Touche Ross & Co.

MINNESOTA STATE RETIREMENT SYSTEM

STATE EMPLOYEES' RETIREMENT FUND

ACTUARIAL VALUATION AS OF

JUNE 30, 1981

DECEMBER 18, 1981

Touche Ross & Co.

December 18, 1981

Board of Directors
Minnesota State Retirement System
529 Jackson at 10th Street
St. Paul, Minnesota 55101

Ladies and Gentlemen:

We have performed an actuarial valuation of the Minnesota State Retirement System, State Employees' Retirement Fund as of June 30, 1981.

The valuation was performed on the basis of accepted actuarial methods and procedures, in accordance with the applicable provisions set forth in Minnesota Statutes (Chapter 356) and stipulated in the Contract between the State of Minnesota and Touche Ross & Co.

We hereby certify that on the basis of our valuation, contributions required from employees and the State under Minnesota Statutes (Chapter 352) are adequate to provide benefits payable from the Fund. Furthermore, the entry age normal cost method was utilized in determining the accrued liability for all benefits payable under the Fund.

TOUCHE ROSS & CO.

John H. Flittie

John H. Flittie, F.S.A.

Andrea Feshbach

Andrea Feshbach, F.S.A.

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Comparison with Previous Valuation

	6/30/80**	6/30/81
A. Financial and Actuarial Status		
1. Valuation Assets	569,165,868	675,227,139
2. Accrued Liability	767,247,161	861,658,302
3. Unfunded Accrued Liability (A2 - A1)	198,081,293	186,431,163
4. Accrued Liability Funding Ratio (A1/A2)	74.18%	78.36%
5. Normal Cost*		
General Plan	46,831,191 (6.82%)	52,378,019 (6.73%)
Correctional Plan	1,787,079 (10.64%)	2,027,036 (11.05%)
B. Contributions		
1. Chapter 356 Requirement	62,966,897	68,352,121
2. Actual Prescribed Contribution (Chapter 352)	73,854,736	81,463,385
3. Sufficiency (B2 / B1)	1.17	1.19
C. Depth of Funding - Plan Continuation Basis		
1. Present Value of Accrued Benefits	653,668,405	739,501,542
2. Depth of Funding (A1 / C1)	87.07%	91.31%

* Parentheses indicate contribution levels as a percentage of salary.

** From the actuarial valuation as of 6/30/80 prepared by The Wyatt Co.

REPORT HIGHLIGHTS (continued)

	6/30/80	6/30/81
D. Plan Participants		
1. Active Members		
a. Number	47,232	47,634
b. Covered payroll	$703,470,202	$796,297,430
2. Retired Members/Beneficiaries		
a. Number	9,504	9,917
b. Average annual benefit payable	$2,339	$2,501
3. Deferred Annuitants		
a. Number	772	798
b. Average annual vested benefit	$2,664	$2,967
4. Former Members Without Vested Rights		
a. Number	3,531	4,790
b. Average employee contributions	260	$219

REPORT HIGHLIGHTS

Results for General and Correctional Employees

	General	Correctional
A. Financial and Actuarial Status		
1. Valuation Assets	$648,942,941	26,284,198
2. Accrued Liability	831,782,260	29,876,042
3. Unfunded Accrued Liability (A2 - A1)	182,839,319	3,591,844
4. Accrued Liability Funding Ratio (A1/A2)	78.02%	87.98%
5. Normal Cost*	$52,378,019 (6.73%)	$2,027,036 (11.05%)
B. Contributions		
1. Chapter 356 Requirement	$66,050,986 (8.49%)	$2,301,135 (12.55%)
2. Actual Prescribed Contribution (Chapter 352)	77,796,102 (10.00%)	3,667,283 (20.00%)
3. Sufficiency (2 / 1)	1.18	1.59
C. Depth of Funding - Plan Continuation Basis		
1. Present Value of Accrued Benefits	711,193,039	28,308,503
2. Depth of Funding (A1 / C1)	91.25%	92.85%

* Parentheses indicate contribution levels as a percentage of salary.

REPORT HIGHLIGHTS (continued)

	General	Correctional
D. Plan Participants		
1. Active Members		
a. Number	46,669	965
b. Covered payroll	777,961,014	18,336,416
2. Retired Members/Beneficiaries		
a. Number	9,642	275
b. Average annual benefit payable	$2,432	$4,938
3. Deferred Annuitants		
a. Number	793	5
b. Average annual vested benefit	$2,944	$6,722
4. Former Members Without Vested Rights		
a. Number	4,752	38
b. Average employee contributions	$212	$1,052

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

ACTUARIAL VALUATION AS OF JUNE 30, 1981

PURPOSE AND SUMMARY

The purpose of this report is to set forth the financial status of the Minnesota State Retirement System (MSRS), State Employees' Retirement Fund in accordance with the applicable provisions set forth in Chapter 356 and Chapter 11A of the Minnesota Statutes.

Chapter 356 of the Minnesota Statutes sets forth the annual reporting requirements which govern the public employee retirement systems in Minnesota. The principal requirement (in addition to the experience study required every fourth year) is that an actuarial valuation be performed each year and that the valuation specifically set forth the following items based on an assumed 5% interest rate and a 3-1/2% salary scale assumption:

1. The assets of the plan and the present value of all benefits which will be payable from the plan.

2. The normal cost of the plan (as a level percentage of payroll) based on the entry age normal cost method.

3. The accrued liability of the plan, defined as the present value of all benefits less the present value of future entry age normal costs.

4. An actuarial balance sheet showing accrued assets, accrued liabilities, and the deficit from full funding of the accrued liability (unfunded accrued liability).

5. The annual contribution required to pay normal cost and amortize the June 30, 1981 unfunded accrued liability by June 30, 2009.

6. An analysis explaining the increase or decrease in the unfunded accrued liability since the last valuation.

Chapter 11A of the Minnesota Statutes pertains to the operation of the Minnesota Post Retirement Investment Fund (MPRI Fund). It includes requirements regarding the determination of the present value of benefits payable from the MPRI Fund (as of June 30, 1981 and as of January 1, 1982) and the corresponding mortality gain or loss each year, the latter to facilitate an appropriate transfer between the State Employees' Retirement Fund and the MPRI Fund.

This reporting on the status of the State Employees' Retirement Fund as of June 30, 1981, is intended to comply with all of the requirements regarding actuarial reporting that are set forth in Chapters 356 and 11A of the Statutes. The Appendix at the end of the report cross-references the information of the Minnesota Statutes set forth herein with that specifically called for under Chapters 356 and 11A respectively.

There have been no changes from last year in the methods used in the valuation.

VALUATION ASSETS

The Executive Director furnished us with a Financial Report setting forth the assets and liabilities of the Fund as of June 30, 1981. The accounting balance sheet furnished by the Executive Director is set forth in Table 1(a).

In order to determine the Chapter 356 contribution requirements, as well as the unfunded accrued liability and depth of funding ratio, separately for Correctional and General Employees, we must allocate the State Contribution Reserve (item B.4 in Table 1A) between the General and Correctional Employees' portion of the fund. The method used in last year's report has been retained and may be briefly outlined as follows:

1. Start with last year's resulting allocation.

2. Add estimated State contributions to each plan, determined by allocating the actual State contribution for the year in proportion to the respective amounts derived by applying the State contribution rates to average General and Correctional payrolls during the year.

3. Deduct any refund of contributions and transfers of assets to the MPRI Fund (estimated, based on new retirees reported at the end of the year during the year. Note that this step is performed only in regard to those items which we can definitely allocate on the valuation date. Determine new 1981 base before allocation of investment earnings.

4. Allocate investment earnings, net of operating expenses in proportion to the new base.

The June 30, 1981 allocation on this basis results in valuation assets as follows:

General Plan	$648,942,941
Correctional Plan	26,284,198
Total	$675,227,139

Addition of the Metropolitan Transit Commission/Transit Operating Division

Effective July 1, 1978, the MTC/TOD Retirement Fund was transferred to MSRS. As set forth in Chapter 600, Section 10 of the 1980 Minnesota Laws, MTC is to make additional annual contributions in the amount of 3.8% of covered payroll until the additional unfunded accrued liability of $7,307,545 is paid off. As of June 30, 1981, the additional deficiency was reported as $3,550,866.

ACTUARIAL BALANCE SHEETS

Table 2 sets forth an actuarial balance sheet summarizing the actuarial valuation. Whereas the previously mentioned accounting balance sheet (Table 1(a)) balances the current assets to date with current accumulated reserves for benefits payable, the actuarial balance sheet compares total assets, including the present value of all future contributions payable to the plan, with the present value of all benefits payable from the plan.

Table 3(a) sets forth a balance sheet comparing the assets and unfunded accrued liability (the total of the two equaling the accrued liability) to the current liabilities and reserves required under the plan. This table is in the format specifically required by Chapter 356 and is supported by attachments in the form of Tables 3(b) and 3(c) which set forth the determination of the unfunded accrued liability and the status of the MPRI Fund as of June 30, 1981.

