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**LEXINGTON-FAYETTE
URBAN COUNTY GOVERNMENT**
Lexington, Kentucky

**Policemen's & Firefighters'
Retirement Fund**



Report on the Valuation of the Lexington-Fayette Urban County Government Policemen's and Firefighters' Retirement Fund

Prepared as of July 1, 2012





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 8, 2012

Board of Trustees

Lexington-Fayette Urban County Government Policemen's and Firefighters' Pension Plan

Lexington-Fayette Urban County Government

200 East Main Street

Lexington, KY 40507

Dear Members of the Board:

We are pleased to submit herewith the results of the biennial actuarial valuation of the Lexington-Fayette Urban County Government Policemen's and Firefighters' Pension Plan prepared as of July 1, 2012. The purpose of this report is to provide a summary of the funded status of the Plan as of July 1, 2012, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). The Lexington-Fayette County Government is solely responsible for the accuracy and comprehensiveness of the data.

The promised benefits of the Plan are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method. Actuarial value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions that are equal to regular interest on the unfunded accrued liability in perpetuity. The annual required employer contribution rate is 57.52% of payroll for the plan years ending June 30, 2014 and June 30, 2015. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan.

Since the previous valuation, revised rates of retirement, termination, disability, pre-retirement mortality and post-retirement mortality have been adopted by the Board based on information provided in an experience study for the five-year period ending June 30, 2010. In addition to revised decrements, the Board also adopted a lower assumed rate of return. The rate was lowered from 8.00% to 7.50% based on the analysis of the economic assumptions in the experience study.

The valuation has been prepared in accordance with the parameters set forth in Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) of the Government under GASB for the fiscal years ending June 30, 2014 and June 30, 2015 is 57.52% of payroll, which will liquidate the unfunded accrued liability over a 23 year period on the assumption that payroll will increase 3% annually.

This is to certify that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.

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Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Plan. The undersigned are members of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Thomas J. Cavanaugh'.

Thomas J. Cavanaugh, FSA, FCA, MAAA, EA
Chief Executive Officer

A handwritten signature in blue ink that reads 'Todd B. Green'.

Todd B. Green ASA, FCA, MAAA
Principal and Senior Actuary

TJC/TBG:jmy



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**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
POLICEMEN'S AND FIREFIGHTERS' RETIREMENT FUND
REPORT OF ACTUARY
ON THE VALUATION
PREPARED AS OF JULY 1, 2012**

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below.

| Valuation Date | July 1, 2012 | July 1, 2010 |
|---|------------------------|------------------------|
| Active members: | | |
| Number | 1,014 | 1,063 |
| Annualized compensation | \$ 54,595,799 | \$ 60,512,412 |
| Retired members and beneficiaries: | | |
| Number | 997 | 895 |
| Annual benefits | \$ 42,960,998 | \$ 35,456,635 |
| Assets: | | |
| Market Value | \$ 509,409,641 | \$ 421,629,957 |
| Actuarial Value | 525,849,582 | 502,259,967 |
| Unfunded actuarial accrued liability | \$ 296,806,492 | \$ 221,880,771 |
| Amortization Period | 23 | 23 |
| Fiscal Years Ending | 2015 & 2014 | 2013 & 2012 |
| Government annual required contribution rate (ARC): | | |
| Normal | 19.59% | 17.51% |
| Accrued liability | <u>37.93</u> | <u>27.16</u> |
| Total | 57.52% | 44.67% |
| Member contribution rate | 11.00% | 11.00% |



2. The major benefit and contribution provisions of the Plan as reflected in the valuation are summarized in Schedule G. The actual cost-of-living allowances granted under Section 67A.690 through July 1, 2012 were reflected in the valuation.
3. The development of the actuarial value of assets is shown in Schedule C. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the valuation.

