

**Teachers Retirement Association Fund**

*Actuarial Valuation and Review  
as of July 1, 2007*

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*November 28, 2007*

*Ms. Laurie Hacking  
Teachers Retirement Association Fund  
60 Empire Drive, Suite 400  
St. Paul, Minnesota 55103 - 1855*

*Dear Ms. Hacking:*

*We are pleased to submit this Actuarial Valuation and Review as of July 1, 2007. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2008 and analyzes the preceding year's experience.*

*The census information on which our calculations were based was prepared by the Fund and the financial information was provided by the Fund. That assistance is gratefully acknowledged. The actuarial calculations were completed under our supervision.*

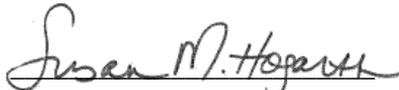
*This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in the valuation are consistent with those in the statute, and reasonably represent the experience of the plan.*

*Sincerely,*

THE SEGAL COMPANY

By:   
Thomas D. Levy, FSA, MAAA, EA  
Senior Vice President and Chief  
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cc: *Legislative Commission on Pensions and Retirement (3 copies)  
Minnesota Legislative Reference Library (6 copies)  
Minnesota Department of Finance (2 copies)*

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## SECTION 1: Valuation Summary for the Teachers Retirement Association Fund

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### Purpose

This report has been prepared by The Segal Company to present a valuation of the Teachers Retirement Association Fund (TRA) as of July 1, 2007. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- Section 356.215 of the Minnesota Statutes;
- The benefit provisions of the Retirement Fund as administered by the Fund;
- The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2007, provided by the Fund;
- The assets of the Fund as of June 30, 2007, provided by the Fund;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.

## SECTION 1: Valuation Summary for the Teachers Retirement Association Fund

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### Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The statutory contribution rate under Chapter 354 is equal to 11.79% of payroll compared to the required contribution rate under Chapter 356 of 13.44% of payroll. Therefore the contribution deficiency is 1.65% of payroll as of July 1, 2007. Each year that there is a contribution deficiency leads to an increased deficiency in all future years. The FY2007 shortfall increased the required rate for FY2008 (and each succeeding year through FY 2037) by 0.08% of payroll.
- There were no changes in plan provisions or actuarial assumptions since the prior valuation.
- The only change in actuarial cost methods since the prior valuation was a modification to the asset valuation method, effective with the July 1, 2007 valuation. Assets allocated to the Minnesota Post Retirement Investment Fund (MPRIF) must equal the Market Value of Assets on the valuation date. This change resulted in a decrease to the Actuarial Value of Assets and increase to the Unfunded Actuarial Accrued Liability of \$1,317,389,816. The Supplemental Contribution increased by \$70,947,353, which directly impacted the Contribution Sufficiency of 0.21% of payroll prior to the asset method change, resulting in a total deficiency of 1.65% of payroll.
- The actuarial accrued liability funded ratio based on the actuarial value of assets under the new asset valuation method as of July 1, 2007 is 87.54% compared to 92.05% as of July 1, 2006. The funded ratio based on this calculation under the old asset valuation method would have increased to 93.67% as of July 1, 2007, hence the decrease in the funded ratio from 93.67% to 87.54% is entirely attributable to the asset valuation method change. This ratio is a measure of funding status, and its history is a measure of funding progress.

## SECTION 1: Valuation Summary for the Teachers Retirement Association Fund

### Summary of Key Valuation Results

	2007*	2006**
<b>Contributions (% of payroll) for plan year beginning July 1:</b>		
Statutory – Chapter 354	11.79%	11.31%
Required – Chapter 356	13.44%	12.11%
Sufficiency/(Deficiency)	-1.65%	-0.80%
<b>Funding elements for plan year beginning July 1:</b>		
Normal cost	\$357,343,265	\$349,678,399
Market value of assets	19,938,881,872	19,785,671,584
Actuarial value of assets (AVA)	18,794,389,076	19,035,611,839
Actuarial accrued liability (AAL)	21,470,314,497	20,679,110,879
Unfunded/(Overfunded) actuarial accrued liability	2,675,925,421	1,643,499,040
<b>Funded ratios:</b>		
<u>Accrued Benefit Funded Ratio</u>	91.03%	95.64%
Current assets (AVA)	\$18,794,389,076	\$19,035,611,839
Current benefit obligations	20,646,891,165	19,902,652,650
<u>Projected Benefit Funded Ratio</u>	95.26%	97.63%
Current and expected future assets	\$23,435,932,759	\$23,163,841,989
Current and expected future benefit obligations (Present Value of Benefits)	24,602,815,725	23,726,317,592
<b>GASB 25/27 for plan year beginning July 1:</b>		
Annual required employer contributions	\$229,641,535	\$133,388,506
Accrued Liability Funded Ratio (AVA/AAL)	87.54%	92.05%
Covered actual payroll	\$3,532,158,749	\$3,430,645,420
<b>Demographic data for plan year beginning July 1:</b>		
Number of pensioners and beneficiaries	46,538	44,683
Number of vested terminated members	12,636	11,773
Number of other non-vested terminated members	22,914	21,956
Number of active members	77,694	79,164
Total projected payroll***	\$3,814,373,772	\$3,707,900,584
Average annual compensation (projected dollars)	49,095	46,838

\*The 2007 results reflect a change in the Asset Valuation Method, with MPRIF Reserves equal to Market Value.

\*\*The results of the July 1, 2006 actuarial valuation reflect the Minneapolis Teachers Retirement Fund Association (MTRFA) merger effective June 30, 2006.

\*\*\*Calculated as covered actual payroll, projected one year with salary scale.

**SECTION 2: Valuation Results for the Teachers Retirement Association Fund**

**A. MEMBER DATA**

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, pensioners and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, C, D, E and F.

*A historical perspective of how the member population has changed over the past several valuations can be seen in this chart.*

**CHART 1**  
**Member Population: 2002 – 2007**

<b>Year Ended June 30</b>	<b>Active Members</b>	<b>Vested Terminated Members*</b>	<b>Pensioners and Beneficiaries</b>	<b>Ratio of Non-Actives to Actives</b>
2002	71,690	8,680	34,974	0.61
2003	71,916	9,304	36,199	0.63
2004	72,008	10,767	37,649	0.67
2005	74,552	9,880	38,957	0.66
2006**	79,164	11,773	44,683	0.71
2007**	77,694	12,636	46,538	0.76

\* Excludes terminated members due a refund of employee contributions

\*\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

**SECTION 2: Valuation Results for the Teachers Retirement Association Fund**

**Active Members**

Plan costs are affected by the age, years of service and projected payroll of active members. In this year's valuation, there were 77,694 active members with an average age of 43.3, average years of service of 11.7 years and average projected compensation of \$49,095. This includes 73,477 non-MTRFA active members with an average age of 43.2, average years of service of 11.7 years and average projected compensation of \$48,989. This also includes 4,217 former MTRFA active members with an average age of 46.0, average years of service of 11.2 years and average projected compensation of \$50,946.

**Inactive Members**

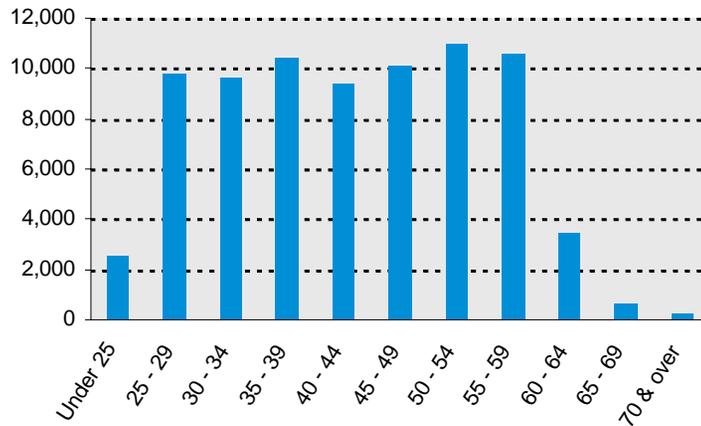
In this year's valuation, there were 12,636 (11,172 non-MTRFA and 1,464 former MTRFA) members with a vested right to a deferred or immediate vested benefit.

In addition, there were 22,914 (19,215 non-MTRFA and 3,699 former MTRFA) other non-vested terminated members entitled to a return of their employee contributions.

*These graphs show a distribution of active members by age and by years of service.*

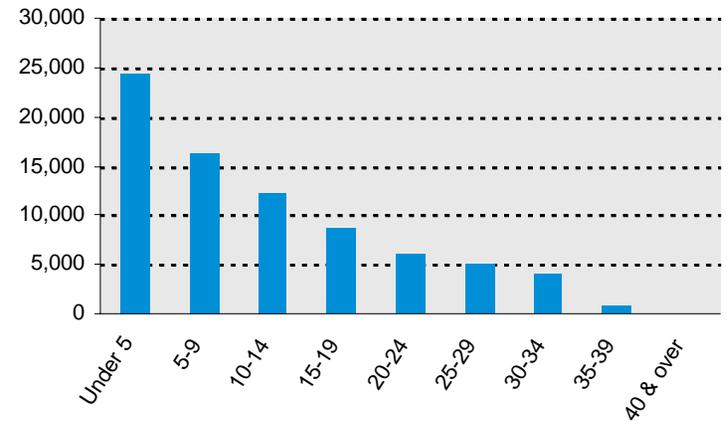
**CHART 2**

**Distribution of Active Members by Age as of June 30, 2007 (Total)**



**CHART 3**

**Distribution of Active Members by Years of Service as of June 30, 2007 (Total)**



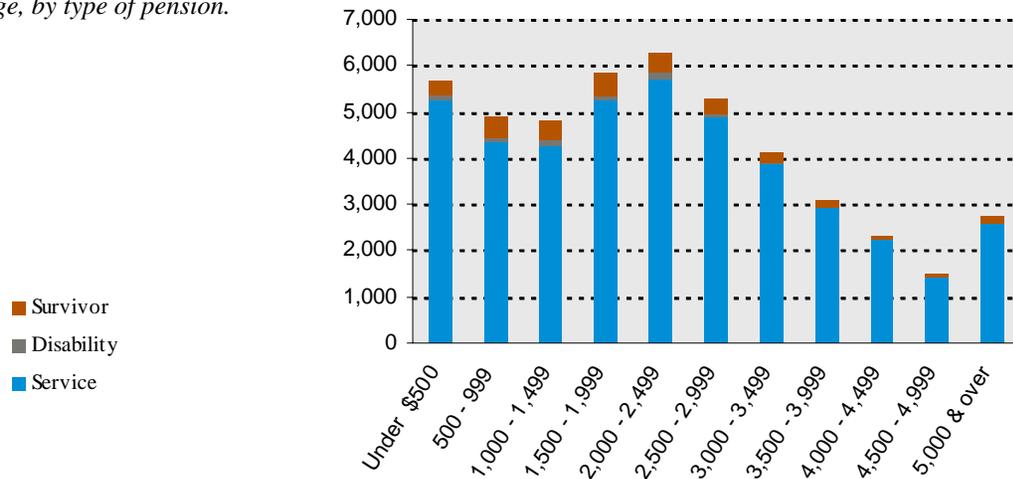
**SECTION 2: Valuation Results for the Teachers Retirement Association Fund**

**Pensioners and Beneficiaries**

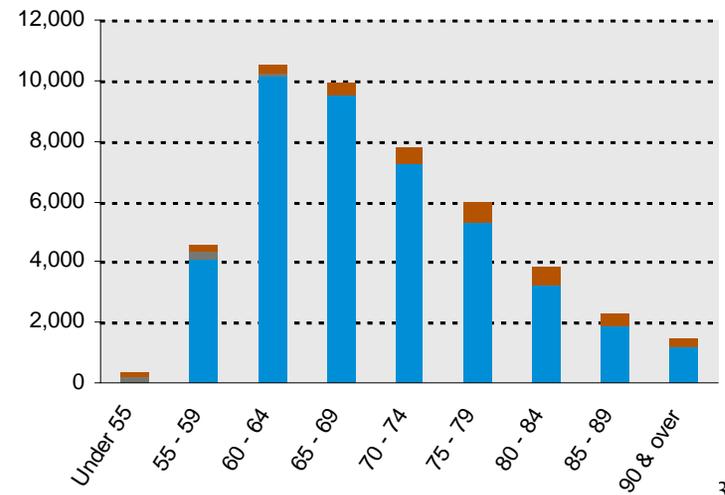
As of June 30, 2007, 43,315 pensioners (including 636 disabled participants) and 3,223 beneficiaries were receiving total monthly benefits of \$108,598,092. This includes 39,601 non-MTRFA pensioners (including 595 disabled participants) and 2,938 beneficiaries receiving total monthly benefits of \$97,627,691. This also includes 3,714 former MTRFA pensioners (including 41 disabled) and 285 beneficiaries receiving total monthly benefits of \$10,970,401.

