



**City of Evanston
Firefighters' Pension
Fund**

Actuarial Valuation

*As of January 1, 2025
Contributions Applicable to the Plan/
Fiscal Year Ending December 31, 2026*

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

July 29, 2025

Board of Trustees
City of Evanston Firefighters' Pension Fund

Re: City of Evanston Firefighters' Pension Fund

Dear Board,

This report details the annual actuarial valuation of the City of Evanston Firefighters' Pension Fund as of January 1, 2025.

The valuation was performed to measure the plan's liability and funding levels and to determine the actuarially appropriate funding requirements for the plan year ending December 31, 2026. This report was prepared for use by the Board. Use of the results for other purposes may not be applicable and could produce significantly different results.

DATA AND ASSUMPTIONS

In preparing this report, we have relied on personnel and plan design supplied by the Board. Assets were determined based on financial reports supplied by the Board. In our opinion, the assumptions used in the valuation, as adopted by the Board, represent reasonable expectations of anticipated fund experience. Other sets of assumptions and methods could also be reasonable and could produce materially different results. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

DISCLOSURES AND LIMITATIONS

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such 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); and changes in plan provisions or applicable law. Due to the limited scope of this report, we did not provide an analysis of these potential differences.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the

software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

ACTUARIAL CERTIFICATION

The valuation has been conducted in accordance with all applicable laws and regulations, as well as generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board; specifically No. 4 Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, No. 23 Data Quality, No. 27 Selection of Economic Assumptions for Measuring Pension Obligations, No. 35 Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations, No. 44 Selection and Use of Asset Valuation Methods for Pension Valuations, and No. 51 Assessment and Disclosure of Risk Associated with Measuring Pension Obligations.

In our opinion, the Minimum Required Contribution set forth in this report constitutes a reasonable actuarially determined contribution under Actuarial Standard of Practice No. 4.

The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on this report has any direct financial interest or indirect material interest in the City of Evanston, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Evanston Firefighters' Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

Respectfully submitted,
Foster & Foster, Inc.



Jason L. Franken, FSA, EA, MAAA



Heidi E. Andorfer, FSA, EA, MAAA

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SUMMARY

The regular annual actuarial valuation of the City of Evanston Firefighters' Pension Fund, performed as of January 1, 2025, has been completed and the results are presented in this report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2026.

The contribution requirements, compared with those set forth in the January 1, 2024 actuarial report, are as follows:

Valuation Date	1/1/2025	1/1/2024
Applicable to Fiscal Year Ending	12/31/2026	12/31/2025
FUNDED STATUS		
Total Actuarial Accrued Liability	\$ 239,524,823	\$ 230,107,790
Actuarial Value of Assets	128,409,299	118,383,956
Unfunded Actuarial Accrued Liability	\$ 111,115,524	\$ 111,723,834
Funded Ratio	53.6%	51.4%
 CONTRIBUTION REQUIREMENTS		
Normal Cost	\$ 3,982,855	\$ 3,930,318
Administrative Expenses	128,910	123,015
Amortization Payment	11,375,738	11,050,194
Total Recommended Contribution	\$ 15,487,503	\$ 15,103,527
Member Contributions (Est.)	(1,340,038)	(1,292,609)
City Recommended Contribution	\$ 14,147,465	\$ 13,810,918
 CONTRIBUTION REQUIREMENTS (AS A PERCENTAGE OF PAYROLL)		
Normal Cost	28.1%	28.7%
Administrative Expenses	0.9%	0.9%
Amortization Payment	80.3%	80.8%
Total Recommended Contribution	109.3%	110.4%
Member Contributions (Est.)	(9.5)%	(9.5)%
City Recommended Contribution	99.8%	100.9%

As you can see, the Total Required Contribution shows an increase from the January 1, 2024 actuarial valuation report. The increase is mainly attributable to net unfavorable plan experience.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included inactive mortality experience and an average salary increase of 7.54% which exceeded the 4.36% assumption. These losses were offset in part by a gain associated with an investment return of 6.80% (Actuarial Asset Basis) which exceeded the 6.50% assumption.

CHANGES SINCE PRIOR VALUATION

PLAN CHANGES

There have been no plan changes since the prior valuation.

ACTUARIAL ASSUMPTION/METHOD CHANGES

There have been no assumption or method changes since the prior valuation.

VALUATION RESULTS

PRINCIPAL VALUATION RESULTS

Valuation Date	1/1/2025	1/1/2024
PARTICIPANT DATA		
Actives	112	115
Service Retirees	84	81
Beneficiaries	41	41
Disability Retirees	23	24
Terminated Vested	9	7
Total	<u>269</u>	<u>268</u>
Total Annual Payroll	\$ 14,172,799	\$ 13,671,166
Projected Annual Payroll	\$ 14,172,799	\$ 13,671,166
Annual Rate of Payments to:		
Service Retirees	\$ 8,194,651	\$ 7,750,570
Beneficiaries	2,088,866	1,953,576
Disability Retirees	1,780,651	1,795,286
Terminated Vested	32,642	0
ASSETS		
Actuarial Value (AVA)	\$ 128,409,299	\$ 118,383,956
Market Value (MVA)	129,409,918	114,786,199
LIABILITIES		
Present Value of Benefits		
Actives		
Retirement Benefits	\$ 98,126,286	\$ 95,729,007
Disability Benefits	10,500,049	10,283,648
Death Benefits	1,182,504	1,150,795
Vested Benefits	3,550,521	3,474,077
Service Retirees	115,514,401	109,612,090
Beneficiaries	17,932,347	17,162,386
Disability Retirees	26,277,429	26,738,966
Terminated Vested	359,024	141,840
Total	<u>\$ 273,442,561</u>	<u>\$ 264,292,809</u>