Table 1(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Accounting Balance Sheet as of June 30, 1981

A.	ASSETS		
1.	Cash in State Treasury		(2,455.07)
2.	Cash in Bank (imprest cash)		149.76
3.	Short term investments (at cost)		72,694,560.75
4.	Accounts receivable:		
	a. Accrued employee contributions	980,932.31	
	b. Accrued employer contributions	1,564,844.69	
	c. Employee buy backs	200,802.79	
	d. Other	471.56	2,747,051.35
5.	Due from other plans		120,534.75
6.	Accrued interest on investments		7,121,893.83
7.	Dividends declared and payable, but not yet received		773,093.26
8.	Investment in debt securities at amortized cost		192,893,073.10
9.	Investment in G.N.M.A.'s at amortized cost		20,384,081.69
10.	Investment in equities at cost*		143,908,168.08
11.	Equipment at depreciated cost		20,918.06
12.	Deferred yield adjustment account		4,511,134.59
13.	Participation in MPRI Fund**		230,426,989.00
14.	TOTAL ASSETS		676,060,983.09
B.	LIABILITIES		
	Liabilities		
1.	Accounts payable		
	a. Security purchases	388,182.37	
	b. Annuities	226.26	
	c. Annuitant deposits	1,146.48	
	d. Accrued expenses	90,273.97	
	e. Transfer to unclassified retirement	286,150.90	
	f. Due MPRI Fund	67,324.55	
	g. Due General Fund	540.00	
2.	Total liabilities		833,844.53
	Reserves		
1.	Participation in MPRI Fund**		230,426,989.00
2.	Survivor benefit reserve		197,897.00
3.	Employee contribution reserve		153,317,649.12
4.	State contribution reserve		291,284,603.44
5.	Total reserves (valuation assets)***		675,227,138.56
6.	TOTAL LIABILITIES AND RESERVES		676,060,983.09

* Market value as of June 30, 1981 is $165,639,743
** Participation equals Required Reserves for retired lives.
*** Portion of assets to be applied as valuation assets towards providing benefits.

Table 1(b)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Allocation of June 30, 1981 Valuation Assets
Between General and Correctional Employees

	General Plan	Correctional Plan	Total
1. Original Base, Equal to the Employee and State Contribution Fund, as Allocated on June 30, 1980	350,715,748	11,860,199	362,575,947
2. Allocated Contributions During the Year	69,996,453	3,367,074	73,363,527
3. Transfers of Assets to MPRI Fund During the Year	28,428,621	1,144,358	29,572,979
4. Refunds Allocable During the Year	6,652,762	221,050	6,873,812
5. Estimated Base as of June 30, 1981, Before Allocation of Investment Earnings and Expenses (1) + (2) - (3) - (4)	385,630,818	13,861,865	399,492,683
6. Employee Contribution Reserve as of June 30, 1981	148,625,673	4,691,976	153,317,649
7. Estimated State Contribution Reserve as of June 30, 1981 (5) - (6)	237,005,145	9,169,889	246,175,034
8. Actual State Contribution Reserve, Including Investment Earnings During the Year and Expenses Allocated According to Item 7	280,434,407	10,850,196	291,284,603
9. MPRI Fund Reserve	219,684,964	10,742,025	230,426,989
10. Survivor Benefit Reserve	197,897	0	197,897
11. Total Valuation Assets* (6) + (8) + (9) + (10)	648,942,941	26,284,198	675,227,139

* Includes Employee and State Contribution Reserves, MPRI Fund Participation and Survivor Benefit Reserve.

Table 2

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Actuarial Balance Sheet as of June 30, 1981

A. ASSETS		
1. Assets on hand from accounting balance sheet:		
a. Reserves for MPRI Fund benefits	230,426,989	
b. All other assets	445,633,994	676,060,983
2. Present value of employees' future contributions		286,278,629
3. Present value of state future contributions applicable to:		
a. Entry age normal costs	197,145,243	
b. Unfunded accrued liability (Balance of "matching" contribution less .18% for operating expense)	76,398,409	
c. Unfunded accrued liability (Portion to be funded by "additional" contribution)	110,032,754	383,576,406
4. TOTAL ASSETS		1,345,916,018
B. LIABILITIES		
1. Current liabilities from accounting balance sheet		833,844
2. Present value of earned and earnable benefits payable to presently active members:		
a. Retirement benefits	855,153,962	
b. Disability benefits	63,216,190	
c. Refundments due to death or withdrawal	156,686,821	
d. Surviving spouse benefits	27,290,840	1,102,347,813
3. Present value of benefits for deferred annuitants		11,059,859
4. Present value of refundment to former members without vested rights		1,049,616
5. Present value of survivor benefits		197,897
6. Participation in MPRI Fund		230,426,989
7. TOTAL LIABILITIES		1,345,916,018

Table 3(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Chapter 356 Balance Sheet as of June 30, 1981

ASSETS AND UNFUNDED ACCRUED LIABILITY

A. ASSETS(1)

1.	Cash in State Treasury		(2,455.07)
2.	Cash in Bank (Imprest Cash)		149.76
3.	Short term investments (at cost)		72,694,560.75
	a. Accrued employee contributions	980,932.31	
	b. Accrued employer contributions	1,564,844.69	
	c. Employee buybacks	200,802.74	
	e. Other	471.56	2,747,051.35
5.	Due from other plans		120,534.75
6.	Accrued interest on investments		7,121,893.83
7.	Dividends declared and payable, but not yet received		773,093.26
8.	Investment in debt securities at amortized cost		192,893,073.10
9.	Investment in G.N.M.A.'s at amortized cost		20,384,081.69
10.	Investment in equities at cost		143,908,168.08
11.	Equipment at depreciated cost		20,918.06
12.	Deferred yield adjustment account		4,511,134.59
13.	Participation in MPRI Fund(2)		230,426,989.00
14.	TOTAL ASSETS		676,060,983.09

B. UNFUNDED ACCRUED LIABILITY

1.	Unfunded accrued liability to be funded by portion of employee contributions and State "matching" contribution in excess of entry age normal cost contribution and operating expenses	76,398,409.00
2.	Unfunded accrued liability to be funded by State's "additional" contribution	110,032,754.44
3.	Total unfunded accrued liability	186,431,163.44
4.	TOTAL ASSETS AND UNFUNDED ACCRUED LIABILITY	862,492,146.53

(continued)

CURRENT LIABILITIES AND RESERVES REQUIRED

C. LIABILITIES

1. Accounts payable:		
a. Security purchases	388,182.37	
b. Annuities	226.26	
c. Annuitant deposits	1,146.48	
d. Accrued expenses	90,273.97	
e. Transfer to unclassified retirement	286,150.90	
f. Due MPRI Fund	67,324.55	
g. Due general fund	540.00	
2. Total liabilities		833,844.53

RESERVES REQUIRED

1. Total reserves required per attached Table 3(b)	861,658,302.00
2. TOTAL CURRENT LIABILITIES AND RESERVES REQUIRED	862,492,146.53

(1) Accumulated contributions, without interest, of members not yet retired amounted to 153,317,649 as of June 30, 1981 (includes accrued but unpaid contributions).

(2) Participation equals Required Reserves for retired lives as of June 30, 1981, excluding the January 1, 1982 benefit increases.

Table 3(b)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Determination of Accrued Liability and
Unfunded Accrued Liability as of June 30, 1981

	(1) Present Value of Benefits	(2) Present Value of Applicable Portion of Normal Cost Contribution	(3) Accrued Liability Equals Reserves Required (1) - (2)
A. DETERMINATION OF ACCRUED LIABILITY			
1. Active Members			
a. Retirement benefits	855,153,962	314,121,174	541,032,788
b. Disability benefits	63,216,190	24,189,355	39,026,835
c. Refundments due to death or withdrawal	156,686,821	136,457,891	20,228,930
d. Surviving spouse benefits	27,290,840	8,655,452	18,635,388
2. Deferred annuitants	11,059,859		11,059,859
3. Former members without vested rights	1,049,616		1,049,616
4. Survivors	197,897		197,897
5. Participation in MPRI Fund	230,426,989		230,426,989
6. Total	1,345,082,174	483,423,872	861,658,302
B. DETERMINATION OF UNFUNDED ACCRUED LIABILITY			
1. Accrued Liability			861,658,302
2. Valuation assets			675,227,139
3. Unfunded accrued liability (1 - 2)			186,431,163

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Table 3(c)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Determination of MPRI Fund Participation and Reserves
as of June 30, 1981

	Members Eligible for 1/1/82 Increase	Members Not Eligible for Increase	Total
1. Unadjusted MPRI Fund Participation as of June 30, 1981	--	--	$224,751,212
2. Transfer (from) to MPRI Fund for Mortality (Gain) Loss	(432,359)	(28,893)	(461,252)
3. Participation as of June 30, 1981 (1) + (2)	--	--	224,289,960
4. Required Reserves as of June 30, 1981	201,196,176	29,230,813	230,426,989
5. Required Reserves as of January 1, 1982	198,444,609	28,893,622	227,338,231

This exhibit does not reflect benefit increases to become effective on January 1, 1982.

MINNESOTA POST RETIREMENT INVESTMENT FUND

Background

The Minnesota Post Retirement Investment Fund (MPRI Fund), previously termed the Minnesota Adjustable Fixed Benefit Fund (MAFB), is basically a vehicle for providing variable annuity payments to pensioners. When an active participant retires, assets equal to the present value of future benefits payable to that participant (and beneficiary, if applicable) are transferred from the State and Employee Contribution Reserves, to the MPRI Fund. Thereafter, benefits are paid from the MPRI Fund. Future benefit increases are determined on the basis of the investment performance of MPRI Fund assets.

