MONROE COUNTY POLICE
RETIREMENT PLAN AND BENEFIT PLAN

ACTUARIAL STUDY

JANUARY 1, 2024

OneAmerica[SM] Financial

Retirement plan administrative and recordkeeping services provided by
McCready and Keene, Inc. | a OneAmerica Financial[SM] company

MONROE COUNTY POLICE
RETIREMENT PLAN AND BENEFIT PLAN

<u>A C T U A R I A L S T U D Y</u>

STUDY DATE	January 1, 2024
PLAN YEAR	January 1, 2024 - December 31, 2024
BUDGET YEAR	January 1, 2025 - December 31, 2025
EFFECTIVE DATE OF PLAN	January 1, 1973
EFFECTIVE DATE OF LAST PLAN RESTATEMENT (Executed November 4, 2013)	January 1, 2013
EFFECTIVE DATE OF LAST PLAN AMENDMENT (Executed August 17, 2022)	September 1, 2022

MONROE COUNTY POLICE

RETIREMENT PLAN AND BENEFIT PLAN

Summary of Actuarial Study as of January 1, 2024

Introduction

This report contains the results of the Actuarial Study as of January 1, 2024 for the Monroe County Police Retirement Plan and Benefit Plan. As of the study date there were 42 merit employees actively participating in the Plans. In addition to the actives, there were 26 retired participants and 4 beneficiaries receiving benefits and 8 terminated participants entitled to benefits from the Retirement Plan as well as 5 dependents receiving benefits from the Benefit Plan.

The purpose of the study is to estimate the cost impact on funding requirements to modify the plan provisions under the following scenario effective January 1, 2024.

Study reflects the change in the Special Early Retirement eligibility to attainment of 25 years of service (with no age requirement); the change to a 3 year averaging period for compensation in the benefit formula; and the change in the Normal Retirement eligibility to the later of age 50 and attainment of 8 years of service. Retirement is assumed to occur at the earlier of the Normal Retirement Age or the Special Early Retirement Age.

The valuation census data was provided by the Sheriff's Office and transposed into a computer file for processing. We have relied upon this information in the preparation of this report. Similar information has been furnished to us in the past, and the accuracy of this report depends on the accuracy of all data that has been furnished to us from time to time. Trust information was furnished by Comerica Bank, Detroit, Michigan.

The Study was performed based on our understanding of Indiana State Law and the plan document in effect as of January 1, 2024. The current statutory limit of $178,168.00 has been applied to average salaries for benefit purposes in accordance with IC 36-8-10-12(j). Although this plan is not subject to ERISA funding requirements, some have been applied in accordance with standard actuarial practice.

Actuarial Methods and Assumptions

The actuarial cost methods for determining the cost of retirement benefits, death benefits, disability benefits, and termination benefits used for the Valuation have been reviewed and remain unchanged for the Study. Valuation assets have been developed on a 5-year asset smoothing basis for the Valuation and were used for the Study. The method to establish annual closed amortization bases of the actuarial gains or losses (known as layered or tiered amortization) became effective January 1, 2020 and has been continued. The amortization of the initial unfunded actuarial accrued liability base will utilize a period of 20 years. Plan assets and liabilities are considered as of January 1, 2024 and funding results are projected to the 2025 Plan Year. For a complete description of the actuarial methods used, see the exhibit titled Disclosure of Actuarial Methods.

The actuarial assumptions used in the Study have been reviewed and continued from the Valuation, except as noted for the Study. For a complete description of the actuarial assumptions used, see the exhibit titled Disclosure of Actuarial Assumptions.

Recommended County Contribution

The total Recommended County Contribution developed in this report, as a percentage of approved payroll, is 35.8% under the Study (25 years of service Special Early Retirement; 3 year salary average; and age 50 and 8 years of service Normal Retirement), as compared to 30.3% developed in the January 1, 2024 Valuation.

In actual dollar amounts, we estimate the Recommended County Contribution will increase by $198,177 (or 5.5% of payroll) under the Study for the 2025 plan year if the respective changes become effective January 1, 2024.