*These graphs show a distribution of the current pensioners and beneficiaries based on their monthly amount and age, by type of pension.*

**CHART 4**  
**Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2007 (Total)**



**CHART 5**  
**Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2007 (Total)**



## SECTION 2: Valuation Results for the Teachers Retirement Association Fund

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### B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Minnesota Statutes require an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Both the actuarial value and market value of assets are representations of the Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

Effective with the July 1, 2007 valuation, the Asset Valuation Method was changed such that assets allocated to the Minnesota Post Retirement Investment Fund (MPRIF) must equal the Market Value of Assets on the valuation date. The next page summarizes the determination of the Actuarial Value of Assets for the Year Ended June 30 , 2007, before and after this method change.

**SECTION 2: Valuation Results for the Teachers Retirement Association Fund**

*The chart shows the determination of the actuarial value of assets as of the valuation date, before the asset valuation method change.*

**CHART 6A**

**Determination of Actuarial Value of Assets for Year Ended June 30, 2007 – Before Asset Valuation Method Change**

	Original Amount	% Not Recognized	
1. Market value of assets available for benefits			\$21,256,271,688
2. Calculation of unrecognized return			
(a) Year ended June 30, 2007	\$725,919,948	80%	\$580,735,958
(b) Year ended June 30, 2006	653,165,303	60%	391,899,182
(c) Year ended June 30, 2005	179,823,045	40%	71,929,218
(d) Year ended June 30, 2004	499,642,191	20%	<u>99,928,438</u>
(e) Total unrecognized return			\$1,144,492,796
3. Actuarial value of assets: (1) – (2e) ("Current Assets")			<u>\$20,111,778,892</u>
4. Actuarial value as a percent of market value			<u>94.6%</u>

*The chart shows the determination of the actuarial value of assets as of the valuation date, after the asset valuation method change.*

**CHART 6B**

**Determination of Actuarial Value of Assets for Year Ended June 30, 2007 – After Asset Valuation Method Change**

	Original Amount	% Not Recognized	
1. Market value of assets available for benefits			\$19,938,881,872
2. Calculation of unrecognized return			
(a) Year ended June 30, 2007	\$725,919,948	80%	\$580,735,958
(b) Year ended June 30, 2006	653,165,303	60%	391,899,182
(c) Year ended June 30, 2005	179,823,045	40%	71,929,218
(d) Year ended June 30, 2004	499,642,191	20%	<u>99,928,438</u>
(e) Total unrecognized return			\$1,144,492,796
3. Actuarial value of assets: (1) – (2e) ("Current Assets")			<u>\$18,794,389,076</u>
4. Actuarial value as a percent of market value			<u>94.3%</u>

**SECTION 2: Valuation Results for the Teachers Retirement Association Fund**

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**C. ACTUARIAL EXPERIENCE**

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will

return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

For the plan year ended June 30, 2007, the total gain is \$385,443,786, including a gain of \$378,871,708 from investments and a gain of \$6,572,078 from all other sources. The net experience variation from individual sources other than investments was 0.03% of the actuarial accrued liability, which includes age/service retirements, disability, mortality (pre and post-retirement), withdrawal, and salary increases.

*This chart provides a summary of the actuarial experience during the past year.*

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**CHART 6**  
**Actuarial Experience for Year Ended June 30, 2007**

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1. Net gain from investments	\$378,871,708
2. Net gain from other experience	<u>6,572,078</u>
3. Net experience gain: (1) + (2)	\$385,443,786

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## SECTION 2: Valuation Results for the Teachers Retirement Association Fund

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### D. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded in accordance with GASB actuarially required contributions. Section 4, Exhibit III presents a schedule of this information for the Fund.

The other critical piece of information regarding the Fund's financial status is the funded ratio. This ratio compares the

actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

GASB requires that the actuarial value of assets be used to determine the funded ratio, as shown in Section 4, Exhibit IV.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT A**

**Table of Plan Coverage\***

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2007</b>	<b>2006</b>	
<b>Active members in valuation:</b>			
Number	77,694	79,164	-1.9%
Average age	43.3	43.3	N/A
Average service	11.7	11.6	N/A
Total projected payroll	\$3,814,373,772	\$3,707,900,584	2.9%
Average projected compensation	49,095	46,838	4.8%
Total active vested members	61,180	61,741	-0.9%
<b>Vested terminated members</b>	12,636	11,773	7.3%
<b>Retired participants:</b>			
Number in pay status	42,679	41,009	4.1%
Average age	71.5	70.3	N/A
Average monthly benefit	\$2,359	\$2,353	0.3%
<b>Disabled members:</b>			
Number in pay status	636	630	1.0%
Average age	57.8	57.5	N/A
Average monthly benefit	\$1,652	\$1,656	-0.3%
<b>Beneficiaries:</b>			
Number in pay status	3,223	3,044	5.9%
Average age	77.2	76.6	N/A
Average monthly benefit	\$2,128	\$2,113	0.7%
<b>Other non-vested terminated members</b>	22,914	21,956	4.4%

\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT B-1**

**Members in Active Service as of June 30, 2007  
By Age, Years of Service, and Average Projected Compensation – Total\***

Age	Years of Service									
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over
Under 25	2,534	2,534	--	--	--	--	--	--	--	--
	\$25,877	\$25,877	--	--	--	--	--	--	--	--
25 - 29	9,766	7,950	1,816	--	--	--	--	--	--	--
	34,631	32,098	\$45,722	--	--	--	--	--	--	--
30 - 34	9,649	3,254	5,380	1,014	1	--	--	--	--	--
	43,481	32,411	47,659	\$56,821	\$57,220	--	--	--	--	--
35 - 39	10,415	2,393	3,025	4,229	768	--	--	--	--	--
	49,074	29,462	48,213	57,831	65,354	--	--	--	--	--
40 - 44	9,398	2,133	1,773	2,267	2,610	614	1	--	--	--
	51,262	26,731	47,941	57,239	64,641	\$67,139	\$46,094	--	--	--
45 - 49	10,093	2,246	1,694	1,579	1,795	2,174	605	--	--	--
	51,580	23,582	46,448	56,934	62,837	66,968	67,214	--	--	--
50 - 54	11,011	1,534	1,348	1,528	1,547	1,472	2,439	1,142	1	--
	57,003	24,461	46,035	55,836	63,089	66,655	68,434	\$70,108	\$78,795	--
55 - 59	10,556	1,171	911	1,187	1,395	1,241	1,567	2,592	492	--
	60,012	22,653	43,745	54,493	62,456	68,135	69,877	71,405	73,503	--
60 - 64	3,443	655	350	434	487	491	445	261	282	38
	54,399	15,637	39,285	52,997	61,401	67,832	71,712	78,271	77,431	\$76,784
65 - 69	627	271	83	50	41	57	39	26	39	21
	40,466	9,966	35,438	54,863	57,250	76,439	71,215	84,437	95,702	75,113
70 & Over	202	137	25	10	9	2	6	3	5	5
	18,674	6,716	11,980	40,942	47,647	60,963	58,983	82,199	107,385	90,986
Total	77,694	24,278	16,405	12,298	8,653	6,051	5,102	4,024	819	64
	\$49,095	\$28,199	\$46,807	\$56,757	\$63,464	\$67,306	\$69,024	\$71,575	\$76,126	\$77,345

\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT B-2**

**Members in Active Service as of June 30, 2007  
By Age, Years of Service, and Average Projected Compensation – Non-MTRFA**

Age	Total	Years of Service								
		Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over
Under 25	2,501	2,501	--	--	--	--	--	--	--	--
	\$26,119	\$26,119	--	--	--	--	--	--	--	--
25 - 29	9,516	7,729	\$1,787	--	--	--	--	--	--	--
	35,129	32,635	45,919	--	--	--	--	--	--	--
30 - 34	9,220	3,135	5,110	974	1	--	--	--	--	--
	43,817	32,924	47,964	\$57,105	\$57,220	--	--	--	--	--
35 - 39	9,891	2,318	2,813	4,013	747	--	--	--	--	--
	48,989	29,732	48,069	57,715	65,332	--	--	--	--	--
40 - 44	8,842	2,068	1,619	2,072	2,487	595	1	--	--	--
	50,877	26,733	47,391	56,818	64,402	\$67,068	\$46,094	--	--	--
45 - 49	9,186	1,948	1,526	1,420	1,643	2,055	594	--	--	--
	52,236	25,365	46,555	56,370	62,353	66,711	67,011	--	--	--
50 - 54	10,402	1,475	1,237	1,395	1,390	1,365	2,406	1,133	1	--
	56,774	24,532	45,596	55,160	62,286	66,266	68,408	\$70,018	\$78,795	--
55 - 59	9,993	1,128	838	1,058	1,244	1,148	1,514	2,574	489	--
	59,635	22,627	42,537	53,250	61,302	67,354	69,548	71,337	73,472	--
60 - 64	3,166	629	311	367	426	440	433	248	274	38
	53,598	15,939	37,581	51,045	60,063	66,577	71,460	78,265	76,991	\$76,784
65 - 69	572	266	69	36	37	51	33	24	36	20
	38,608	10,108	32,005	54,758	55,307	77,078	68,925	83,153	96,963	73,877
70 & Over	188	134	20	8	5	2	6	3	5	5
	\$18,157	\$6,743	\$13,788	\$34,582	\$48,632	\$60,963	\$58,983	\$82,199	\$107,385	\$90,986
Total	73,477	23,331	15,330	11,343	7,980	5,656	4,987	3,982	805	63
	\$48,989	\$28,705	\$46,729	\$56,358	\$62,931	\$66,853	\$68,840	\$71,472	\$75,937	\$76,988

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT B-3**

**Members in Active Service as of June 30, 2007  
By Age, Years of Service, and Average Projected Compensation – MTRFA Basic**

Age	Years of Service									
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over
Under 25	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--	--
50 - 54	23 \$74,392	--	--	--	3 \$80,040	5 \$61,581	6 \$71,663	9 \$81,446	--	--
55 - 59	65 81,039	--	--	3 \$77,114	5 76,726	18 79,880	19 83,804	17 81,580	3 \$78,539	--
60 - 64	31 80,624	--	--	--	--	7 75,528	4 78,107	12 76,520	8 92,499	--
65 - 69	7 86,095	--	--	--	--	1 70,151	1 79,828	2 99,855	2 76,569	1 \$99,839
70 & Over	--	--	--	--	--	--	--	--	--	--
Total	126 \$80,005	--	--	3 \$77,114	8 \$77,969	31 \$75,632	30 \$80,483	40 \$80,946	13 \$86,826	1 \$99,839

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT B-4**

**Members in Active Service as of June 30, 2007  
By Age, Years of Service, and Average Projected Compensation – MTRFA Coordinated**

Age	Years of Service									
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over
Under 25	33	33	--	--	--	--	--	--	--	--
	\$7,540	\$7,540	--	--	--	--	--	--	--	--
25 - 29	250	221	29	--	--	--	--	--	--	--
	15,683	13,330	\$33,611	--	--	--	--	--	--	--
30 - 34	429	119	270	40	--	--	--	--	--	--
	36,263	18,896	41,896	\$49,901	--	--	--	--	--	--
35 - 39	524	75	212	216	21	--	--	--	--	--
	50,682	21,117	50,118	59,997	\$66,140	--	--	--	--	--
40 - 44	556	65	154	195	123	19	--	--	--	--
	57,381	26,668	53,729	61,717	69,460	\$69,362	--	--	--	--
45 - 49	907	298	168	159	152	119	11	--	--	--
	44,930	11,924	45,477	61,973	68,071	71,407	\$78,185	--	--	--
50 - 54	586	59	111	133	154	102	27	--	--	--
	60,390	22,683	50,931	62,932	70,012	72,110	69,995	--	--	--
55 - 59	498	43	73	126	146	75	34	1	--	--
	64,827	23,334	57,607	64,390	71,799	77,271	76,716	\$75,542	--	--
60 - 64	246	26	39	67	61	44	8	1	--	--
	61,393	8,342	52,879	63,691	70,743	79,152	82,188	100,815	--	--
65 - 69	48	5	14	14	4	5	5	--	1	--
	55,943	2,409	52,356	55,132	75,231	71,175	84,608	--	\$88,576	--
70 & Over	14	3	5	2	4	--	--	--	--	--
	25,618	5,488	4,750	66,384	46,416	--	--	--	--	--
Total	4,091	947	1,075	952	665	364	85	2	1	--
	\$50,051	\$15,735	\$47,910	\$61,448	\$69,693	\$73,639	\$75,750	\$88,179	\$88,576	--

