

SCHEDULE D

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

The rates of retirement, disability, mortality, termination, salary increases, and rates of future benefit participation used in the valuation were selected based on the actuarial experience study prepared as of June 30, 2015, submitted to and adopted by the Board on September 19, 2016. The health care cost trend rates, and expected plan costs were determined by the actuary based on recent experience.

VALUATION DATE: June 30, 2019

DISCOUNT RATE: 8.00% per annum, compounded annually for the Medical Insurance Fund
7.50% per annum, compounded annually for the Life Insurance Fund

HEALTH CARE COST TREND RATES: Following is a chart detailing health care trend assumptions.

Fiscal Year Ended	Annual Trend Rate		
	Medicare Part B	Under Age 65	Ages 65 and Older
2020	6.49	7.25	5.250
2021	3.95	7.00	5.125
2022	4.40	6.75	5.000
2023	5.68	6.50	5.000
2024	6.22	6.25	5.000
2025	5.97	6.00	5.000
2026	5.90	5.75	5.000
2027	5.90	5.50	5.000
2028	5.90	5.25	5.000
2029	5.50	5.00	5.000
2030	5.25	5.00	5.000
2031 and beyond	5.00	5.00	5.000

AGE RELATED MORBIDITY: For retirees ages 65 and older, per capita health care costs are adjusted to reflect expected health care cost changes related to age. The increase to the net incurred health care claims is assumed to be:

Participant Age	Annual Increase
65 – 69	3.0%
70 – 74	2.5
75 – 79	2.0
80 – 84	1.0
85 - 89	0.5
90 and over	0.0

For the retiree health care liabilities of those under age 65, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost and is projected forward using the health care trend assumption. No implicit rate subsidy is calculated or recognized as the implicit rate subsidy is deemed the responsibility of the KEHP. Under Actuarial Standard of Practice No. 6 (ASOP No. 6), aging subsidies (or implicit rate subsidies) should be recognized, as the differences in health care utilization and cost due to age have been demonstrated and well quantified. The impact of aging on a valuation's results can be as



SCHEDULE D
(Continued)

significant as the use of mortality, trend, and discounting. It has been the long-standing position that the responsibility for compliance with GASB Statement No. 43, when it relates to KEHP implicit subsidies, rests with KEHP, not the System, as the System has no operational authority over KEHP. As such, KEHP implicit subsidies are excluded from the OPEB valuation process of the Retiree Medical Plan. As GASB 74 and 75 prohibit such a deviation from ASOP No. 6, additional consideration to the current treatment of KEHP implicit rate subsidies may be needed in the future. Valuing the KEHP implicit subsidies will increase the actuarial accrued liability for GASB 74 and 75 purposes.

RETIREE MEDICAL PLAN COSTS: Assumed per capita health care costs were based on past experience and trended based on the assumptions. Following are charts detailing retiree per capita assumptions. These amounts include medical, drug, and administrative costs and represent the amount that the System pays as the full contribution amount. An additional \$7.44 per month is paid to the Department of Employee Insurance (DEI) and is not included in the under age 65 costs listed below. For retirees ages 65 and older, the average costs shown are normalized to age 65 and then age adjusted in calculating liabilities.

Monthly Under Age 65 (KEHP) Full Costs as of January 1, 2020				
Tier Elected	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP
Single	\$710.94	\$731.82	\$683.58	\$608.24
Parent Plus	\$982.30	\$1,044.12	\$942.52	\$866.76
Couple	\$1,342.78	\$1,604.96	\$1,457.82	\$1,334.18
Family	\$1,500.50	\$1,787.46	\$1,624.66	\$1,485.46
Family C-R	\$821.36	\$881.40	\$801.82	\$731.68

Average Monthly System Full Costs and Contributions			
Year	Under Age-65 (KEHP) Contributions	Ages 65 and Older (MEHP) Full Costs	Ages 65 and Older (MEHP) Contributions
CY 2008	484	278	278
CY 2009	545	301 ¹	301
CY 2010	594	373 ¹	373
CY 2011	626	289 ¹	289
CY 2012	622	270 ²	270
CY 2013	635	294 ²	294
CY 2014	679	290 ²	290
CY 2015	669	240 ²	240
CY 2016	681	260 ²	260
CY 2017	680	252 ²	252
CY 2018	688	258 ²	258
CY 2019	691	226 ³	226
CY 2020	694	224 ³	224

¹ Under GASB 45, cost reductions for the amount of the Medicare Part D Retiree Drug Subsidy could not be taken into account in the gross cost calculations.

² 2,257 current, Medicare-eligible benefit recipients have been identified by the client to be ineligible for premium-free Medicare Part A benefits. For these individuals, the full cost of coverage is, on average, \$575 per month. It is assumed 9% of current retirees under the age of 65 who were hired prior to 4/1/1986 will be ineligible for premium-free Medicare Part A benefits upon reaching Medicare eligibility (age 65) and 0% of these retirees will cover a spouse. All active members are assumed to have begun contributing to Medicare as of 4/1/1986 and are assumed eligible for premium-free Medicare Part A benefits.

³ Blended basis, includes increased costs for retirees without premium-free Medicare Part A. All active members are assumed to have begun contributing to Medicare as of 4/1/1986 and are assumed eligible for premium-free Medicare Part A benefits.



SCHEDULE D
(Continued)

CURRENT RETIREE MEDICAL PLAN PARTICIPATION: Actual census data and current plan elections (including waivers) provided by the System were used for those retirees currently participating in the Retiree Medical Plan. Current participants are assumed to maintain their current Retiree Medical Plan coverage until they are no longer eligible.