Since the previous valuation, revised rates of retirement, termination, disability, pre-retirement mortality and post-retirement mortality have been adopted by the Board based on information provided in an experience study for the five-year period ending June 30, 2010. In addition to revised decrements, the Board also adopted a lower assumed rate of return. The rate was lowered from 8.00% to 7.50% based upon the analysis of the economic assumptions in the experience study.

The occupational disability benefit is equal to a minimum of 60% of a member's last rate of salary, increased by $\frac{1}{2}$ the amount by which the member's average percentage of disability exceeds 20%, but not greater than 75%. For valuation purposes, the assumed average member disability percentage has been 35%. Based on data provided by staff for occupational disabilities that occurred from 1995 to 2011, the average disability percentage has been 12.5%. As a result of this information, we lowered the assumed averaged disability percentage from 35% to 12.5%. Based on this reduction in the assumed average disability percentage, the assumed average benefit percentage for occupational disabilities will be lowered from 67.5% to 60% of salaries.
4. The entry age normal actuarial cost method was used to prepare the valuation. Schedule F contains a brief description of the actuarial cost method.
5. Comments on the valuation results as of July 1, 2012 are given in Section IV and further discussion of the contributions is set out in Section V. The valuation has been prepared with a future cost-of-living assumption of 3% per year.



SECTION II – MEMBERSHIP DATA

1. Data regarding the membership of the Plan for use as a basis of the valuation were furnished by the Government. The valuation included 1,014 active members with annualized compensation totaling \$54,595,799.
2. The following table shows the number of retired members and beneficiaries as of July 1, 2012 together with the amount of their annual retirement benefits payable under the Plan as of that date.

THE NUMBER AND ANNUAL BENEFITS OF RETIRED MEMBERS AND BENEFICIARIES AS OF JULY 1, 2012

| GROUP | NUMBER | ANNUAL RETIREMENT BENEFITS* |
|-----------------------------------|---------------|--|
| Service Retirements | 516 | \$ 25,109,779 |
| Disability Retirements | 348 | 14,566,600 |
| Beneficiaries of Deceased Members | <u>133</u> | <u>3,284,619</u> |
| Total | 997 | \$ 42,960,998 |

3. Table 1 of Schedule H shows the distribution by age and years of membership service of the number of active members included in the valuation, while Table 2 shows the number and annual benefits of retired members and beneficiaries included in the valuation, distributed by age.

SECTION III – ASSETS

As of July 1, 2012, the total market value of assets amounted to \$509,409,641. The actuarial value of assets used for the current valuation was \$525,849,582. Schedule C shows the development of the actuarial value of assets as of July 1, 2012. Schedule D shows the Summary of Receipts and Disbursements.



SECTION IV – COMMENTS ON VALUATION

1. Schedule B of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the Plan as of July 1, 2012. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule E and the actuarial cost method which is described in Schedule F.
2. The valuation balance sheet shows that the Plan has total prospective liabilities of \$996,459,020 of which \$603,280,373 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, and \$393,178,647 is for the prospective benefits payable on account of present active members. Against these liabilities, the Plan has a total present actuarial value of assets of \$525,849,582 as of July 1, 2012. The difference of \$470,609,438 between the total liabilities and the total present assets represents the present value of future contributions.
3. The contributions to the Plan consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 30.59% of payroll are required under the entry age normal method. Of this amount, 11.00% is paid by the members and the remaining 19.59% is required by the Government.
4. Prospective normal contributions at the rate of 30.59% have a present value of \$173,802,946. When this amount is subtracted from \$470,609,438, which is the present value of the total future contributions to be made, there remains \$296,806,492 as the amount of unfunded accrued liability contributions. The development of the unfunded accrued liability is shown in Schedule A.