Valuation Date	1/1/2025	1/1/2024
LIABILITIES (CONTINUED)		
Present Value of Future Salaries	\$ 146,283,458	\$ 142,436,501
Present Value of Member Contributions	\$ 13,831,101	\$ 13,467,371
Normal Cost		
Retirement	\$ 2,862,157	\$ 2,841,772
Disability	581,447	567,065
Death	80,932	77,882
Vesting	215,234	203,720
Total Normal Cost	<u>\$ 3,739,770</u>	<u>\$ 3,690,439</u>
Present Value of Future Normal Cost (EAN)	\$ 33,917,738	\$ 34,185,019
Actuarial Accrued Liability (EAN AL)		
Actives		
Retirement	\$ 72,018,266	\$ 69,268,432
Disability	5,004,814	4,843,774
Death	347,170	337,958
Vesting	2,071,372	2,002,344
Inactives	160,083,201	153,655,282
Total Actuarial Accrued Liability	<u>\$ 239,524,823</u>	<u>\$ 230,107,790</u>
Unfunded Actuarial Accrued Liability (UAAL)	\$ 111,115,524	\$ 111,723,834
Funded Ratio (AVA / EAN AL)	53.6%	51.4%

ACTUARIAL PRESENT VALUE OF ACCRUED BENEFITS

Valuation Date	1/1/2025	1/1/2024
Vested Accrued Benefits		
Inactives	\$ 160,083,201	\$ 153,655,282
Actives	31,142,709	29,092,157
Member Contributions	12,604,623	12,077,232
Total	\$ 203,830,533	\$ 194,824,671
Non-vested Accrued Benefits	3,037,775	3,060,692
Total Present Value of Accrued Benefits (PVAB)	\$ 206,868,308	\$ 197,885,363
Funded Ratio (MVA / PVAB)	62.6%	58.0%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	\$ 0	
Assumption Changes	0	
Plan Experience	8,173,574	
Benefits Paid	(11,673,780)	
Interest	12,483,151	
Other	0	
Total	\$ 8,982,945	

CONTRIBUTION REQUIREMENTS

Valuation Date	1/1/2025	1/1/2024
Applicable to Fiscal Year Ending	12/31/2026	12/31/2025
CALCULATION OF CONTRIBUTION REQUIREMENT¹		
Normal Cost	\$ 3,982,855	\$ 3,930,318
% of Total Annual Payroll	28.1%	28.7%
Administrative Expenses	128,910	123,015
% of Total Annual Payroll	0.9%	0.9%
UAAL Amortization Payment	11,375,738	11,050,194
% of Projected Annual Payroll	80.3%	80.8%
Total Recommended Contribution	\$ 15,487,503	\$ 15,103,527
% of Projected Annual Payroll	109.3%	110.4%
Expected Member Contributions	(1,340,038)	(1,292,609)
% of Projected Annual Payroll	(9.5)%	(9.5)%
Expected City Contribution	\$ 14,147,465	\$ 13,810,918
% of Projected Annual Payroll	99.8%	100.9%
PAST CONTRIBUTIONS FOR PLAN YEAR ENDING 12/31/2024		
Total Recommended Contribution	\$ 13,705,764	
City Requirement	12,355,183	
Actual Contributions Made:		
Members (excluding buyback)	1,350,581	
City	12,355,183	
Total	\$ 13,705,764	

¹ Contributions developed as of 1/1/2025 displayed above have been adjusted to account for assumed interest.

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

Valuation Date	1/1/2025
Contribution Determined, Prior Year	\$ 13,810,918
Summary of Impact on Contribution by Component	
Change in Normal Cost	52,537
Change in Assumed Administrative Expense	5,895
Investment Return (Actuarial Asset Basis)	(36,683)
Salary Increases	127,575
Active Decrements	(23,733)
Inactive Mortality	128,352
Change in Expected Member Contributions	(47,429)
Other	130,033
Total Change in Contribution	\$ 336,547
Contribution Determined, Current Year	\$ 14,147,465

OTHER INFORMATION

ILLUSTRATION OF AMORTIZATION OF THE TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY

Year	Projected Unfunded Actuarial Accrued Liability
2025	111,115,524
2026	106,962,295
2027	102,539,106
2031	81,778,247
2034	62,390,457
2038	30,128,361
2041	0

5-YEAR COMPARISON OF ACTUAL AND ASSUMED SALARY INCREASES

Year Ended	Actual	Assumed
12/31/2024	7.54%	4.36%
12/31/2023	14.44%	4.28%
12/31/2022	8.20%	4.35%
12/31/2021	2.61%	4.24%
12/31/2020	3.44%	4.32%

5-YEAR COMPARISON OF INVESTMENT RETURN ON MARKET VALUE AND ACTUARIAL VALUE OF ASSETS

Year Ended	Market Value	Actuarial Value	Assumed
12/31/2024	10.98%	6.80%	6.50%
12/31/2023	13.86%	7.32%	6.50%
12/31/2022	(13.41)%	5.35%	6.25%
12/31/2021	13.36%	10.60%	6.25%
12/31/2020	12.64%	8.94%	6.25%

ACTUARIAL (GAIN)/LOSS

DEVELOPMENT OF ACTUARIAL (GAIN)/LOSS

	Actuarial Accrued Liability	Actuarial Valuation of Assets	Unfunded Actuarial Accrued Liability
Actual, Beginning of Year	\$230,107,790	\$118,383,956	\$ 111,723,834
Total Normal Cost	3,690,439		3,690,439
Benefit Payments	(11,673,779)	(11,673,779)	0
Administrative Expenses		(121,042)	121,042
Employer Contribution		12,355,183	(12,355,183)
Member Contribution		1,350,581	(1,350,581)
Interest	14,823,460	7,756,085	7,067,375
Expected, End of Year	\$236,947,910	\$128,050,984	\$ 108,896,926
Actual End of Year (before changes)	239,524,823	128,409,299	111,115,524
Actuarial (Gain)/Loss	\$ 2,576,913	\$ (358,315)	\$ 2,218,598