ANTICIPATED RETIREE MEDICAL PLAN PARTICIPATION: The assumed annual rates of health care plan participation for future retirees are as follows:

Years of Service	Member Participation		
	Entered System Before 7/1/2002	Entered System After 6/30/2002 and Before 7/1/2008	Entered System After 6/30/2008
5-9.99	20%	20%	Not Eligible
10-14.99	49	20	Not Eligible
15-19.99	70	41	41%
20-24.99	91	61	61
25-25.99	91	76	76
26-26.99	91	84	84
27 or more	91	91	91

ANTICIPATED RETIREE MEDICAL PLAN ELECTIONS: The assumed rates of plan election for future retirees participating in the KEHP plans are provided in the following table. As the assumed plan election rates are estimates and actual results may be materially different, this assumption will need to be revised as experience evolves.

LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP
54%	42%	3%	1%

SPOUSE COVERAGE IN RETIREE MEDICAL PLAN: Actual census data and current plan elections were used for MEHP and KEHP covered spouses (including beneficiaries) of current retirees. For spouses of future retirees, 25% of future male retirees are assumed to cover their spouse and 15% of future female retirees are assumed to cover their spouse. Male retirees are assumed to be three years older than their spouse and female retirees are assumed to be one year younger than their spouse.

DISABLED DEPENDENT CHILDREN IN RETIREE MEDICAL PLAN: The liability associated with disabled dependent children was determined to be de minimis and was therefore excluded from this valuation.



SCHEDULE D
(Continued)

WITHDRAWAL ASSUMPTION: Future vested members who terminate employment prior to retirement are assumed to elect to withdraw their contributions based upon their age and service at termination of employment as follows:

Rates of Withdrawal Upon Termination of Employment			
Age at Termination of Employment	Years of Service		
	5 - 10	10 - 15	15+
Under Age 55	20%	15%	10%
Ages 55+	10%	10%	10%

All vested members who terminate employment prior to retirement are assumed to elect to withdraw their contributions prior to receiving a pension benefit based upon their service as follows:

Rates of Withdrawal Prior to Receiving a Pension Benefit			
Years of Service			
5 - 10	10 - 15	15 - 27	27+
25%	15%	10%	25%

All vested members who terminate employment prior to retirement and who are assumed to elect to receive a pension benefit are assumed to begin receiving their benefit at age 60.

PAYROLL GROWTH: 3.50% per annum, compounded annually.

PRICE INFLATION: 3.00% per annum, compounded annually.

AFFORDABLE CARE ACT (ACA): The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain provisions such as the potential future implementation of the excise tax on high-value health insurance plans (if applicable), mandated benefits and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by the assumed rate of health care inflation (i.e., trend). The trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, government-mandated benefits, and technological advances. Given the uncertainty regarding the ACA's implementation (e.g., the impact of excise tax on high-value health insurance plans, changes in participation resulting from the implementation of state-based health insurance exchanges), continued monitoring of the ACA's impact on the Retiree Medical Plan's liability will be required.

ASSET VALUATION METHOD: Five-year market related actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the ultimate assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The ultimate assumed valuation rate of return is assumed to be 8.00% for the Medical Insurance Fund and 7.50% for the Life Insurance Fund.



SCHEDULE D
(Continued)

ACTUARIAL COST METHOD: The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future, of each active member's expected benefit at retirement or death is determined, based on his/her age, service, and gender. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries and deferred vested members to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.

The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his/her anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his/her behalf.

The unfunded actuarial accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the System.



**SCHEDULE D
(Continued)**

SEPARATIONS FROM SERVICE: Representative values of the assumed annual rates of salary increases, death, disability, withdrawal, service retirement and early retirement are as follows:

MALES								
Age	Annual Rate of							
	SALARY*	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
				Years of Service			Before 27 Years of Service	After 27 Years of Service**
				0 – 4	5 – 9	10+		
20	7.20%	0.019%	0.01%	11.00%				
25	6.40	0.021	0.01	11.00	3.00%			
30	5.40	0.025	0.01	11.00	3.00	3.00%		
35	4.70	0.043	0.04	12.00	3.50	1.40		
40	4.20	0.060	0.09	12.00	4.50	1.40		
45	3.80	0.084	0.20	12.00	4.50	1.30		17.0%
50	3.70	0.119	0.30	14.00	4.50	1.90		17.0
55	3.50	0.202	0.58	15.00	4.50	2.40	5.0%	45.0
60	3.50	0.340	0.75	15.00	4.00	2.40	13.0	35.0
62	3.50	0.419	0.75	15.00	3.80	2.40	15.0	25.0
65	3.50	0.565	0.75	15.00	3.50	2.40	20.0	25.0
70	3.50	0.913	0.75	20.00	0.00	0.00	20.0	20.0
75	3.50	1.556	0.75	20.00	0.00	0.00	100.0	100.0

FEMALES								
Age	Annual Rate of							
	SALARY*	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
				Years of Service			Before 27 Years of Service	After 27 Years of Service**
				0 – 4	5 – 9	10+		
20	7.20%	0.007%	0.01%	9.00%				
25	6.40	0.008	0.01	9.00	4.00%			
30	5.40	0.010	0.03	12.00	4.00	1.65%		
35	4.70	0.018	0.06	12.00	4.00	1.50		
40	4.20	0.026	0.12	12.00	4.00	1.30		
45	3.80	0.042	0.25	13.00	4.00	1.20		15.0%
50	3.70	0.062	0.44	13.00	5.00	1.50		18.0
55	3.50	0.096	0.65	15.00	5.00	2.00	5.5%	50.0
60	3.50	0.157	0.85	15.00	5.00	2.00	14.0	40.0
62	3.50	0.197	0.85	15.00	4.60	2.00	14.0	40.0
65	3.50	0.287	0.85	15.00	4.00	2.00	22.0	35.0
70	3.50	0.495	0.85	15.00	0.00	0.00	20.0	35.0
75	3.50	0.831	0.85	15.00	0.00	0.00	100.0	100.0

* Includes wage inflation at 3.5% per annum.