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT C-1**

**Retired Participants as of June 30, 2007  
By Age, Years Retired, and Average Annual Benefit – Total\***

Age	Years Retired							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	17	17	--	--	--	--	--	--
55 - 59	\$36,498	\$36,498	--	--	--	--	--	--
60 - 64	4,088	3,885	200	--	2	1	--	--
65 - 69	32,144	32,039	\$34,552	--	\$10,121	\$1,394	--	--
70 - 74	10,092	4,789	5,142	157	2	1	1	--
75 - 79	29,104	29,078	28,983	\$34,396	10,696	1,786	\$2,472	--
80 - 84	9,535	1,778	5,083	2,589	84	1	--	--
85 - 89	22,724	17,984	23,306	24,759	25,359	2,942	--	--
90 & Over	7,255	227	1,687	3,868	1,434	36	3	--
	28,703	14,058	23,546	31,064	30,963	20,562	9,704	--
	5,303	40	177	1,645	2,115	1,293	32	1
	31,289	13,309	23,194	30,261	31,406	34,186	27,065	\$17,412
	3,248	11	25	148	1,007	1,642	399	16
	32,566	19,349	23,615	31,934	30,370	35,942	26,140	13,497
	1,901	1	3	10	114	901	730	142
	29,122	3,562	3,527	20,270	31,779	31,377	28,775	15,802
	1,240	--	--	--	5	87	501	647
	24,650	--	--	--	4,069	29,375	28,432	21,245
Total	42,679	10,748	12,317	8,417	4,763	3,962	1,666	806
	\$28,311	\$27,937	\$25,886	\$29,032	\$30,909	\$34,021	\$27,958	\$20,127

\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT C-2**

**Retired Participants as of June 30, 2007**

**By Age, Years Retired, and Average Annual Benefit – Non-MTRFA**

Age	Years Retired							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	10	10	--	--	--	--	--	--
55 - 59	\$23,419	\$23,419	--	--	--	--	--	--
60 - 64	3,786	3,694	90	--	1	1	--	--
65 - 69	31,782	31,955	\$25,348	--	\$3,366	\$1,394	--	--
70 - 74	9,219	4,465	4,700	51	1	1	1	--
75 - 79	28,607	29,212	28,144	\$19,952	1,866	1,786	\$2,472	--
80 - 84	8,748	1,628	4,760	2,326	33	1	--	--
85 - 89	21,950	17,622	22,986	22,998	12,674	2,942	--	--
90 & Over	6,709	198	1,561	3,606	1,327	15	2	--
	28,280	12,775	23,619	30,654	29,770	18,490	6,760	--
	4,820	33	150	1,523	1,899	1,208	7	--
	30,885	10,205	21,207	30,418	30,493	33,914	21,390	--
	2,915	8	20	135	907	1,519	322	4
	32,290	25,408	22,731	31,482	29,645	36,174	22,648	\$22,044
	1,699	1	3	9	100	844	620	122
	29,012	3,562	3,527	17,582	30,259	31,653	28,246	15,292
	1,100	--	--	--	5	75	457	563
	24,772	--	--	--	4,069	28,599	28,635	21,311
Total	39,006	10,037	11,284	7,650	4,273	3,664	1,409	689
	\$27,831	\$27,944	\$25,211	\$28,207	\$29,901	\$34,132	\$27,010	\$20,250

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT C-3**

**Retired Participants as of June 30, 2007  
By Age, Years Retired, and Average Annual Benefit – MTRFA Basic**

Age	Years Retired							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	7	7	--	--	--	--	--	--
55 - 59	\$55,183	\$55,183	--	--	--	--	--	--
60 - 64	235	125	109	--	1	--	--	--
65 - 69	43,433	44,595	\$42,344	--	\$16,875	--	--	--
70 - 74	707	204	405	97	1	--	--	--
75 - 79	39,494	35,446	40,454	\$44,202	19,525	--	--	--
80 - 84	626	56	270	249	51	--	--	--
85 - 89	36,202	35,661	31,436	42,030	33,567	--	--	--
90 & Over	481	11	98	244	106	21	1	--
	36,866	37,919	26,091	38,483	46,133	\$22,043	\$15,593	--
	454	3	23	106	211	85	25	1
	37,033	51,690	37,372	31,400	40,291	38,054	28,654	\$17,412
	327	2	3	12	98	123	77	12
	35,492	3,515	40,209	39,413	37,454	33,086	40,745	10,648
	202	--	--	1	14	57	110	20
	30,042	--	--	44,458	42,632	27,288	31,759	18,911
	140	--	--	--	--	12	44	84
	23,688	--	--	--	--	34,228	26,324	20,801
Total	3,179	408	908	709	482	298	257	117
	\$36,714	\$38,647	\$36,370	\$39,476	\$40,264	\$32,662	\$33,156	\$19,408



**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT D-1**

**Disabled Members as of June 30, 2007  
By Age, Years Disabled, and Average Annual Benefit – Total\***

Age	Years Disabled							
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	13	9	3	1	--	--	--	--
	\$7,432	\$6,695	\$10,273	\$5,545	--	--	--	--
45 - 49	40	22	13	5	--	--	--	--
	7,943	9,256	6,445	6,055	--	--	--	--
50 - 54	85	47	23	10	5	--	--	--
	14,996	16,704	12,884	13,941	\$10,765	--	--	--
55 - 59	244	122	78	32	11	1	--	--
	20,101	21,445	17,837	22,650	15,141	\$5,735	--	--
60 - 64	246	73	93	63	11	3	3	--
	23,995	18,887	24,617	28,613	22,714	21,709	\$38,976	--
65 - 69	8	8	--	--	--	--	--	--
	13,658	13,658	--	--	--	--	--	--
70 - 74	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
75 - 79	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	636	281	210	111	27	4	3	--
	\$19,820	\$18,339	\$19,484	\$24,348	\$17,416	\$17,716	\$38,976	--

\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT D-2**

**Disabled Members as of June 30, 2007  
By Age, Years Disabled, and Average Annual Benefit – Non-MTRFA**

Age	Years Disabled							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	11	7	3	1	--	--	--	--
	\$7,754	\$6,991	\$10,273	\$5,545	--	--	--	--
45 - 49	37	19	13	5	--	--	--	--
	7,910	9,401	6,445	6,055	--	--	--	--
50 - 54	80	45	20	10	5	--	--	--
	14,829	15,608	14,535	13,941	\$10,765	--	--	--
55 - 59	230	114	75	29	11	1	--	--
	19,396	21,301	17,406	19,139	15,141	\$5,735	--	--
60 - 64	230	67	89	59	10	2	3	--
	23,051	19,130	23,984	26,201	19,645	13,119	\$38,976	--
65 - 69	7	7	--	--	--	--	--	--
	13,181	13,181	--	--	--	--	--	--
70 - 74	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
75 - 79	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	595	259	200	104	26	3	3	--
	\$19,192	\$18,271	\$19,227	\$21,886	\$16,032	\$10,657	\$38,976	--

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT D-3**

**Disabled Members as of June 30, 2007  
By Age, Years Disabled, and Average Annual Benefit – MTRFA Basic**

Age	Years Disabled							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	2	1	1	--	--	--	--	--
55 - 59	\$34,042	\$66,173	\$1,911	--	--	--	--	--
60 - 64	6	2	1	3	--	--	--	--
65 - 69	58,167	56,891	65,472	\$56,583	--	--	--	--
70 - 74	9	1	2	4	1	1	--	--
75 - 79	54,021	37,258	49,943	64,188	\$53,405	\$38,891	--	--
80 - 84	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
Total	17	4	4	7	1	1	--	--
	\$53,134	\$54,303	\$41,818	\$60,928	\$53,405	\$38,891	--	--

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT D-4**

**Disabled Members as of June 30, 2007  
By Age, Years Disabled, and Average Annual Benefit – MTRFA Coordinated**

Age	Years Disabled							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	2	2	--	--	--	--	--	--
	\$5,659	\$5,659	--	--	--	--	--	--
45 - 49	3	3	--	--	--	--	--	--
	8,339	8,339	--	--	--	--	--	--
50 - 54	3	1	2	--	--	--	--	--
	6,755	16,536	\$1,865	--	--	--	--	--
55 - 59	8	6	2	--	--	--	--	--
	11,817	12,362	10,181	--	--	--	--	--
60 - 64	7	5	2	--	--	--	--	--
	16,384	11,958	27,451	--	--	--	--	--
65 - 69	1	1	--	--	--	--	--	--
	17,000	17,000	--	--	--	--	--	--
70 - 74	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
75 - 79	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	24	18	6	--	--	--	--	--
	\$11,784	\$11,324	\$13,165	--	--	--	--	--

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT E-1**

**Beneficiaries as of June 30, 2007**

**By Age, Years Since Death, and Average Annual Benefit – Total\***

Age	Years Since Death							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	29	16	8	4	--	1	--	--
	\$13,227	\$12,637	\$8,568	\$19,038	--	\$36,704	--	--
45 - 49	53	32	14	6	--	--	1	--
	11,253	13,752	6,904	8,730	--	--	\$7,291	--
50 - 54	55	36	13	4	--	--	2	--
	14,250	15,068	12,537	15,874	--	--	7,408	--
55 - 59	161	102	40	16	3	--	--	--
	18,717	20,367	16,983	13,762	\$12,157	--	--	--
60 - 64	261	143	88	29	--	--	--	1
	21,081	21,996	20,581	17,115	--	--	--	\$49,369
65 - 69	380	166	129	65	19	1	--	--
	20,127	21,459	18,657	20,717	17,201	5,942	--	--
70 - 74	555	208	151	113	61	14	5	3
	25,094	26,232	24,523	27,049	20,794	18,659	27,199	15,177
75 - 79	584	215	160	99	61	29	10	10
	28,972	29,829	27,816	30,760	29,331	27,990	26,715	14,258
80 - 84	551	181	134	92	71	52	16	5
	29,069	29,797	28,588	31,942	26,716	27,756	26,456	18,229
85 - 89	364	108	82	69	44	31	17	13
	30,628	32,903	29,483	30,706	26,513	33,177	38,457	16,161
90 & Over	230	53	53	35	31	18	20	20
	27,598	32,485	29,206	23,027	25,928	27,464	27,738	20,960
Total	3,223	1,260	872	532	290	146	71	52
	\$25,531	\$25,800	\$24,283	\$26,730	\$25,131	\$27,957	\$28,973	\$18,422

\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT E-2**

**Beneficiaries as of June 30, 2007**

**By Age, Years Since Death, and Average Annual Benefit – Non-MTRFA**

Age	Years Since Death							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	12	10	2	--	--	--	--	--
	\$7,189	\$7,731	\$4,484	--	--	--	--	--
45 - 49	34	22	10	2	--	--	--	--
	10,905	14,679	4,299	\$2,416	--	--	--	--
50 - 54	46	35	8	3	--	--	--	--
	12,756	14,504	6,834	8,159	--	--	--	--
55 - 59	152	100	36	15	1	--	--	--
	18,134	20,111	14,862	13,437	\$8,764	--	--	--
60 - 64	246	132	84	29	--	--	--	1
	20,782	21,847	20,034	17,115	--	--	--	\$49,369
65 - 69	358	155	122	61	19	1	--	--
	20,041	21,158	19,054	20,293	17,201	\$5,942	--	--
70 - 74	483	192	133	83	57	12	5	1
	24,178	25,256	24,744	25,107	19,335	17,505	\$27,199	5,924
75 - 79	531	197	145	94	55	24	6	10
	28,540	29,839	27,874	29,536	28,839	23,790	26,465	14,258
80 - 84	520	168	130	87	68	50	13	4
	29,106	29,791	28,491	31,891	26,563	28,161	27,631	19,584
85 - 89	341	99	78	63	44	31	15	11
	30,640	33,045	29,155	30,812	26,513	33,177	40,080	15,018
90 & Over	215	51	49	33	30	17	16	19
	28,065	32,562	29,531	23,535	26,126	27,549	30,960	21,175
Total	2,938	1,161	797	470	274	135	55	46
	\$25,370	\$25,622	\$24,350	\$26,208	\$24,746	\$27,347	\$31,828	\$18,342