SUMMARY OF COMPONENTS OF (GAIN)/LOSS

Investment Return (Actuarial Asset Basis)	\$ (358,315)
Salary Increases	1,246,123
Active Decrements	(231,816)
Inactive Mortality	1,253,714
Other	308,892
Change due to Actuarial (Gain)/Loss	\$ 2,218,598

UNFUNDED ACTUARIAL ACCRUED LIABILITY

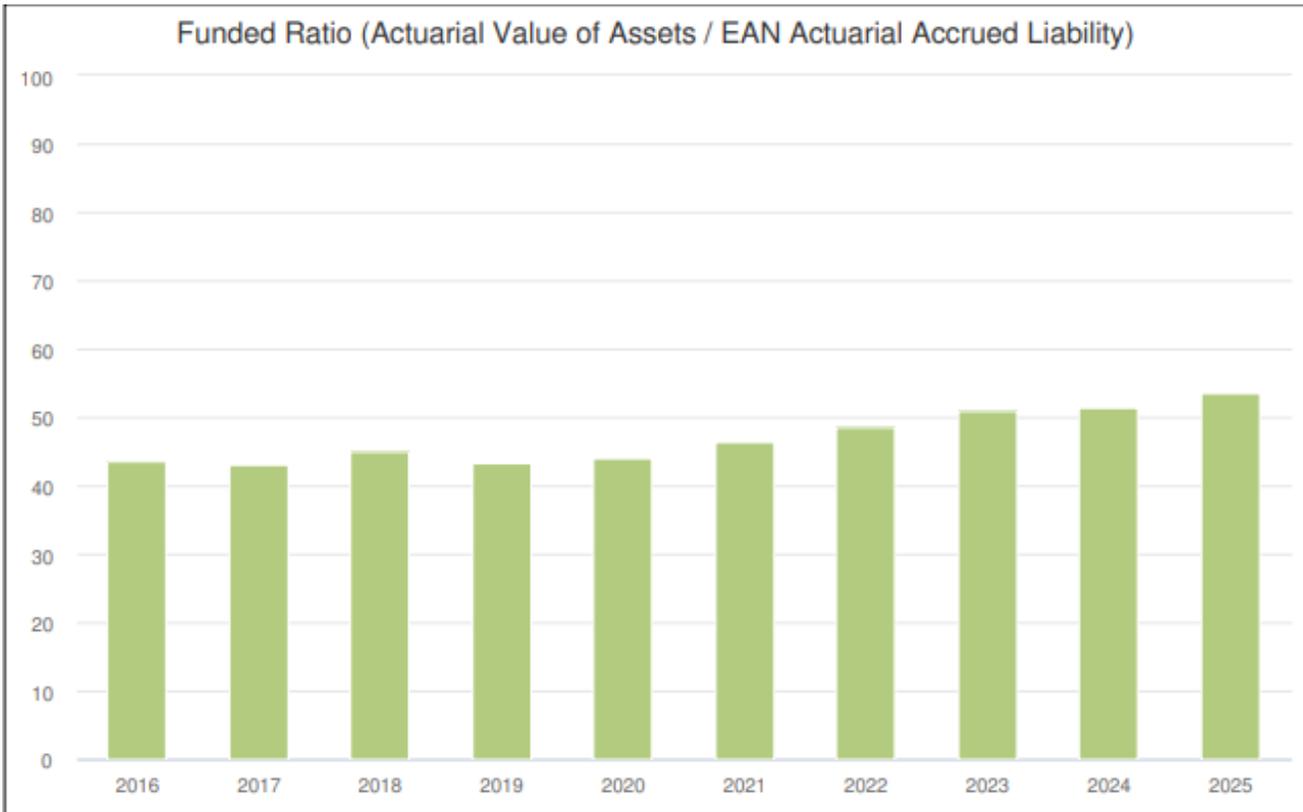
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

Unfunded Actuarial Accrued Liability as of January 1, 2024	\$	111,723,834
Expected Unfunded Actuarial Accrued Liability as of January 1, 2025	\$	108,896,926
Change to UAAL due to Actuarial (Gain)/Loss		2,218,598
Change to UAAL due to Assumption Change		0
Unfunded Actuarial Accrued Liability as of January 1, 2025	\$	111,115,524
UAAL Subject to Amortization (100% AAL less Actuarial Assets)	\$	111,115,524

AMORTIZATION PAYMENT

	Date Established	Years Remaining	Current Balance	Payment
UAAL	1/1/2025	16	111,115,524	10,681,444

HISTORY OF FUNDING PROGRESS



PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2025	243,243	12,063,131	12,306,374
2026	653,128	12,021,924	12,675,052
2027	1,077,491	12,128,660	13,206,151
2028	1,529,146	12,205,170	13,734,316
2029	1,973,727	12,291,494	14,265,221
2030	2,440,301	12,340,566	14,780,867
2031	2,902,389	12,393,442	15,295,831
2032	3,415,423	12,404,432	15,819,855
2033	3,935,155	12,420,410	16,355,565
2034	4,550,789	12,448,995	16,999,784
2035	5,185,363	12,386,251	17,571,614
2036	5,839,702	12,293,488	18,133,190
2037	6,511,704	12,168,757	18,680,461
2038	7,209,689	12,010,281	19,219,970
2039	7,886,512	11,859,332	19,745,844
2040	8,555,766	11,633,230	20,188,996
2041	9,209,493	11,372,377	20,581,870
2042	9,868,553	11,077,122	20,945,675
2043	10,542,681	10,781,210	21,323,891
2044	11,218,729	10,423,812	21,642,541
2045	11,913,937	10,038,467	21,952,404
2046	12,573,609	9,628,430	22,202,039
2047	13,167,137	9,197,145	22,364,282
2048	13,781,324	8,748,236	22,529,560
2049	14,451,390	8,285,477	22,736,867
2050	15,180,325	7,812,781	22,993,106
2051	15,818,553	7,334,211	23,152,764
2052	16,410,609	6,853,809	23,264,418
2053	16,947,542	6,375,558	23,323,100
2054	17,523,978	5,903,138	23,427,116
2055	18,016,225	5,439,752	23,455,977
2056	18,463,746	4,988,362	23,452,108
2057	18,830,513	4,551,319	23,381,832
2058	19,118,906	4,130,551	23,249,457
2059	19,352,987	3,727,749	23,080,736
2060	19,525,843	3,344,332	22,870,175
2061	19,636,994	2,981,630	22,618,624
2062	19,687,099	2,640,955	22,328,054
2063	19,676,454	2,323,403	21,999,857
2064	19,605,562	2,029,836	21,635,398