SECTION V – CONTRIBUTIONS PAYABLE

1. Under Section 67A.520 of the law governing the Fund, the Government shall make current contributions to the Fund on an actuarially funded basis. The contributions shall be equal to an amount resulting from the application of a rate percent of salaries of active members determined by the entry age normal cost funding method (normal contribution). In addition, the Government shall contribute an amount resulting from the application of a rate percent of the salaries of active members which will provide each year regular interest on the remaining liability for prior service (accrued liability contribution). In any event the total contribution of the Government shall be at least seventeen percent of salaries of the active members participating in the fund.
2. The normal contribution rate is calculated as the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. On the basis of the valuation, the normal contribution rate was determined to be 30.59%.
3. Each member shall contribute an amount equal to 11.00% of current salary each year.
4. The Government's normal contribution rate is equal to the difference between the normal contribution rate of 30.59% and the member contribution rate of 11.00%, or 19.59% of payroll.
5. The annual accrued liability contribution rate is determined to be 37.93% of payroll. This amount is equal to the regular interest on the prior service liability in perpetuity. Contributions at this level would be sufficient to amortize the unfunded accrued liability over a 23 year period on the assumption that payroll will increase 3% annually.
6. The required employer contribution rate for the plan years ending June 30, 2014 and June 30, 2015 is, therefore, 57.52% of payroll.
7. The following table summarizes the employer contributions which were determined by the July 1, 2012 valuation and are recommended for use.



**ANNUAL REQUIRED CONTRIBUTION RATE
FOR PLAN YEARS ENDING JUNE 30, 2014 AND JUNE 30, 2015**

| CONTRIBUTION | PERCENTAGE OF ACTIVE MEMBERS' COMPENSATION |
|-------------------|--|
| Normal | 19.59% |
| Accrued Liability | <u>37.93</u> |
| Total | 57.52% |

SECTION VI – ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the Plan and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF JULY 1, 2012**

| GROUP | NUMBER |
|---|--------------|
| Retired participants and beneficiaries currently receiving benefits | 997 |
| Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits | 0 |
| Active Participants | <u>1,014</u> |
| Total | 2,011 |



2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded AAL (UAAL) (b - a) | Funded Ratio (a / b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b - a) / c) |
|--------------------------|-------------------------------|---|-----------------------------|----------------------|---------------------|---|
| 7/01/2007 | \$397,712,302 | \$627,939,926 | \$230,227,624 | 63.3% | \$57,717,156 | 398.9% |
| 7/01/2008 | 418,311,038 | 664,935,356 | 246,624,318 | 62.9 | 61,368,960 | 401.9 |
| 7/01/2009 | 441,772,820 | 699,851,128 | 258,078,308 | 63.1 | 65,765,448 | 392.4 |
| 7/01/2010 | 502,259,967 | 724,140,738 | 221,880,771 | 69.4 | 60,512,412 | 366.7 |
| 7/01/2011 | 501,069,884 | 758,851,546 | 257,781,662 | 66.0 | 64,258,162 | 401.2 |
| 7/01/2012 | 525,849,582 | 822,656,074 | 296,806,492 | 63.9 | 54,595,799 | 543.6 |

3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2014.

| Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2012 | | |
|---|--|---------------------|
| (a) | Employer annual required contribution | \$ 30,665,280 |
| (b) | Interest on net pension obligation | (2,671,000) |
| (c) | Adjustment to annual required contribution | <u>(2,636,148)</u> |
| (d) | Annual pension cost (a) + (b) - (c) | \$ 28,668,786 |
| (e) | Employer contributions made for fiscal year ending June 30, 2012 | <u>47,585,689</u> |
| (f) | Increase (decrease) in net pension obligation (d) - (e) | \$ (18,916,903) |
| (g) | Net pension obligation beginning of fiscal year | <u>(35,613,328)</u> |
| (h) | Net pension obligation end of fiscal year (f) + (g) | \$ (54,530,231) |



TREND INFORMATION

| <u>Year Ending</u> | <u>Annual Pension Cost (APC)</u> | <u>Percentage of APC Contributed</u> | <u>Net Pension Obligation (NPO)</u> |
|--------------------|----------------------------------|--------------------------------------|-------------------------------------|
| June 30, 2012 | 30,485,067 | 162.3% | (49,127,742) |
| June 30, 2013 | 27,923,223 | 51.6% | (35,613,328) |
| June 30, 2014 | 28,668,786 | 166.0% | (54,530,231) |