** Plus 7.5% in year when first eligible for unreduced retirement with 27 years of service.



SCHEDULE D
(Continued)

DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table projected to 2025 using scale BB (set forward two years for males and one year for females) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table (set forward two years for males and seven years for females) is used for death 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 September 19, 2016, the numbers of expected future deaths are 15-19% less than the actual number of deaths that occurred during the study period for healthy retirees and 13-17% less than expected under the selected table for disabled retirees. Representative values of the assumed annual rates of death after service retirement and after disability retirement are shown below:

Age	Annual Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
45	0.1609%	0.1135%	2.3306%	1.2482%
50	0.2474	0.1718	2.9279	1.5650
55	0.4246	0.2658	3.4400	1.7807
60	0.6985	0.4409	3.5881	2.3164
65	1.1300	0.8100	3.8275	3.1687
70	1.8697	1.3739	4.7566	4.4032
75	3.2147	2.2899	6.3153	6.0857
80	5.5160	3.7551	8.3527	8.4679
85	9.5631	6.3873	10.9122	12.7572
90	17.2787	11.2476	17.2787	19.4718
95	27.1263	18.1190	27.1263	24.2074



SCHEDULE E

SUMMARY OF MAIN PLAN PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

ELIGIBILITY FOR ACCESS TO RETIREE MEDICAL PLAN COVERAGE:

Service Retirement: For employees hired prior to July 1, 2008, Retiree Medical Plan coverage eligibility is attained when an employee retires, which is possible after the completion of 27 years of service or attainment of age 55 and 5 years of service with reduced pension benefits. For employees hired on or after July 1, 2008, employees may retire after the completion of 27 years of service, the attainment of age 55 and 10 years of service with reduced pension benefits, or the attainment of age 60 and 5 years of service with unreduced pension benefits, but must complete a minimum of 15 years of service to be eligible for Retiree Medical Plan coverage.

Disability Retirement: Disabled employees hired prior to July 1, 2008 with at least 5 years of service, who are totally and permanently incapable of being employed as a teacher, are eligible for Retiree Medical Plan coverage upon approval for TRS disability retirement benefits. Disabled employees hired after July 1, 2008 must have 15 years of service to be eligible for Retiree Medical Plan coverage upon approval for TRS disability retirement benefits.

Members and dependents under age 65 and eligible for Medicare due to a disability after January 1, 2013 are only eligible to enroll in the MEHP. Under age 65 members who retired prior to January 1, 2013, are grandfathered from this requirement and allowed a choice of KEHP or MEHP coverage. Actual census data and current plan elections were used for current disabled retirees. All future disabled members under the age of 65 with Medicare are placed on the MEHP and not the KEHP. This has been consistently applied since 2013.

Survivors: Spouses of employees who die in service while eligible to retire, as well as survivors of service and disabled retirees, are eligible for Retiree Medical Plan coverage if elected within 30 days of the employee's/retiree's death with no future remarriage. Otherwise, survivor is not eligible for Retiree Medical Plan coverage.

Spousal Shared Risk Waiver for MEHP: Beginning in 2013, eligible spouses who waive the MEHP coverage, will no longer have the opportunity to enroll during any annual MEHP open enrollment so most spousal waivers on the MEHP are now permanent waivers unless a KTRS specific qualifying event is met. This does not apply to the KEHP. This MEHP eligibility rule became necessary to mitigate spousal adverse selection with zero premium Medicare Advantage plans on the individual and open market.

Termination: For employees hired prior to July 1, 2008 and who terminated with at least 5 years of service, Retiree Medical Plan coverage eligibility is attained at age 60 with unreduced pension benefits. For employees hired on or after July 1, 2008 and who terminated with at least 15 years of service, Retiree Medical Plan coverage eligibility is attained at age 60 with unreduced pension benefits.

Reemployed Retirees: Effective January 1, 2019 and because of the Affordable Care Act (ACA) and Medicare secondary payer (MSP) federal rules, if a TRS retiree returns to work and is offered the same health insurance coverage as any full time employee (whether the KEHP, MEHP, or another plan), then the member must waive coverage through TRS. For valuation purposes, active employees identified as currently receiving retiree health care through the System are valued as retirees.



SCHEDULE E
(Continued)

COVERED MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS:

Under Age 65 Retiree Shared Responsibility Contribution: Effective July 1, 2010, retirees under the age of 65 began a three-year phase-in of the Shared Responsibility Contribution. This contribution reduces the applicable amount of the full contribution provided by the System to retirees, by adjusting the Shared Responsibility Contribution amount by 100% less the appropriate percentage from the Retiree Percentage Contribution table below. Effective July 1, 2012, the full Shared Responsibility Contribution equals the Standard Medicare Part B premium paid by retirees ages 65 and older.

Monthly Under Age 65 Shared Responsibility Contribution Timeline			
Effective Date	Medicare Part B Monthly Cost	Formula	Shared Responsibility Contribution
July 1, 2010	\$110.50	$(1/3 \times \$110.50)$	\$ 37.00
January 1, 2011	115.40	$(1/3 \times 115.40)$	39.00
July 1, 2011	115.40	$(2/3 \times 115.40)$	77.00
January 1, 2012	99.90	$(2/3 \times 99.90)$	66.00
July 1, 2012	99.90	99.90	99.90
January 1, 2013	104.90	104.90	104.90
January 1, 2014	104.90	104.90	104.90
January 1, 2015	104.90	104.90	104.90
January 1, 2016	121.80	121.80	121.80
January 1, 2017	134.00	134.00	134.00
January 1, 2018	134.00	134.00	134.00
January 1, 2019	135.50	135.50	135.50
January 1, 2020	144.30	144.30	144.30

Retiree Years of Service Percentage Contribution: Retirees contribute the following percentages based on years of service at retirement, which are then applied to the Retiree Contribution Rate Basis:

Retiree Percentage Contribution*				
Year of Service	Entered System Before 7/1/2002		Entered System After 6/30/2002 and Before 7/1/2008	Entered System After 6/30/2008
	Age 65 or Older and Covered Before 1/1/2005	Age 65 After or Covered After 12/31/2004		
5 – 9.99	30%	75%	90%	Not Eligible
10 – 14.99	20	50	75	Not Eligible
15 – 19.99	10	25	55	55%
20 – 24.99	0	0	35	35
25 – 25.99	0	0	10	10
26 – 26.99	0	0	5	5
27 or more	0	0	0	0

*0% for disabled retirees that retired prior to 1/1/2002



SCHEDULE E
(Continued)

COVERED MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS (CONTINUED):

Monthly Retiree Contribution Rate Basis Effective January 1, 2020					
Tier Elected	Under Age 65 (KEHP)				Ages-65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP	
Single	\$660.04	\$646.96	\$656.60	\$583.96	\$224.00
Parent Plus	\$851.84	\$802.26	\$878.24	\$808.92	n/a
Couple	\$1,029.02	\$1,060.74	\$1,189.96	\$1,093.10	n/a
Family	\$1,131.64	\$1,105.34	\$1,303.24	\$1,196.18	n/a
Family C-R	\$738.64	\$719.12	\$771.84	\$704.70	n/a

Under Age 65 Retiree Plan Cost Contribution: An additional contribution according to the table below is required to be paid by retirees under the age of 65 based upon the plan elected:

Monthly Under Age 65 Plan Cost Contribution* Effective January 1, 2020				
Tier Elected	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP
Single	\$50.90	\$84.86	\$26.98	\$24.28
Parent Plus	\$130.46	\$241.86	\$64.28	\$57.84
Couple	\$313.76	\$544.22	\$267.86	\$241.08
Family	\$368.86	\$682.12	\$321.42	\$289.28
Family C-R	\$82.72	\$162.28	\$29.98	\$26.98

* Does not include the additional contribution required to be paid by retirees under the age of 65 who use tobacco (\$40 for Single or Family Cross-Reference, and \$80 for Parent Plus, Couple or Family). Also, this does not include the additional contribution required to be paid by retirees under the age of 65 who do not complete their LivingWell Promise, which is an additional \$40 per month for all levels of coverage—single, parent +, couple, and family. Approximately 2,500 retirees across all four KEHP plans did not complete their LivingWell Promise for 2019. The additional contribution for these retirees will begin in 2020. For valuation purposes, it is conservatively assumed that, over time, 100% of KEHP retirees will complete their LivingWell Promise. This assumption will be monitored in future experience studies.



SCHEDULE E
(Continued)

COVERED MEMBER MEDICAL PLAN CONTRIBUTIONS (CONTINUED):

Spouse Contributions: 100% of the full cost for non-Medicare eligible dependents is paid through a combination of payments from beneficiaries and the State. Spouses of current post-65 retirees and surviving spouses of deceased retirees with a date of death on or after July 1, 2002 pay 100% of the full contribution. Spouses of active members who died while eligible to retire prior to July 1, 2002, are provided the same subsidy by the System that would have been provided to the retiree for the lifetime of the spouse, or until remarriage. Spouses of active members who die while eligible to retire on or after July 1, 2002 or later pay 100% of the full contribution.

Survivors: Spouses of employees who die in service while eligible to retire, as well as survivors of service and disabled retirees, are eligible for Retiree Medical Plan coverage if elected within 30 days of the employee's/retiree's death with no future remarriage. Otherwise, survivor is not eligible for Retiree Medical Plan coverage.

Spousal Shared Risk Waiver for MEHP: Beginning in 2013, eligible spouses who waive the MEHP coverage, will no longer have the opportunity to enroll during any annual MEHP open enrollment so most spousal waivers on the MEHP are now permanent waivers unless a KTRS specific qualifying event is met. This does not apply to the KEHP. This MEHP eligibility rule became necessary to mitigate spousal adverse selection with zero premium Medicare Advantage plans on the individual and open market.

Monthly Surviving Spouse Contribution Effective January 1, 2020					
Tier Elected by Surviving Spouse	Under Age 65 (KEHP)				Ages 65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP	
Single	\$718.38	\$739.26	\$691.02	\$615.68	\$224.00
Parent Plus	989.74	1,051.56	949.96	874.20	n/a

SYSTEM RETIREE MEDICAL PLAN CONTRIBUTIONS: The System Contribution Rate Basis is determined annually by the System; and the full cost is projected based on historical claims data. For retirees, the following percentages are based on years of service at retirement and are then applied to the System Contribution Rate Basis:

Percentage of System Contribution Rate Provided to Retirees*				
Year of Service	Entered System Before 7/1/2002		Entered System After 6/30/2002 and Before 7/1/2008	Entered System After 6/30/2008
	Age 65 or Older and Covered Before 1/1/2005	Age 65 After or Covered After 12/31/2004		
5 – 9.99	70%	25%	10%	Not Eligible
10 – 14.99	80	50	25	Not Eligible
15 – 19.99	90	75	45	45%
20 – 24.99	100	100	65	65
25 – 25.99	100	100	90	90
26 – 26.99	100	100	95	95
27 or more	100	100	100	100

*100% for disabled retirees that retired prior to 1/1/2002



SCHEDULE E
(Continued)

SYSTEM RETIREE MEDICAL PLAN CONTRIBUTIONS (CONTINUED):

Monthly Retiree Contribution Rate Basis Effective January 1, 2020					
Tier Elected	Under Age 65 (KEHP)				Ages-65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP	
Single	\$660.04	\$646.96	\$656.60	\$583.96	\$224.00
Parent Plus	\$851.84	\$802.26	\$878.24	\$808.92	n/a
Couple	\$1,029.02	\$1,060.74	\$1,189.96	\$1,093.10	n/a
Family	\$1,131.64	\$1,105.34	\$1,303.24	\$1,196.18	n/a
Family C-R	\$738.64	\$719.12	\$771.84	\$704.70	n/a

**Irrespective of a participating retiree's service, an additional \$7.44 per month is paid by the System to the Department of Employee Insurance (DEI) for KEHP coverage.*