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT E-3**

**Beneficiaries as of June 30, 2007**

**By Age, Years Since Death, and Average Annual Benefit – MTRFA Basic**

Age	Total	Years Since Death						
		Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	13	2	6	4	--	1	--	--
	\$17,056	\$24,646	\$9,929	\$19,038	--	\$36,704	--	--
45 - 49	14	6	4	3	--	--	1	--
	10,685	12,090	13,415	5,366	--	--	\$7,291	--
50 - 54	9	1	5	1	--	--	2	--
	21,885	34,820	21,662	39,018	--	--	7,408	--
55 - 59	7	1	3	1	2	--	--	--
	27,008	54,821	29,296	18,639	\$13,854	--	--	--
60 - 64	12	8	4	--	--	--	--	--
	27,470	25,170	32,070	--	--	--	--	--
65 - 69	18	8	6	4	--	--	--	--
	21,446	24,747	13,227	27,171	--	--	--	--
70 - 74	67	11	18	30	4	2	--	2
	30,858	38,705	22,888	32,423	41,577	25,580	--	\$19,804
75 - 79	49	14	15	5	6	5	4	--
	34,528	33,005	27,254	53,764	33,839	48,152	27,092	--
80 - 84	27	9	4	5	3	2	3	1
	29,086	32,384	31,743	32,819	30,201	17,640	21,367	12,809
85 - 89	21	7	4	6	--	--	2	2
	31,505	34,730	35,874	29,587	--	--	26,287	22,448
90 & Over	15	2	4	2	1	1	4	1
	20,905	30,524	25,230	14,653	20,014	26,019	14,848	16,873
<b>Total</b>	<b>252</b>	<b>69</b>	<b>73</b>	<b>61</b>	<b>16</b>	<b>11</b>	<b>16</b>	<b>6</b>
	<b>\$27,749</b>	<b>\$30,351</b>	<b>\$23,415</b>	<b>\$30,673</b>	<b>\$31,729</b>	<b>\$35,448</b>	<b>\$19,159</b>	<b>\$19,031</b>

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT E-4**

**Beneficiaries as of June 30, 2007**

**By Age, Years Since Death, and Average Annual Benefit – MTRFA Coordinated**

Age	Total	Years Since Death						
		Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	4	4	--	--	--	--	--	--
	\$18,899	\$18,899	--	--	--	--	--	--
45 - 49	5	4	--	1	--	--	--	--
	15,208	11,149	--	\$31,448	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	2	1	1	--	--	--	--	--
	33,958	11,492	\$56,423	--	--	--	--	--
60 - 64	3	3	--	--	--	--	--	--
	20,092	20,092	--	--	--	--	--	--
65 - 69	4	3	1	--	--	--	--	--
	21,878	28,242	2,786	--	--	--	--	--
70 - 74	5	5	--	--	--	--	--	--
	36,274	36,274	--	--	--	--	--	--
75 - 79	4	4	--	--	--	--	--	--
	18,226	18,226	--	--	--	--	--	--
80 - 84	4	4	--	--	--	--	--	--
	24,192	24,192	--	--	--	--	--	--
85 - 89	2	2	--	--	--	--	--	--
	19,465	19,465	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	33	30	2	1	--	--	--	--
	\$22,949	\$22,222	\$29,605	\$31,448	--	--	--	--

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT F-1**

**Reconciliation of Member Data – Total\***

	Active Members	Leave of Absence	Inactive Vested Members	Other Non- Vested Members	Retired Participants	Disableds	Beneficiaries	Other Beneficiaries	Total
A. Number in June 30, 2006 report	79,108	56	11,773	21,956	40,973	630	3,044	36	157,576
B. Adjustments**	<u>-67</u>	<u>-3</u>	<u>-79</u>	<u>3</u>	<u>3</u>	<u>54</u>	<u>48</u>	<u>--</u>	<u>-41</u>
C. Number as of June 30, 2006	79,041	53	11,694	21,959	40,976	684	3,092	36	157,535
D. Additions	6,861	9	1,770	3,990	2,517	61	257	4	15,469
E. Deletions:									
1. Retirements from Active/Inactive	-2,112	-3	-272	-62	--	--	--	--	-2,449
2. Disability Retirements from Active	-49	-7	-1	--	--	--	--	--	-57
3. Retirements from Disability	--	--	--	--	--	-48	--	--	-48
4. Active Disability from Inactive	--	--	-2	-2	--	--	--	--	-4
5. Died with beneficiary	-3	--	-4	-2	-203	-11	--	--	-223
6. Died without beneficiary	-41	--	-19	-15	-641	-7	-82	--	-805
7. Terminated - deferred	-1,712	-35	--	-1	--	--	--	--	-1,748
8. Terminated - other non-vested	-3,829	-2	-17	--	--	--	--	--	-3,848
9. Refunds	-508	-1	-38	-952	--	--	--	--	-1,499
10. Contributions written off	--	--	--	-1,142	--	--	--	--	-1,142
11. Rehired as active	34	-2	-466	-859	--	--	--	--	-1,293
12. Expired benefits	--	--	--	--	-10	-43	-44	--	-97
13. Leave of absence	<u>--</u>	<u>--</u>	<u>-9</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>-9</u>
F. Number as of June 30, 2007	77,682	12	12,636	22,914	42,639	636	3,223	40	159,782

\*May include duplicate records (headcount purposes only) due to the MTRFA merger that was effective June 30, 2006, for members who have accrued service under both MTRFA and TRA.

\*\*Adjustments made by TRA to the 2006 data subsequent to the 2006 valuation.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT F-2**

**Reconciliation of Member Data – Non-MTRFA**

	Active Members	Leave of Absence	Inactive Vested Members	Other Non-Vested Members	Retired Participants	Disabled	Beneficiaries	Other Beneficiaries	Total
A. Number in June 30, 2006 report	74,783	--	10,225	18,060	37,373	598	2,754	--	143,793
B. Adjustments*	<u>-17</u>	--	<u>-48</u>	<u>29</u>	<u>4</u>	<u>54</u>	<u>51</u>	--	<u>73</u>
C. Number as of June 30, 2006	74,766	--	10,177	18,089	37,377	652	2,805	--	143,866
D. Additions	6,815	--	1,734	3,986	2,395	51	243	--	15,224
E. Deletions:									
1. Retirements from Active/Inactive	-2,024	--	-246	-58	--	--	--	--	-2,328
2. Disability Retirements from Active	-47	--	--	--	--	--	--	--	-47
3. Retirements from Disability	--	--	--	--	--	-47	--	--	-47
4. Active Disability from Inactive	--	--	-2	-2	--	--	--	--	-4
5. Died with beneficiary	--	--	--	--	-187	-11	--	--	-198
6. Died without beneficiary	-41	--	-18	-11	-569	-7	-69	--	-715
7. Terminated - deferred	-1,712	--	--	--	--	--	--	--	-1,712
8. Terminated - other non-vested	-3,828	--	-16	--	--	--	--	--	-3,844
9. Refunds	-452	--	--	-809	--	--	--	--	-1,261
10. Contributions written off	--	--	--	-1,142	--	--	--	--	-1,142
11. Rehired as active	--	--	-457	-838	--	--	--	--	-1,295
12. Expired benefits	--	--	--	--	-10	-43	-41	--	-94
13. Leave of absence	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>
F. Number as of June 30, 2007	73,477	--	11,172	19,215	39,006	595	2,938	--	146,403

\*Adjustments made by TRA to the 2006 data subsequent to the 2006 valuation.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT F-3**

**Reconciliation of Member Data – MTRFA**

	Active Members	Leave of Absence	Inactive Vested Members	Other Non- Vested Members	Retired Participants	Disableds	Beneficiaries	Other Beneficiaries	Total
A. Number in June 30, 2006 report	4,325	56	1,548	3,896	3,600	32	290	36	13,783
B. Adjustments*	<u>-50</u>	<u>-3</u>	<u>-31</u>	<u>-26</u>	<u>-1</u>	<u>--</u>	<u>-3</u>	<u>--</u>	<u>-114</u>
C. Number as of June 30, 2006	4,275	53	1,517	3,870	3,599	32	287	36	13,669
D. Additions	46	9	36	4	122	10	14	4	245
E. Deletions:									
1. Retirements from Active/Inactive	-88	-3	-26	-4	--	--	--	--	-121
2. Disability Retirements from Active	-2	-7	-1	--	--	--	--	--	-10
3. Retirements from Disability	--	--	--	--	--	-1	-	-	-1
4. Active Disability from Inactive	--	--	--	--	--	--	--	--	--
5. Died with beneficiary	-3	--	-4	-2	-16	--	--	--	-25
6. Died without beneficiary	--	--	-1	-4	-72	--	-13	--	-90
7. Terminated - deferred	--	-35	--	-1	--	--	--	--	-36
8. Terminated - other non- vested	-1	-2	-1	--	--	--	--	--	-4
9. Refunds	-56	-1	-38	-143	--	--	--	--	-238
10. Contributions written off	--	--	--	--	--	--	--	--	--
11. Rehired as active	34	-2	-9	-21	--	--	--	--	2
12. Expired benefits	--	--	--	--	--	--	-3	--	-3
13. Leave of absence	<u>--</u>	<u>--</u>	<u>-9</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>-9</u>
F. Number as of June 30, 2007	4,205	12	1,464	3,699	3,633	41	285	40	13,379

\*Adjustments made by TRA to the 2006 data subsequent to the 2006 valuation.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT G**

**Statement of Change in Net Plan Assets for Year Ended June 30, 2007**

	<b>Non-MPRIF Assets</b>	<b>MPRIF Reserve</b>	<b>Market Value</b>
A. Assets available at beginning of year (BOY)	\$7,414,466,457	\$12,371,205,127	\$19,785,671,584
B. Additions:			
1. Member contributions	\$199,868,969	--	\$199,868,969
2. Employer contributions	187,338,732	--	187,338,732
3. Contributions from other sources	25,413,403	--	25,413,403
4. MPRIF income	--	\$1,022,960,205	1,022,960,205
5. Net investment income:			
(a) Interest and dividends	\$838,337,006	--	\$838,337,006
(b) Net appreciation/(depreciation)	503,000,314	--	503,000,314
(c) Investment expenses	<u>-11,560,758</u>	--	<u>-11,560,758</u>
(d) Net subtotal	\$1,329,776,562	--	\$1,329,776,562
6. Other	<u>4,368,274</u>	--	<u>4,368,274</u>
7. Total additions	\$1,746,765,940	\$1,022,960,205	\$2,769,726,145
C. Operating expenses:			
1. Service retirements	--	\$1,245,395,728	\$1,245,395,728
2. Disability benefits	\$11,923,494	--	11,923,494
3. Survivor benefits	1,158,548	14,615,614	15,774,162
4. Refunds	12,088,193	--	12,088,193
5. Administrative expenses	10,635,365	--	10,635,365
6. Other	<u>3,309,099</u>	--	<u>3,309,099</u>
7. Total operating expenses	\$39,114,699	\$1,260,011,342	\$1,299,126,041
D. Other changes in reserves:			
1. Annuities awarded	-\$900,038,092	\$900,038,092	
2. Adjustment to shortfall due to MTRFA merger	8,772,600	-8,772,600	--
3. Mortality gain/(loss)	68,495,077	-68,495,077	--
4. Change in MPRIF asset valuation method	--	<u>-\$1,317,389,816</u>	<u>-\$1,317,389,816</u>
5. Total other changes	-\$822,770,415	-\$494,619,401	-\$1,317,389,816
E. Assets available at end of year (EOY)	\$8,299,347,283	\$11,639,534,589	\$19,938,881,872

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

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**EXHIBIT G (Continued)**

**Statement of Change in Net Plan Assets for Year Ended June 30, 2007**

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F.	Determination of current year unrecognized asset return	
1.	Average balance:	
(a)	Non-MPRIF Assets available at BOY: (A.1) + (A.2)	\$7,414,466,457
(b)	Non-MPRIF Assets available at EOY*: (E)	8,230,852,206
(c)	Average balance [(a) + (b) – Net Investment Income] / 2 Net Investment Income: (B.5.(d)) + (B.6)	7,155,586,914
2.	Expected return: 8.50% x (F.1. (c)):	608,224,888
3.	Actual return: (B.5.(d)) + (B.6)	<u>1,334,144,836</u>
4.	Current year unrecognized asset return: (F.3) – (F.2)	\$725,919,948