Chapter 11A of the Minnesota Statutes provides a method for determining benefit increases. A benefit increase is granted in any year in which the earnings of MPRI Fund assets exceed 5%. In a year in which there is an MPRI Fund deficit (i.e., required reserves exceed MPRI Fund assets) 5% of any income in excess of the 5% requirement is credited towards amortizing the deficit, with the remaining 95% being used to provide benefit increases. If there is no MPRI Fund deficit, all income in excess of the required 5% is used to provide benefit increases.

MPRI Fund Status as of June 30, 1981

Table 3(c) sets forth the determination of MPRI Fund net assets and reserve requirements as of June 30, 1981.

As required by Chapter 11A, Table 3(c) allocates the mortality gain and reserve determinations for January 1, 1982 benefit increase purposes to the eligible and non-eligible groups.

UNFUNDED ACCRUED LIABILITY

Tables 4 and 5 reconcile the change in the unfunded accrued liability during the year. Table 4 sets forth an illustration that the decrease in the unfunded accrued liability is equal to the excess of income over deductions during the year, where any increase in required actuarial reserves is indicated as a deduction item. Table 5 sets forth our analysis of the change in the unfunded accrued liability.

Table 4

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Analysis of Income and Deductions from Income and Effect on the Unfunded Accrued Liability

A.	INCOME		
1.	From employees		
	a. Employee contributions	27,301,889.02	
	b. Employee accrued contributions receivable	980,932.31	
	c. Employee contributions, accounts receivable	41,770.83	28,324,592.16
2.	From employers		
	a. Employer contributions	27,840,757.51	
	b. Employer additional contributions	15,633,332.35	
	c. Employer accrued contributions receivable	1,564,844.69	45,038,934.55
3.	From investments		
	a. Interest on securities, short term and GNMA's	25,241,336.31	
	b. Dividends on corporate stock	8,402,903.51	
	c. Gain on sale of securities	15,932,242.04	
	d. Interest on back payments by employees	137,570.92	49,714,052.78
4.	From MPRI Fund participation		
	a. Participation in MPRI Fund income		16,267,413.28
5.	Other revenues		
	a. Miscellaneous		44,770.62
6.	TOTAL INCOME		139,389,763.39
B.	DEDUCTIONS FROM INCOME		
1.	Benefits		
	a. Service retirement annuities	22,374,035.24	
	b. Disability retirement benefits	1,450,559.19	
	c. Survivor benefits (spouse)	22,787.49	23,847,381.92
2.	Refundments (employee contributions)		
	a. Left service	6,119,720.04	
	b. Erroneous deductions	28,624.69	
	c. Annuitant deposits	65,239.75	
	d. Employee death	372,340.70	
	e. Interest on refundments	287,886.17	6,873,811.35
3.	Operating expenses		
	a. Administrative expenses	1,335,410.13	
	b. Loss on disposition of assets	452.19	
	c. Interest expense on lump sum cancellation	125,218.97	1,461,081.29

(continued)

Table 4 (continued)

4. Increase in total reserves required		
a. Reserves required 6/30/80	767,247,161.00	
b. Reserves required 6/30/81	861,658,302.00	94,411,141.00
5. TOTAL DEDUCTIONS FROM INCOME		126,593,415.56
C. OTHER FINANCING SOURCES (USES)		
1. Transfers from other funds/plans		236,010.91
2. Lump sum payments		(1,252,020.00)
3. Supplemental payments		(60,546.00)
4. Transfers to other funds/plans		(79,186.12)
5. TOTAL OTHER FINANCING SOURCES (USES)		(1,155,741.21)
D. EXCESS OF INCOME AND OTHER SOURCES OVER DEDUCTIONS FROM INCOME AND OTHER USES		11,640,606.62
E. INCREASE IN UNFUNDED ACCRUED LIABILITY		
1. Unfunded accrued liability 6/30/80		
a. Unfunded Liability in June 30, 1980 Valuation Report	198,081,293.33	
b. Decrease in Unfunded Liability after prior period adjustment	9,523.27	198,071,770.06
2. Unfunded accrued liability 6/30/81		186,431,163.44
3. DECREASE IN UNFUNDED ACCRUED LIABILITY		11,640,606.62

Table 5

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Analysis of Change in the Unfunded Accrued Liability
During the Fiscal Year Ending June 30, 1981

1. Unfunded accrued liability as of June 30, 1980		198,081,293
2. Change due to current rate of funding and interest requirements		
a. 1980-81 past service contribution	(22,759,860)	
b. 5% interest requirement	9,904,065	(12,855,795)
3. Change due to actuarial gains (indicated by parentheses) or losses (no parentheses) because of experience deviations from expected		
a. Salary increases	26,503,419	
b. Investment income	(30,363,313)	
c. MPRI Fund mortality gain	(461,790)	
d. Withdrawals, death, disability of active members (balancing item)	5,527,349	1,205,665
4. Unfunded accrued liability as of June 30, 1981		186,431,163

CONTRIBUTIONS

Chapters 356 and 352 set forth requirements as to the level of contributions. Chapter 352 prescribes the actual amount of contributions and Chapter 356 describes the method used to determine the amount of contribution required to fully fund the Normal Cost and the Unfunded Accrued Liability. Together, the actual contribution and required contribution are used to determine the sufficiency of the actual contribution. These calculations are illustrated in Tables 6(a) and 6(b).

Table 6(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

General Employees' Plan Annual Requirement in Accordance With Chapter 356

	Percent of Payroll	Amount
1. Normal cost	6.73	52,378,019
2. Assumed operating expense	.18	1,400,330
3. Amortization of the Unfunded Accrued Liability by June 30, 2009	1.58	12,272,637
4. Total Chapter 356 requirement (1) + (2) + (3)	8.49	66,050,986
Actual Contributions:		
1. Employee contributions	4.00	31,118,441
2. Employer "matching" contribution	4.00	31,118,441
3. Employer "additional: contribution	2.00	15,559,220
4. Total Chapter 352A prescribed contribution	10.00	77,796,102
Contribution Sufficiency:		1.18

Table 6(b)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Correctional Employees' Plan Annual Requirement in Accordance With Chapter 356

	Percent of Payroll	Amount
1. Normal cost	11.05	2,027,036
2. Assumed operating expense	.18	33,005
3. Amortization of the Unfunded Accrued Liability by June 30, 2009	1.32	241,094
4. Total Chapter 356 requirement (1) + (2) + (3)	12.55	2,301,135
Actual Contributions:		
1. Employee contributions	6.00	1,100,185
2. Employer "matching" contribution	9.00	1,650,277
3. Employer "additional: contribution	5.00	916,821
4. Total Chapter 352 prescribed contribution	20.00	3,667,283
Contribution Sufficiency:		1.59

DEPTH OF FUNDING - PLAN CONTINUATION BASIS

The depth of funding is an indication of the extent to which the accrued benefits are funded and is measured by the ratio of valuation assets to the present value of accrued benefits. These measurements are made on the plan continuation basis (applying all ongoing actuarial assumptions including assumed salary increases and turnover) and are illustrated as follows:

Table 6(c)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Depth of Funding

	General	Correctional
1. Active members	479,378,814	17,388,367
2. Deferred annuitants	10,921,716	138,143
3. Former members without vested rights	1,009,648	39,968
4. Survivors	197,897	-
5. Participation in MPRI Fund	219,684,964	10,742,025
6. Total present values of accrued benefits	711,193,039	28,308,503
7. Valuation assets	648,942,941	26,284,198
8. Depth of Funding (7 / 6)	91.25%	92.85%

EMPLOYEE DATA

The Executive Director furnished us with employee information pertaining to all active members, inactive members and retired members of the Fund. Tables 7(a), 7(b), 8(a) and 8(b) summarize the changes in active, inactive and retired membership during the year in accordance with the requirements set forth in Section 356.215 of the Minnesota Statutes, Subdivisions 4 and 5. In addition, age and service distributions are provided in Tables 9(a) - 9(d).

PAYROLL ADJUSTMENT

The data, reported as of June 30, 1981, reflects covered payrolls of $721,713,729 and $16,947,979 for General and Correctional Employees, respectively. Chapter 356, Section 356.215, Subdivision 4 of the Statutes requires that the actuarial valuation reflect salaries that will be in force during the ensuing fiscal year for which the valuation is being performed. In order to satisfy this requirement, salaries as reported have been adjusted for valuation purposes as follows:

> Based on salary information available to the Executive Director at the time employee data were submitted, an across the board increase of 8.2% became effective on July 1, 1981, for Correctional and General Employees, excluding those employed with MTC/TOD. Accordingly, we increased reported salaries by 8.2%. For MTC employees, we increased reported salaries by $508, representing a 10¢ per hour increase in May, 1981, a 5¢ increase in October, 1981, and expected cost of living increases totaling $222 during the year, based on 2,080 hours per year, an estimated 10% inflation rate, and quarterly cost of living increases of 1¢ per hour for each .35 point change in CPI.

PLAN VALUED

The provisions of the Minnesota State Retirement System, State Employees' Retirement Fund are governed principally by Chapters 352 and 11A of the Minnesota Statutes pertaining to MPRI Fund Benefits. Table 11 sets forth a summary of the principal provisions as of June 30, 1981. No changes to Chapter 352 were reported since the last actuarial valuation as of June 30, 1980.