ACTIVE MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS: Actively employed members make payroll contributions to the Medical Insurance Fund based upon the following schedule:

Active Member Percentage of Payroll Contribution Made to Medical Insurance Fund

Active Member Percentage of Payroll Contribution Made to Medical Insurance Fund					
University Employees		School District Employees (Non-Federal)		Other Employees	
Hired Before 7/1/2008	Hired On or After 7/1/2008	Hired Before 7/1/2008	Hired On or After 7/1/2008	Hired Before 7/1/2008	Hired On or After 7/1/2008
2.775	2.775	3.750	3.750	3.750	3.750



SCHEDULE E
(Continued)

LIFE INSURANCE PLAN BENEFITS:

(1) Effective July 1, 2000, the Teachers' Retirement System shall:

- (a) Provide a life insurance benefit in a minimum amount of five thousand dollars (\$5,000) for its members who are retired for service or disability. This life insurance benefit shall be payable upon the death of a member retired for service or disability to the member's estate or to a party designated by the member on a form prescribed by the retirement system; and
- (b) Provide a life insurance benefit in a minimum amount of two thousand dollars (\$2,000) for its active contributing members. This life insurance benefit shall be payable upon the death of an active contributing member to the member's estate or to a party designated by the member on a form prescribed by the retirement system.

Note: Members employed on a substitute or part-time basis and working at least 69% of a full contract year in a single fiscal year will be eligible for a life insurance benefit for the balance of the fiscal year or the immediately succeeding fiscal year under certain conditions. For non-vested members employed on a substitute or part-time basis, the life insurance benefit is provided if death occurs as the result of a physical injury on the job. For vested members employed on a substitute or part-time basis, death does not have to be the result of a physical injury on the job for life insurance benefits to be provided.



SCHEDULE F

**TABLE 1
ACTIVE MEMBER AGE AND SERVICE TABLE AS OF JUNE 30, 2019**

Distribution of Active Members as of June 30, 2019 by Age and Service Groups

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 & Over	No.	Payroll
Under 25	1,884	1,655	5							3,544	\$ 78,310,776
25 to 29	971	4,560	1,752	1						7,284	287,762,572
30 to 34	614	1,965	4,431	1,572						8,582	407,539,614
35 to 39	706	1,524	2,173	4,510	1,551	9				10,473	559,874,557
40 to 44	610	1,190	1,375	2,103	4,096	1,196	3			10,573	614,043,506
45 to 49	534	938	1,074	1,501	2,026	3,846	1,015	4		10,938	671,896,297
50 to 54	632	674	649	965	1,242	1,700	2,005	335	3	8,205	497,549,540
55 to 59	846	778	468	580	900	994	732	248	47	5,593	294,393,011
60 to 64	786	936	337	264	450	475	380	102	40	3,770	152,726,863
65 to 69	563	808	273	120	154	167	124	50	40	2,299	61,148,793
70 & Over	362	549	252	79	39	32	32	16	25	1,386	23,182,181
Total Count	8,508	15,577	12,789	11,695	10,458	8,419	4,291	755	155	72,647	\$ 3,648,427,710

Average Age: 43.6
Average Service: 11.0



**SCHEDULE F
(Continued)**

**TABLE 2
SCHEDULE OF TOTAL ACTIVE MEMBER VALUATION DATA**

Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage Increase in Average Pay
6/30/2019	72,647	\$3,648,427,710	\$50,221	0.58%
6/30/2018	72,205	3,605,115,787	49,929	1.06
6/30/2017	72,130	3,563,584,342	49,405	0.35
6/30/2016	71,848	3,537,226,348	49,232	1.19
6/30/2015	72,246	3,515,113,126	48,655	2.45
6/30/2014	73,407	3,486,326,799	47,493	2.12
6/30/2013	74,831	3,480,066,406	46,506	1.51
6/30/2012	75,951	3,479,567,004	45,813	1.33

**TABLE 3
ELIGIBLE DEFERRED VESTED MEMBERS AS OF JUNE 30, 2019
MALE AND FEMALE DEMOGRAPHIC BREAKDOWN**

Attained Age	Medical Insurance Fund			Life Insurance Fund		
	Number of		Total Number	Number of		Total Number
	Males	Females		Males	Females	
Under 30	0	0	0	9	26	35
30-34	23	104	127	140	525	665
35-39	246	826	1,072	347	1,049	1,396
40-44	306	910	1,216	367	1,093	1,460
45-49	346	1120	1,466	387	1,297	1,684
50-54	259	1013	1,272	284	1,127	1,411
55-59	239	856	1,095	268	933	1,201
60 & Over	252	768	1,020	298	842	1,140
Total	1,671	5,597	7,268	2,100	6,892	8,992



SCHEDULE F
(Continued)

TABLE 4
ALL RETIREES AND SPOUSES RECEIVING HEALTH CARE BENEFITS AS OF JUNE 30, 2019
MALE AND FEMALE DEMOGRAPHIC BREAKDOWN

Attained Age	Number of		Total Number
	Males	Females	
Under 40	1	10	11
40-44	11	37	48
45-49	72	179	251
50-54	450	1,069	1,519
55-59	1,216	2,802	4,018
60-64	2,202	4,849	7,051
65-69	3,362	7,762	11,124
70-74	3,652	7,062	10,714
75-79	2,343	4,121	6,464
80-84	1,380	2,362	3,742
85-89	710	1,406	2,116
90-94	212	722	934
95-99	50	206	256
100 and over	3	29	32
Total	15,664	32,616	48,280



