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September 16, 2025

Board of Trustees

City of North Kansas City Policemen's and Fireman's Retirement Fund

Cost statement of Proposed Changes to City of North Kansas City Policemen's and Fireman's Retirement Fund ("the Plan")

Dear Board Members:

According to Missouri Revised Statute 105.665: 1. The legislative body or committee thereof which determines the amount and type of plan benefits to be paid shall, before taking final action on any substantial proposed change in plan benefits, cause to be prepared a statement regarding the cost of such change(s).

The changes under consideration involve enhancements to the Plan's retirement benefits. Under consideration are the following:

A A Plan provision that would change the benefit multiplier for years of service between 20 and 30 years from 1% to 2%. This change would increase the maximum retirement benefit from 60% of Average Monthly Salary to 70%.

B A Plan provision that would increase the combination of the City's percentage of pay contributions and the Member's percentage of pay contributions from 10% to 12.9%.

The following cost statement employs the methods used in preparing the most recent periodic actuarial valuation for the plan and addresses the requirements in the order they are requested in the Statute:

(1) The total level normal cost of employer provided plan benefits currently in effect, is \$1,316,043. Expressed as a percent of active employee payroll is 18.2%.

(2) The contribution for unfunded accrued liabilities currently payable by the plan is \$(212,022). Expressed as a percent of active employee payroll over a period of 11-20 years is (2.9)%;

(3) The total employer contribution rate, which is the total of the normal cost percent plus the contribution percent for unfunded accrued liabilities adjusted with interest is \$1,139,902. Expressed as a percent of active employee payroll over a period of 11-20 years is 15.8%;

(4) The legislative body is currently paying more than the total contribution rate as defined in subdivision (3) above;



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(5) The plan's actuarial value of assets, market value of assets, actuarial accrued liability, and funded ratio as defined in section 105.660 as of the most recent actuarial valuation is:

Actuarial Value of Assets	\$69,471,640
Market Value of Assets	\$73,432,420
Actuarial Accrued Liability	\$66,602,422
Funded Ratio	104.3%

(6) The total post-change contribution rate is \$1,441,714. Expressed as a percent of active employee payroll is 20.0%. We expect that contributions will remain higher than recommended for the foreseeable future.

(7) Please see the tables appearing in Appendix A of this letter, showing projections of the actuarial measurements required by RSMo 105.665.

(8) Additional contributions may be mandated by the proposed change as noted above. These increases in contributions expected due to the benefit enhancements are less than the proposed increase in contributions from 10% to 12.9% of covered pay.

(9) The proposed change would not impair the ability of the plan to meet the obligations thereof in effect at the present time.

(10) All assumptions relied upon to evaluate the present financial condition of the plan and all assumptions relied upon to evaluate the impact of the proposed change upon the financial condition of the plan, which are those assumptions used in preparing the most recent periodic actuarial valuation for the plan, are:

(a) Investment return of 6.5%, net of expenses;

(b) Salary scale consists of a 4% inflation component and an age-based merit scale that uses 2.5% increases up to age 35, 2.0% increases from age 36 to 40, 1.0% increases from age 41 to 45, and 0.0% increases after age 45.

(c) Mortality of employees and officials, and other persons who may receive benefits under the plan is the Public Safety 2010 Bottom Quartile table for employees and annuitants, projected with generational improvements using the most recently available projection scale (MP 2024);



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(d) Withdrawal (turnover) is illustrated in the following table:

Selected Rates

Age	Probability of Termination
20	0.195
28	0.130
36	0.069
44	0.045
52 and above	0.000

(e) Disability rates are illustrated in the following table:

Selected Rates

Age	Probability of Termination
25	0.0015
30	0.002
40	0.005
50	0.008

(f) Retirement rates are based on the following table:

Age	Probability of Retirement
45-49	5%
50-54	10%
55	30%
56-64	20%
65+	100%

(g) There has been no significant change in active employee group size;

(11) As the Plan actuary I certify that the assumptions used for the valuation produce results which, in the aggregate, are reasonable;



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(12) Actuarial Method Used for the Valuation – Entry Age Normal

Normal Cost. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

The annual normal costs for each individual active Member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the Member's benefit at the time of retirement;

Each annual normal cost is a constant percentage of the Member's year-by-year projected covered pay.

Before these changes were considered, the excess of accrued assets over actuarial accrued assets was amortized as a level percent-of-payroll over 11-20 years using layered amortization.

Because the plan has sufficient assets to fully fund the actuarial liability even after the proposed benefit improvements are adopted, the amortization bases will be eliminated after the change is implemented.

Respectfully submitted,

Traci M. Christian, EA, MAAA, MSEA, FCA

Appendix A

Projections of Measures under RSMo 105.665 2.(7)

The projections in this appendix show that the additional contributions contemplated in the proposed changes more than make up for the costs of the additional benefits, and the plan becomes better funded in the long term due to the additional contributions.