ASSET INFORMATION

STATEMENT OF FIDUCIARY NET POSITION

	Market Value 12/31/2024
ASSETS	
Cash and Cash Equivalents:	
Checking Account	1,089,334
Cash	1,010,549
Total Cash and Equivalents	\$ 2,099,883
RECEIVABLES	
From Municipality	9,677
Prepays	9,254
Accrued Past Due Interest	5,513
Miscellaneous	3,555
Total Receivable	\$ 27,999
INVESTMENTS	
Pooled/Common/Commingled Funds	127,289,161
Total Investments	\$ 127,289,161
TOTAL ASSETS	\$ 129,417,043
LIABILITIES	
Payables:	
Miscellaneous	7,125
Total Liabilities	\$ 7,125
NET POSITION RESTRICTED FOR PENSIONS	\$ 129,409,918

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	Year Ended 12/31/2024
ADDITIONS	
Contributions:	
Member	\$ 1,350,581
Employer	12,355,183
Total Contributions	<u>\$ 13,705,764</u>
Investment Income:	
Net Increase in Fair Value of Investments	\$ 10,121,524
Interest & Dividends	2,739,857
Less Investment Expense ¹	(148,605)
Net Investment Income	<u>\$ 12,712,776</u>
Total Additions	\$ 26,418,540
DEDUCTIONS	
Distributions To Members:	
Benefit Payments	\$ 11,660,640
Refunds of Member Contributions	13,139
Total Distributions	<u>\$ 11,673,779</u>
Administrative Expense	<u>\$ 121,042</u>
Total Deductions	\$ 11,794,821
NET INCREASE IN NET POSITION	\$ 14,623,719
NET POSITION RESTRICTED FOR PENSIONS	
Beginning of the Year	\$ 114,786,199
End of the Year	<u>\$ 129,409,918</u>

¹ Investment related expenses include investment advisory, custodial and performance monitoring fees.

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

	12/31/2024
ACTUARIAL VALUE OF ASSETS	
Market Value of Assets	\$ 129,409,918
Total Deferred Investment (Gains)/Losses	(1,000,619)
Preliminary Actuarial Value of Assets	<u>\$ 128,409,299</u>
Limited Actuarial Value of Assets	\$ 128,409,299
DEVELOPMENT OF INVESTMENT (GAIN)/LOSS	
Market Value of Assets, Prior Year	\$ 114,786,199
Contributions	13,705,764
Benefit Payments	(11,673,779)
Administrative Expenses	(121,042)
Expected Investment Earnings	\$ 7,522,231
Actual Net Investment Earnings	(12,712,776)
2024 Actuarial Investment (Gain)/Loss	<u>\$ (5,190,545)</u>

DEFERRED INVESTMENT (GAIN)/LOSS

Year Ended	(Gain)/Loss	Percentage Deferred	Deferred (Gain)/Loss
12/31/2024	(5,190,545)	80%	(4,152,436)
12/31/2023	(7,356,718)	60%	(4,414,030)
12/31/2022	22,507,723	40%	9,003,088
12/31/2021	(7,186,201)	20%	(1,437,241)
12/31/2020	(5,735,113)	0%	0
Total Deferred Investment (Gains)/Losses			(1,000,619)

APPROXIMATE RATES OF RETURN

Basis	Rate of Return
Actuarial Valuation of Assets	6.80%
Market Value of Assets	10.98%