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*\*Before adjustment for MPRIF mortality gain (loss) and new MPRIF assumptions.*

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT H**

**Statement of Plan Net Assets for Year Ended June 30, 2007**

	<b>Market Value</b>	<b>Cost Value</b>
<b>Assets in trust</b>		
Cash, equivalents, short-term securities	\$99,909,277	\$99,909,277
Fixed income	1,791,305,692	1,879,442,894
Equity	6,330,740,538	5,738,419,028
Real estate	--	--
Equity in Minnesota Post-Retirement Investment Fund*	11,639,534,589	11,639,534,589
Invested securities lending collateral	3,160,951,648	3,160,951,648
Other assets	<u>11,107,651</u>	<u>11,107,651</u>
Total assets in trust	\$23,033,549,395	\$22,529,365,087
<b>Assets receivable</b>	<u>\$86,137,573</u>	<u>\$86,137,573</u>
<b>Total assets</b>	\$23,119,686,968	\$22,615,502,660
<b>Liabilities</b>		
Invested securities lending collateral	-\$3,160,951,648	-\$3,160,951,648
Other	<u>-19,853,450</u>	<u>-19,853,450</u>
Total liabilities	-\$3,180,805,098	-\$3,180,805,098
<b>Net assets held in trust for pension benefits</b>		
MPRIF reserves	\$11,639,534,589	\$11,639,534,589
Member reserves	1,799,909,653	1,799,909,653
Other non-MPRIF reserves	<u>6,499,437,630</u>	<u>5,995,253,321</u>
Total assets available for benefits	\$19,938,881,872	\$19,434,697,563
<b>Net Assets at Market/Cost Value</b>	<u>\$19,938,881,872</u>	<u>\$19,434,697,563</u>

\*The Cost Value of the Equity in the MPRIF is stated as Market Value in the MPRIF. The actual liability of the MPRIF Reserve is \$12,956,924,405.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

**EXHIBIT I**

**Actuarial Value of Assets Calculation History Through June 30, 2007**

<b>Year Ended June 30</b>	<b>Employer Contributions and Other Sources</b>	<b>Employee Contributions</b>	<b>Net Investment Return*</b>	<b>Change in Asset Method</b>	<b>Administrative Expenses</b>	<b>Benefit Payments</b>	<b>Actuarial Value of Assets at End of Year</b>
2002	--	--	--	--	--	--	\$17,378,994,000
2003	\$150,971,000	\$155,577,000	\$696,917,000	--	\$13,158,000	\$985,122,000	17,384,179,000
2004	154,394,908	159,139,548	849,647,285	--	12,179,212	1,015,272,179	17,519,909,350
2005	160,678,168	160,982,004	977,415,580	--	10,883,151	1,055,184,638	17,752,917,313
2006	182,203,849	177,084,905	2,171,403,001	--	11,912,701	1,236,084,528	19,035,611,839
2007	212,752,135	199,868,969	1,959,362,891	-\$1,317,389,816	10,635,365	1,285,181,577	18,794,389,076

\* Net Investment Return on an Actuarial Value of Assets basis, and net of investment fees.

**SECTION 3: Supplemental Information for the Teachers Retirement Association Fund**

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**EXHIBIT J**

**Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2007**

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1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		\$1,643,499,040
2. Normal cost at beginning of year, including expenses		360,313,764
3. Total contributions		412,621,104
4. Interest:		
(a) For whole year on (1) + (2)	\$170,324,088	
(b) For half year on (3)	<u>17,536,397</u>	
(c) Total interest: (4a) – (4b)		<u>152,787,691</u>
5. Expected unfunded/(overfunded) actuarial accrued liability: (1) + (2) – (3) + (4)		\$1,743,979,391
6. Changes due to (gain)/loss from:		
(a) Investments	-\$378,871,708	
(b) Other demographics*	<u>-6,572,078</u>	
(c) Total changes due to (gain)/loss		-\$385,443,786
7. Changes due to asset valuation method change		<u>\$1,317,389,816</u>
8. Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$2,675,925,421</u>

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*\*Includes (gain)/loss due to age/service retirements, disability, mortality (pre and post-retirement), withdrawal and salary increases.*

## SECTION 3: Supplemental Information for the Teachers Retirement Association Fund

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### EXHIBIT K

#### Definitions of Pension Terms

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The following list defines certain technical terms for the convenience of the reader:

#### **Assumptions or Actuarial**

##### **Assumptions:**

The estimates on which the cost of the Fund is calculated including:

- (a) Investment return — the rate of investment yield that the Fund will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

##### **Normal Cost:**

The amount of contributions required to fund the benefit allocated to the current year of service.

##### **Actuarial Accrued Liability**

##### **For Actives:**

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

##### **Actuarial Accrued Liability**

##### **For Pensioners:**

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

##### **Unfunded Actuarial Accrued**

##### **Liability:**

The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

### SECTION 3: Supplemental Information for the Teachers Retirement Association Fund

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#### **Amortization of the Unfunded**

**Actuarial Accrued Liability:** Payments made over a period of years equal in value to the Fund's unfunded actuarial accrued liability.

#### **Investment Return:**

The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

#### **Accrued Benefit Funded Ratio:**

A current year funded status that measures the percent of benefits covered by Current Assets. This ratio is based on benefits earned to the valuation date (accrued service) and includes future salary increases to retirement. The liability for these benefits is defined as the Current Benefit Obligations. The Accrued Benefit Funded Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current Benefit Obligations.

#### **Projected Benefit Funded Ratio:**

A projected funded status that measures contribution sufficiency/deficiency, which is based on a present value of all plan benefits for the lifetime of all plan members. The liability for these benefits is defined as the Current and Expected Future Benefit Obligations, or Present Value of Benefits. The Current and Expected Future Assets are determined as the sum of the Actuarial Value of Assets (Current Assets), the Present Value of Expected Future Statutory Supplemental Contributions and the Present Value of Future Normal Costs. The Projected Benefit Funded Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. If the ratio is equal to or more than 100%, there is a contribution sufficiency, and if it is less than 100% there is a contribution deficiency.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**EXHIBIT IA**

**Summary of Actuarial Valuation Data**

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The valuation was made with respect to the following data supplied to us:

1. Pensioners as of the valuation date (including 3,223 beneficiaries in pay status)		46,538
2. Members inactive during year ended June 30, 2007 with vested rights		12,636
3. Members active during the year ended June 30, 2007		77,694
Fully vested	61,180	
Not vested	16,514	
4. Other non-vested terminated members as of June 30, 2007		22,914

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**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT IB**

**Summary of Actuarial Valuation Results – Total (Before Asset Method Valuation Change)**

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>A. Determination of Actuarial Accrued Liability (Total)</b>			
1. Active members:			
(a) Retirement benefits	\$10,044,770,918	\$2,471,288,907	\$7,573,482,011
(b) Disability benefits	193,834,032	75,872,806	117,961,226
(c) Death Benefits	86,012,773	32,329,497	53,683,276
(d) Withdrawal Benefits	<u>751,882,275</u>	<u>553,010,018</u>	<u>198,872,257</u>
(e) Total	\$11,076,499,998	\$3,132,501,228	\$7,943,998,770
2. Vested terminated members	\$375,783,598	--	\$375,783,598
3. Other non-vested terminated members	37,640,975	--	37,640,975
4. Annuitants in MPRIF	12,956,924,405	--	12,956,924,405
5. Annuitants not in MPRIF	<u>155,966,749</u>	--	<u>155,966,749</u>
6. Total	\$24,602,815,725	\$3,132,501,228	\$21,470,314,497
<b>B. Determination of Unfunded Actuarial Accrued Liability</b>			
1. Actuarial Accrued Liability			\$21,470,314,497
2. Actuarial Value of Assets			<u>20,111,778,892</u>
3. Unfunded Actuarial Accrued Liability: (B.1) – (B.2)			\$1,358,535,605
<b>C. Determination of Supplemental Contribution Rate</b>			
1. Present value of future payrolls through the amortization date of June 30, 2037			\$70,847,063,611
2. Supplemental contribution rate: (B.3) / (C.1)			1.92%

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT IC**

**Summary of Actuarial Valuation Results – Total (After Asset Valuation Method Change)**

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>A. Determination of Actuarial Accrued Liability (Total)</b>			
1. Active members:			
(a) Retirement benefits	\$10,044,770,918	\$2,471,288,907	\$7,573,482,011
(b) Disability benefits	193,834,032	75,872,806	117,961,226
(c) Death Benefits	86,012,773	32,329,497	53,683,276
(d) Withdrawal Benefits	<u>751,882,275</u>	<u>553,010,018</u>	<u>198,872,257</u>
(e) Total	\$11,076,499,998	\$3,132,501,228	\$7,943,998,770
2. Vested terminated members	\$375,783,598	--	\$375,783,598
3. Other non-vested terminated members	37,640,975	--	37,640,975
4. Annuitants in MPRIF	12,956,924,405	--	12,956,924,405
5. Annuitants not in MPRIF	<u>155,966,749</u>	--	<u>155,966,749</u>
6. Total	\$24,602,815,725	\$3,132,501,228	\$21,470,314,497
<b>B. Determination of Unfunded Actuarial Accrued Liability</b>			
1. Actuarial Accrued Liability			\$21,470,314,497
2. Actuarial Value of Assets			<u>18,794,389,076</u>
3. Unfunded Actuarial Accrued Liability: (B.1) – (B.2)			\$2,675,925,421
<b>C. Determination of Supplemental Contribution Rate</b>			
1. Present value of future payrolls through the amortization date of June 30, 2037			\$70,847,063,611
2. Supplemental contribution rate: (B.3) / (C.1)			3.78%

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT 1D**

**Summary of Actuarial Valuation Results – Non-MTRFA**

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>A. Determination of Actuarial Accrued Liability (Non-MTRFA)</b>			
1. Active members:			
(a) Retirement benefits	\$9,495,693,977	\$2,332,059,263	\$7,163,634,714
(b) Disability benefits	182,601,166	71,653,285	110,947,881
(c) Death Benefits	81,126,979	30,606,503	50,520,476
(d) Withdrawal Benefits	<u>715,735,788</u>	<u>526,310,001</u>	<u>189,425,787</u>
(e) Total	\$10,475,157,910	\$2,960,629,052	\$7,514,528,858
2. Vested terminated members	\$334,871,745	--	\$334,871,745
3. Other non-vested terminated members	34,440,632	--	34,440,632
4. Annuitants in MPRIF	11,512,331,333	--	11,512,331,333
5. Annuitants not in MPRIF	<u>155,966,749</u>	--	<u>155,966,749</u>
6. Total	\$22,512,768,369	\$2,960,629,052	\$19,552,139,317

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT IE**

**Summary of Actuarial Valuation Results – MTRFA**

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>A. Determination of Actuarial Accrued Liability (MTRFA)</b>			
1. Active members:			
(a) Retirement benefits	\$549,076,941	\$139,229,644	\$409,847,297
(b) Disability benefits	11,232,866	4,219,521	7,013,345
(c) Death Benefits	4,885,794	1,722,994	3,162,800
(d) Withdrawal Benefits	<u>36,146,487</u>	<u>26,700,017</u>	<u>9,446,470</u>
(e) Total	\$601,342,088	\$171,872,176	\$429,469,912
2. Vested terminated members	\$40,911,853	--	\$40,911,853
3. Other non-vested terminated members	3,200,343	--	3,200,343
4. Annuitants in MPRIF	1,444,593,072	--	1,444,593,072
5. Annuitants not in MPRIF	<u>          --</u>	<u>          --</u>	<u>          --</u>
6. Total	\$2,090,047,356	\$171,872,176	\$1,918,175,180

