

Schedule D – Outline of Actuarial Assumptions and Methods

Actuarial assumptions and methods adopted by the Board October 2, 2018.

INVESTMENT RATE OF RETURN: 7.00% per year (net of investment expenses only), including price inflation at 3.00% per annum.

SALARY INCREASES:

Service	Increase per year
Less than 5	5.25%
5-9	4.25
10-14	3.75
15-19	3.50
20-24	3.25
25 or more	2.75

EXPENSES: Estimated budgeted administrative expenses of 0.55% of payroll are added to the normal cost rate.

COST-OF-LIVING ADJUSTMENT: 1.00% per year, compounded for Plan B. 2.75% per year, compounded for Plan A and Plan C. 2.00% per year, compounded for Plan D.

DEATH ASSUMPTION: 90% of active member deaths are assumed to occur as a result of non-hazardous duty and 10% of active member deaths are assumed to occur as a result of hazardous duty.

PERCENT MARRIED: 65% of male active members and 40% of female active members are assumed to be married with the male three years older than his spouse.

ASSETS: Actuarial value, as developed in Schedule C. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 10% of the difference between market value and expected market value.

VALUATION METHOD: Entry Age Normal actuarial cost method.



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RATES OF WITHDRAWAL AND DISABILITY: Representative values of the assumed rates of withdrawal and disability are as follows:

Age	Annual Rate of			
	Withdrawal			Disability
	Less than 4 years of service	4 to 7 years of service	8 or more years of service	
20	15.0%	15.0%	10.0%	0.12%
25	15.0	15.0	10.0	0.12
30	13.0	10.0	10.0	0.12
35	12.0	8.5	6.0	0.12
40	11.0	7.0	5.0	0.17
45	10.0	5.0	4.0	0.22
50	9.0	4.5	3.5	0.27
55	8.0	4.5	3.5	0.32
60	8.0	4.5	3.5	0.37
65	8.0	4.5	3.5	0.42

RATES OF RETIREMENT: Representative values of the assumed rates of retirement are as follows:

Plan B

Age	Non-Public Safety	Public Safety
60	20.00%	100.0%
61	5.00	100.0
62	7.50	100.0
63	5.00	100.0
64	5.00	100.0
65	100.00	100.0



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Plan A

Age	0 – 7 years of service	8 or more years of service
55		7.5%
56		6.5
57		6.0
58		6.5
59		7.0
60		7.5
61		8.5
62		12.5
63		11.0
64		14.0
65	22.0%	22.0
66	20.0	20.0
67	20.0	20.0
68	20.0	20.0
69	20.0	20.0
70	100.0	100.0

Plan C

Age	Non-Public Safety			Public Safety		
	0 – 7 years of service	8 – 24 years of service	25 or more years of service	0 – 7 years of service	8 – 24 years of service	25 or more years of service
50			18.0%			16.0%
55		7.0%	18.0		7.0%	16.0
56		6.0	18.0		6.0	16.0
60		7.5	18.0		10.0	20.0
61		10.0	18.0		11.0	20.0
62		11.0	18.0		11.0	20.0
63		11.0	18.0		11.0	20.0
64		11.0	21.5		11.0	20.0
65	15.0%	15.0	25.0	100.0%	100.0	100.0
66	12.0	12.0	25.0	100.0	100.0	100.0
70	100.0	100.0	100.0	100.0	100.0	100.0



Schedule D – Outline of Actuarial Assumptions and Methods

Plan D

Age	Non-Public Safety	Public Safety	
		Less than 20 years of service	20 or more years of service
50			7.0%
51			6.0
55		10.0%	16.0
56		11.0	16.0
60		11.0	20.0
62	11.0%	11.0	20.0
65	15.0	100.0	100.0
66	12.0	100.0	100.0
67	40.0	100.0	100.0
70	100.0	100.0	100.0

RATES OF DEATHS BEFORE RETIREMENT: The RP-2014 Mortality Table with Blue Collar Adjustment and projected to 2020 with projection scale MP-2017 is used for both males and females while in active service. Representative values of the assumed rates of death while in active service are as follows:

Age	Male	Female
20	0.0486%	0.0186%
25	0.0630	0.0208
30	0.0653	0.0262
35	0.0788	0.0371
40	0.0908	0.0510
45	0.1280	0.0752
50	0.2137	0.1204
55	0.3590	0.1969
60	0.6311	0.3027
65	1.1325	0.4355



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RATES OF DEATH AFTER RETIREMENT: The RP-2014 Mortality Table with Blue Collar Adjustment and projected to 2020 with projection scale MP-2017, set forward two years for males and set forward three year for females, with rates at ages 70 and below adjusted by 125% for both males and females and rates at ages above 70 adjusted by 85% for females only is used for the period after retirement and for dependent beneficiaries. The RP-2014 Disabled Mortality Table projected to 2020 with projection scale MP-2017 is used for the period after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on October 2, 2018, the numbers of expected future deaths are 7-11% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries. Representative values of the assumed rates of death after service and disability retirement are as follows:

Age	Annual Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
50	0.5843%	0.4434%	1.9977%	1.1596%
55	0.8686	0.6783	2.3252	1.5198
60	1.2970	0.9881	2.7672	1.8787
65	1.9648	1.4628	3.3502	2.1917
70	3.0106	2.3581	4.1376	2.8342
75	3.9060	2.7112	5.5115	4.1428
80	6.5624	4.7309	7.8620	6.3510
85	11.1563	8.3054	11.7706	9.7144



Schedule E – Summary of Main System Provisions – Plan B

Eligibility	All salaried employees hired prior to December 1, 1978 were eligible at date of employment and had to apply for membership as a condition of such employment. "Employee" means any person employed on a regular full-time basis, excluding officials or employees of the Board of Education of Shelby County. Entry in the System was optional for individuals employed on a per diem basis. Employees not able to complete the required number of years of service prior to mandatory retirement age could not join the plan.
Final Average Earnings	<p>If a participant had 10 years of credited service on October 1, 1977, the greater of:</p> <ol style="list-style-type: none">1) Average monthly earnings for the five consecutive years of County Service during which earnings was the highest or,2) Average monthly earnings for the 12 months preceding the date of retirement. <p>If the participant did not have 10 years of service on October 1, 1977, the average monthly earnings for the 36 consecutive months during which the employee received his highest earnings.</p>
Normal Retirement Benefit	
Eligibility	25 years of credited service or age 60 (age 55 if Deputy Sheriff) and 10 years of credited service.
Benefit	2.7% of final average earnings multiplied by years of credited service not in excess of 25 plus 1% of final average earnings multiplied by years of credited service greater than 25 but less than 35. The maximum benefit is 77.5% of final average earnings. The minimum monthly benefit is \$300 (\$150 monthly if jointly employed by the City and County).
Disability Retirement	
Eligibility	After January 1, 2007, only participants who are disabled in the line-of-duty are eligible to receive a disability pension.
Benefit	The greater of: <ol style="list-style-type: none">1) The Normal Retirement Benefit (if participant is then eligible for a Normal Retirement Benefit) or,2) 50% of Final Average Earnings.
Termination of Employment	If employment is terminated prior to the completion of 10 years of credited service, a refund of the participant's contributions, without interest, is payable.



Schedule E – Summary of Main System Provisions – Plan B

	<p>If employment is terminated after completion of 10 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 60. Benefits are payable to the surviving spouse after age 60 of the participant. The participant may elect to withdraw his contributions, without interest, instead of receiving the deferred monthly benefit at age 60.</p>
Death Benefit	<p>If a participant dies before completing 10 years of credited service and does not die in line-of-duty, his beneficiary will receive a refund of the participant's contributions, without interest.</p> <p>If a participant dies after completing 10 years of credited service or after retirement the member's eligible spouse will receive the participant's accrued benefit until death.</p> <p>If death occurs in line-of-duty, a benefit of 50% of the participant's final average earnings will be paid to the spouse until death.</p>
Contributions	<p>Each year the County contributes an amount determined actuarially to sustain the plan on an actuarially determined funding basis. Employees contribute 8% of earnings to the retirement plan for the first 35 years. After 35 years, employees contribute 8% of any increases in pay.</p>
Cost of Living Adjustment	<p>A maximum of 1% annual adjustment based on CPI changes for the following:</p> <ol style="list-style-type: none">1) Retired participants who have attained age 65, completed 25 years of credited service prior to termination, have been retired and receiving benefits for 5 years, and have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.2) Disability retired participants who have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.3) Surviving Spouses who have attained age 65, where the original participant completed 25 years of credited service prior to termination or whose death was a line of duty death or whose pension had been a disability pension, where the original participant's termination was at least 5 years prior to receiving the COLA, and who have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.4) Surviving children where the original participant completed 25 years of credited service prior to termination or whose death was a line of duty death or whose pension had been a disability pension, where the participant's termination was at least 5 years prior to receiving the COLA, and who have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000. <p>In no event, however, will the Plan B benefits exceed 100% of final average pay.</p>