**SCHEDULE F
(Continued)**

**TABLE 5
SCHEDULE OF RETIRANTS, BENEFICIARIES AND SURVIVORS ADDED TO AND REMOVED FROM ROLLS***

Medical Insurance Fund									
Fiscal Year Ending June 30	Number of Members Added to Rolls	Number of Spouses** Added to Rolls	Total Number Added to Rolls	Number of Members Removed from Rolls	Number of Spouses** Removed from Rolls	Total Number Removed from Rolls	Number of Members on Rolls at the End of the Year	Number of Spouses** on Rolls at the End of the Year	Total Number on Rolls at the End of the Year
2012	1,996	702	2,698	1,029	616	1,645	36,000	7,008	43,008
2013	1,853	664	2,517	1,076	619	1,695	36,777	7,053	43,830
2014	1,663	638	2,301	1,165	660	1,825	37,275	7,031	44,306
2015	1,990	731	2,721	1,190	633	1,823	38,075	7,129	45,204
2016	2,045	726	2,771	1,305	674	1,979	38,815	7,181	45,996
2017	1,835	699	2,534	1,153	691	1,844	39,497	7,189	46,686
2018	1,903	828	2,731	1,170	422	1,592	40,230	7,595	47,825
2019	1,701	666	2,367	1,220	692	1,912	40,711	7,569	48,280

*Reflects members, spouses, and beneficiaries participating in a health care plan.

**Includes spouses, beneficiaries, and surviving spouses.

**TABLE 6
SCHEDULE OF RETIRANTS, BENEFICIARIES AND SURVIVORS ADDED TO AND REMOVED FROM ROLLS***

Life Insurance Fund								
Fiscal Year Ending June 30	Number Added to Rolls	Life Insurance Benefit (\$1,000's)	Number Removed from Rolls	Life Insurance Benefit (\$1,000's)	Number on Rolls at the End of the Year	Life Insurance Benefit (\$1,000's)	Increase in Life Insurance Benefit	Average Life Insurance Benefit
2012	2,364	11,820	880	4,400	42,602	213,010	3.61	5,000
2013	2,195	10,975	952	4,760	43,845	219,225	2.92	5,000
2014	1,964	9,820	954	4,770	44,855	224,275	2.30	5,000
2015	2,270	11,350	1,641	8,205	45,484	227,420	1.40	5,000
2016	2,394	11,970	807	4,035	47,071	235,355	3.49	5,000
2017	2,175	10,875	1,021	5,105	48,225	241,125	2.45	5,000
2018	2,605	13,025	1,408	7,040	49,422	247,110	2.48	5,000
2019	2,226	11,130	210	1,050	51,438	257,190	4.08	5,000

*The life insurance benefit is payable upon the death of only members retired for service or disability. Numbers do not include life insurance benefits payable upon the death of an active contributing member.



SCHEDULE G

MEDICAL INSURANCE FUND SENSITIVITY ANALYSIS

The June 30, 2019 valuation results of the Medical Insurance Fund (MIF) are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate, the assumed rate of payroll growth, and the assumed rates of health care inflation (trend). The charts show the actuarial accrued liability, the unfunded liability, the funded ratio and the employer contribution rate under the following scenarios:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption, 8.00%, together with a decrease in the discount rate to 7.00% and an increase in the discount rate to 9.00%. Under this scenario, the underlying inflation rate assumption is held constant at 3.00% and the payroll growth assumption is held constant at 3.50%.
- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 3.00%, together with decreases in the inflation rate to 2.75% and 2.50%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption, and the assumed rates of salary increase for active members. The assumed decreases in inflation are not assumed to impact the assumed rates of health care inflation (trend).
- The wage inflation assumption sensitivity analysis shows the valuation results with the baseline underlying payroll growth assumption, 3.50%, together with decreases in the wage inflation assumption to 2.00% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.
- The health care inflation (trend) assumption sensitivity analysis shows the valuation results with the baseline trend assumption along with a 1.00% increase in all assumed trend rates and a 1.00% decrease in all assumed trend rates.



SCHEDULE G
(Continued)

MEDICAL INSURANCE FUND
SENSITIVITY ANALYSIS

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY			
MEDICAL INSURANCE FUND			
ASSUMED DISCOUNT RATE SENSITIVITY ANALYSIS			
	(\$1,000's)		
	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	\$ 3,563,566	\$ 3,133,202	\$ 2,778,342
Actuarial Value of Assets	<u>1,442,522</u>	<u>1,442,522</u>	<u>1,442,522</u>
Unfunded Liability	\$ 2,121,044	\$ 1,690,680	\$ 1,335,820
Funded Ratio	40.48%	46.04%	51.92%
Contributions			
Normal Cost	2.14%	1.62%	1.24%
Accrued Liability	<u>3.78%</u>	<u>3.27%</u>	<u>2.79%</u>
Total	5.92%	4.89%	4.03%
Member	<u>(3.70%)</u>	<u>(3.70%)</u>	<u>(3.70%)</u>
Employer/State	2.22%	1.19%	0.33%
Discount Rate	7.00%	8.00%	9.00%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%



SCHEDULE G
(Continued)

MEDICAL INSURANCE FUND
SENSITIVITY ANALYSIS

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY			
MEDICAL INSURANCE FUND			
INFLATION ASSUMPTION SENSITIVITY ANALYSIS			
(\$1,000's)			
	Valuation Results	Decrease Inflation Rate 0.25%	Decrease Inflation Rate 0.50%
Actuarial Accrued Liability	\$ 3,133,202	\$ 3,246,150	\$ 3,365,907
Actuarial Value of Assets	<u>1,442,522</u>	<u>1,442,522</u>	<u>1,442,522</u>
Unfunded Liability	\$ 1,690,680	\$ 1,803,628	\$ 1,923,385
Funded Ratio	46.04%	44.44%	42.86%
Contributions			
Normal Cost	1.62%	1.72%	1.83%
Accrued Liability	<u>3.27%</u>	<u>3.49%</u>	<u>3.72%</u>
Total	4.89%	5.21%	5.55%
Member	<u>(3.70%)</u>	<u>(3.70%)</u>	<u>(3.70%)</u>
Employer/State	1.19%	1.51%	1.85%
Discount Rate	8.00%	7.75%	7.50%
Payroll Growth	3.50%	3.25%	3.00%
Inflation Rate	3.00%	2.75%	2.50%