4. The annual required contribution (ARC) as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below.

EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)

| EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC) | FISCAL YEARS ENDING June 30, 2014 and 2015 |
|--|---|
| Normal (including expenses) | 19.59% |
| Accrued liability | <u>37.93</u> |
| Total | 57.52% |

5. Additional information as of July 1, 2012 follows:

| | |
|---|-------------------------------|
| Valuation date | 7/1/2012 |
| Actuarial cost method | Entry age normal |
| Amortization period | Level percent of payroll open |
| Remaining amortization period | 23 years |
| Asset valuation method | Actuarial Related Value |
| Actuarial assumptions: | |
| Investment rate of return (includes inflation) | 7.50% |
| Projected salary increases (includes inflation) | 10.50% to 4.00% |
| Inflation | 3.00% |
| Cost-of-living adjustments | 3.00% |



SECTION VII – EXPERIENCE

1. The following table shows the estimated change in the unfunded accrued liability from various factors that resulted in an increase of \$74,925,721 in the unfunded accrued liability from \$221,880,771 as of July 1, 2010 to \$296,806,492 as of July 1, 2012.

ANALYSIS OF FINANCIAL EXPERIENCE CHANGE IN UNFUNDED ACCRUED LIABILITY

| ITEM | AMOUNT OF INCREASE/(DECREASE) |
|---|----------------------------------|
| Interest (7.50%) added to previous unfunded accrued liability | \$ 36,199,294 |
| Accrued Liability Contributions | (43,410,985) |
| Recognized Asset (Gain)/Loss | 51,633,178 |
| COLA Gain | (2,366,645) |
| Assumption and Method Changes | 54,222,853 |
| Salary (Gain)/Loss | (18,629,082) |
| Liability (Gain)/Loss | <u>(2,722,892)</u> |
| Increase in Unfunded Accrued Liability | \$74,925,721 |



SCHEDULE A

DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY

| | | July 1, 2012 |
|-----|--|--------------------|
| (1) | Present value of prospective benefits: | |
| (a) | Present active members | \$ 393,178,647 |
| (b) | Present retired members, beneficiaries and former members entitled to deferred vested benefits | <u>603,280,373</u> |
| (c) | Total | \$ 996,459,020 |
| (2) | Present value of future Government and member normal contributions before expenses | <u>173,802,946</u> |
| (3) | Actuarial accrued liabilities 1(c) – (2) | \$ 822,656,074 |
| (4) | Actuarial value of assets | <u>525,849,582</u> |
| (5) | Unfunded actuarial accrued liability (3) – (4) | \$ 296,806,492 |



SCHEDULE B
VALUATION BALANCE SHEET

| <u>ACTUARIAL LIABILITIES</u> | | |
|--|--------------------|-----------------------|
| Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits | | \$ 603,280,373 |
| Present value of prospective benefits payable on account of present active members | | <u>\$ 393,178,647</u> |
| Total liabilities | | <u>\$ 996,459,020</u> |
| <u>PRESENT AND PROSPECTIVE ASSETS</u> | | |
| Actuarial value of assets | | \$ 525,849,582 |
| Present value of future contributions | | |
| Government and member normal contributions | 173,802,946 | |
| Unfunded accrued liability contributions | <u>296,806,492</u> | |
| Total prospective contributions | | \$ 470,609,438 |
| Total assets | | <u>\$ 996,459,020</u> |