Projection of Funded Status and Recommended Contributions

Current Benefit Formula and 10% Pay-Related Contributions

Assumes the Actuarial Recommended Contribution is Made Each Year

Year	Total Normal Cost	Net Normal Cost	Amortization	Recommended Contribution	Expected Tax Contribution	Additional Recommended	Payroll	Contribution as a % of Payroll	Benefit Payments	Actuarial Value of Assets	Accrued Liability	Unfunded Liability	Funded Ratio
2024	1,316,043	593,557		612,847	900,000	-	7,224,863	8.5%	3,569,969	69,471,640	66,602,422	(2,869,218)	104.3%
2025	1,368,685	617,299		637,361	909,000	-	7,513,858	8.5%	3,736,885	73,083,476	68,647,172	(4,436,304)	106.5%
2026	1,423,432	641,991		662,856	918,000	-	7,814,412	8.5%	3,879,241	74,987,170	70,708,554	(4,278,616)	106.1%
2027	1,480,369	667,671		689,370	927,000	-	8,126,988	8.5%	4,104,168	80,118,129	72,815,249	(7,302,881)	110.0%
2028	1,539,584	694,377		716,945	937,000	-	8,452,068	8.5%	4,280,743	84,725,829	74,887,280	(9,838,550)	113.1%
2029	1,601,168	722,152		745,622	946,000	-	8,790,151	8.5%	4,371,520	87,643,119	76,974,743	(10,668,376)	113.9%
2030	1,665,214	751,039		775,447	955,000	-	9,141,757	8.5%	4,469,066	90,700,407	79,169,750	(11,530,657)	114.6%
2031	1,731,823	781,080		806,465	965,000	-	9,507,427	8.5%	4,608,250	93,901,201	81,474,927	(12,426,274)	115.3%
2032	1,801,096	812,323		838,724	975,000	-	9,887,724	8.5%	4,743,960	97,214,311	83,857,170	(13,357,141)	115.9%
2033	1,873,140	844,816		872,273	984,000	-	10,283,233	8.5%	4,849,756	100,652,135	86,327,914	(14,324,220)	116.6%
2034	1,948,065	878,609		907,164	994,000	-	10,694,562	8.5%	4,977,635	104,254,214	88,926,749	(15,327,465)	117.2%
2035	2,025,988	913,753		943,450	1,004,000	-	11,122,345	8.5%	5,102,656	108,011,080	91,642,269	(16,368,811)	117.9%
2036	2,107,027	950,303		981,188	1,014,000	-	11,567,238	8.5%	5,210,145	111,937,444	94,488,201	(17,449,242)	118.5%
2037	2,191,308	988,316		1,020,436	1,024,000	-	12,029,928	8.5%	5,358,201	116,064,190	97,494,444	(18,569,746)	119.0%
2038	2,278,961	1,027,848		1,061,253	1,035,000	26,253	12,511,125	8.5%	5,480,569	120,364,297	100,632,983	(19,731,313)	119.6%
2039	2,370,119	1,068,962		1,103,703	1,045,000	58,703	13,011,570	8.5%	5,585,593	124,905,309	103,942,533	(20,962,776)	120.2%
2040	2,464,924	1,111,721		1,147,851	1,055,000	92,851	13,532,033	8.5%	5,646,099	129,728,091	107,455,850	(22,272,241)	120.7%
2041	2,563,521	1,156,189		1,193,766	1,066,000	127,766	14,073,314	8.5%	5,727,806	134,900,724	111,236,027	(23,664,697)	121.3%
2042	2,666,062	1,202,437		1,241,516	1,077,000	164,516	14,636,247	8.5%	5,801,761	140,428,011	115,282,558	(25,145,453)	121.8%
2043	2,772,704	1,250,534		1,291,177	1,087,000	204,177	15,221,697	8.5%	5,889,513	146,345,122	119,624,962	(26,720,160)	122.3%
2044	2,883,612	1,300,556		1,342,824	1,098,000	244,824	15,830,565	8.5%	6,001,622	152,667,425	124,272,592	(28,394,833)	122.8%
2045	2,998,957	1,352,578		1,396,537	1,109,000	287,537	16,463,787	8.5%	6,096,397	159,400,557	129,224,683	(30,175,874)	123.4%
2046	3,118,915	1,406,681		1,452,398	1,120,000	332,398	17,122,339	8.5%	6,156,543	166,593,745	134,523,647	(32,070,098)	123.8%
2047	3,243,672	1,462,948		1,510,494	1,131,000	379,494	17,807,232	8.5%	6,252,346	174,317,456	140,232,698	(34,084,758)	124.3%
2048	3,373,419	1,521,466		1,570,914	1,143,000	427,914	18,519,521	8.5%	6,305,263	182,574,362	146,346,786	(36,227,576)	124.8%

Projection of Funded Status and Recommended Contributions**Benefit Formula Improved to Accrual of 2% times Average Salary for Service Years from 20 to 30****Pay-Related Contributions Increased from 10% to 12.9% of Pay****Assumes the Actuarial Recommended Contribution is Made Each Year**