Table 7(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Covered General Employees Census Data as of June 30, 1981

	Number	Annual Payroll
Active at June 30, 1980	46,242	654,713,729
New Entrants*	8,586	
Total	54,828	
Less Separations from Active Service:		
Refund of Contributions*	5,564	49,882,446
Separation with a Vested Right to a Deferred Annuity	114	1,198,340
Separation with Neither Refund or Right to a Deferred Annuity	1,629	9,976,517
Disability	63	894,479
Death, no spouse's benefits*	79	1,165,720
Service Retirement	624	9,969,593
Death	6	95,846
Total Separations	8,079	
Net Transfers to and from other plans	80	
Active at June 30, 1981**	46,669	721,713,729

Average Entry Age of New Employees

For the Fiscal Year Ending	Male	Female	Average of Total
6/30/77	29.6	28.6	29.3
6/30/78	30.7	29.1	29.5
6/30/79	30.7	28.9	29.4
6/30/80	31.4	29.9	30.5
6/30/81	28.9	27.8	28.2

Average age at entry in State service for all active employees at 6/30/81:

Male	29.9
Female	28.8
Total	29.3

* Includes those who entered the plan and terminated during the period from July 1, 1980 to June 30, 1981.
**Includes six Military Affairs employees who have special additional coverage.

Table 7(b)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

General Plan Annuitant Census Data as of June 30, 1981

	Number	Annual Annuity Benefit Payable
A. Service Retirement Annuitants		
Receiving at June 30, 1980	8,280	19,156,082.88
New	707	2,417,803.20
Deaths	364	770,993.52
Adjustments-Net Result	12	577,064.36
Receiving at June 30, 1981*	8,635	21,379,956.92
B. Disabled Employees		
Receiving at June 30, 1980	626	1,274,977.92
New	69	196,905.12
Deaths	48	105,142.92
Disability Rescinded	0	0
Adjustments-Net Result	(8)	21,065.04
Receiving at June 30, 1981	639	1,387,805.16
C. Widows Receiving an Annuity or Survivor Benefit		
1. Beneficiaries Receiving an Optional or Reversionary Annuity:		
Receiving at June 30, 1980	321	553,495.20
New	50	127,677.24
Deaths	19	23,163.52
Adjustments-Net Result	(1)	2,778.40
Receiving at June 30, 1981	351	660,787.32

* Includes four annuitants under the Unclassified Plan.

Table 7(b) (con't.)

	Number	Annual Annuity Benefit Payable
2. Spouse Receiving a Survivor Benefit:		
Receiving at June 30, 1980	20	25,111.32
Deaths	3	4,744.80
Adjustments-Net Result	0	653.64
Receiving at June 30, 1981	17	21,020.16

D. Children Receiving a Survivor Benefit

Receiving at June 30, 1981	None	

E. Deferred Annuitants

Deferred as of June 30, 1980	765	2,009,726.04
New	133	522,756.00
Began Receiving	63	152,000.00
Adjustments - Net Result	(42)	(46,191.20)
Deferred as of June 30, 1981	793	2,334,290.84

Average Age at Retirement of New Service Annuitants

Fiscal Year Ending	Average Retirement Age
6/30/77	64.1
6/30/78	64.0
6/30/79	63.9
6/30/80	64.1
6/30/81	63.4
All Existing Service Annuitants	64.4

Table 8(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Covered Correctional Employees Census Data as of June 30, 1981

	Number	Annualized Payroll
Active at June 30, 1981	990	16,157,502
New Entrants 1/	163	
Total	1,153	
Less Separations from Active Service:		
Refund of Contributions 1/	104	1,114,956
Separation with a Deferred Annuity	1	17,888
Separation with Neither Refundment or Right to a Deferred Annuity	10	139,693
Disability	2	34,736
Death, No Spouse's Benefits	1	15,808
Service Retirement	21	370,531
Total Separations	139	
Net Transfers to and From Other Plans	49	
Active at June 30, 1981	965	16,947,979

AVERAGE ENTRY AGE OF NEW EMPLOYEES

For the Fiscal Year Ending	Male	Female	Average of Total
6/30/78	29.1	30.0	29.2
6/30/79	28.5	31.0	28.9
6/30/80	30.1	32.8	30.7
6/30/81	28.4	29.2	28.6

Average age at entry in State service for all active employees at 6/30/81

Male 28.5 Female 29.8 Total 28.6

1/ Includes those who entered the plan and terminated during the period from July 1, 1980 to June 30, 1981.

Table 8(b)
MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Correctional Plan Annuitant Census Data as of June 30, 1981

	Number	Annual Annuity Benefit Payable
A. SERVICE RETIREMENT ANNUITANTS		
Receiving at June 30, 1980	247	1,193,476.92
New	24	166,648.92
Deaths	7	30,485.04
Adjustments-Net Result	0	(9,135.48)
Receiving at June 30, 1981	264	1,320,505.32
B. DISABLED EMPLOYEES		
Receiving at June 30, 1980	7	18,245.88
New	2	10,275.24
Deaths	1	2,604.48
Adjustments-Net Result	0	358.44
Receiving at June 30, 1981	8	26,275.08
C. WIDOWS RECEIVING AN ANNUITY OR SURVIVOR BENEFIT		
1. Beneficiaries Receiving an Optional or Reversionary Annuity		
Receiving at June 30, 1980	3	10,836.96
New	0	0.00
Adjustments-Net Result	0	347.64
Receiving at June 30, 1981	3	11,184.60
D. CHILDREN RECEIVING A SURVIVOR BENEFIT	None	

Table 8(b) (con't.)

	Number	Annual Annuity Benefit Payable
E. DEFERRED ANNUITANTS		
Deferred as of June 30, 1980	7	47,000.00
New	1	6,564.00
Began Receiving	3	19,952.00
Deferred as of June 30, 1981	5	33,612.00

AVERAGE AGE AT RETIREMENT OF NEW SERVICE ANNUITANTS

Fiscal Year Ending	Average Retirement Age
6/30/78	56.5
6/30/79	57.9
6/30/80	58.4
6/30/81	56.1
All Existing Service Annuitants	58.5

Table 9(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

General Employees

Service Groups by Age Groups

Age Group	0-4	5-9	10-14	15-19	20-24	25 & over	Total
				Male			
0 - 19	169						169
20 - 24	1328	18					1346
25 - 29	2622	597	19				3238
30 - 34	2194	1490	422	30			4136
35 - 39	981	946	821	328	5		3081
40 - 44	558	481	500	521	222	14	2296
45 - 49	450	358	359	352	282	214	2015
50 - 54	347	326	357	267	271	360	1928
55 - 59	316	378	414	272	215	580	2175
60 - 64	157	244	324	257	158	459	1599
65 & over	33	48	68	30	19	43	241
Total	9155	4886	3284	2057	1172	1670	22224
				Female			
0 - 19	318						318
20 - 24	3280	66					3346
25 - 29	4533	1230	52				5815
30 - 34	2622	1171	623	30			4446
35 - 39	1380	572	363	181	8		2504
40 - 44	993	420	230	109	81	6	1839
45 - 49	590	454	248	109	78	43	1522
50 - 54	484	415	332	139	77	78	1525
55 - 59	382	364	385	277	96	124	1628
60 - 64	183	234	285	215	135	168	1220
65 & over	46	39	71	59	33	34	282
Total	14811	4965	2589	1119	508	453	24445

Table 9(b)

MINNESOTA STATE RETIREMENT SYSTEM
GENERAL EMPLOYEES

Distribution of Annual Earnings by Age Groups

Age Group	Male No.	Male Total	Male Average	Female No.	Female Total	Female Average	All No.	All Total	All Average
0 - 19	169	1,788,249	10,581	318	3,371,743	10,603	487	5,159,992	10,595
20 - 24	1,346	17,589,737	13,068	3,346	39,405,431	11,777	4,692	56,995,168	12,147
25 - 29	3,238	51,060,148	15,769	5,815	80,349,858	13,818	9,053	131,410,006	14,516
30 - 34	4,136	76,670,689	18,537	4,446	65,643,741	14,765	8,582	142,314,430	16,583
35 - 39	3,081	64,088,022	20,801	2,504	38,560,250	15,399	5,585	102,648,272	18,379
40 - 44	2,296	49,678,590	21,637	1,839	27,294,509	14,842	4,135	76,973,100	18,615
45 - 49	2,015	43,711,236	21,693	1,522	22,554,425	14,819	3,537	66,265,662	18,735
50 - 54	1,928	42,001,090	21,785	1,525	22,306,048	14,627	3,453	64,307,138	18,624
55 - 59	2,175	46,516,452	21,387	1,628	24,548,186	15,079	3,803	71,064,638	18,686
60 - 64	1,599	33,445,776	20,917	1,220	18,494,352	15,159	2,819	51,940,128	18,425
65 & over	241	4,687,430	19,450	282	4,195,050	14,876	523	8,882,480	16,984
Total	22,224	431,237,420	19,404	24,445	346,723,594	14,184	46,669	777,961,014	16,670