SCHEDULE C
Development of Actuarial Value of Assets

| Valuation date June 30: | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|-----------------|-----------------|-----------------|----------------|----------------|----------------|
| A. Actuarial Value Beginning of Year | \$ 502,259,969 | \$ 501,069,884 | | | | |
| B. Market Value End of Year | 491,370,669 | 509,409,641 | | | | |
| C. Market Value Beginning of Year | 421,629,959 | 491,370,669 | | | | |
| D. Cash Flow | | | | | | |
| D1. Contributions | \$ 22,251,294 | \$ 55,469,828 | | | | |
| D2. Other Revenue | 54,292 | 137,955 | | | | |
| D3. Beginning of Year Market Value Adjustment | 0 | 0 | | | | |
| D4. Benefit Payments | (40,242,987) | (44,267,378) | | | | |
| D5. Administrative Expenses | (108,497) | (158,020) | | | | |
| D6. Investment Expenses | (2,543,556) | (2,624,274) | | | | |
| D7. Net | \$ (20,589,454) | \$ 8,558,111 | | | | |
| E. Investment Income | | | | | | |
| E1. Market Total: B.-C.-D7. | \$ 90,330,164 | \$ 9,480,861 | | | | |
| E2. Assumed Rate (Net of Expenses) | 8.00% | 8.00% | | | | |
| E3. Amount for Immediate Recognition | 35,664,954 | 42,545,564 | | | | |
| E4. Amount for Phased-In Recognition | 54,665,210 | (33,064,703) | | | | |
| F. Phased-In Recognition of Investment Income | | | | | | |
| F1. Current Year: 0.20 * E4. | \$ 10,933,042 | \$ (6,612,941) | \$ - | \$ - | \$ - | \$ - |
| F2. First Prior Year | 656,893 | 10,933,042 | (6,612,941) | - | - | - |
| F3. Second Prior Year | (24,101,088) | 656,893 | 10,933,042 | (6,612,941) | - | - |
| F4. Third Prior Year | (7,199,883) | (24,101,088) | 656,893 | 10,933,042 | (6,612,941) | - |
| F5. Fourth Prior Year | 3,445,451 | (7,199,883) | (24,101,088) | 656,893 | 10,933,042 | (6,612,941) |
| F6. Total Recognized Investment Gain | \$ (16,265,585) | \$ (26,323,977) | \$ (19,124,094) | \$ 4,976,994 | \$ 4,320,101 | \$ (6,612,941) |
| G. Preliminary Actuarial Value End of Year A.+D6.+E3.+F6.+G | \$ 501,069,884 | \$ 525,849,582 | | | | |
| H. Corridor | | | | | | |
| H1. 80% of Market Value | \$ 393,096,535 | \$ 407,527,713 | | | | |
| H2. 120% of Market Value | \$ 589,644,803 | \$ 611,291,569 | | | | |
| I. Actuarial Value End of Year H. Not Less than H1. or Greater than H2 | \$ 501,069,884 | \$ 525,849,582 | | | | |
| J. Difference Between Market & Actuarial Values | \$ (9,699,215) | \$ (16,439,941) | \$ 2,684,156 | \$ (2,292,838) | \$ (6,612,939) | \$ 2 |

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 5 consecutive years, actuarial value will become equal to market value.



SCHEDULE D

SUMMARY OF RECEIPTS AND DISBURSEMENTS

| <u>Receipts for the Period</u> | |
|---|----------------------|
| Contributions: | |
| Members | \$ 8,022,094 |
| Employer /Other | <u>47,585,689</u> |
| Total | 55,607,783 |
| Investment Income | <u>6,856,588</u> |
| TOTAL | \$ 62,464,371 |
| <u>Disbursements for the Period</u> | |
| Benefit Payments | 44,267,378 |
| Refunds to Members | 0 |
| Administrative Expense | <u>158,020</u> |
| TOTAL | \$ 44,425,398 |
| <u>Excess of Receipts over Disbursements</u> | <u>\$ 18,038,973</u> |
| <u>Reconciliation of Asset Balances</u> | |
| Market Value of Assets as of July 1, 2011 | \$ 491,370,669 |
| Excess of Receipts over Disbursements | <u>18,038,973</u> |
| Market Value of Assets as of July 1, 2012 | \$ 509,409,641 |
| Beginning of Year Market Value Adjustment | 0 |
| Market Value of Assets as of July 1, 2010 including Adjustment | \$ 509,409,641 |
| Rate of Return on Market Value of Assets | 1.35% |



SCHEDULE E

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

INVESTMENT RATE OF RETURN: 7.50% per year, compounded annually.