Year	Total Normal Cost	Net Normal Cost	Amortization	Recommended Contribution	Expected Tax Contribution	Additional Recommended	Payroll	Contribution as a % of Payroll	Benefit Payments	Actuarial Value of Assets	Accrued Liability	Unfunded Liability	Funded Ratio
2024	1,396,333	464,326		479,416	900,000	-	7,224,863	6.6%	3,578,567	69,471,640	69,311,967	(159,673)	100.2%
2025	1,452,186	482,899		498,593	909,000	-	7,513,858	6.6%	3,763,305	73,447,582	71,609,469	(1,838,113)	102.6%
2026	1,510,274	502,215		518,537	918,000	-	7,814,412	6.6%	3,922,313	75,735,567	73,925,051	(1,810,516)	102.4%
2027	1,570,685	522,303		539,278	927,000	-	8,126,988	6.6%	4,169,121	81,274,120	76,288,832	(4,985,287)	106.5%
2028	1,633,512	543,195		560,849	937,000	-	8,452,068	6.6%	4,368,338	86,309,451	78,615,768	(7,693,683)	109.8%
2029	1,698,853	564,923		583,283	946,000	-	8,790,151	6.6%	4,470,589	89,675,572	80,955,175	(8,720,397)	110.8%
2030	1,766,807	587,520		606,615	955,000	-	9,141,757	6.6%	4,581,523	93,216,472	83,410,656	(9,805,816)	111.8%
2031	1,837,479	611,021		630,879	965,000	-	9,507,427	6.6%	4,735,466	96,936,642	85,983,575	(10,953,067)	112.7%
2032	1,910,978	635,462		656,114	975,000	-	9,887,724	6.6%	4,890,733	100,806,526	88,640,054	(12,166,472)	113.7%
2033	1,987,417	660,880		682,359	984,000	-	10,283,233	6.6%	5,013,039	104,836,754	91,387,167	(13,449,587)	114.7%
2034	2,066,914	687,315		709,653	994,000	-	10,694,562	6.6%	5,158,014	109,073,116	94,267,970	(14,805,147)	115.7%
2035	2,149,591	714,808		738,039	1,004,000	-	11,122,345	6.6%	5,303,336	113,509,076	97,271,002	(16,238,075)	116.7%
2036	2,235,574	743,400		767,561	1,014,000	-	11,567,238	6.6%	5,428,359	118,159,798	100,407,236	(17,752,562)	117.7%
2037	2,324,997	773,136		798,263	1,024,000	-	12,029,928	6.6%	5,597,249	123,062,851	103,709,812	(19,353,038)	118.7%
2038	2,417,997	804,062		830,194	1,035,000	-	12,511,125	6.6%	5,738,464	128,192,098	107,147,912	(21,044,186)	119.6%
2039	2,514,717	836,224		863,402	1,045,000	-	13,011,570	6.6%	5,861,675	133,594,706	110,762,729	(22,831,976)	120.6%
2040	2,615,306	869,673		897,938	1,055,000	-	13,532,033	6.6%	5,936,948	139,308,991	114,588,301	(24,720,690)	121.6%
2041	2,719,918	904,460		933,855	1,066,000	-	14,073,314	6.6%	6,033,355	145,407,808	118,691,942	(26,715,866)	122.5%
2042	2,828,714	940,639		971,209	1,077,000	-	14,636,247	6.6%	6,121,927	151,898,578	123,074,191	(28,824,387)	123.4%
2043	2,941,863	978,264		1,010,058	1,087,000	-	15,221,697	6.6%	6,225,027	158,818,220	127,765,705	(31,052,514)	124.3%
2044	3,059,538	1,017,395		1,050,460	1,098,000	-	15,830,565	6.6%	6,355,620	166,182,076	132,776,220	(33,405,856)	125.2%
2045	3,181,919	1,058,091		1,092,478	1,109,000	-	16,463,787	6.6%	6,468,584	173,995,281	138,102,904	(35,892,378)	126.0%
2046	3,309,196	1,100,414		1,136,178	1,120,000	16,178	17,122,339	6.6%	6,544,208	182,309,019	143,789,523	(38,519,496)	126.8%
2047	3,441,564	1,144,431		1,181,625	1,131,000	50,625	17,807,232	6.6%	6,658,914	191,214,828	149,903,241	(41,311,586)	127.6%
2048	3,579,226	1,190,208		1,228,890	1,143,000	85,890	18,519,521	6.6%	6,728,117	200,733,584	156,436,889	(44,296,696)	128.3%

Uses 6.5% assumed rate of return and discount rate. Assumes payroll and expected tax contributions are made.

The results presented here are ESTIMATES. They are based on the data, assumptions, methods and plan provisions outlined in the October 1, 2024 Valuation Report.

These results are for **discussion purposes only** and should not be relied upon for purposes of making cash contributions to the Plan nor for any other purposes.