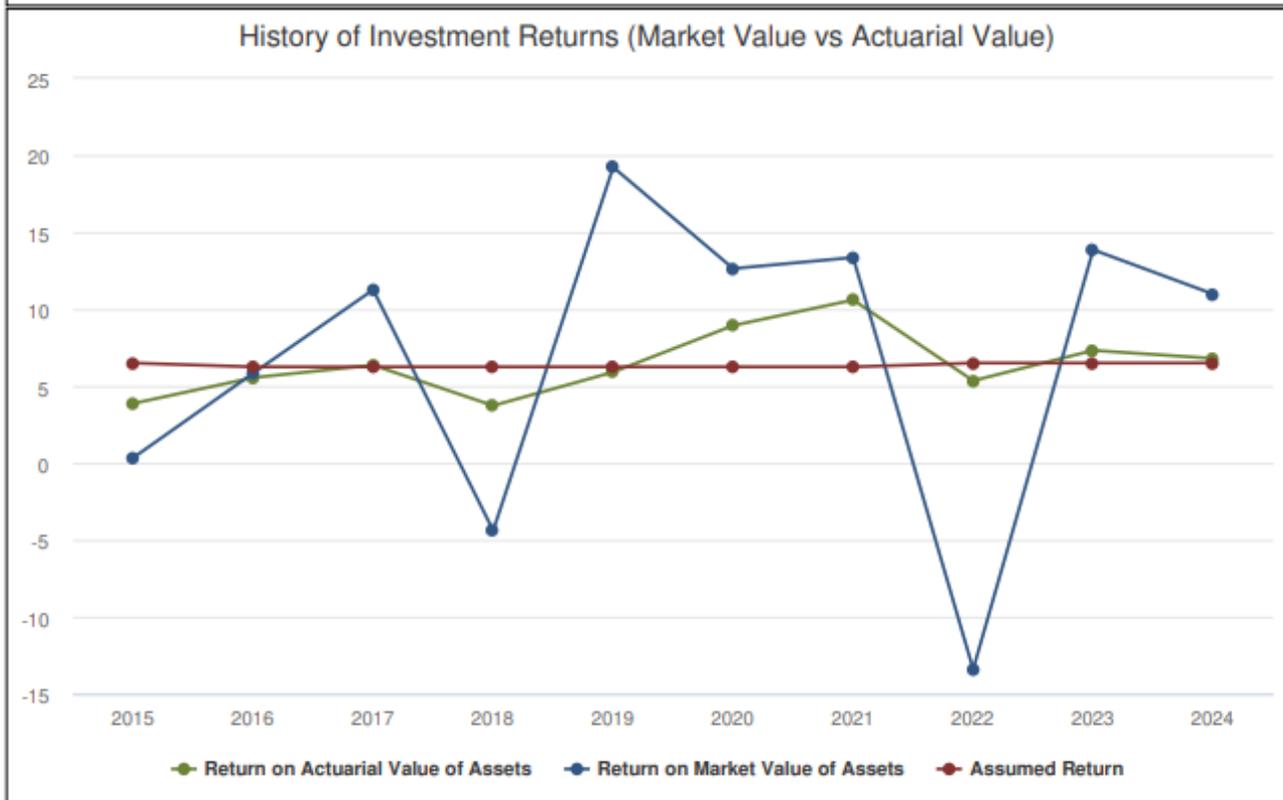
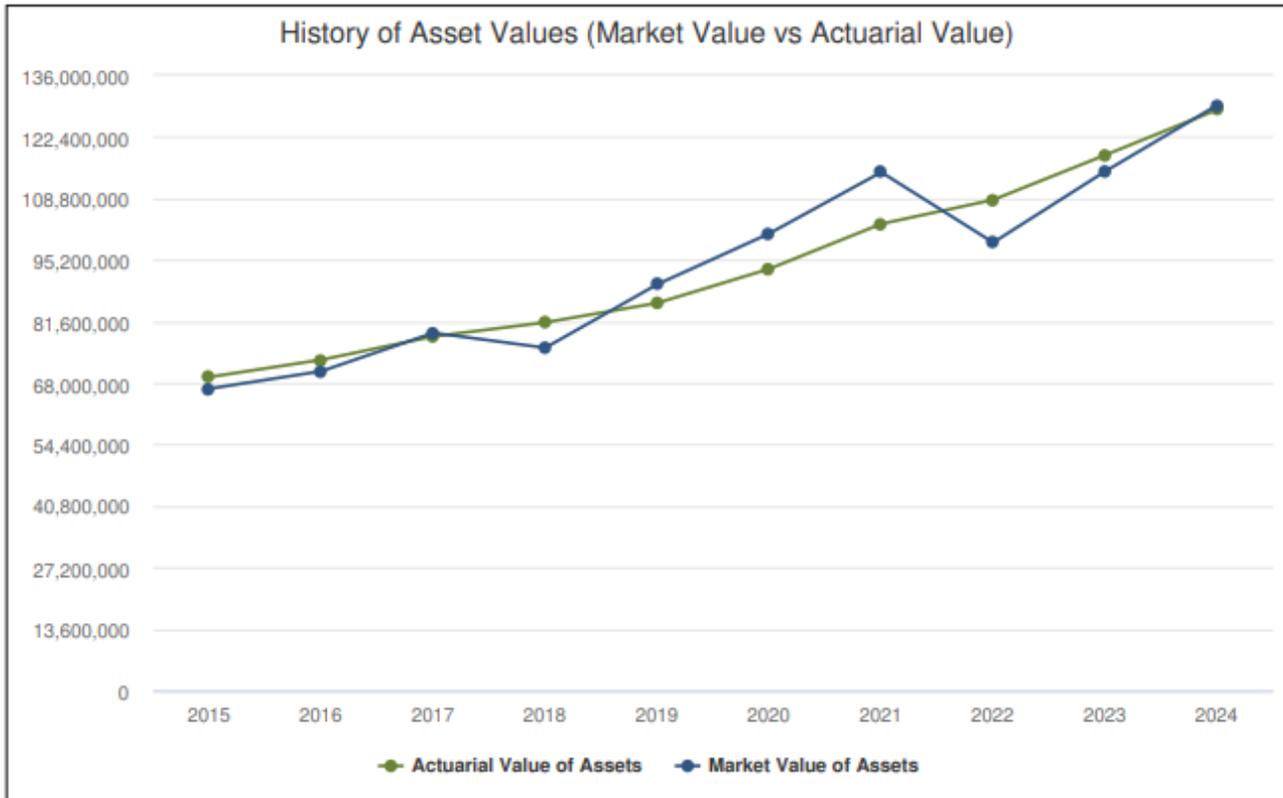
CHANGES IN ASSETS AVAILABLE FOR BENEFITS – ACTUARIAL ASSET BASIS

	Year Ended 12/31/2024
ADDITIONS	
Contributions:	
Member	\$ 1,350,581
Employer	12,355,183
Total Contributions	<u>\$ 13,705,764</u>
Earnings from Investments:	
Interest & Dividends	\$ 2,739,857
Net Increase in Fair Value of Investments	10,121,524
Change in Actuarial Value	(4,598,376)
Total Earnings and Investment Gains	<u>\$ 8,263,005</u>
DEDUCTIONS	
Distributions To Members:	
Benefit Payments	\$ 11,660,640
Refunds of Member Contributions	13,139
Total Distributions	<u>\$ 11,673,779</u>
Expenses:	
Investment Related ¹	\$ 148,605
Administrative	121,042
Total Expenses	<u>\$ 269,647</u>
CHANGE IN NET ASSETS FOR THE YEAR	\$ 10,025,343
NET ASSETS	
Beginning of the Year	\$ 118,383,956
End of the Year ²	<u>\$ 128,409,299</u>

¹ Investment related expenses include investment advisory, custodial and performance monitoring fees.