Distribution of Annual Earnings by Service Groups

Service Group	Male No.	Male Total	Male Average	Female No.	Female Total	Female Average	All No.	All Total	All Average
0	2,307	29,434,154	12,759	4,116	45,463,319	11,046	6,423	74,897,474	11,661
1	3,172	49,574,597	15,629	5,481	69,386,146	12,659	8,653	118,960,743	13,748
2	1,245	21,906,170	17,595	2,125	29,664,533	13,960	3,370	51,570,703	15,303
3	1,459	27,512,924	18,857	1,732	24,863,547	14,355	3,191	52,376,471	16,414
4	972	18,346,919	18,875	1,357	20,253,316	14,925	2,329	38,600,234	16,574
0-4	9,155	146,774,301	16,032	14,811	189,631,324	12,803	23,966	336,405,625	14,037
5-9	4,886	101,464,355	20,766	4,965	78,225,209	15,755	9,851	179,689,564	18,241
10-14	3,284	70,258,025	21,394	2,589	42,552,411	16,436	5,873	112,810,436	19,208
15-19	2,057	45,272,249	22,009	1,119	19,066,126	17,039	3,176	64,338,375	20,258
20-24	1,172	27,190,188	23,200	508	8,843,209	17,408	1,680	36,033,398	21,448
25-29	996	23,094,832	23,188	256	4,654,371	18,181	1,252	27,749,204	22,164
30-34	543	13,913,220	25,623	128	2,399,391	18,745	671	16,312,611	24,311
35-39	116	2,846,987	24,543	50	943,559	18,871	166	3,790,545	22,835
40+	15	423,263	28,218	19	407,993	21,473	34	831,256	24,449
Total	22,224	431,237,420	19,404	24,445	346,723,594	14,184	46,669	777,961,014	16,670

Table 9(c)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Correctional Employees

Service Groups by Age Groups

Age Group	0-4	5-9	10-14	15-19	20-24	25 & over	Total
Male							
0 - 19	1						1
20 - 24	76						76
25 - 29	138	40					178
30 - 34	101	86	13				200
35 - 39	52	42	20	8			122
40 - 44	29	19	22	13	4		87
45 - 49	21	22	14	13	11	2	83
50 - 54	4	8	15	16	9	19	71
55 - 59	1	2	12	5	3	6	29
60 - 64	0	2	3	4	0	0	9
65 & over	0	0	0	0	0	0	0
Total	423	221	99	59	27	27	856
Female							
0 - 19	0						0
20 - 24	13						13
25 - 29	19	4					23
30 - 34	10	6	2				18
35 - 39	11	2	2				15
40 - 44	6	2	3	1			12
45 - 49	2	3	5	1	1		12
50 - 54	1	2	6	0	0		9
55 - 59	1	0	1	2	0	2	6
60 - 64	0	0	1	0	0	0	1
65 & over	0	0	0	0	0	0	0
Total	63	19	20	4	1	2	109

Table 9(d)

MINNESOTA STATE RETIREMENT SYSTEM
CORRECTIONAL

Distribution of Annual Earnings by Age Groups

Age Group	Male No.	Male Total	Male Average	Female No.	Female Total	Female Average	All No.	All Total	All Average
0 - 19	0	0	0	0	0	0	0	0	0
20 - 24	77	1,151,975	14,961	13	188,198	14,477	90	1,340,173	14,891
25 - 29	178	3,154,863	17,724	23	391,465	17,020	201	3,546,328	17,643
30 - 34	200	3,742,029	18,710	18	339,589	18,866	218	4,081,618	18,723
35 - 39	122	2,407,467	19,733	15	253,939	16,929	137	2,661,406	19,426
40 - 44	87	1,787,416	20,545	12	217,548	18,129	99	2,004,964	20,252
45 - 49	83	1,735,920	20,915	12	228,936	19,078	95	1,964,856	20,683
50 - 54	71	1,592,503	22,430	9	177,514	19,724	80	1,770,017	22,125
55 - 59	29	632,461	21,809	6	120,510	20,085	35	752,971	21,513
60 - 64	9	194,527	21,614	1	19,556	19,556	10	214,083	21,408
65 & over	0	0	0	0	0	0	0	0	0
Total	856	16,399,160	19,158	109	1,937,256	17,773	965	18,336,416	19,001

Distribution of Annual Earnings by Service Groups

Service Group	Male No.	Male Total	Male Average	Female No.	Female Total	Female Average	All No.	All Total	All Average
0	76	1,063,859	13,998	19	259,475	13,657	95	1,323,335	13,930
1	107	1,817,769	16,988	14	226,979	16,213	121	2,044,748	16,899
2	87	1,558,973	17,919	16	267,802	16,738	103	1,826,775	17,736
3	76	1,426,321	18,767	8	151,702	18,963	84	1,578,023	18,786
4	77	1,421,031	18,455	6	107,436	17,906	83	1,528,467	18,415
0-4	423	7,287,813	17,228	63	1,013,384	16,086	486	8,301,197	17,080
5-9	221	4,474,521	20,247	19	370,805	19,516	240	4,845,325	20,189
10-14	99	2,135,488	21,571	20	405,597	20,280	119	2,541,085	21,354
15-19	59	1,280,900	21,710	4	86,979	21,745	63	1,367,879	21,712
20-24	27	590,404	21,867	1	21,379	21,379	28	611,783	21,849
25-29	22	511,075	23,231	2	39,113	19,556	24	550,188	22,925
30-34	5	118,959	23,792	0	0	0	5	118,959	23,792
35-39	0	0	0	0	0	0	0	0	0
40+	0	0	0	0	0	0	0	0	0
Total	856	16,399,160	19,158	109	1,937,256	17,773	965	18,336,416	19,001

MINNESOTA STATE RETIREMENT SYSTEM
'STATE EMPLOYEES' RETIREMENT FUND
RETIRED GENERAL IN MPIRF ANNUITANTS

TABLE 10(A)
DISTRIBUTION OF ANNUAL BENEFIT BY AGE GROUP

AGE GROUP	MALE NO.	MALE TOTAL	MALE AVERAGE	FEMALE NO.	FEMALE TOTAL	FEMALE AVERAGE	ALL NO.	ALL TOTAL	ALL AVERAGE
UNDER 40	5	8708	1742	2	1829	915	7	10537	1505
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	3	5442	1814	3	5442	1814
55-59	8	36178	4522	25	66234	2649	33	102412	3103
60-64	385	1866642	4848	320	839184	2622	705	2705826	3838
65-69	1312	4479328	3414	1269	2765377	2179	2581	7244705	2807
70-74	1227	3642260	2968	1123	2123517	1891	2350	5765777	2454
75-79	841	2010895	2391	771	1240788	1609	1612	3251683	2017
80-84	503	1053395	2094	462	654381	1416	965	1707776	1770
85+	341	687982	2018	353	497373	1409	694	1185355	1708
TOTAL	4622	13785388	2983	4328	8194125	1893	8950	21979513	2456

DISTRIBUTION OF ANNUAL BENEFIT BY YEARS RETIRED

YEARS RETIRED	MALE NO.	MALE TOTAL	MALE AVERAGE	FEMALE NO.	FEMALE TOTAL	FEMALE AVERAGE	ALL NO.	ALL TOTAL	ALL AVERAGE
0	373	1505524	4036	275	723493	2631	648	2229017	3440
1	310	1334529	4305	274	665782	2430	584	2000311	3425
2	330	1158660	3511	261	621700	2382	591	1780360	3012
3	336	1144073	3405	350	705582	2016	686	1849655	2696
4	310	993220	3204	312	612492	1963	622	1605712	2582
0-4	1659	6136006	3699	1472	3329049	2262	3131	9465055	3023
5-9	1549	4817557	3110	1511	3019334	1998	3060	7836891	2561
10-14	747	1524344	2041	642	898453	1399	1389	2422797	1744
15-19	399	764096	1915	426	527838	1239	825	1291934	1566
20-24	188	366907	1952	204	278937	1367	392	645844	1648
25+	80	176478	2206	73	140514	1925	153	316992	2072
TOTAL	4622	13785388	2983	4328	8194125	1893	8950	21979513	2456

Table 10(b)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Retired General Annuitants in MPRIF*

Distribution of Years Retired by Age Groups

Age Group	Years Retired 0-4	5-9	10-14	15-19	20-24	25 & over	Total
Male							
Under 40	5	0	0	0	0	0	5
40 - 44	0	0	0	0	0	0	0
45 - 49	0	0	0	0	0	0	0
50 - 54	0	0	0	0	0	0	0
55 - 59	8	0	0	0	0	0	8
60 - 64	378	6	1	0	0	0	385
65 - 69	1127	180	5	0	0	0	1311
70 - 74	140	1002	72	13	0	0	1227
75 - 79	0	341	434	49	16	1	841
80 - 84	1	19	203	230	39	11	503
85 & over	0	1	32	107	133	68	341
Total	1659	1549	747	399	188	80	4622
Female							
Under 40	1	0	0	0	0	0	1
40 - 44	0	0	1	0	0	0	1
45 - 49	0	0	0	0	0	0	0
50 - 54	1	1	1	0	0	0	3
55 - 59	22	3	0	0	0	0	25
60 - 64	306	13	0	1	0	0	320
65 - 69	998	254	11	3	2	1	1269
70 - 74	141	889	73	16	3	1	1123
75 - 79	3	331	350	71	14	2	771
80 - 84	0	18	188	211	33	12	462
85 & over	0	2	18	124	152	57	353
Total	1472	1511	642	426	204	73	4328