Schedule E – Summary of Main System Provisions – Plan A

Eligibility All employees hired after December 1, 1978 and prior to March 1, 2005 including all full-time, part-time and elected employees, and members of Plan B electing to transfer to Plan A and employees of all joint City/County agencies administered by Shelby County participate. CETA employees, Board of Education employees, employees electing Social Security coverage, and Joint City/County agencies not administered by Shelby County cannot participate.

Public Safety Employees Public Safety Employees, hired prior to March 1, 2005, who did not elect to transfer to Plan C, effective September 1, 2005, are no longer eligible to retire under the 25 year-and-out program and no longer contribute to Plan A.

Final Average Earnings The average over the three highest consecutive years of earnings.

Normal Retirement Benefit

Eligibility Age 65 regardless of amount of credited service.

Benefit Final average earnings multiplied by a percentage from Table A, which is included in the appendix to the plan. Listed below is a summary of Table A:

Years of Service	Benefit Accrual Per Year
1 – 7	1.5%
8 – 13	2.0
14 – 20	2.5
21 – 25	3.0
26 – 30	3.0
31 – 35	2.5
36 – 38	2.5
39 and above	0.0

Early Retirement Benefit

Eligibility Age 55 and completion of 7.5 years of credited service.

Benefit The Normal Retirement Benefit reduced 2.5% for each year less than age 65.

Disability Retirement

Eligibility After January 1, 2002, no disability benefits are provided by the Plan. Upon reaching age 65, a disabled participant will have any disability benefit recomputed as a normal retirement benefit payable by the Plan.



Schedule E – Summary of Main System Provisions – Plan A

Benefit	The Normal Retirement Benefit calculated with credited service including time while disabled.
Termination of Employment	<p>If employment is terminated prior to the completion of 7.5 years of credited service, no benefit is payable.</p> <p>If employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 65. Alternatively, the participant may elect a vested early benefit payable beginning at age 55 which is actuarially equivalent.</p>
Death Benefit	<p>If a participant dies, the participant's eligible spouse shall receive 45% of final average earnings for two years after the participant's death.</p> <p>If death occurs in line-of-duty, or, if not line-of-duty, the participant before death was age 55 and completed 15 years of credited service, the participant's eligible spouse shall receive 75% of the participant's pension calculated as if the participant had retired immediately before death. This benefit shall be payable when the spouse reaches age 65. The participant's final average earnings is adjusted by the COLA from the participant's death until the spouse reaches age 65.</p>
Contributions	Employees contribute 0.5% of earnings in 2011, 1.0% of earnings in 2012, 1.5% of earnings in 2013 and 2.0% of earnings in 2014 and thereafter.
Cost of Living Adjustment	<p>A maximum of 4% annual adjustment based on CPI changes applies to the following benefits:</p> <ol style="list-style-type: none"> 1) Retired participants after age 65 2) Disabled participants 3) Survivor benefits for dependent children 4) Survivor benefits for spouses under age 65 receiving the two year temporary benefit 5) Survivor benefits for spouses age 65 and over. <p>In no event, however, will the Plan A benefits exceed 100% of final average pay except as follows for an employee who retires with 40 or more years of service:</p>

Final Average Earnings	Maximum Benefit
Less than \$1,200	124%
\$1,200 to \$2,800	115%
More than \$2,800	106%