² Net Assets may be limited for actuarial consideration.

HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



PARTICIPANT STATISTICS

STATISTICAL DATA

	1/1/2025	1/1/2024	1/1/2023	1/1/2022
ACTIVES - TIER 1				
Number	51	55	55	56
Average Current Age	48.3	47.5	47.0	46.2
Average Age at Employment	27.6	28.1	28.1	28.3
Average Past Service	20.8	19.4	18.9	17.9
Average Annual Salary	\$146,718	\$139,285	\$122,534	\$114,583
ACTIVES - TIER 2				
Number	61	60	50	48
Average Current Age	34.1	33.3	33.9	33.1
Average Age at Employment	27.2	27.3	27.4	27.5
Average Past Service	7.0	6.0	6.5	5.6
Average Annual Salary	\$109,675	\$100,174	\$93,237	\$85,753
SERVICE RETIREES				
Number	84	81	83	83
Average Current Age	70.2	70.1	69.9	69.0
Average Annual Benefit	\$97,555	\$95,686	\$88,911	\$86,939
BENEFICIARIES				
Number	41	41	41	40
Average Current Age	65.8	64.0	59.7	58.7
Average Annual Benefit	\$50,948	\$47,648	\$43,803	\$42,285
DISABILITY RETIREES				
Number	23	24	25	25
Average Current Age	63.8	63.1	60.8	59.8
Average Annual Benefit	\$77,420	\$74,804	\$71,729	\$70,693
TERMINATED VESTEDS				
Number	9	7	6	5
Average Current Age ¹	42.1	34.0	32.0	31.8
Average Annual Benefit ¹	\$32,642	N/A	N/A	N/A

¹ The Average Current Age and Average Annual Benefit exclude participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

Age	Past Service											Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+		
15 - 19													0
20 - 24		3											3
25 - 29	1	4	1	5									11
30 - 34	1	3	1	4	2	6	1						18
35 - 39		1	1	2		2	10						16
40 - 44					1	2	10	15					28
45 - 49							2	6	7				15
50 - 54							1	3	9	1			14
55 - 59								1	2	2			5
60 - 64												2	2
65+													0
Total	2	11	3	11	3	10	24	25	18	3	2	112	

PARTICIPANT RECONCILIATION

	Actives	Members Receiving Benefits	Receiving Death Benefits	Receiving Disability Benefits	Vested (Deferred Annuity)	Vested (Due Refund)	Total
Number, prior valuation	115	81	41	24	0	7	268
New Entrants / Rehires	2						2
Vested (Deferred Annuity)	(1)				1		0
Non-Vested / Vested (Due Refund)	(1)					1	0
Refund of Contributions or Transferred Service to Other Fund						(1)	(1)
Hired/Termed Same Year						1	1
Retired	(3)	3					0
Disabled							0
Death, With Survivor		(1)	2	(1)			0
Death, No Survivor			(2)				(2)
Expired Annuities							0
Data Corrections							0
Other		1					1
Number, current valuation	112	84	41	23	1	8	269

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate 6.50% per year compounded annually, net of investment related expenses.

Mortality Rate

Active Lives:

PubS-2010 Employee mortality, unadjusted, with generational improvements with the most recent projection scale (currently Scale MP-2021). 20% of active deaths are assumed to be in the line of duty.

Inactive Lives:

PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.081 for male retirees and unadjusted for female retirees, with generational improvements with the most recent projection scale (currently Scale MP-2021).

Beneficiaries:

PubS-2010 Survivor mortality, unadjusted for male beneficiaries and adjusted by a factor of 1.098 for female beneficiaries, with generational improvements with the most recent projection scale (currently Scale MP-2021).

Disabled Lives:

PubS-2010 Disabled mortality, adjusted by a factor of 1.178 for male disabled members and unadjusted for female disabled members, with generational improvements with the most recent projection scale (currently Scale MP-2021).

The mortality assumptions sufficiently accommodate anticipated future mortality improvements.

Retirement Age

Rates are based on a 2021 experience study performed for the Illinois Firefighters' Pension Investment Fund.

% Retiring During Year (Tier 1)		% Retiring During Year (Tier 2)	
Age	Rate	Age	Rate
50-51	12%	50-54	3%
52-53	15%	55	30%
54-59	20%	56-59	20%
60-62	25%	60-62	25%
63-64	33%	63-64	33%
65-69	50%	65-69	50%

% Retiring During Year (Tier 1)		% Retiring During Year (Tier 2)	
Age	Rate	Age	Rate
70+	100%	70+	100%

Disability Rate

80% of the disabilities are assumed to be in the line of duty. Rates are based on a 2021 experience study performed for the Illinois Firefighters' Pension Investment Fund.

% Becoming Disabled During Year			
Age	Rate	Age	Rate
20	0.010%	45	0.650%
25	0.016%	50	0.900%
30	0.068%	55	1.240%
35	0.220%	60	1.580%
40	0.420%		

Termination Rate

Rates are based on a 2021 experience study performed for the Illinois Firefighters' Pension Investment Fund.

% Terminating During Year	
Age	Rate
20	10.00%
25	8.00%
30	4.00%
35	2.50%
40	1.20%
45+	1.00%

Inflation

2.50%.

Cost-of-Living Adjustment

Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.

Salary Increases

Graded schedule based on age.

Salary Scale	
Age	Rate
25	7.36%
30	5.48%
35	4.53%
40	4.02%
45	3.81%
50	3.68%
55+	3.62%

Marital Status

80% of Members are assumed to be married.

Spouse's Age

Males are assumed to be three years older than females.