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

| <u>Service</u> | <u>Wage Inflation</u> | <u>Merit Component</u> | <u>Total Rate</u> |
|----------------|-----------------------|------------------------|-------------------|
| 0 | 4.00% | 6.50% | 10.50% |
| 1 | 4.00 | 5.50 | 9.50 |
| 2 | 4.00 | 3.50 | 7.50 |
| 3-5 | 4.00 | 3.00 | 7.00 |
| 6-8 | 4.00 | 2.50 | 6.50 |
| 9-12 | 4.00 | 2.00 | 6.00 |
| 13-16 | 4.00 | 1.50 | 5.50 |
| 16-19 | 4.00 | 1.00 | 5.00 |
| 20 or more | 4.00 | 0.00 | 4.00 |

SEPARATIONS FROM ACTIVE SERVICE: For death rates, the RP-2000 Combined Table projected to 2015 with scale AA was used. Representative values of the assumed annual rates of separation from active service are as follows:

| <u>Age</u> | <u>Annual Rate of</u> | | |
|------------|-----------------------|-------------|---------------|
| | <u>Disability</u> | <u>Male</u> | <u>Female</u> |
| 20 | 0.30% | 0.03% | 0.02% |
| 25 | 0.30 | 0.03 | 0.02 |
| 30 | 0.30 | 0.04 | 0.02 |
| 35 | 0.60 | 0.07 | 0.04 |
| 40 | 1.00 | 0.10 | 0.06 |
| 45 | 2.00 | 0.12 | 0.09 |
| 50 | 4.00 | 0.16 | 0.13 |
| 55 | 5.00 | 0.27 | 0.24 |



| Annual Rate of Termination | | | |
|----------------------------|-------------|----------------|-------------|
| <u>Service</u> | <u>Rate</u> | <u>Service</u> | <u>Rate</u> |
| 0 | 1.91% | 10 | 1.29% |
| 1 | 1.85 | 11 | 1.23 |
| 2 | 1.79 | 12 | 1.17 |
| 3 | 1.73 | 13 | 1.08 |
| 4 | 1.67 | 14 | 1.00 |
| 5 | 1.61 | 15 | 0.94 |
| 6 | 1.55 | 16 | 0.88 |
| 7 | 1.47 | 17 | 0.82 |
| 8 | 1.41 | 18 | 0.76 |
| 9 | 1.35 | 19 | 0.70 |

SERVICE RETIREMENT: Representative annual rates of assumed service retirement are as follows:

| <u>Service</u> | <u>Rate</u> |
|----------------|-------------|
| 20 | 5.0% |
| 21 | 6.0 |
| 22 | 7.0 |
| 23 | 8.0 |
| 24 | 9.0 |
| 25 | 10.0 |
| 26 | 12.0 |
| 27 | 14.0 |
| 28 | 15.0 |
| 29 | 20.0 |
| 30 | 100.0 |



DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table projected to 2015 using scale AA, with male mortality set forward 0 years and female mortality set forward 3 years is used for the period following service retirement and for beneficiaries of deceased members. For disabled lives, male mortality was assumed to be the RP-2000 table not projected with male mortality set forward 4 years. Female mortality was assumed to be consistent with rates issued by the IRS in Revenue Ruling 96-7 for use in determining current liability for disabled lives prior to January 1, 1995.

OCCUPATIONAL VS. NON OCCUPATIONAL DEATH: 20% of all deaths are assumed to be due to occupational causes.

OCCUPATIONAL VS. NON OCCUPATIONAL DISABILITY: 75% of disabilities are assumed to be due to occupational causes. For occupational disabilities the average benefit percentage is assumed to be 60.0%.