SCHEDULE G
(Continued)

MEDICAL INSURANCE FUND
SENSITIVITY ANALYSIS

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY			
MEDICAL INSURANCE FUND			
WAGE INFLATION ASSUMPTION SENSITIVITY ANALYSIS			
(\$1,000's)			
	Valuation Results	Decrease Wage Inflation to 2%	No Wage Inflation
Actuarial Accrued Liability	\$ 3,133,202	\$ 3,133,202	\$ 3,133,202
Actuarial Value of Assets	<u>1,442,522</u>	<u>1,442,522</u>	<u>1,442,522</u>
Unfunded Liability	\$ 1,690,680	\$ 1,690,680	\$ 1,690,680
Funded Ratio	46.04%	46.04%	46.04%
Contributions			
Normal Cost	1.62%	1.62%	1.62%
Accrued Liability	<u>3.27%</u>	<u>3.68%</u>	<u>4.28%</u>
Total	4.89%	5.30%	5.90%
Member	<u>(3.70%)</u>	<u>(3.70%)</u>	<u>(3.70%)</u>
Employer/State	1.19%	1.60%	2.20%
Discount Rate	8.00%	8.00%	8.00%
Payroll Growth	3.50%	2.00%	0.00%
Inflation Rate	3.00%	3.00%	3.00%



**SCHEDULE G
(Continued)**

**MEDICAL INSURANCE FUND
SENSITIVITY ANALYSIS**

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY MEDICAL INSURANCE FUND HEALTH CARE TREND ASSUMPTION SENSITIVITY ANALYSIS			
	(\$1,000's)		
	Decrease Trend Rates 1.0%	Valuation Results	Increase Trend Rates 1.0%
Actuarial Accrued Liability	\$ 2,742,612	\$ 3,133,202	\$ 3,617,384
Actuarial Value of Assets	<u>1,442,522</u>	<u>1,442,522</u>	<u>1,442,522</u>
Unfunded Liability	\$ 1,300,090	\$ 1,690,680	\$ 2,174,862
Funded Ratio	52.60%	46.04%	39.88%
Contributions			
Normal Cost	1.28%	1.62%	2.08%
Accrued Liability	<u>2.51%</u>	<u>3.27%</u>	<u>4.20%</u>
Total	3.79%	4.89%	6.28%
Member	<u>(3.70%)</u>	<u>(3.70%)</u>	<u>(3.70%)</u>
Employer/State	0.09%	1.19%	2.58%
Discount Rate	8.00%	8.00%	8.00%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%



SCHEDULE H

LIFE INSURANCE FUND SENSITIVITY ANALYSIS

The June 30, 2019 valuation results of the Life Insurance Fund (LIF) are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate, and the assumed rate of payroll growth. The charts show the actuarial accrued liability, the unfunded liability, the funded ratio and the employer contribution rate under the following scenarios:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption, and 7.50% together with a decrease in the discount rate to 6.50% and an increase in the discount rate to 8.50%. Under this scenario, the underlying inflation rate assumption is held constant at 3.00% and the payroll growth assumption is held constant at 3.50%.
- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 3.00%, together with decreases in the inflation rate to 2.75% and 2.50%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption, and the assumed rates of salary increase for active members.
- The wage inflation assumption sensitivity analysis shows the valuation results with the baseline underlying wage inflation assumption, 3.50%, together with decreases in the wage inflation assumption to 2.00% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.



**SCHEDULE H
(Continued)**

**LIFE INSURANCE FUND
SENSITIVITY ANALYSIS**

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY LIFE INSURANCE FUND ASSUMED DISCOUNT RATE SENSITIVITY ANALYSIS			
	(\$1,000's)		
	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	\$ 132,794	\$ 117,485	\$ 104,905
Actuarial Value of Assets	<u>92,506</u>	<u>92,506</u>	<u>92,506</u>
Unfunded Liability	\$ 40,288	\$ 24,979	\$ 12,399
Funded Ratio	69.66%	78.74%	88.18%
Contributions			
Normal Cost	0.04%	0.03%	0.03%
Accrued Liability	<u>0.06%</u>	<u>0.04%</u>	<u>0.02%</u>
Total	0.10%	0.07%	0.05%
Member	<u>(0.00%)</u>	<u>(0.00%)</u>	<u>(0.00%)</u>
Employer/State	0.10%	0.07%	0.05%
Discount Rate	6.50%	7.50%	8.50%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%



**SCHEDULE H
(Continued)**

**LIFE INSURANCE FUND
SENSITIVITY ANALYSIS**

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY LIFE INSURANCE FUND INFLATION ASSUMPTION SENSITIVITY ANALYSIS			
(\$1,000's)			
	Valuation Results	Decrease Inflation Rate 0.25%	Decrease Inflation Rate 0.50%
Actuarial Accrued Liability	\$ 117,485	\$ 121,207	\$ 125,135
Actuarial Value of Assets	<u>92,506</u>	<u>92,506</u>	<u>92,506</u>
Unfunded Liability	\$ 24,979	\$ 28,701	\$ 32,629
Funded Ratio	78.74%	76.32%	73.92%
Contributions			
Normal Cost	0.03%	0.03%	0.04%
Accrued Liability	<u>0.04%</u>	<u>0.05%</u>	<u>0.05%</u>
Total	0.07%	0.08%	0.09%
Member	<u>(0.00%)</u>	<u>(0.00%)</u>	<u>(0.00%)</u>
Employer/State	0.07%	0.08%	0.09%
Discount Rate	7.50%	7.25%	7.00%
Payroll Growth	3.50%	3.25%	3.00%
Inflation Rate	3.00%	2.75%	2.50%