Schedule E – Summary of Main System Provisions – Plan C

Eligibility	All employees participate who are hired on or after March 1, 2005 but before July 1, 2011, including all full-time, part-time and elected employees, and employees of all joint City/County agencies administered by Shelby County, and members of Plan A electing to transfer to Plan C. CETA employees, Board of Education employees, employees electing Social Security coverage, and Joint City/County agencies not administered by Shelby County cannot participate.
Final Average Earnings	The average over the three highest consecutive years of earnings.
Alternate Benefit Accrual Account	Participants contribute 6% of earnings prior to 2011, 6.5% of earnings in 2011, 7.0% of earnings in 2012, 7.5% of earnings in 2013 and 8.0% of earnings in 2014 and thereafter to fund the Plan. Participants are always fully vested in these contributions. Prior to January 1, 2011, the employer matches 50% of each contribution the participant makes to the plan. Effective January 1, 2011, employer matching contributions are frozen at 3%. The participant becomes fully vested in the employer contributions upon reaching 7.5 years of credited service. The total of these two contribution amounts will comprise the participant's Alternate Benefit Accrual Account. The investment return on these contributions and match is 2% per annum.
Normal Retirement Benefit	
Eligibility	Age 65 or upon completion of 25 years of credited service.
Benefit	The greater of: 1) 2.35% of final average earnings multiplied by credited service (up to 35 years) or, 2) The life annuity equivalent of the participant's Alternate Benefit Accrual Account.
Early Retirement Benefit	
Eligibility	Age 55 and completion of 7.5 years of credited service.
Benefit	The greater of: 1) Final average earnings multiplied by credited service (up to 35 years) and a percentage from Table ERP, which is included as part of the plan, or 2) The life annuity equivalent of the participant's Alternate Benefit Accrual Account.



Schedule E – Summary of Main System Provisions – Plan C

Disability Retirement

Eligibility	No disability benefits are provided by the Plan except for transfers. Upon reaching age 65, a disabled participant will have any disability benefit recomputed as a normal retirement benefit payable by the Plan.
Benefit	The Normal Retirement Benefit calculated with credited service including time while disabled.

Termination of Employment

If employment is terminated prior to the completion of 7.5 years of credited service, the participant is entitled to receive the vested portion of the participant's alternate benefit accrual account as a lump sum payment.

If employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 65. Alternatively, the participant may elect a vested early benefit payable beginning at age 55 which is actuarially equivalent.

Death Benefit

If a participant dies before completion of 15 years of credited service and the death occurs in line-of-duty, or, if not line of duty, the participant had completed 7.5 years of credited service before death, the participant's eligible beneficiary shall receive the vested portion of the participant's alternate benefit accrual account as a lump sum payment.

If a participant dies after completion of 15 years of credited service the participant's eligible spouse shall receive 75% of the participant's pension calculated as if the participant had retired immediately before death. This benefit shall be payable when the spouse reaches age 65. The participant's final average earnings is adjusted by the COLA from the participant's death until the spouse reaches age 65.

Contributions

See Alternate Benefit Accrual Account.

Cost of Living Adjustment

A maximum of 4% annual adjustment based on CPI changes applies to the following benefits:

- 1) Retired participants after age 65
- 2) Disabled participants
- 3) Survivor benefits for dependent children
- 4) Survivor benefits for spouses age 65 and over.

In no event, however, will the Plan C benefits exceed 100% of final average pay.