* includes widows

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT SYSTEM
DISABLED GENERAL ANNUITANTS

TABLE 10(C)
DISTRIBUTION OF ANNUAL BENEFIT BY AGE GROUP

AGE GROUP	MALE NO.	MALE TOTAL	MALE AVERAGE	FEMALE NO.	FEMALE TOTAL	FEMALE AVERAGE	ALL NO.	ALL TOTAL	ALL AVERAGE
UNDER 40	3	5531	1844	1	1586	1586	4	7117	1779
40-44	3	5202	1734	5	5878	1176	8	11080	1385
45-49	7	16579	2368	2	3811	1906	9	20390	2266
50-54	20	48441	2422	8	21636	2705	28	70077	2503
55-59	76	218192	2871	21	43429	2068	97	261621	2697
60-64	133	385246	2897	63	111767	1774	196	497013	2536
65-69	122	241202	1977	59	94674	1605	181	335876	1856
70-74	39	80174	2056	35	48265	1379	74	128439	1736
75-79	22	34611	1573	22	21769	990	44	56380	1281
80-84	7	12280	1754	7	10716	1531	14	22996	1643
85+	13	26429	2033	3	4308	1436	16	30737	1921
TOTAL	445	1073887	2413	226	367839	1628	671	1441726	2149

DISTRIBUTION OF ANNUAL BENEFIT BY YEARS RETIRED

YEARS RETIRED	MALE NO.	MALE TOTAL	MALE AVERAGE	FEMALE NO.	FEMALE TOTAL	FEMALE AVERAGE	ALL NO.	ALL TOTAL	ALL AVERAGE
0	31	106274	3428	10	22790	2279	41	129064	3148
1	46	166396	3617	20	39233	1962	66	205629	3116
2	51	139927	2744	28	61213	2186	79	201140	2546
3	52	110424	2124	26	49660	1910	78	160084	2052
4	56	123178	2200	21	37733	1797	77	160911	2090
0-4	236	646199	2738	105	210629	2006	341	856828	2513
5-9	122	269325	2208	63	86073	1366	185	355398	1921
10-14	44	82348	1872	30	36226	1208	74	118574	1602
15-19	20	31621	1581	21	23437	1116	41	55058	1343
20-24	6	10287	1715	4	5835	1459	10	16122	1612
25+	17	34107	2006	3	5639	1880	20	39746	1987
TOTAL	445	1073887	2413	226	367839	1628	671	1441726	2149

Touche Ross & Co.

Table 10(d)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Disabled General Annuitants in MPRIF*

Distribution of Years Retired by Age Groups

Age Group	0-4	5-9	10-14	15-19	20-24	25 & over	Total
				Male			
Under 40	3	0	0	0	0	0	3
40 - 44	2	1	0	0	0	0	3
45 - 49	6	1	0	0	0	0	7
50 - 54	13	7	0	0	0	0	20
55 - 59	53	19	2	2	0	0	76
60 - 64	99	24	5	5	0	0	133
65 - 69	60	50	9	2	0	1	122
70 - 74	0	20	14	4	1	0	39
75 - 79	0	0	14	4	0	4	22
80 - 84	0	0	0	3	4	0	7
85 & over	0	0	0	0	1	12	13
Total	236	122	44	20	6	17	445
				Female			
Under 40	1	0	0	0	0	0	1
40 - 44	2	3	0	0	0	0	5
45 - 49	2	0	0	0	0	0	2
50 - 54	6	1	0	1	0	0	8
55 - 59	18	2	1	0	0	0	21
60 - 64	48	15	0	0	0	0	63
65 - 69	28	24	5	2	0	0	59
70 - 74	0	18	15	1	1	0	35
75 - 79	0	0	9	12	1	0	22
80 - 84	0	0	0	4	1	2	7
85 & over	0	0	0	1	1	1	3
Total	105	63	30	21	4	3	226

* includes widows

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND
CORRECTIONAL ANNUITANTS

TABLE 10(E)
DISTRIBUTION OF ANNUAL BENEFIT BY AGE GROUP

AGE GROUP	MALE NO.	MALE TOTAL	MALE AVERAGE	FEMALE NO.	FEMALE TOTAL	FEMALE AVERAGE	ALL NO.	ALL TOTAL	ALL AVERAGE
UNDER 40	0	0	0	0	0	0	0	0	0
40-44	1	4508	4508	0	0	0	1	4508	4508
45-49	1	2379	2379	0	0	0	1	2379	2379
50-54	0	0	0	1	5767	5767	1	5767	5767
55-59	54	405783	7515	4	17763	4441	58	423546	7303
60-64	93	589274	6336	12	38186	3182	105	627460	5976
65-69	66	183874	2786	15	25058	1671	81	208932	2579
70-74	26	82029	3155	2	3340	1670	28	85369	3049
75-79	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0	0
TOTAL	241	1267847	5261	34	90114	2650	275	1357961	4938

DISTRIBUTION OF ANNUAL BENEFIT BY SERVICE GROUPS

YEARS RETIRED	MALE NO.	MALE TOTAL	MALE AVERAGE	FEMALE NO.	FEMALE TOTAL	FEMALE AVERAGE	ALL NO.	ALL TOTAL	ALL AVERAGE
0	19	123433	6496	2	9640	4820	21	133073	6337
1	27	206724	7656	2	11455	5728	29	218179	7523
2	19	144178	7588	2	8716	4358	21	152894	7281
3	16	89860	5616	0	0	0	16	89860	5616
4	37	194232	5250	2	6292	3146	39	200524	5142
0-4	118	758427	6427	8	36103	4513	126	794530	6306
5-9	123	509420	4142	26	54011	2077	149	563431	3781
10-14	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0
25+	0	0	0	0	0	0	0	0	0
TOTAL	241	1267847	5261	34	90114	2650	275	1357961	4938

Table 10(f)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Correctional Annuitants in MPRIF
(Includes Retired and Disabled)

Distribution of Years Retired by Age Groups

Age Group	Years Retired 0-4	5-9	10-14	15-19	20-24	25 & over	Total
				Male			
Under 40	0	0	0	0	0	0	0
40 - 44	1	0	0	0	0	0	1
45 - 49	1	0	0	0	0	0	1
50 - 54	0	0	0	0	0	0	0
55 - 59	52	2	0	0	0	0	54
60 - 64	51	42	0	0	0	0	93
65 - 69	13	53	0	0	0	0	66
70 - 74	0	26	0	0	0	0	26
75 - 79	0	0	0	0	0	0	0
80 - 84	0	0	0	0	0	0	0
85 & over	0	0	0	0	0	0	0
Total	118	123	0	0	0	0	241
				Female			
Under 40	0	0	0	0	0	0	0
40 - 44	0	0	0	0	0	0	0
45 - 49	0	0	0	0	0	0	0
50 - 54	1	0	0	0	0	0	1
55 - 59	4	0	0	0	0	0	4
60 - 64	3	9	0	0	0	0	12
65 - 69	0	15	0	0	0	0	15
70 - 74	0	2	0	0	0	0	2
75 - 79	0	0	0	0	0	0	0
80 - 84	0	0	0	0	0	0	0
85 & over	0	0	0	0	0	0	0
Total	8	26	0	0	0	0	34

Table 11
MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Summary of Principal Plan Provisions as of June 30, 1981

A. General Employees

1. Coverage:	From first date of employment.
2. Service Credit:	Service is credited from date of coverage subject to a maximum equal to the greater of: . 40 years of service; or . service earned prior to April 30, 1978
3. Contributions:	
a. Employee:	4% of salary
b. State of Minnesota	6% of salary
4. Final Average Salary:	Monthly average for the highest 5 successive years of salary.
5. Normal Retirement:	
a. Eligibility:	Earlier of: . attainment of age 65 and completion of 10 years of service; or . attainment of age 62 with 30 years of service.
b. Benefit Amount:	1% of Final Average Salary for each of the first 10 years of service plus 1-1/2% of Final Average Salary for each year of service thereafter.
6. Early Retirement:	
a. Eligibility:	Earlier of: . attainment of age 62 and completion of 10 years of service; or . attainment of age 58 and completion of 20 years of service.
b. Benefit Amount:	Normal Retirement benefit formula based on service and Final Average Salary to date of early retirement but actuarially reduced to reflect payment prior to age 65 (or age 62 if 30 years of service have been completed).

7. Form of Payment:	Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are also available.
8. Disability Retirement:	
a. Eligibility:	Earlier of: . attainment of age 50 and completion of 5 years of service; or . completion of 10 years of service.
b. Benefit Amount:	Normal retirement benefit formula based on service and Final Average Salary to date of disability retirement.
9. Deferred Service Retirement:	
a. Eligibility:	Completion of 10 years of service and election to leave employee contributions on deposit.
b. Benefit Amount:	Retirement benefits payable at normal retirement date are determined according to the normal retirement benefit formula based on the member's Final Average Salary and service at termination, such amount being subject to an increase for each year between termination and retirement of 5% for years prior to January 1, 1981 and 3% compounded annually thereafter.
10. Return of Contributions:	Upon termination of employment, a member may elect the return of contributions in lieu of all other benefits under the plan. Contributions made after the first 3 years of service are credited with 3-1/2% interest compounded annually.