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT II**

**Actuarial Balance Sheet - Total**

A. Current Assets				\$18,794,389,076
B. Expected Future Assets				
1. Present Value of Expected Future Statutory Supplemental Contributions				\$1,509,042,455
2. Present Value of Future Normal Costs				<u>3,132,501,228</u>
3. Total Expected Future Assets				\$4,641,543,683
C. Total Current and Expected Future Assets				\$23,435,932,759
D. Current Benefit Obligations	<b><u>Non-Vested</u></b>	<b><u>Vested</u></b>		<b><u>Total</u></b>
1. Benefit recipients:				
(a) Retirement annuities	--	\$12,345,385,806		\$12,345,385,806
(b) Disability benefits	--	160,303,686		160,303,686
(c) Beneficiaries	--	607,201,662		607,201,662
2. Vested terminated members	--	375,783,598		375,783,598
3. Other non-vested terminated members	--	37,640,975		37,640,975
4. Active members:				
(a) Retirement benefits	\$30,783,896	\$6,500,767,126		\$6,531,551,022
(b) Disability benefits	1,115,273	111,575,424		112,690,697
(c) Death benefits	483,268	51,039,801		51,523,069
(d) Withdrawal benefits	<u>15,540,333</u>	<u>409,270,317</u>		<u>424,810,650</u>
5. Total Current Benefit Obligations	\$47,922,770	\$20,598,968,395		\$20,646,891,165
E. Expected Future Benefit Obligations				<u>3,955,924,560</u>
F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)				\$24,602,815,725
G. Current Unfunded Actuarial Liability (D.5 - A)				\$1,852,502,089
H. Current and Future Unfunded Actuarial Liability (F - C)				\$1,166,882,968

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT III**

**Supplementary Information Required by the GASB – Schedule of Employer Contributions**

<b>Plan Year Ended June 30</b>	<b>Actuarially Required Contribution Rate (a)</b>	<b>Actual Covered Payroll (b)</b>	<b>Actual Member Contributions (c)</b>	<b>Annual Required Contributions [(a) x (b)] – (c)</b>	<b>Actual Employer Contributions <sup>(1)</sup></b>	<b>Percentage Contributed</b>
1991	13.11%	\$1,943,375,000	\$89,313,000	\$165,463,000	\$159,439,000	96.36%
1992	13.04%	1,989,624,000	91,506,000	167,941,000	162,370,000	96.68%
1993	13.13%	2,065,881,000	94,709,000	176,541,000	168,071,000	95.20%
1994	12.75%	2,150,300,000	100,803,000	173,360,000	171,855,000	99.13%
1995	14.73%	2,204,693,000	143,536,000	181,215,000	179,672,000	99.15%
1996	14.30%	2,268,390,000	148,051,000	176,329,000	184,495,000	104.63%
1997	12.78%	2,359,011,000	154,161,000	147,321,000	191,670,000	130.10%
1998 <sup>(2)</sup>	9.55%	2,422,957,000	124,096,000	107,296,000	151,323,000	141.03%
1999 <sup>(2)</sup>	8.39%	2,625,254,000	132,040,000	88,219,000	130,526,000	147.96%
2000 <sup>(2)</sup>	8.36%	2,704,575,000	138,696,000	87,406,000	134,419,000	153.79%
2001 <sup>(2), (3)</sup>	7.92%	2,812,000,000	145,075,000	77,635,000	139,799,000	180.07%
2002 <sup>(2)</sup>	7.85%	2,873,771,000	152,331,000	73,260,000	142,222,000	194.13%
2003 <sup>(2), (4)</sup>	7.57%	2,952,887,000	155,577,000	67,957,000	149,481,000	219.96%
2004 <sup>(2)</sup>	8.37%	3,032,483,365	159,139,548	94,679,310	151,028,911	159.52%
2005 <sup>(2)</sup>	8.46%	3,121,571,447	160,982,004	103,102,940	157,693,090	152.95%
2006 <sup>(5)</sup>	9.05%	3,430,645,420	177,084,905	133,388,506	200,285,866	150.15%
2007 <sup>(6)</sup>	12.16%	3,532,158,749	199,868,969	229,641,535	209,219,130	91.11%
2008 <sup>(7)</sup>	13.44%					

<sup>(1)</sup> Includes contributions from other sources (if applicable).

<sup>(2)</sup> Actuarially Required Contributions calculated according to parameters of GASB 25 using a 30-year amortization of the negative unfunded actuarial accrued liability.

<sup>(3)</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Asset Valuation Method is 7.31%.

<sup>(4)</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 8.11%.

<sup>(5)</sup> Actuarially Required Contribution Rate shown is the contribution rate stated in the TRA July 1, 2005 actuarial valuation.

<sup>(6)</sup> Actuarially Required Contributions calculated according to parameters of GASB 25 (30-year amortization period), and post-merger of the Minneapolis Teachers' Retirement Fund Association.

<sup>(7)</sup> Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 11.58%.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**EXHIBIT IV**

**Supplementary Information Required by the GASB – Schedule of Funding Progress**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Actual Covered Payroll (Previous FY) (c)</b>	<b>UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)</b>
07/01/1991	\$5,614,924,000	\$7,213,720,000	\$1,598,796,000	77.84%	\$1,943,375,000	82.27%
07/01/1992	6,324,733,000	7,662,522,000	1,337,789,000	82.54%	1,989,624,000	67.24%
07/01/1993	7,045,937,000	8,266,059,000	1,220,122,000	85.24%	2,065,881,000	59.06%
07/01/1994	7,611,936,000	9,115,266,000	1,503,330,000	83.51%	2,150,300,000	69.91%
07/01/1995	8,348,124,000	9,717,623,000	1,369,499,000	85.91%	2,204,693,000	62.12%
07/01/1996	9,541,221,000	10,366,168,000	824,947,000	92.04%	2,268,390,000	36.37%
07/01/1997	11,103,759,000	10,963,637,000	-140,122,000	101.28%	2,359,011,000	-5.94%
07/01/1998	12,727,546,000	12,046,312,000	-681,234,000	105.66%	2,422,957,000	-28.12%
07/01/1999	14,011,247,000	13,259,569,000	-751,678,000	105.67%	2,625,254,000	-28.63%
07/01/2000	15,573,151,000	14,802,441,000	-770,710,000	105.21%	2,704,575,000	-28.50%
07/01/2001	16,834,024,000	15,903,984,000	-930,040,000	105.85%	2,812,000,000	-33.07%
07/01/2002	17,378,994,000	16,503,099,000	-875,895,000	105.31%	2,873,771,000	-30.48%
07/01/2003	17,384,179,000	16,856,379,000	-527,800,000	103.13%	2,952,887,000	-17.87%
07/01/2004	17,519,909,350	17,518,783,700	-1,125,650	100.01%	3,032,483,365	-0.04%
07/01/2005	17,752,917,313	18,021,410,061	268,492,748	98.51%	3,121,571,447	8.60%
07/01/2006	19,035,611,839	20,679,110,879	1,643,499,040	92.05%	3,430,645,420	47.91%
07/01/2007	18,794,389,076	21,470,314,497	2,675,925,421	87.54%	3,532,158,749	75.76%

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Exhibit VA**

**Determination of Contribution Sufficiency – Total (Before Asset Valuation Method Change)**

	July 1, 2007	
	Percent of Payroll	Dollar Amount
<b>A. Statutory Contributions – Chapter 354</b>		
1. Member contributions	5.51%	\$210,143,378
2. Employer contributions	5.72	218,013,895
3. Supplemental contributions*		
(a) 1993 Legislation	0.13	5,000,000
(b) 1996 Legislation	0.08	3,005,110
(c) 1997 Legislation	<u>0.35</u>	<u>13,314,000</u>
4. Total	<u>11.79%</u>	<u>\$449,476,383</u>
<b>B. Required Contributions – Chapter 356</b>		
1. Normal Cost:		
(a) Retirement	7.62%	\$290,472,173
(b) Disability	0.21	7,982,670
(c) Death	0.09	3,602,367
(d) Withdrawal	<u>1.45</u>	<u>55,286,055</u>
(e) Total	<u>9.37%</u>	\$357,343,265
2. Supplemental contribution amortization	1.92%	\$73,235,976
3. Allowance for administrative expenses	<u>0.29%</u>	<u>\$11,061,684</u>
4. Total	<u>11.58%</u>	<u>\$441,640,925</u>
<b>C. Contribution Sufficiency / (Deficiency): (A.3) – (B.4)</b>	0.21%	\$7,835,458
<b>Projected annual payroll** for fiscal year beginning on the valuation date</b>		<u>\$3,814,373,772</u>

\* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

\*\* Calculated as covered actual payroll, projected one year with salary scale.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Exhibit VB**

**Determination of Contribution Sufficiency – Total (After Asset Valuation Method Change)**

	<b>July 1, 2007</b>	
<b>A. Statutory Contributions – Chapter 354</b>	<b>Percent of Payroll</b>	<b>Dollar Amount</b>
1. Member contributions	5.51%	\$210,143,378
2. Employer contributions	5.72	218,013,895
3. Supplemental contributions*		
(d) 1993 Legislation	0.13	5,000,000
(e) 1996 Legislation	0.08	3,005,110
(f) 1997 Legislation	<u>0.35</u>	<u>13,314,000</u>
4. Total	<u>11.79%</u>	<u>\$449,476,383</u>
<b>B. Required Contributions – Chapter 356</b>		
1. Normal Cost:		
(f) Retirement	7.62%	\$290,472,173
(g) Disability	0.21	7,982,670
(h) Death	0.09	3,602,367
(i) Withdrawal	<u>1.45</u>	<u>55,286,055</u>
(j) Total	<u>9.37%</u>	<u>\$357,343,265</u>
2. Supplemental contribution amortization:		
(a) Before asset valuation method change	1.92%	\$73,235,976
(b) Cost impact due to asset valuation method change	1.86%	\$70,947,353
3. Allowance for administrative expenses	<u>0.29%</u>	<u>\$11,061,684</u>
4. Total	<u>13.44%</u>	<u>\$512,588,278</u>
<b>C. Contribution Sufficiency / (Deficiency): (A.3) – (B.4)</b>	-1.65%	-\$63,111,895
<b>Projected annual payroll** for fiscal year beginning on the valuation date</b>		<u>\$3,814,373,772</u>

\* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

\*\* Calculated as covered actual payroll, projected one year with salary scale.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Exhibit VC**

**Determination of Contribution Sufficiency – Non-MTRFA**

	<b>July 1, 2007</b>	
<b>A. Statutory Contributions – Chapter 354</b>	<b>Percent of Payroll</b>	<b>Dollar Amount</b>
1. Member contributions	5.50%	\$197,974,451
2. Employer contributions	5.50%	197,974,451
3. Supplemental contributions*		
(a) 1993 Legislation	0.13	4,679,396
(b) 1996 Legislation	0.08	2,879,628
(c) 1997 Legislation	<u>0.35</u>	<u>12,598,374</u>
4. Total	<u>11.56%</u>	<u>\$416,106,300</u>
<b>B. Required Contributions – Chapter 356</b>		
1. Normal Cost:		
(a) Retirement	7.57%	\$272,475,292
(b) Disability	0.21	7,489,918
(c) Death	0.09	3,394,280
(d) Withdrawal	<u>1.46</u>	<u>52,484,167</u>
(e) Total	<u>9.33%</u>	<u>\$335,843,657</u>
<b>Projected annual payroll** for fiscal year beginning on the valuation date</b>		<b>\$3,599,535,470</b>

\*Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

\*\*Calculated as covered actual payroll, projected one year with salary scale.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Exhibit VD**

**Determination of Contribution Sufficiency – MTRFA Basic**

	July 1, 2007	
	Percent of Payroll	Dollar Amount
<b>A. Statutory Contributions – Chapter 354</b>		
1. Member contributions	9.00%	\$907,253
2. Employer contributions	13.14	1,324,589
3. Supplemental contributions*		
(a) 1993 Legislation	0.13	13,105
(b) 1996 Legislation	0.08	8,064
(c) 1997 Legislation	<u>0.35</u>	<u>35,282</u>
4. Total	<u>22.70%</u>	<u>\$2,288,293</u>
<b>B. Required Contributions – Chapter 356</b>		
1. Normal Cost:		
(a) Retirement	11.74%	\$1,183,317
(b) Disability	0.27	26,733
(c) Death	0.12	12,448
(d) Withdrawal	<u>2.26</u>	<u>228,180</u>
(e) Total	<u>14.39%</u>	<u>\$1,450,678</u>
<b>Projected annual payroll** for fiscal year beginning on the valuation date</b>		<b>\$10,080,587</b>

\*Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

\*\*Calculated as covered actual payroll, projected one year with salary scale.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Exhibit VE**

**Determination of Contribution Sufficiency – MTRFA Coordinated**

	July 1, 2007	
	Percent of Payroll	Dollar Amount
<b>A. Statutory Contributions – Chapter 354</b>		
1. Member contributions	5.50%	\$11,261,674
2. Employer contributions	9.14	18,714,855
3. Supplemental contributions*		
(a) 1993 Legislation	0.13	266,185
(b) 1996 Legislation	0.08	163,806
(c) 1997 Legislation	<u>0.35</u>	<u>716,652</u>
4. Total	<u>15.20%</u>	<u>\$31,123,172</u>
<b>B. Required Contributions – Chapter 356</b>		
1. Normal Cost:		
(a) Retirement	8.21%	\$16,813,564
(b) Disability	0.23	466,019
(c) Death	0.10	195,639
(d) Withdrawal	<u>1.26</u>	<u>2,573,708</u>
(e) Total	<u>9.80%</u>	<u>\$20,048,930</u>
<b>Projected annual payroll** for fiscal year beginning on the valuation date</b>		<b>\$204,757,715</b>

\* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

\*\*Calculated as covered actual payroll, projected one year with salary scale.

## SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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### EXHIBIT VI

#### Supplementary Information Required by the GASB

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Valuation date	July 1, 2007
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 5.00% per annum
Remaining amortization period	30 years remaining as of July 1, 2007
Asset valuation method	MPRIF Reserve: Market Value Non-MPRIF Assets: Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).

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#### Actuarial assumptions:

Investment rate of return:	
Pre-retirement	8.50% per annum
Post-retirement	6.00% per annum
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 5.00% - 6.00%

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#### Plan membership:

Pensioners and beneficiaries receiving benefits	46,538
Terminated vested members entitled to, but not yet receiving benefits	12,636
Other terminated non-vested members	22,914
Active members	<u>77,694</u>
Total	159,782

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**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**EXHIBIT VII**

**Actuarial Assumptions and Actuarial Cost Method**

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**Mortality Rates:**

*Healthy Pre-Retirement:*

Male:	1983 Group Annuity Mortality Table for males set back 12 years
Female:	1983 Group Annuity Mortality Table for females set back 10 years

*Healthy Post-Retirement:*

Male:	1983 Group Annuity Mortality Table for males set back 6 years
Female:	1983 Group Annuity Mortality Table for females set back 3 years

*Disabled:*

Male:	1965 Railroad Retirement Board (RRB) rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Healthy Post-Retirement mortality table. For ages 65 and later, the Healthy Post-Retirement mortality table.
Female:	1965 Railroad Retirement Board (RRB) rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Healthy Post-Retirement mortality table. For ages 65 and later, the Healthy Post-Retirement mortality table.

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**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Summary of Rates:**

Shown below for selected ages:

Age	Rate (%)						Salary Increases
	Pre-Retirement Mortality		Withdrawal		Disability		
	Male	Female	Male	Female	Male	Female	
20	0.03	0.01	3.70	4.50	0.00	0.00	6.00
25	0.03	0.01	3.20	4.50	0.00	0.00	6.00
30	0.04	0.02	2.70	4.50	0.00	0.00	6.00
35	0.04	0.03	2.50	3.90	0.01	0.01	6.00
40	0.05	0.03	2.35	2.75	0.03	0.03	5.70
45	0.07	0.05	2.10	2.10	0.05	0.05	5.20
50	0.10	0.07	1.85	1.85	0.11	0.10	5.00
55	0.17	0.10	0.00	0.00	0.22	0.16	5.00
60	0.31	0.16	0.00	0.00	0.33	0.25	5.30
65	0.52	0.25	0.00	0.00	0.00	0.00	5.70
70	0.77	0.42	0.00	0.00	0.00	0.00	5.70
71	0.84	0.47	0.00	0.00	0.00	0.00	5.70

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

**Summary of Retirement Rates:** Shown below for selected ages:

Age	All Non-MTRFA and MTRFA Coordinated Members Eligible for Rule of 90	All Non-MTRFA and MTRFA Coordinated Members Not Eligible for Rule of 90	Age	MTRFA Basic Members Eligible for 30 and Out Provision	MTRFA Basic Members Not Eligible for 30 and Out Provision
55 & under	50.0	9.0	55 & under	40.0	5.0
60	50.0	12.0	60	25.0	25.0
65	50.0	50.0	65	40.0	40.0
70	35.0	35.0	70	60.0	60.0
71	100.0	100.0	75	60.0	60.0
			80 & over	100.0	100.0

**Withdrawal Rates:** Select and ultimate rates were based on recent plan experience as of June 30, 2000. Ultimate rates after the third year are shown in the rate table. Select rates are as follows:

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>
Male:	45.00%	12.00%	6.00%
Female:	40.00%	10.00%	8.00%

**Salary Increases:** Reported salary for prior fiscal year, with new hires annualized, increased according to the ultimate table shown in the rate table to current fiscal year and annually for each future year. During a ten-year select period,  $0.30 \times (10 - T)$  where T is completed years of service is added to the ultimate rate.

**Retirement Age:** Graded rates beginning at age 55 as shown in rate table. Members who have attained the highest assumed retirement age will retire in one year.

#### SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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<b>Percent Married:</b>	85% of male members and 65% of female members are assumed to be married. Assume members have no children.
<b>Age of Spouse:</b>	Females three years younger than males.
<b>Net Investment Return:</b>	
<i>Pre-Retirement:</i>	8.50% per annum
<i>Post-Retirement:</i>	6.00% per annum
<b>Administrative Expenses:</b>	Prior year administrative expenses expressed as percentage of prior year payroll.
<b>Allowance for Combined Service Annuity:</b>	Liabilities for active members are increased by 1.40% and liabilities for former members are increased by 4.00% to account for the effect of some Participants having eligibility for a Combined Service Annuity.
<b>Return of Contributions:</b>	All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.
<b>Interest on Member Contributions:</b>	Members and former members who are eligible for the money purchase annuity are assumed to receive interest credits equal to the Pre-Retirement interest rate. All other members and former members receive the interest crediting rate as specified in statutes.
<b>Special Consideration:</b>	Married members assumed to elect subsidized joint and survivor form of annuity as follows: Males: 15% elect 50% J&S option 25% elect 75% J&S option 55% elect 100% J&S option Females: 20% elect 50% J&S option 10% elect 75% J&S option 30% elect 100% J&S option

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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<b>Benefit Increases After Retirement:</b>	Payment of earnings on retired reserves in excess of 6.00% accounted for by 6.00% post-retirement assumptions.				
<b>Asset Valuation Method:</b>	<p>MPRIF Reserve: Market Value</p> <p>Non-MPRIF Assets: Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).</p>				
<b>Actuarial Cost Method:</b>	Entry Age Normal Cost Method. Entry age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll, with Normal Cost determined as if the current benefit accrual rate had always been in effect.				
<b>Unknown Data for Members:</b>	<p>The submitted participant data has been reviewed for reasonableness and consistency with data submitted for prior valuations. We have not audited this data, and the results of this valuation may change based on the accuracy of the underlying data. In cases where submitted data was missing or incomplete, the following assumptions were applied:</p> <table border="0" data-bbox="957 1133 1898 1403"> <tr> <td data-bbox="957 1133 1121 1161">Date of Birth:</td> <td data-bbox="1194 1133 1818 1295">                 July 1, 1960 (TRA active members)                  July 1, 1961 (former MTRFA active members)                  July 1, 1960 (vested terminated members)                  July 1, 1936 (pensioners, survivors and beneficiaries)             </td> </tr> <tr> <td data-bbox="957 1312 1136 1403">Salary (Former MTRFA active members):</td> <td data-bbox="1194 1312 1898 1403">Calculated estimate for actual salary for period July 1, 2006 through June 30, 2007 equal to salary provided for period July 1, 2005 through June 30, 2006, increased by 2.00%.</td> </tr> </table>	Date of Birth:	July 1, 1960 (TRA active members) July 1, 1961 (former MTRFA active members) July 1, 1960 (vested terminated members) July 1, 1936 (pensioners, survivors and beneficiaries)	Salary (Former MTRFA active members):	Calculated estimate for actual salary for period July 1, 2006 through June 30, 2007 equal to salary provided for period July 1, 2005 through June 30, 2006, increased by 2.00%.
Date of Birth:	July 1, 1960 (TRA active members) July 1, 1961 (former MTRFA active members) July 1, 1960 (vested terminated members) July 1, 1936 (pensioners, survivors and beneficiaries)				
Salary (Former MTRFA active members):	Calculated estimate for actual salary for period July 1, 2006 through June 30, 2007 equal to salary provided for period July 1, 2005 through June 30, 2006, increased by 2.00%.				

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**Payment on the Unfunded**

**Actuarial Accrued Liability:**

A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5.00% per annum.

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**Changes in Actuarial Assumptions  
and Cost Methods:**

There have been no changes made to the actuarial assumptions since the prior valuation.

The only change in actuarial cost methods since the last valuation was a modification to the asset valuation, effective with the July 1, 2007 valuation. Assets allocated to the Minnesota Post Retirement Investment Fund (MPRIF) must equal the Market Value of Assets as of the valuation date.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**EXHIBIT VIII**

**Summary of Plan Provisions – Basic (Non-MTRFA Members)**

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This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

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<b>Plan Year:</b>	July 1 through June 30
<b>Eligibility:</b>	A public school or MNSCU teacher who is not covered by the Social Security Act, except for teachers employed by St. Paul or Duluth public schools or by the University of Minnesota. Effective July 1, 2002, charter school teachers employed by St. Paul or Duluth public schools are covered by this fund. No MNSCU teacher is a Member if that person elected coverage under Chapter 354B.
<b>Contributions:</b>	Member: 9.00% of Salary. Employer: 9.50% of Salary.
<b>Allowable Service:</b>	A day of credit is earned if five hours are taught that day. A year is earned if 170 days of service are credited. Credit may also be provided for certain leaves if contributions are paid into the fund.
<b>Salary:</b>	Compensation used for contribution purposes excluding lump sum annual or sick leave payments, severance payments, any payments made in lieu of employer paid fringe benefits or expenses, and employer contributions to a Section 457 deferred compensation plan.
<b>Average Salary:</b>	Average of the five highest successive years of Salary. Average Salary is based on all Allowable Service if less than five years.

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## SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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### **Retirement:**

#### Normal Retirement:

- Age/Service Requirement:*
- (a) Age 65 and three years of Allowable Service.
  - (b) Age 62 and 30 years of Allowable Service.
- Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.

#### Early Retirement:

- Age/Service Requirement:*
- (a) Age 55 and three years of Allowable Service.
  - (b) Any age with 30 years of Allowable Service.
  - (c) Rule of 90: Age plus Allowable Service totals 90.

#### *Amount:*

The greater of (a), (b) or (c):

- (a) 2.20% of Average Salary for each of the first ten years of Allowable Service and 2.70% of Average Salary for each subsequent year with reduction of 0.25% for each month the member is under age 65 at time of retirement or under age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90.
- (b) 2.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.
- (c) For eligible members, money purchase annuity equal to the actuarial equivalent of 220.00% of the member's accumulated deductions plus interest thereon.

#### *Form of Payment:*

Life annuity. Actuarially equivalent options are:

- (a) 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction.
- (b) 15-year Certain and Life.
- (c) Guaranteed Refund.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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*Benefit Increases:* Benefits may be increased each January 1 based on a formula in the Minnesota Statute consisting of both an inflation component and an investment based component of the Minnesota Post Retirement Investment Fund (MPRIF). A member who has been receiving a benefit for a least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial pro rata increase.

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**Disability:**

*Age/Service Requirement:* Total and permanent disability before normal retirement age with three years of Allowable Service.

*Amount:* Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age unless an optional annuity plan is selected. Supplemental benefit of \$25 per month.

Payments stop at normal retirement age or the five year anniversary of the effective date of the disability benefit, whichever is later. Payments stop earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment. If death occurs before retirement status, the surviving spouse and dependent children are eligible for survivor benefits.

*Form of Payment:* Same as for retirement.

*Benefit Increases:* Adjusted by TRA to provide same increase as MPRIF.

*Retirement After Disability:*

*Age/Service Requirement:* Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later.

*Amount:* Any optional annuity continues. Otherwise, the larger of the disability benefit paid before Normal Retirement Age or the normal retirement benefit available at Normal Retirement Age, or an actuarially equivalent optional annuity.

*Benefit Increases:* Same as for retirement.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**Death:**

Surviving Spouse Benefit:

*Age/Service Requirement:* Active member with 18 months of Allowable Service or member receiving a disability benefit.

*Amount:* 50% of salary for the last full fiscal year preceding death. Maximum family benefit is \$1,000 per month. Benefits paid until spouse's death.

Surviving spouse optional annuity or refund of contributions may be elected in lieu of this benefit.

Surviving Dependent Child Benefit:

*Age/Service Requirement:* Active member with 18 months of Allowable Service or member receiving a disability benefit.