Schedule E – Summary of Main System Provisions – Plan D

Eligibility	All employees participate who are hired on or after July 1, 2011, including all full-time, part-time and elected employees, and employees of all joint City/County agencies administered by Shelby County. CETA employees, Board of Education employees, employees electing Social Security coverage, and Joint City/County agencies not administered by Shelby County cannot participate.
Final Average Earnings	The average over the 5 highest consecutive years of earnings.
Normal Retirement Benefit	
Eligibility	Age 67 with at least 7.5 years of credited service for general employees and age 55 with at least 7.5 years of credited service for public safety employees.
Benefit	Final average earnings multiplied by credited service multiplied by 2.175%.
Early Retirement Benefit	
Eligibility	Age 62 with at least 7.5 years of credited service for general employees and age 50 with the last 20 years of credited service being in a public safety classification for public safety employees.
Benefit	Final average earnings multiplied by credited service and a percentage from Table ERP-S and Table ERP-PS, which is included as part of the plan.
Disability Retirement	
Eligibility	No disability benefits are provided by the Plan except for transfers. Upon reaching age 65, a disabled participant will have any disability benefit recomputed as a normal retirement benefit payable by the Plan.
Benefit	The Normal Retirement Benefit calculated with credited service including time while disabled.
Termination of Employment	<p>If employment is terminated prior to the completion of 7.5 years of credited service, the participant is entitled to receive the vested portion of the participant's alternate benefit accrual account as a lump sum payment.</p> <p>For general employees, if employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 67. Alternatively, the participant may elect a vested early benefit payable beginning at age 62 which is actuarially equivalent.</p>



Schedule E – Summary of Main System Provisions – Plan D

For public safety employees, if employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 55. Alternatively, the participant may elect a vested early benefit payable beginning at age 50 which is actuarially equivalent.

Death Benefit

If a participant dies before completion of 15 years of credited service and the death occurs in line-of-duty, or, if not line of duty, the participant had completed 7.5 years of credited service before death, the participant's eligible beneficiary shall receive the amount of the participant contribution account.

If a participant dies after completion of 15 years of credited service the participant's eligible spouse shall receive 75% of the participant's pension calculated as if the participant had retired immediately before death. This benefit shall be payable when the spouse reaches age 67. The participant's final average earnings is adjusted by the COLA from the participant's death until the spouse reaches age 67.

Contributions

Employees contribute 8.0% of earnings.

Cost of Living Adjustment

A maximum of 2% annual adjustment based on CPI changes applies to the following benefits:

- 1) Retired participants after age 65
- 2) Disabled participants
- 3) Survivor benefits for dependent children
- 4) Survivor benefits for spouses age 65 and over.

In no event, however, will the Plan D benefits exceed 100% of final average pay.



Schedule F – Tables of Membership Data

**TABLE 1
RECONCILIATION OF DATA**

	<u>Actives</u>	<u>County to City Transfers</u>	<u>Retirees</u>	<u>Disabled</u>	<u>Beneficiaries</u>	<u>Vested Terms</u>	<u>Total</u>
1. Headcounts as of June 30, 2017	5,011	180	3,154	55	592	207	9,199
2. Change in status during the year:							
a. Death	(13)		(96)	(3)	(29)	(4)	(145)
c. Disabled							
d. Retired	(161)	(4)	193	(4)		(24)	
e. Terminated Vested	(25)					25	
f. Terminated Not Vested	(269)	(2)					(271)
g. Benefits Expired/Refund					(11)	(3)	(14)
h. Transfer to/from City							
3. New member due to:							
a. New Hires	487						487
b. Rehires	16		(3)			(1)	12
c. Death of Participant					52		52
d. Adjustments			6		(1)	6	11
4. Headcounts as of June 30, 2018	5,046	174	3,254	48	603	206	9,331

In addition, there are 360 terminated participants entitled to a refund of contributions.



Schedule F – Tables of Membership Data

TABLE 2

PLAN B

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF JUNE 30, 2018**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40		
Under 25 Avg. Pay												
25 to 29 Avg. Pay												
30 to 34 Avg. Pay												
35 to 39 Avg. Pay												
40 to 44 Avg. Pay												
45 to 49 Avg. Pay												
50 to 54 Avg. Pay												
55 to 59 Avg. Pay												
60 to 64 Avg. Pay										2 65,207	2 65,207	
65 to 69 Avg. Pay										1 172,737	1 172,737	
70 & up Avg. Pay										1 108,303	1 108,303	
Total Avg. Pay										4 102,863	4 102,863	