PERCENT MARRIED: 75% of employees who die before retirement are assumed to be married with the husband 3 years older than the wife. 85% of employees who die after retirement are assumed to be married with the husband 3 years older than the wife.

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 actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets cannot be more than 120% or less than 80% of the market value of assets.

VALUATION METHOD: Entry age normal actuarial cost method. See Schedule F for a brief description of this method.

POST-RETIREMENT BENEFIT INCREASES: 3% Annually



SCHEDULE F

ACTUARIAL COST METHOD

1. 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 (currently 7.50%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. 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 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 to obtain the present value of all expected benefits payable from the Plan on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the Plan are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the entry age normal actuarial cost method. Under this method, a calculation is made to determine the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded 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 Plan.



SCHEDULE G

**SUMMARY OF MAIN PLAN PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES**

| | |
|---------------------------------|---|
| Member | Sworn members of the Lexington-Fayette Urban County Government Division of Police and Division of Fire and Emergency Services. |
| Membership Service | Service rendered on or after the date of establishment of the fund or the fund of a city existing within the boundaries of the government immediately prior to the establishment of the urban-county government. |
| Total Service | Prior service, membership service, and service credit purchased by a member as provided in KRS 67A.402. |
| Average Salary | The highest average salary of the member for any three consecutive years of service. |
| Retirement Annuity | |
| Eligibility | Anytime after completion of 20 years of Total Service (including service purchased up to 4 years). |
| Benefit | Annuity is 2½% of Average Salary multiplied by years of Total Service. The minimum monthly benefit is \$1,250. Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form. |
| Occupational Disability Benefit | |
| Eligibility | No requirements. |
| Benefit | Annuity equal to a minimum of 60% of member's last rate of salary, increased above the 60% minimum by ½ the amount by which the member's percentage of disability exceeds 20%, but not greater than 75%. The member's percentage of disability shall be the average of the impairment rating determined by two physicians selected by the Board using the American Medical Association "Guide to the Evaluation of Permanent Impairment". If a member is eligible for a service retirement annuity and the amount of the service retirement annuity exceeds the amount of the disability benefit, then the member may elect to receive an additional service retirement annuity equal to this difference. |



Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.

In addition, any minor children will receive benefits as provided under the occupational death benefit provisions.

Non-Occupational Disability Benefit

Eligibility

5 years of Total Service.

Benefit

2½% of Average Salary times years of Total Service subject to a minimum payment of 25% of Average Salary and a maximum payment of 75% of Average Salary.

Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.

In addition, any minor children will receive benefits provided under the non-occupational death benefit provisions.

Termination Benefit

If a member is terminated with less than 20 years of total service credit, he is entitled to a return of his accumulated contributions, without interest.

Occupational Death Benefit

Eligibility

No requirements.

Benefit

Surviving Spouse receives immediate annuity equal to 60% of the member's last rate of salary until death or remarriage.

In addition, 10% of the member's last rate of salary is payable for each minor child until each child attains age 18 (age 23 if involved in educational activities). Maximum total income is 75% of final rate of salary.

If no surviving spouse or upon remarriage, then minor children will receive a benefit based on the following schedule:



| | |
|------------------------------|---------------|
| One minor child | 50% of Salary |
| Two minor children | 65% of Salary |
| Three of more minor children | 75% of Salary |

Non-Occupational Death Benefit

Eligibility 5 Years of Total Service, married 6 months prior to death.

Benefit Surviving spouse received immediate annuity equal to 1½% of the Average Salary multiplied by years of Total Service, until death or remarriage. The minimum benefit is 15% of Average Salary. In addition, this annuity is increased by ½ for the first minor child and by ¼ for each additional child. Maximum total income is 75% of Average Salary.

If no surviving spouse or upon remarriage, then minor children will receive a benefit based on the following schedule:

| | |
|------------------------------|---------------|
| One minor child | 50% of Salary |
| Two minor children | 65% of Salary |
| Three of more minor children | 75% of Salary |

Member Contributions

Each active member contributes 11% of current salary.

