON FIRE DEPARTMENT

ACTIVE MEMBERS CURRENT SALARY IS THE SALARY ON WHICH RETIREMENT BENEFITS ARE BASED

| | C ODE NUMBER | ÄGE | SERVICE | SEX | CURRENT SALARY | PROSP ANNUAL ANNUITY |
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| - | 74 | 31 | 0 | M | 11472 | 7117 |
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| | 31 | 31 | 1 | M | 11472 | 7117 |
| | 53 | 31 | 2 | М | 11472 | 7117 |
| in the second | 38 | 31 | 5 | М | 11472 | 7117 |
| | 68 | 31 | 1 | М | 11472 | 7117 |
| | 73 | 30 | 1 | M | 11472 | 7333 |
| i which have shall returned to a plant, it is a factor which with a column | 72 | 30 | 1 | М | 11472 | 7333 |
| | 62 | 30 | 2 | М | 11472 | 7333 |
| | 16 | 30 | 6 | М | 11472 | 7333 |
| Policy Science and the State program are manufacturing and application policy. | 54 | 29 | 2 | М | 11472 | 7552 |
| | 66 | 29 | 1 | М | 11472 | 7552 |
| | 52 | 29 | 2 | M | 11472 | 7552 |
| ander, serings — who con to cold suite that of the control transport and debution is because for | 46 | 29 | 3 | <u></u> | 11472 | 7552 |
| The state of the s | 71 | 29 | 1 | М | 11472 | 7552 |
| | 34 | 29 | 3 | М | 11472 | 7552 |
| o New York Charles - White county distributed and the State White common the distributed to the property | 70 | 29 | 0 | М | 11472 | 7552 |
| | 77 | 29 | 0 | М | 11472 | 7552 |
| | 41 | 28 | 3 | М | 11472 | 7779 |
| and in the Transaction State Company of the Law Company of the Com | 60 | 28 | 1 | M | 11472 | 7779 |
| | 24 | 28 | 2 | М | 11472 | 7779 |
| | 78 | 27 | 0 | М | 11472 | 8013 |
| | 42 | 27 | 3 | M | 11472 | 8013 |
| | 61 | 27 | 2 | М | 11472 | 8013 |
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CENSUS DATA BLOOMINGTON FIRE DEPARTMENT

ACTIVE MEMBERS CURRENT SALARY IS THE SALARY ON WHICH RETIREMENT BENEFITS ARE BASED

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|--|--------|-----|---------|-----|---------|---------|--|
| The second secon | CODE | | | | CURRENT | ANNUAL | |
| | NUMBER | AGE | SERVICE | SEX | SALARY | ANNUITY | |
| · | 69 | 27 | 0 | M | 11472 | 8013 | |
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| <u> </u> | 37 | 25 | 0 | M | 11472 | 8499 | |
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| | 57 | 23 | 1 | M | 11472 | 9015 | |
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| , | CODE NUMBER | AGE | TYPE ANNUITY | SEX | ANNUAL ANNU |
| | 1 | 42 | ESCALATOR | — — М | 3648 |
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| RETIRED | MEMBER | RS | | |

| · · · · · · · · · · · · · · · · · · · | CODE NUMBER | AGE | TYPE ANNUITY | SEX | ANNUAL ANNUITY |
|--|-------------|-----|--------------|-----|----------------|
| | 15 | 68 | ESCALATOR | M | 3648 |
| e Maria de la constitución de la | 1 | 65 | ESCALATOR | М | 3648 |
| | 12 | 62 | ESCALATOR | M | 3648 |
| and the second s | 11 | 60 | ESCALATOR | M | 3648 |
| territorio de la securito degrada de la palación y qualificación de la companya d | 7 | 59 | ESCALATOR | М | 3648 |
| | 5 | 58 | ESCALATOR | М | 3648 |
| ···· | 6 | 58 | ESCALATOR | М | 3648 |
| nden (1919 vill) — (Messagethe Esmilderfers and Passeran Africa Managere groupe) | 16 | 56 | ESCALATOR | М | 3648 |
| | 8 | 55 | ESCALATOR | М | 3648 |
| | 9 | 53 | ESCALATOR | М | 3648 |
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| | 13 | 53 | ESCALATOR | М | 3648 |
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| | 2 | 34 | ESCALATOR | M | 3648 |
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CENSUS DATA BLOOMINGTON FIRE DEPARTMENT WIDOWS OF DECEASED MEMBERS

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