Average Age 67.0

Average Service

43.9



Schedule F – Tables of Membership Data

TABLE 3

PLAN A

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF JUNE 30, 2018**

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	
Under 25 Avg. Pay											
25 to 29 Avg. Pay											
30 to 34 Avg. Pay											
35 to 39 Avg. Pay				3 42,464	10 37,965						13 39,003
40 to 44 Avg. Pay				13 48,171	85 50,722	12 51,710					110 50,528
45 to 49 Avg. Pay				10 48,366	129 51,640	56 51,902	15 48,188				210 51,307
50 to 54 Avg. Pay				14 50,742	109 51,065	71 51,927	46 47,944	9 47,615			249 50,591
55 to 59 Avg. Pay				13 50,572	99 47,794	86 48,936	54 53,137	21 57,071	7 47,666	1 57,795	281 50,025
60 to 64 Avg. Pay				5 57,746	53 52,489	55 51,514	40 56,259	27 60,344	15 57,592	2 48,585	197 54,541
65 to 69 Avg. Pay				7 52,093	33 53,240	36 47,220	31 57,270	16 54,913	10 49,964	2 56,500	135 52,504
70 & up Avg. Pay				2 81,412	14 58,886	8 54,461	13 58,811	7 77,624	5 70,797	1 29,380	50 62,284
Total Avg. Pay				67 51,064	532 50,777	324 50,590	199 53,206	80 58,478	37 55,437	6 49,557	1,245 51,760

Average Age 55.4

Average Service

21.3



Schedule F – Tables of Membership Data

TABLE 4

PLAN C

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF JUNE 30, 2018**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40		
Under 25 Avg. Pay												
25 to 29 Avg. Pay		2 47,026	1 58,428									3 50,826
30 to 34 Avg. Pay		1 34,144	43 48,795	18 48,447								62 48,458
35 to 39 Avg. Pay		1 27,301	61 51,251	89 50,071	26 53,579	1 60,775						178 50,920
40 to 44 Avg. Pay		1 40,783	47 51,016	98 54,505	77 53,535	34 60,506						257 54,317
45 to 49 Avg. Pay		2 29,390	53 47,334	119 53,782	81 51,005	109 59,849	29 64,083					393 54,659
50 to 54 Avg. Pay			38 49,108	83 48,721	47 47,215	91 56,273	94 61,844	35 64,421	1 33,061			389 54,887
55 to 59 Avg. Pay		1 32,448	33 51,887	60 46,236	26 48,260	54 56,926	59 58,319	50 64,003	10 71,080	1 59,866		294 55,304
60 to 64 Avg. Pay			26 46,584	67 55,103	12 58,386	28 56,564	23 58,976	38 65,398	16 70,882	4 79,737		214 58,327
65 to 69 Avg. Pay			11 77,827	27 60,265	12 69,648	15 72,705	3 83,038	10 59,080	10 87,735			88 69,624
70 & up Avg. Pay			9 54,164	11 59,116	5 97,746	2 48,745	3 76,489	1 123,466	1 58,914	1 32,646		33 65,711
Total Avg. Pay		8 35,938	322 50,691	572 52,198	286 52,957	334 58,707	211 61,363	134 64,584	38 74,059	6 68,576		1,911 55,494

Average Age 50.5

Average Service

17.3



Schedule F – Tables of Membership Data

TABLE 5

PLAN D

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF JUNE 30, 2018**

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	
Under 25	40	62									102
Avg. Pay	36,901	36,258									36,510
25 to 29	69	287	44								400
Avg. Pay	34,331	39,557	44,765								39,229
30 to 34	40	239	108								387
Avg. Pay	40,184	42,019	49,617								43,949
35 to 39	30	156	74								260
Avg. Pay	43,247	45,303	44,792								44,921
40 to 44	14	106	51								171
Avg. Pay	49,669	45,330	48,609								46,663
45 to 49	23	122	45								190
Avg. Pay	36,657	45,028	50,599								45,334
50 to 54	12	102	37								151
Avg. Pay	59,623	47,281	44,989								47,700
55 to 59	13	67	32								112
Avg. Pay	39,754	48,138	48,260								47,200
60 to 64	4	47	17								68
Avg. Pay	43,923	45,055	43,505								44,601
65 to 69	3	18	15								36
Avg. Pay	34,788	70,410	70,556								67,503
70 & up		3	6								9
Avg. Pay		100,159	55,374								70,302
Total	248	1,209	429								1,886
Avg. Pay	39,518	43,625	48,340								44,157