Employer Contributions

The government shall make current contributions to the fund on an actuarially funded basis. Such contributions shall be equal to the sum of:

- (1) An amount resulting from the application of a rate percent of salaries of active members determined under the entry age normal cost funding method (fixed by the board every two years), and
- (2) An amount resulting from the application of a rate percent of salaries of active members which will provide each year regular interest on any remaining liability for prior service.

In any event, the total contribution of the government shall be at least 17% of salaries of active members participating in the fund.

Post Retirement Cost-of-Living Increases

Each retired member will have his pension increased each year by an amount, to be determined by the board, of not less than 2.00% nor more than 5.00%, compounded annually. This increase shall also apply to beneficiaries of deceased members.



SCHEDULE H

TABLE 1

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE GROUPS

AS OF JULY 1, 2012

| Attained Age | Completed Years of Service | | | | | | | | | | |
|----------------------|----------------------------|---------------|---------------|---------------|---------------|--------------|--------------|-------------|----------|------|-----------------|
| | 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 | Total |
| Under 25 Avg. Pay | 5 31,344 | 1 30,241 | | | | | | | | | 6 31,160 |
| 25 to 29 Avg. Pay | 19 33,180 | 39 37,524 | 17 46,227 | | | | | | | | 75 38,396 |
| 30 to 34 Avg. Pay | 13 32,582 | 59 37,085 | 124 45,104 | 21 54,539 | | | | | | | 217 43,087 |
| 35 to 39 Avg. Pay | 4 35,034 | 25 36,440 | 92 45,586 | 119 56,252 | 15 66,949 | | | | | | 255 50,758 |
| 40 to 44 Avg. Pay | | 12 36,328 | 38 46,119 | 81 56,332 | 93 66,922 | 12 74,013 | | | | | 236 58,743 |
| 45 to 49 Avg. Pay | | 1 33,305 | 20 47,834 | 20 55,904 | 50 65,791 | 41 79,359 | 9 84,565 | | | | 141 66,755 |
| 50 to 54 Avg. Pay | | | 1 52,814 | 9 55,982 | 14 64,156 | 15 71,834 | 21 83,411 | | | | 60 71,400 |
| 55 to 59 Avg. Pay | | | 2 39,566 | 1 57,873 | 4 72,746 | 4 72,581 | 5 82,995 | 4 76,948 | | | 20 72,054 |
| 60 to 64 Avg. Pay | | | 1 51,024 | 1 56,215 | 1 51,042 | | | 1 77,031 | | | 4 58,828 |
| 65 to 69 Avg. Pay | | | | | | | | | | | |
| 70 & up Avg. Pay | | | | | | | | | | | |
| Total Avg. Pay | 41 32,948 | 137 36,948 | 295 45,644 | 252 56,104 | 177 66,428 | 72 76,524 | 35 83,648 | 5 76,964 | | | 1,014 53,842 |



TABLE 2
NUMBER OF RETIRED MEMBERS AND BENEFICIARIES
AND THEIR BENEFITS BY AGE

| <u>Attained Age</u> | <u>Number of Members</u> | <u>Total Annual Benefits</u> | <u>Average Annual Benefit</u> |
|---------------------|--------------------------|------------------------------|-------------------------------|
| 50 & Under | 153 | \$ 5,977,376 | \$ 39,068 |
| 51 – 55 | 115 | 5,740,686 | 49,919 |
| 56 – 60 | 120 | 6,213,191 | 51,777 |
| 61 – 65 | 197 | 8,791,735 | 44,628 |
| 66 – 70 | 154 | 6,547,664 | 42,517 |
| 71 – 75 | 125 | 5,080,495 | 40,644 |
| 76 – 80 | 73 | 2,762,631 | 37,844 |
| Over 80 | <u>60</u> | <u>1,847,220</u> | <u>30,787</u> |
| Total | 997 | \$ 42,960,999 | \$ 43,090 |