Funding Method

Entry Age Normal Cost Method.

Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

The normal cost accrual rate equals:

- (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
- (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future.

Under this method, the entry age used for each active participant is

the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

Actuarial Asset Method

Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Funding Policy Amortization Method

The UAAL is amortized according to a Level Dollar method over a period ending in 2040. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

Total Required Contribution

Equal to the Normal Cost plus Administrative Expenses plus an amount sufficient to amortize the Unfunded Accrued Liability as defined by the Funding Policy Amortization Method. The required amount is adjusted for interest according to the timing of contributions during the year.

Payroll Growth

None.

Administrative Expenses

Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.

PLAN PROVISIONS

Article 4 Pension Fund	The Plan is established and administered as prescribed by "Article 4. Firefighters' Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.
Plan Administration	<p>The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:</p> <ul style="list-style-type: none">a.) Two members appointed by the Municipality,b.) Two active Members of the Fire Department elected by the Membership, andc.) One retired Member of the Fire Department elected by the Membership.
Credited Service	Years and fractional parts of years of service (except as noted below) as a sworn Firefighter employed by the Municipality.
Salary	<p>Annual salary, including longevity, attached to firefighter's rank, as established by the municipality appropriation ordinance, excluding overtime pay, bonus pay and holiday pay except for the base 8 hours of the 10 pensionable holidays which is included.</p> <p>For Tier 2 participants, the salary is capped at a rate of \$106,800 as of 2011, indexed annually at a rate of CPI-U, but not to exceed 3.00%.</p>
Normal Retirement Date	<p>Tier 1: Age 50 and 20 years of Credited Service.</p> <p>Tier 2: Age 55 with 10 years of Credited Service.</p>
Benefit	<p>Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,159.27 per month.</p> <p>Tier 2: 2.50% per year of service times the average salary for the 48 consecutive months of service within the last 60 months of service in which the total salary was the highest prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,159.27 per month.</p>

Form of Benefit	<p>Tier 1: For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.</p> <p>Tier 2: Same as above, but with 66 2/3% of benefit continued to spouse.</p>
Early Retirement Date	<p>Tier 1: Age 60 and 10 years of Credited Service.</p> <p>Tier 2: Age 50 with 10 years of Credited Service.</p>
Benefit	<p>Tier 1: 1.50% plus 0.10% for each year of service in excess of 10 years, times salary x service (complete years).</p> <p>Tier 2: Normal Retirement Benefit, reduced 6.00% for each year before age 55, with no minimum benefit.</p>
Form of Benefit	Same as Normal Retirement.
Disability Benefit Eligibility	Total and permanent as determined by the Board of Trustees. Seven years of service required for non-service connected disability.
Benefit Amount	<p>A maximum of:</p> <ul style="list-style-type: none">a.) 65% of salary attached to the rank held by Member on last day of service, and;b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately. <p>For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.</p>
Cost-of-Living Adjustment	<p>Tier 1:</p> <p><i>Retirees:</i> An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.</p> <p><i>Disabled Retirees:</i> An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.</p>

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

Service Incurred

100% of salary attached to rank held by Member on last day of service.

Non-Service Incurred

A maximum of:

- a.) 54% of salary attached to the rank held by Member on last day of service, and;
 - b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.
-

Vesting (Termination)

Vesting Service Requirement

10 years.

Non-Vested Benefit

Refund of Member Contributions.

Vested Benefit

Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions.

Termination Benefit

Based on the monthly salary attached to the Member's rank at separation from service and equals:

Tier 1: 1.50% plus 0.10% for each year of service in excess of 10 years, times salary x service (based on complete years).

Tier 2: 2.50% of 4-year final average salary times creditable service.

Contributions

Employee

9.455% of Salary.

Municipality

Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

SUPPLEMENTARY INFORMATION

GLOSSARY

Accrued Benefit	The benefit earned as of a specific date based on the provisions of the plan and the member's age, service, and salary as of that date.
Actuarial Accrued Liability	The portion of the anticipated future benefits allocated to years prior to the valuation date determined according to the plan's Actuarial Cost Method.
Actuarial Value of Assets	The asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets (see below), with adjustments according to the plan's Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets.
Actuarial Assumptions	Assumptions regarding the occurrence of future events affecting plan costs. These assumptions include rates of investment earnings, changes in compensation, rates of mortality, withdrawal, disablement, and retirement as well as statistics related to marriage and family composition.
Actuarial Cost Method	A method of determining the portion of the cost of a plan to be allocated to each year; sometimes referred to as the "actuarial funding method." Each cost method allocates a certain portion of the actuarial present value of benefits between the Actuarial Accrued Liability and future normal costs to ensure the plan is adequately and systematically funded.
Actuarial Gain or Loss	The change in Unfunded Actuarial Accrued Liability resulting from experience different from Actuarial Assumptions. Gains decrease the Unfunded Actuarial Accrued Liability and losses increase the Unfunded Actuarial Accrued Liability.
Actuarial Present Value	The estimated amount of funds required as of a specified date to provide a payment or series of payments in the future. It is

determined by discounting future payments at predetermined rates of interest, and by probabilities of payments between the specified date and the expected date of payment.

Amortization Payment

The portion of the plan contribution designated to pay interest and reduce the outstanding principal balance of Unfunded Actuarial Accrued Liability. If the amortization payment is less than the accrued interest on the Unfunded Actuarial Accrued Liability the outstanding principal balance will increase.

Decrements

Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

Funded Ratio

A measure of the ratio of the plan assets to liabilities of the system. Typically, the assets used in the measure are the Actuarial Value of Assets as determined by the asset valuation method. The Funded Ratio depends not only on the financial strength of the plan but also on the asset valuation method used to determine the assets and on the Actuarial Cost Method used to determine the liabilities.

Interest Rate

The assumed long-term rate of return on plan assets.