*Amount:* 10% of salary for the last full fiscal year preceding death. Family benefit minimum (including spouse's benefit) of 50% of salary and maximum \$1,000 per month. Benefits paid until child marries, dies, or attains age 18 (age 22 if full-time student).

Surviving Spouse Optional Annuity:

*Age/Service Requirement:* Member or former member with three years of Allowable Service who dies before retirement or disability benefits commence.

*Amount:* Survivor's payment of the 100% Joint and Survivor benefit or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.

*Benefit Increases:* Adjusted by TRA to provide same increase as MPRIF except surviving spouse optional annuity benefit increases which are paid from MPRIF.

#### SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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Refund of Contributions:

<i>Age/Service Requirement:</i>	Member dies before receiving any retirement benefits and survivor benefits are not elected.
<i>Amount:</i>	The excess of the member's contributions over any disability benefits paid plus 6.00% interest compounded annually if death occurred on or after May 16, 1989.

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**Withdrawal:**

Refund of Contributions:

<i>Age/Service Requirement:</i>	Thirty days following termination of teaching service.
<i>Amount:</i>	Member's contributions with 6.00% interest compounded annually if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

Deferred Annuity:

<i>Age/Service Requirement:</i>	Vested at date of termination. Current requirement is three years of Allowable Service.
<i>Amount:</i>	The benefit computed under law in effect at termination and increased by the following percentage compounded annually: (a) 3.00% until January 1 of the year following attainment of age 55; and (b) 5.00% thereafter until the annuity begins. Amount is payable as a normal or early retirement. A member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption; or For eligible former members, money purchase annuity equal to the actuarial equivalent of 220.00% of the former member's accumulated deductions plus interest thereon.

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<b>Changes in Plan Provisions:</b>	There have been no changes made to the plan provisions since the prior valuation.
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**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**EXHIBIT IX**

**Summary of Plan Provisions – Basic (MTRFA Members)**

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This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

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<b>Plan Year:</b>	July 1 through June 30
<b>Eligibility:</b>	A teacher who is employed by the Board of Education of Special School District No. 1, other than a charter school, and who is not covered by the Social Security Act. Certain part-time licensed employees are covered as well as employees of the Minneapolis Teachers Retirement Fund.
<b>Contributions:</b>	Member: 9.00% of Salary. Employer: 13.14% of Salary.
<b>Teaching Service:</b>	A year is earned during a calendar year if the member is employed in a covered position and employee contributions are deducted. Certain part-time service and military service is also included.
<b>Salary:</b>	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
<b>Average Salary:</b>	Average of the five highest consecutive years of Salary.

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## SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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### Retirement:

#### Normal Retirement:

*Age/Service Requirement:* Age 60, or any age with 30 years of Teaching Service.

*Amount:* 2.50% of Average Salary for each year of Teaching Service.

#### Early Retirement:

*Age/Service Requirement:* Age 55 with less than 30 years of Teaching Service.

*Amount:* The greater of (a) or (b):

- (d) 2.25% of Average Salary for each year of Teaching Service with reduction of 0.25% for each month the Member is under age first eligible for a normal retirement benefit.
- (e) 2.50% of Average Salary for each year of Teaching Service assuming augmentation to the age first eligible for a normal retirement benefit at 3.00% per year and actuarial reduction for each month the member is under the age first eligible for a normal retirement benefit.

An alternative benefit is available to members who are at least age 50 and have seven years of Teaching Service. The benefit is based on the accumulation of the 6.50% “city deposits” to the Retirement Fund. Other benefits are also provided under this alternative depending on the member’s age and Teaching Service.

*Form of Payment:* Life annuity. Actuarially equivalent options are:

- (d) 10 or 15-year Certain and Life.
- (e) 50%, 75%, or 100% Joint and Survivor with bounce back feature without additional reduction (option is canceled if member is predeceased by beneficiary).

*Benefit Increases:* Benefits may be increased each January 1 based on a formula in the Minnesota Statute consisting of both an inflation component and an investment based component of the Minnesota Post Retirement Investment Fund (MPRIF). A member who has been receiving a benefit for a least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial pro rata increase.

## SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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### **Disability:**

<i>Age/Service Requirement:</i>	Total and permanent disability with three years of Teaching Service.
<i>Amount:</i>	An annuity based on the continued accumulation of member and city contributions at the current rate for a period of 15 years (but not beyond age 65) plus an additional benefit equal to the smaller of 100% of the annuity provided by city contributions only or \$150 per month. A member with 20 years of Teaching Service also receives an additional \$7.50 per month.  Payments stop if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.
<i>Form of Payment:</i>	Same as for retirement.
<i>Benefit Increases:</i>	Same as for retirement.

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### **Death:**

Choice of Benefit A, Benefit B or Benefit C.

#### Benefit A:

<i>Age/Service Requirement:</i>	Death before retirement.
<i>Amount:</i>	The accumulation of member and city contributions plus 5.00% interest if death occurred before May 16, 1989, or 6.00% interest if death occurred on or after May 16, 1989. Paid as a life annuity, 15-year Certain and Life, or lump sum. If an annuity is chosen the beneficiary also receives additional benefits.

#### Benefit B:

<i>Age/Service Requirement:</i>	An active member with seven years of Teaching Service. A former member age 60 with seven years of Teaching Service who dies before retirement or disability benefits begin.
<i>Amount:</i>	The actuarial equivalent of any benefits the member could have received if he had resigned on the date of death.

#### Benefit C:

<i>Age/Service Requirement:</i>	An active member who dies and leaves surviving children.
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**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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*Amount:* A monthly benefit of \$248.30 to the surviving widow while caring for a child and an additional \$248.30 per month for each surviving dependent child. The maximum family benefit is \$579.30 per month. These benefits may be increased by the Board of Trustees.

Benefits to the widow cease upon death or when no longer caring for an eligible child. Benefits for dependent children cease upon marriage or age 18 (age 22 if a full time student).

*Benefit Increases:* Same as retirement.

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**Withdrawal:**

*Deferred Annuity:*

*Age/Service Requirement:* Seven years of Teaching Service.

*Amount:* Benefit computed under law in effect at termination and increased by the following annual percentage:

- (a) 3.00% until January 1 of the year following the attainment of 55, and
- (b) 5.00% thereafter until the annuity begins.

In addition, the interest earned on the member and city contributions between termination and age 60 can be applied to provide an additional annuity.

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**Refund of Contributions:**

*Age/Service Requirement:* Termination of Teaching Service.

*Amount:* Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.

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**Changes in Plan Provisions:** There have been no changes made to the plan provisions since the prior valuation.

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**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**EXHIBIT X**

**Summary of Plan Provisions - Coordinated**

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This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

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<b>Plan Year:</b>	July 1 through June 30
<b>Eligibility:</b>	<p>A public school or MNSCU teacher who is covered by the Social Security Act, except for teachers employed by St. Paul or Duluth public schools or by the University of Minnesota. Effective July 1, 2002, charter school teachers employed by St. Paul or Duluth public schools are covered by this fund.</p> <p>No MNSCU teacher will become a new Member unless that person elects coverage as defined by Minnesota Statutes under Chapter 354B.</p>
<b>Contributions:</b>	<p>Member: 5.50% of Salary. Employer: 5.50% of Salary plus Supplemental of 3.64% of Salary (MTRFA members only).</p>
<b>Allowable Service:</b>	<p>A day of credit is earned if five hours are taught that day. A year is earned if 170 days of service are credited. Credit may also be provided for certain leaves if contributions are paid into the fund.</p>
<b>Salary:</b>	<p>Compensation used for contribution purposes excluding lump sum annual or sick leave payments, severance payments, any payments made in lieu of employer paid fringe benefits or expenses, and employer contributions to a Section 457 deferred compensation plan.</p>
<b>Average Salary:</b>	<p>Average of the five highest successive years of Salary. Average Salary is based on all Allowable Service if less than five years.</p>

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## SECTION 4: Reporting Information for the Teachers Retirement Association Fund

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### Retirement:

#### Normal Retirement:

##### *Age/Service Requirement:*

First hired before July 1, 1989:

- (a) Age 65 and three years of Allowable Service.
- (b) Age 62 and 30 years of Allowable Service.

Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.

First hired after June 30, 1989:

The greater of (a) or (b):

- (a) Age 65.
- (b) The age eligible for full Social Security retirement benefits (but not to exceed age 66) and three years of Allowable Service.

Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.

#### Early Retirement:

##### *Age/Service Requirement:*

First hired before July 1, 1989:

- (a) Age 55 and three years of Allowable Service.
- (b) Any age with 30 years of Allowable Service.
- (c) Rule of 90: Age plus Allowable Service totals 90.

First hired after June 30, 1989:

- (a) Age 55 with three years of Allowable Service.

##### *Amount:*

First hired before July 1, 1989:

The greater of (a), (b) or (c):

- (a) 1.20% of Average Salary for each of the first ten years of Allowable Service, 1.70% of Average Salary for each subsequent year prior to July 1, 2006, and 1.90% of Average Salary for years of Allowable Service July 1, 2006 and after.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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No actuarial reduction if age plus years of service totals 90. Otherwise reduction of 0.25% for each month the member is under age 65 (or 62 if 30 years of Allowable Service) at time of retirement.

- (b) 1.70% of Average Salary for each year of Allowable Service prior to July 1, 2006 and 1.90% for each year of Allowable Service beginning July 1, 2006, assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.
- (c) For eligible members, money purchase annuity equal to the actuarial equivalent of 220.00% of the member's accumulated deductions plus interest thereon.

First hired after June 30, 1989:

1.70% of Average Salary for each year of Allowable Service prior to July 1, 2006 and 1.90% for each year of Allowable Service beginning July 1, 2006, assuming augmentation to age eligible for full Social Security retirement benefits at 3.00% per year and actuarial reduction for each month the member is under the full Social Security benefit retirement age but not to exceed age 66.

*Form of Payment:*

Life annuity. Actuarially equivalent options are:

- (a) 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction.
- (b) 15-year Certain and Life.
- (c) Guaranteed Refund.

*Benefit Increases:*

Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A member who has been receiving a benefit for a least 12 full months as of the previous June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial pro rata increase.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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**Disability:**

*Age/Service Requirement:* Total and permanent disability before Normal Retirement Age with three years of Allowable Service.

*Amount:* Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age unless an optional annuity plan is selected.  
Payments stop at Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later. Payments stop earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.

*Form of Payment:* Same as for retirement.

*Benefit Increases:* Adjusted by TRA to provide same increase as MPRIF.

Retirement After Disability:

*Age/Service Requirement:* Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later.

*Amount:* Any optional annuity continues. Otherwise, the larger of the disability benefit paid before Normal Retirement Age or the normal retirement benefit available at Normal Retirement Age, or an actuarially equivalent optional annuity.

*Benefit Increases:* Same as for retirement.

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**Death:**

Surviving Spouse Optional Annuity:

*Age/Service Requirement:* Member or former member with three years of Allowable Service who dies before retirement benefits commence.

*Amount:* Survivor's payment of the 100% Joint and Survivor benefit or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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*Benefit Increases:* Same as for normal retirement.

*Refund of Contributions:*

*Age/Service Requirement:* Member dies before receiving any retirement benefits and the surviving spouse optional annuity is not elected.

*Amount:* The excess of the member's contributions over any disability benefits paid plus 6.00% interest compounded annually if service occurred on or after May 16, 1989.

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**Withdrawal:**

*Refund of Contributions:*

*Age/Service Requirement:* Thirty days following termination of teaching service.

*Amount:* Member's contributions with 6.00% interest compounded annually if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

*Deferred Annuity:*

*Age/Service Requirement:* Vested at date of termination. Current requirement is three years of Allowable Service.

*Amount:* For members first hired prior to July 1, 2006, the benefit is computed under law in effect at termination and increased by the following percentage compounded annually:

- (a) 3.00% thereafter until January 1 of the year following attainment of age 55; and
- (b) 5.00% thereafter until the annuity begins.

For members hired after June 30, 2006, the benefit is computed under law in effect at termination and increased by 2.50% for all years.

Amount is payable as a normal or early retirement.

A member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption; or

**SECTION 4: Reporting Information for the Teachers Retirement Association Fund**

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For eligible former members, money purchase annuity equal to the actuarial equivalent of 220% of the former member's accumulated deductions plus interest thereon.

For members first hired July 1, 2006 and after, the greater of the benefit computed under law in effect at termination and increased by 2.50% compounded annually until the annuity begins.

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**Changes in Plan Provisions:**

There have been no changes made to the plan provisions since the prior valuation.

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