Average Age 38.6

Average Service 2.8



Schedule F – Tables of Membership Data

TABLE 6

PLAN B

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES
AS OF JUNE 30, 2018

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
Under 50	-	\$ -	\$ -
50 – 54	2	21,704	10,852
55 – 59	11	299,018	27,183
60 – 64	51	1,525,023	29,902
65 – 69	125	3,860,258	30,882
70 – 74	189	5,361,281	28,367
75 – 79	167	4,185,072	25,060
80 – 84	132	3,063,287	23,207
85 – 89	113	2,014,933	17,831
90 & Over	98	1,353,647	13,813
Total	888	\$ 21,684,223	\$ 24,419



Schedule F – Tables of Membership Data

TABLE 7

PLAN A

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES
AS OF JUNE 30, 2018

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
Under 50	31	\$ 561,875	\$ 18,125
50 – 54	14	115,149	8,225
55 – 59	86	1,158,638	13,473
60 – 64	251	3,783,875	15,075
65 – 69	472	8,649,364	18,325
70 – 74	456	8,405,989	18,434
75 – 79	320	5,453,710	17,043
80 – 84	196	2,996,101	15,286
85 – 89	86	1,437,155	16,711
90 & Over	44	534,826	12,155
Total	1,956	\$ 33,096,682	\$ 16,921

In addition, there are 150 participants entitled to deferred annual benefits totaling \$3,123,733.



Schedule F – Tables of Membership Data

TABLE 8

PLAN C

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES
AS OF JUNE 30, 2018

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
Under 50	20	\$ 492,660	\$ 24,633
50 – 54	111	3,159,161	28,461
55 – 59	240	6,570,228	27,376
60 – 64	326	9,694,948	29,739
65 – 69	257	7,597,997	29,564
70 – 74	81	2,073,921	25,604
75 – 79	18	328,596	18,255
80 – 84	7	136,014	19,431
85 – 89	1	8,369	8,369
90 & Over	-	-	-
Total	1,061	\$ 30,061,894	\$ 28,334

In addition, there are 53 participants entitled to deferred annual benefits totaling \$1,520,645.



Schedule G – Analysis of Financial Experience

Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience (\$ Thousands)

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/2018	\$ Gain (or Loss) For Year Ending 6/30/2017
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 1,051.1	\$ 666.2
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(1,115.2)	(477.2)
Death-in-Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	546.0	810.9
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(1,890.7)	(1,253.6)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(4,524.2)	5,122.9
New Members. Additional unfunded accrued liability will produce a loss.	(1,134.9)	(1,628.4)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(32,085.3)	(51,355.4)
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	(1,722.1)	2,168.5
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(5,951.3)</u>	<u>(2,284.8)</u>
Gain (or Loss) During Year From Financial Experience	<u>\$ (46,826.6)</u>	<u>\$ (48,230.9)</u>
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	<u>47,234.9</u>	<u>0.0</u>
Composite Gain (or Loss) During Year	<u>\$ 408.3</u>	<u>\$ (48,230.9)</u>



Schedule H – 10-Year Projection of Funded Ratio and Employer Contribution Rates

The results of actuarial valuations are a “snapshot” of the financial position on the valuation date, based on the assumed number of active employees and current beneficiaries. Projections simulate future actuarial valuation results over a forecast period (ten years in this case) by “creating” future new hires and performing valuations using the projected membership. The following items are assumed for the projected results provided on the following page.

- Active Employee Growth Rate: 0%
- Valuation Discount Rate: 7.00%
- Investment Rate of Return: 7.00% each year
- Actuarial Value of Assets: 10 year smoothing, No Corridor
- Amortization Method: Level Dollar, Closed
- June 30, 2018 Amortization Period: Weighted 20-year period
- Future Contributions: Based on Expected Actuarially Determined Contributions

All other demographic and economic changes are assumed to occur in accordance with the actuarial assumptions used for the actuarial valuation.



Schedule H – 10-Year Projection of Funded Ratio and Employer Contribution Rates