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11. Surviving Spouse Death Benefit:

a. Eligibility: Death of member in service who is qualified at that time for early or normal retirement.

b. Benefit Amount: The surviving spouse may elect one of:

- refund of member contributions with 3-1/2% interest; or
- 50% of the annuity the member would have received had he retired early (if eligible) and elected a 50% joint and survivor annuity commencing on his date of death.

12. Combined Service Provisions:

a. Eligible Members: Members who have had coverage under two or more Minnesota Public Retirement Systems, with a total of at least 10 years of credited service.

b. Benefit Provisions: Benefits under both plans are based on the highest Final Average Salary including all years from both plans, and on the plans in effect on the member's last day in covered public employment.

14. Proportionate Annuity: Any member who terminates after attaining age 65 and completing at least one year of service is entitled to a proportionate retirement annuity based on his allowable service credit.

B. Correctional Employees

Same as above except:

1. Contributions:
   a. Employee: 6% of salary.

   b. State of Minnesota: 14% of salary.

2. Normal Retirement:
   a. Eligibility: Attainment of age 55 and completion of 10 years of service.

   b. Retirement Benefit: General Plan benefit plus an additional benefit defined below.

   c. Additional Benefit: Final Average Salary times the sum of:

      - 1-1/2% for each of first 10 years of service; plus
      - 1% for each of next ten years of service; plus
      - 1/2% for each year of service thereafter.

   d. Limitation on Additional Benefit: That amount which, when added to the General Plan benefit, provides a retirement benefit of 75% of Final Average Salary.

   e. Additional Benefits Period: 84 months or until attainment of age 65, whichever comes first.

   f. Minimum Benefit Following Additional Benefit Period: That amount which when added to Social Security benefits, equals the benefit payable during the additional benefit period.

3. Disability Retirement:
   a. Eligibility:
      - In line of duty: None.

      - Not in line of duty: Five years of service and less than age 55.

b. Benefit Amount:

- In line of duty: 50% of average monthly salary plus 2% for each year of service in excess of 20, offset by Workers' Compensation.

- Not in line of duty: 2-1/2% of average monthly salary for each year up to and including 20 years plus 2% for each year in excess of 20; subject to a minimum of 25%

c. Limitation: At age 62, general plan benefit based on credited service is payable subject to a minimum benefit of 10% of pay.

ACTUARIAL METHODS AND ASSUMPTIONS

Chapter 356 of the Minnesota Statutes calls for the determination of normal cost and accrued liability in accordance with the entry age normal cost method, one of several available projected cost methods. We have continued to use the version employed in prior years.

Under the method used, the normal cost rate is determined by dividing the total present value at entry of all benefits by the total present value at entry of all future pay. This percentage is applied to current annual payroll to determine the normal cost.

Tables 12(a) through 12(e) summarize the actuarial assumptions used. They are unchanged from the previous valuation.

Table 12(a)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT FUND

Summary of Actuarial Assumptions and Methods

1. Mortality:	1971 Group Annuity Mortality Table with ages set back 8 years for females.
2. Post-Disablement Mortality:	Combined Annuity Mortality Table.
3. Withdrawal:	Graded rates based on actual experience developed by the June 30, 1971 experience analysis and set forth in the Separation from Active Service Table.
4. Expenses:	.18% of covered payroll.
5. Interest Rate:	5% per annum.
6. Salary Scale:	3-1/2% per annum.
7. Assumed Retirement Age:	Graded rates beginning at age 58 set forth in the Separation from Active Service Table.
8. Actuarial Cost Method:	Entry age cost method, with normal cost determined as a level percentage of future covered payroll, on an aggregate basis.
9. Social Security:	Based on the present law (2nd phase 1981) and 3-1/2% salary scale applicable to current salaries. No wage base increases beyond those specifically prescribed in the Social Security Act of 1977 are projected. No cost of living increases are projected.

Table 12(b)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Male General Members

Probabilities of Separation From Active Service
(Number Separating at Each Age Per 10,000 Working at That Age)

Age	Withdrawal	Death	Disability	Age and Service Retirement
20	2,400	5		
21	2,250	5		
22	2,080	5		
23	1,920	6		
24	1,760	6		
25	1,600	6		
26	1,470	7		
27	1,340	7		
28	1,230	7		
29	1,130	8		
30	1,040	8	2	
31	950	9	2	
32	890	9	2	
33	830	10	2	
34	770	10	2	
35	720	11	2	
36	680	12	2	
37	640	13	2	
38	600	14	2	
39	560	15	2	
40	530	16	2	
41	500	18	2	
42	480	20	2	
43	460	23	3	
44	430	26	3	
45	410	29	3	
46	390	33	5	
47	370	38	7	
48	350	42	9	
49	340	47	11	
50	320	53	14	
51	300	59	16	
52	280	65	20	
53	260	71	24	
54	240	78	28	

Table 12(b) (continued)

Age	Withdrawal	Death	Disability	Age and Service Retirement
55	210	85	34	
56	170	93	40	
57	140	100	46	
58	90	109	56	30
59	40	119	66	30
60		131	76	40
61		144	90	150
62		159	110	150
63		174	136	250
64		192	174	1,350
65				10,000

Table 12(c)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Female General Members
Probabilities of Separation From Active Service
(Number Separating at Each Age Per 10,000 Working at That Age)

Age	Withdrawal	Death	Disability	Age and Service Retirement
20	3,700	4		
21	3,550	4		
22	3,390	4		
23	3,230	4		
24	3,070	4		
25	2,910	5		
26	2,750	5		
27	2,600	5		
28	2,430	5		
29	2,270	5		
30	2,120	5		
31	1,970	6		
32	1,820	6		
33	1,680	6		
34	1,540	7		
35	1,410	7	1	
36	1,300	7	1	
37	1,190	8	1	
38	1,090	8	1	
39	1,000	9	2	
40	920	9	2	
41	850	10	2	
42	780	10	4	
43	720	11	4	
44	680	12	4	
45	630	13	5	
46	590	14	6	
47	560	15	7	
48	530	16	7	
49	500	18	10	
50	470	20	10	
51	440	23	12	
52	410	26	14	
53	390	29	16	
54	360	33	20	

Table 12(c) (continued)

Age	Withdrawal	Death	Disability	Age and Service Retirement
55	330	38	24	
56	290	42	30	
57	230	47	36	
58	170	53	44	50
59	90	59	52	50
60		65	62	150
61		71	74	150
62		78	88	200
63		85	104	350
64		93	122	1,100
65				10,000

Table 12(d)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Male Correctional Members
Probabilities of Separation From Active Service
(Number Separating at Each Age Per 10,000 Working at That Age)

Age	Withdrawal	Death	Disability	Age and Service Retirement
20	2,400	5		
21	2,250	5		
22	2,080	5		
23	1,920	6		
24	1,760	6		
25	1,600	6		
26	1,470	7		
27	1,340	7		
28	1,230	7		
29	1,130	8		
30	1,040	8	2	
31	950	9	2	
32	890	9	2	
33	830	10	2	
34	770	10	2	
35	720	11	2	
36	680	12	2	
37	640	13	2	
38	600	14	2	
39	560	15	2	
40	530	16	2	
41	500	18	2	
42	480	20	2	
43	460	23	3	
44	430	26	3	
45	410	29	3	
46	390	33	5	
47	370	38	7	
48	350	42	9	
49	340	47	11	
50	320	53	14	
51	300	59	16	
52	280	65	20	
53	260	71	24	
54	240	78	28	
55	210	85	34	
56	170	93	40	
57	140	100	46	
58				10,000

Table 12(e)

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Female Correctional Members
Probabilities of Separation From Active Service
(Number Separating at Each Age Per 10,000 Working at That Age)

Age	Withdrawal	Death	Disability	Age and Service Retirement
20	3,700	4		
21	3,500	4		
22	3,390	4		
23	3,230	4		
24	3,070	4		
25	2,910	5		
26	2,750	5		
27	2,600	5		
28	2,430	5		
29	2,270	5		
30	2,120	5		
31	1,970	6		
32	1,820	6		
33	1,680	6		
34	1,540	7		
35	1,410	7	1	
36	1,300	7	1	
37	1,190	8	1	
38	1,090	8	1	
39	1,000	9	2	
40	920	9	2	
41	850	10	2	
42	780	10	4	
43	720	11	4	
44	680	12	4	
45	630	13	5	
46	590	14	6	
47	560	15	7	
48	530	16	7	
49	500	18	10	
50	470	20	10	
51	440	23	12	
52	410	26	14	
53	390	29	16	
54	360	33	20	
55	330	38	24	
56	290	42	30	
57	230	47	36	
58				10,000

APPENDIX

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

Table References to Chapter 356 and Chapter 11A*

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APPENDIX (continued)

* Chapters 356 and 11A of the Minnesota Statutes.
** All as of June 30, 1981.

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STATE EMPLOYEES RETIREMENT SYSTEM

Appendix 2 Military Affairs Calculation

Section 352.85 of Chapter 352 of Minnesota laws provides that certain military affairs personnel may retire at age 60 without being subject to the early retirement reduction of Section 352.116, Subdivision 1. In addition, they may receive disability benefits upon being found disqualified for retention in active military duty. To fund these special benefits, employees and employer contribute an extra 1% of payroll.