Market Value of Assets

The fair market value of plan assets as of the valuation date.

Normal Cost

The portion of the Actuarial Present Value of Benefits allocated to the current year determined according to the plan's Actuarial Cost Method.

Present Value of Benefits

The single sum value on the valuation date of all future benefits to be paid to current plan participants.

Projected Annual Payroll

The salary expected for the year after the valuation date, excluding members over the 100% assumed retirement age.

Projected Benefits

The benefits expected to be paid in the future based on the provisions of the plan and the Actuarial Assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

Total Annual Payroll	The salary expected for the year after the valuation date.
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Ultimate Cost	The total cost to the plan once the last benefit has been paid. The Ultimate Cost equals
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Benefit Payments
Plus: Expenses
Less: Investment Income

The Ultimate Cost is independent of the Actuarial Cost Method selected.

Unfunded Actuarial Accrued Liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.
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Vested Benefit	Benefits members are entitled to regardless of employment status.
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DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- **Investment Return:** When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- **Salary Increases:** When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- **Payroll Growth:** The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll increases less than the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- **Demographic Assumptions:** Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g., the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

IMPACT OF PLAN MATURITY ON RISK

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled "Plan Maturity Measures and Other Risk Metrics". Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has stayed about the same from January 1, 2022 to January 1, 2025, indicating that the plan's maturity level has not significantly changed during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 66.8%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 48.6% on January 1, 2022 to 53.6% on January 1, 2025.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, increased from 0.0% on January 1, 2022 to 1.5% on January 1, 2025. The current Net Cash Flow Ratio of 1.5% indicates contributions are generally covering the plan's benefit payments and administrative expenses.
- It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

LOW DEFAULT RISK OBLIGATION MEASURE

ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a "low-default-risk obligation measure" (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown in the principal valuation results in terms of member data, plan provisions, and assumptions/methods, including the use of the Entry Age Normal Cost Method, except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.28%, resulting in an LDROM of \$325,166,678. The LDROM should not be considered the "correct" liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. The Board actually invests the pension plan's contributions in a diversified portfolio of stocks and bonds and other investments with the objective of maximizing investment returns at a reasonable level of risk. Consequently, the difference between the plan's Actuarial Accrued Liability disclosed earlier in this section and the LDROM can be thought of as representing the expected taxpayer savings from investing in the plan's diversified portfolio compared to investing only in high quality bonds.

The actuarial valuation reports the funded status and develops contributions based on the expected return of the plan's investment portfolio. If instead, the plan switched to investing exclusively in high quality bonds, the LDROM illustrates that reported funded status would be lower (which also implies that the Actuarially Determined Contributions would be higher), perhaps significantly. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	1/1/2025	1/1/2024	1/1/2023	1/1/2022
SUPPORT RATIO				
Total Actives	112	115	105	104
Total Inactives ¹	149	146	149	148
Actives / Inactives ¹	75.2%	78.8%	70.5%	70.3%
ASSET VOLATILITY RATIO				
Market Value of Assets (MVA)	129,409,918	114,786,199	99,046,036	114,592,514
Total Annual Payroll	14,172,799	13,671,166	11,401,235	10,532,785
MVA / Total Annual Payroll	913.1%	839.6%	868.7%	1,088.0%
ACCRUED LIABILITY (AL) RATIO				
Inactive Accrued Liability	160,083,201	153,655,282	149,644,494	152,778,948
Total Accrued Liability (EAN)	239,524,823	230,107,790	213,018,404	212,228,446
Inactive AL / Total AL	66.8%	66.8%	70.2%	72.0%
FUNDED RATIO				
Actuarial Value of Assets (AVA)	128,409,299	118,383,956	108,485,060	103,165,026
Total Accrued Liability (EAN)	239,524,823	230,107,790	213,018,404	212,228,446
AVA / Total Accrued Liability (EAN)	53.6%	51.4%	50.9%	48.6%
NET CASH FLOW RATIO				
Net Cash Flow ²	1,910,943	1,884,216	(194,703)	55,823
Market Value of Assets (MVA)	129,409,918	114,786,199	99,046,036	114,592,514
Ratio	1.5%	1.6%	(0.2)%	0.0%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in the Contribution Requirements section of this report.

Valuation Date	1/1/2025	1/1/2024
Applicable to Fiscal Year Ending	12/31/2026	12/31/2025
UNFUNDED ACTUARIAL ACCRUED LIABILITY		
Actuarial Accrued Liability (PUC)	\$ 232,720,288	\$ 223,361,146
Actuarial Value of Assets	128,409,299	118,383,956
Unfunded Actuarial Accrued Liability (UAAL)	<u>104,310,989</u>	<u>104,977,190</u>
UAAL Subject to Amortization	81,038,960	82,641,075
CALCULATION OF MINIMUM REQUIRED CONTRIBUTION¹		
Normal Cost	\$ 4,421,214	\$ 4,366,207
% of Total Annual Payroll	31.2%	31.9%
Administrative Expenses	128,910	123,015
% of Total Annual Payroll	0.9%	0.9%
UAAL Amortization Payment	6,962,558	6,791,458
% of Total Annual Payroll	<u>49.1%</u>	<u>49.7%</u>
Total Required Contribution	\$ 11,512,682	\$ 11,280,680
% of Total Annual Payroll	81.2%	82.5%
Expected Member Contributions	(1,340,038)	(1,292,609)
% of Total Annual Payroll	<u>(9.5)%</u>	<u>(9.5)%</u>
Expected City Contribution	\$ 10,172,644	\$ 9,988,071
% of Total Annual Payroll	71.7%	73.0%
ASSUMPTIONS AND METHODS		
Actuarial Cost Method	Projected Unit Credit	
Amortization Method	90% Funding by 2040	
Payroll Growth Assumption	2.75%	

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

¹ Contributions developed as of 1/1/2025 displayed above have been adjusted to account for assumed interest.