**SCHEDULE H
(Continued)**

**LIFE INSURANCE FUND
SENSITIVITY ANALYSIS**

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY LIFE INSURANCE FUND WAGE INFLATION ASSUMPTION SENSITIVITY ANALYSIS			
	(\$1,000's)		
	Valuation Results	Decrease Wage Inflation to 2%	No Wage Inflation
Actuarial Accrued Liability	\$ 117,485	\$ 117,485	\$ 117,485
Actuarial Value of Assets	<u>92,506</u>	<u>92,506</u>	<u>92,506</u>
Unfunded Liability	\$ 24,979	\$ 24,979	\$ 24,979
Funded Ratio	78.74%	78.74%	78.74%
Contributions			
Normal Cost	0.03%	0.03%	0.03%
Accrued Liability	<u>0.04%</u>	<u>0.05%</u>	<u>0.06%</u>
Total	0.07%	0.08%	0.09%
Member	<u>(0.00%)</u>	<u>(0.00%)</u>	<u>(0.00%)</u>
Employer/State	0.07%	0.08%	0.09%
Discount Rate	7.50%	7.50%	7.50%
Payroll Growth	3.50%	2.00%	0.00%
Inflation Rate	3.00%	3.00%	3.00%



SCHEDULE I

MEDICAL INSURANCE FUND 20-YEAR BASELINE PROJECTION

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 (thirty 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: 0.00%
- Valuation Discount Rate: 8.00%
- Investment Rate of Return: 8.00% each year
- Actuarial Value of Assets: 5 year smoothing, No Corridor
- Amortization Method: Level Percent of Payroll, Closed
- Amortization Period: 21-year period as of Valuation Date
- 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 I
(Continued)

MEDICAL INSURANCE FUND
20-YEAR BASELINE PROJECTION
(Dollar amounts in \$1,000s)

Fiscal Year End	Non-University Payroll (1)	University Payroll (2)	Total Payroll (3)	Unfunded Accrued Liability (4)	Funding Ratio (5)	Actuarially Determined Contribution in Dollars (6)
2020	\$3,453,441	\$194,987	\$3,648,428	\$1,690,680	46.0%	\$178,446
2021	3,540,907	195,809	3,736,716	1,572,229	52.4%	177,268
2022	3,629,800	199,926	3,829,726	1,424,340	59.1%	173,693
2023	3,719,567	205,035	3,924,602	1,261,546	65.6%	168,692
2024	3,809,893	210,510	4,020,403	1,072,731	72.2%	161,137
2025	3,901,606	216,801	4,118,407	853,226	79.0%	150,264
2026	3,991,126	224,165	4,215,291	605,222	85.8%	135,598
2027	4,081,214	232,450	4,313,664	326,053	92.7%	116,402
2028	4,172,477	241,666	4,414,143	11,883	99.7%	91,459
2029	4,268,103	251,466	4,519,569	0	100.0%	94,687
2030	4,367,514	261,323	4,628,837	0	100.0%	99,330
2031	4,470,072	271,796	4,741,868	0	100.0%	104,211
2032	4,578,015	282,465	4,860,480	0	100.0%	109,389
2033	4,691,000	293,137	4,984,137	0	100.0%	114,848
2034	4,807,117	304,819	5,111,936	0	100.0%	120,614
2035	4,930,521	316,176	5,246,697	0	100.0%	126,721
2036	5,060,198	327,783	5,387,981	0	100.0%	133,159
2037	5,197,690	340,357	5,538,047	0	100.0%	139,955
2038	5,343,656	353,535	5,697,191	0	100.0%	147,158
2039	5,498,384	367,474	5,865,858	0	100.0%	154,790



SCHEDULE J

LIFE INSURANCE FUND 20-YEAR BASELINE PROJECTION

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 (thirty 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: 0.00%
- Valuation Discount Rate: 7.50%
- Investment Rate of Return: 7.50% each year
- Actuarial Value of Assets: 5 year smoothing, No Corridor
- Amortization Method: Level Percent of Payroll, Closed
- Amortization Period: 25-year period as of Valuation Date
- 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 J
(Continued)

LIFE INSURANCE FUND
20-YEAR BASELINE PROJECTION
(Dollar amounts in \$1,000s)

Fiscal Year End	Non-University Payroll (1)	University Payroll (2)	Total Payroll (3)	Unfunded Accrued Liability (4)	Funding Ratio (5)	Actuarially Determined Contribution in Dollars (6)
2020	\$3,453,441	\$194,987	\$3,648,428	\$24,979	78.7%	\$2,726
2021	3,540,907	195,809	3,736,716	28,732	76.2%	3,006
2022	3,629,800	199,926	3,829,726	31,926	74.1%	3,263
2023	3,719,567	205,035	3,924,602	33,771	73.2%	3,450
2024	3,809,893	210,510	4,020,403	34,415	73.3%	3,567
2025	3,901,606	216,801	4,118,407	34,753	73.6%	3,673
2026	3,991,126	224,165	4,215,291	35,018	73.9%	3,785
2027	4,081,214	232,450	4,313,664	35,200	74.2%	3,904
2028	4,172,477	241,666	4,414,143	35,288	74.6%	4,029
2029	4,268,103	251,466	4,519,569	35,268	75.0%	4,158
2030	4,367,514	261,323	4,628,837	35,126	75.4%	4,293
2031	4,470,072	271,796	4,741,868	34,847	75.9%	4,435
2032	4,578,015	282,465	4,860,480	34,413	76.5%	4,585
2033	4,691,000	293,137	4,984,137	33,805	77.2%	4,743
2034	4,807,117	304,819	5,111,936	33,002	77.9%	4,910
2035	4,930,521	316,176	5,246,697	31,978	78.8%	5,086
2036	5,060,198	327,783	5,387,981	30,707	79.8%	5,273
2037	5,197,690	340,357	5,538,047	29,158	80.9%	5,472
2038	5,343,656	353,535	5,697,191	27,296	82.2%	5,685
2039	5,498,384	367,474	5,865,858	25,081	83.7%	5,917