At the request of the Executive Director, we have made a determination as to whether the extra 2% contribution is sufficient to pay for the additional normal costs arising from the special benefits.

The results of our determination are as follows:

1.	Number of active participants	6
2.	Annual Payroll	$177,708
	Extra normal cost for special military affairs benefits:	
3.	- amount	5,728
4.	- percentage of pay	3.223%
	Sufficiency of extra 2% contribution 2% / (4)	62.05%

MEMORANDUM TO: Legislative Commission on Pensions and Retirement

FROM: James R. Bordewick, F.S.A., Commission Actuary

RE: June 30, 1981 Actuarial Valuation of Minnesota State Retirement System - State Employees Retirement Fund

DATE: February 18, 1982

The purpose of this memorandum is to review and discuss the results of the June 30, 1981 Actuarial Valuation of the Minnesota State Retirement System - State Employees Retirement Fund. This Actuarial Valuation was prepared by John H. Flittie and Andrea Feshbach of the firm of Touche Ross & Co.

The Actuarial Valuation was conducted using the Entry Age Normal Cost actuarial method, interest at 5%, and a salary increase assumption of 3½%, which are in accordance with Minnesota Statutes, Chapter 356.

There were no changes in the actuarial assumptions from the previous year. In addition, there were no changes in the provisions of the plan since the last Actuarial Valuation.

SUMMARY OF ACTUARIAL VALUATION RESULTS

1. Membership	6-30-80	6-30-81	Increase	(%)
Active Members	47,232*	47,634*	402	(.9%)
Inactive Members	3,531	4,790	1,259	(35.7%)
Retired Members	8,527	8,899	372	(4.4%)
Disabled Members	633	647	14	(2.2%)
Survivors and Beneficiaries	344	371	27	(7.8%)
Deferred Annuitants	772	798	26	(10.5%)
	61,039	63,139	2,100	(3.4%)

* Includes 990 and 965 Correctional Employees for 6-30-80 and 6-30-81, respectively.

2. Payroll

6-30-80: $703,470,202
6-30-81: $796,297,430

Increase: $ 92,827,228
% Increase: 13.2%

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SUMMARY OF ACTUARIAL VALUATION RESULTS

3. Annuities In Force:
   Annual Basis

6-30-80:	$22,232,227
6-30-81:	$24,807,535
Increase:	$ 2,575,308
% Increase:	11.6%

4. Actuarial Balance Sheet: (In $1,000's)

	6-30-80	6-30-81	Increase	(%)
Accrued Liablilities				
Annuities In Force	$206,590	$230,625	$ 24,035	(11.6%)
Deferred Annuities	12,345	12,109	- 236	(-1.9%)
Active Members	548,312	618,924	70,612	(12.9%)
	$767,247	$861,658	$ 94,411	(12.3%)
Assets	$569,166	$675,227	$106,621	(18.6%)
Unfunded Accrued Liability	$198,081	$186,431	$-11,650	(-5.9%)
Funding Ratio	74.2%	78.4%	4.2%	(5.7%)
Prospective Funding Ratio*	64.7%	70.5%	5.8%	(9.0%)

* Assets less Accrued Liabilities for Annuities In Force divided by Accrued Liabilities for other than Annuities In Force.

5. Analysis of Increase in Unfunded Accrued Liability

The Unfunded Accrued Liability decreased by $11,650,130 from June 30, 1980 to June 30, 1981. The items making up this decrease are shown below:

Actuarial Experience		
Interest	$30,363,313	Gain
Salary	26,503,419	Loss
Mortality: Retired Members	461,790	Gain
Pre-Retirement Experience	5,527,349	Loss
	$ 1,205,665	Loss
Contribution Deficiency	($12,855,795)	
	($11,650,130)	

6. Contribution Levels and Support Rates

Based on the Actuarial Valuation results, the contribution, as a percentage of payroll, which will prevent the Unfunded Accrued Liability from increasing is 8.09% and 12.21% for Regular and Correctional Employees, respectively. The contribution, as a percentage of payroll, which will amortize the Unfunded Accrued Liability by June 30, 2009 is 8.49% and 12.55% for Regular and Correctional Employees, respectively.

The current contribution rate (including member contributions) is 10.0% and 20.0% for Regular and Correctional Employees, respectively.

A comparison of the funding costs and support rates, as a percentage of payroll are shown below:

	6-30-80	6-30-81
Contribution Required to Keep Unfunded Accrued Liability from Increasing		
	Regular	
Normal Cost	6.82%	6.73%
Expense	.18	.18
Interest	1.39	1.18
	8.39%	8.09%
	Correctional	
Normal Cost	10.64%	11.05%
Expense	.18	.18
Interest	2.11	.98
	12.93%	12.21%
Contribution Required to Amortize Unfunded Accrued Liability by June 30, 2009		
	Regular	
Normal Cost	6.82%	6.73%
Expense	.18	.18
Amortization	1.84	1.58
	8.84%	8.49%
	Correctional	
Normal Cost	10.64%	11.05%
Expense	.18	.18
Amortization	2.78	1.32
	13.60%	12.55%

SUMMARY OF ACTUARIAL VALUATION RESULTS

6. Contribution Levels and Support Rates (cont.)

Current Support:*	Regular		Correctional	
	6-30-80	6-30-81	6-30-80	6-30-81
Member	4.00%	4.00%	6.00%	6.00%
Employer	4.00	4.00	9.00	9.00
Additional	2.00	2.00	5.00	5.00
	10.00%	10.00%	20.00%	20.00%

*Note: Third Special Session Laws 1981, Chapter 2, Sections 64 to 69 provide for a reduction in the above support rates. The ultimate support rates, July 1, 1982 and later, are shown below:

	Regular	Correctional
Member	3.73%	4.89%
Employer	3.73	7.34
Additional	1.87	4.08
	9.33%	16.31%

If the contribution level percentages are applied to participating payroll as of June 30, 1981, the following contribution amounts would result:

	Regular	Correctional
Contribution Required to Keep the Unfunded Accrued Liability from Increasing:	\$62,937,053	\$ 2,238,876
Contribution Required to Amortize Unfunded Accrued Liability by June 30, 2009:	\$66,048,890	\$ 2,301,220
Support Rate Before Change:	\$77,796,104	\$ 3,667,283
Support Rate After Change; Ultimate Level:	\$72,583,762	\$ 2,990,669

DISCUSSION OF ACTUARIAL VALUATION RESULTS

1. Total membership from June 30, 1980 to June 30, 1981 showed very little change. The largest increase occurred in the inactive member category. These are former members without vested benefits, but where contributions have not been refunded.

2. Total participating payroll increased by 13.2% from June 30, 1980 to June 30, 1981. Average annual compensation for active members increased from \$14,893 to \$16,716. Payroll, as of June 30, 1981, was adjusted by 8.2% for Regular and Correctional members. This compares with a \$644.80 flat dollar increase for Regular and Correctional members as of June 30, 1980. Separate adjustments were made for MTC/TOD members.

DISCUSSION OF ACTUARIAL VALUATION RESULTS

2. (cont.) These adjustments were made so that compensation for the year ended June 30, 1982 would be adequately reflected.

3. The Unfunded Accrued Liability decreased by $11,650,130 from June 30, 1980. The contribution for the year ended June 30, 1981 was much greater than the amount required required to keep the Unfunded Accrued Liability from increasing. In addition, salary losses were more than offset by interest gains. Realized gains from the sale of securities amounted to approximately $16,000,000 and contributed heavily to the total interest gain.

   The Unfunded Accrued Liability for Correctional members decreased from $7,072,781 as of June 30, 1980 to $3,591,844 as of June 30, 1981. This decrease represented about 30% of the total decrease in the Unfunded Accrued Liability whereas the Correctional members represent only about 3½% of the total Accrued Liability. This was discussed with the Plan's actuary and it was their opinion that the leveraging effect in the allocation of assets to the Correctional members resulted in this large decrease in the Unfunded Accrued Liability. This could only be confimred by a detailed analysis of the changes for Correctional members over the past year.

4. Under normal circumstances, it would be expected that the Accrued Liability for Deferrred Annuitants would increase from June 30, 1980 to June 30, 1981. This liability decreased slightly. The results were reviewed by the Plan's actuary and they indicated that the June 30, 1981 result was correct based on the information which was used.

5. The contribution levels, as a percentage of payroll, decreased from a a year ago. This was primarily due to the decrease in the Unfunded Accrued Liability and the corresponding contribution rate on this amount.

   As mentioned earlier, the support rates have been reduced from their prior level. Even with this reduction, the target date for full amortization of the Unfunded Accrued Liability is well ahead of the June 30, 2009 date. This target date is 1995 for the Regular members and 1986 for the Correctional members.

6. The funding ratios of the Plan showed increases from a year ago and the Plan is in a superior funding position. Assets cover 91% of accrued benefits as compared to 87% a year ago. If realistic assumptions were utilized. it would be expected that asset coverage would be over 100%.

CONCLUSION

The Actuarial Valuation report complies with the requirements of Minnesota Statutues, Chapter 356. The Plan is in a strong funding position.

James R. Bordewick

James R. Bordewick, F.S.A.
Commission Actuary