A comparison of the results of the January 1, 2024 Actuarial Valuation and the Actuarial Study can be found throughout the remainder of this report.

MONROE COUNTY POLICE
RETIREMENT PLAN AND BENEFIT PLAN

Actuarial Study as of January 1, 2024

The undersigned member(s) of the American Academy of Actuaries meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We will be pleased to furnish any additional information or answer any questions which may arise after your review of this report.

Submitted and Certified by
McCready and Keene, Inc.

By____
Benjamin S. Langhammer
F.S.A., M.A.A.A., E.A.
Director and Consulting Actuary

SUMMARY OF COSTS

Retirement Plan and Benefit Plan

	2025 Valuation	2025 Study
ACCELERATED FUNDING COUNTY CONTRIBUTION		
Retirement Plan	$ 1,172,756	$ 1,451,930
Benefit Plan	57,938	15,063
Total	$ 1,230,694	$ 1,466,993
Percentage of Approved Payroll	34.2%	40.8%
RECOMMENDED COUNTY CONTRIBUTION		
Retirement Plan	$ 1,030,893	$ 1,271,945
Benefit Plan	57,938	15,063
Total	$ 1,088,831	$ 1,287,008
Percentage of Approved Payroll	30.3%	35.8%
ACTUARIALLY DETERMINED / MINIMUM COUNTY CONTRIBUTION (Minimum Contribution Necessary to Satisfy IC 36-8-10-12(e))		
Retirement Plan	$ 958,666	$ 1,181,565
Benefit Plan	57,938	15,063
Total	$ 1,016,604	$ 1,196,628
Percentage of Approved Payroll	28.3%	33.3%

COST COMPARISON

Retirement Plan

	2025 Valuation	2025 Study
ACCELERATED FUNDING COUNTY CONTRIBUTION		
(10-year Funding of Unfunded Liability)		
County Normal Cost	$ 502,747	$ 606,132
Unfunded Actuarial Accrued Liability Amortization Charge	531,224	673,976
Interest (to end of plan year)	138,785	171,822
Total	$ 1,172,756	$ 1,451,930
Percentage of Approved Payroll	32.6%	40.4%
RECOMMENDED COUNTY CONTRIBUTION		
(15-year Funding of Unfunded Liability)		
County Normal Cost	$ 502,747	$ 606,132
Unfunded Actuarial Accrued Liability Amortization Charge	406,149	515,290
Interest (to end of plan year)	121,997	150,523
Total	$ 1,030,893	$ 1,271,945
Percentage of Approved Payroll	28.7%	35.4%
ACTUARIALLY DETERMINED / MINIMUM COUNTY CONTRIBUTION		
(Minimum Contribution Necessary to Satisfy IC 36-8-10-12(e))		
County Normal Cost	$ 502,747	$ 606,132
Unfunded Actuarial Accrued Liability Amortization Charge	342,470	435,606
Interest (to end of plan year)	113,449	139,827
Total	$ 958,666	$ 1,181,565
Percentage of Approved Payroll	26.7%	32.9%

DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AND NORMAL COST

Retirement Plan

	2025 Valuation	2025 Study
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY		
Entry Age Normal Accrued Liability		
Active Participants	$ 6,417,869	$ 7,510,793
Retired Participants & Beneficiaries Receiving Benefits	7,179,303	7,179,303
Terminated Participants Entitled to Future Benefits	595,596	595,596
Total Actuarial Accrued Liability	$ 14,192,768	$ 15,285,692
Less: Actuarial Value of Assets	10,125,658	10,125,658
Equals: Unfunded Actuarial Accrued Liability	$ 4,067,110	$ 5,160,034
DEVELOPMENT OF NORMAL COST		
Normal Cost	$ 619,198	$ 722,583
Plus: Expense Loading	22,900	22,900
Less: Estimated Employee Contributions (Discounted to January 1)	139,351	139,351
Equals: Employer Normal Cost	$ 502,747	$ 606,132

DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY BASE AND AMORTIZATION CHARGE AND ACTUARIAL (GAIN) OR LOSS ANALYSIS

Retirement Plan

	2025 Valuation	2025 Study
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (GAIN) OR LOSS BASE		
Unfunded Actuarial Accrued Liability	$ 4,067,110	$ 5,160,034
Less: Outstanding Balances of Prior Bases	3,831,014	3,831,014
Equals: Unfunded Actuarial Accrued Liability (Gain) or Loss Base to be Established	$ 236,096	$ 1,329,020
ESTIMATED BREAKDOWN OF ACTUARIAL (GAIN) OR LOSS ANALYSIS		
Experience (Gain) or Loss Due to Investment Experience	$ (21,543)	$ (21,543)
Experience (Gain) or Loss Due to Liability and Other Experience	257,639	257,639
Experience (Gain) or Loss Due to Change in Assumptions	0	0
Experience (Gain) or Loss Due to Change in Plan Provisions	N/A	1,092,924
Total Experience (Gain) or Loss	$ 236,096	$ 1,329,020
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AMORTIZATION CHARGE		
Unfunded Actuarial Accrued Liability (Gain) or Loss Base to be Established	$ 236,096	$ 1,329,020
Maximum Amortization Period of New Base (in years)	20	20
Divided by: Amortization Factor	11.735	11.735
Equals: Amortization Installment for New Base	$ 20,119	$ 113,255
Plus: Amortization Installments for Prior Bases	322,351	322,351
Equals: Unfunded Actuarial Accrued Liability Amortization Charge	$ 342,470	$ 435,606

<u>SUMMARY OF EMPLOYEE DATA</u>

<u>Retirement Plan</u>

		2024
Active Participants		
Fully Vested		20
Partially Vested		0
Non-Vested		22
Total		42 *
Retired Participants Receiving Benefits		26
Beneficiaries Receiving Benefits		4
Deferred Vested Participants Entitled to Future Benefits		8 **
Annual Benefits Payable	$	677,773
Annual Salaries of Active Participants (Reported Approved Amounts)	$	3,597,003
Accumulated Employee Contributions	$	783,980

* Includes 2 active participants over Normal Retirement Age.

** Includes 1 beneficiary entitled to future benefits and 1 disabled participant entitled to a benefit from the Retirement Plan at the later of Normal Retirement Age or when the disability insurance payments cease prior to age 65.

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

Retirement Plan

	2020	2021	2022	2023
1. Prior Year Market Value of Assets	$ 7,259,286	$ 8,484,326	$ 9,989,212	$ 8,483,727
2. Benefit Payments	(531,378)	(532,467)	(1,050,269)	(698,680)
3. Net Operational Expenses	(19,313)	(20,132)	(23,120)	(22,868)
4. County Contributions	613,195	718,812	702,841	822,201
5. Employee Contributions	101,795	110,903	115,703	143,388
6. Expected Return	506,503	575,494	640,094	540,062
7. Expected Market Value of Assets [(1) + (2) + (3) + (4) + (5) + (6)]	$ 7,930,088	$ 9,336,936	$ 10,374,461	$ 9,267,830
8. Actual Market Value of Assets	$ 8,484,326	$ 9,989,212	$ 8,483,727	$ 9,743,562
9. Gain/(Loss) [(8) - (7)]	$ 554,238	$ 652,276	$ (1,890,734)	$ 475,732
10. Portion of Gain/(Loss) Offset for 2024	20%	40%	60%	80%
11. Adjustment to 2024 Assets [(9) * (10)]	$ 110,848	$ 260,910	$ (1,134,440)	$ 380,586
12. Total Adjustment to 2024 Assets [Sum of (11) for 2020 through 2023]				$ (382,096)
13. 2024 Actuarial Value of Assets* [(8) for 2023 - (12)]				$ 10,125,658
14. Ratio of Actuarial Value of Assets to Actual Market Value of Assets [(13) / (8)]				103.92%

* This amount cannot be less than 80% or greater than 120% of the Actual Market Value of Assets.

DEVELOPMENT OF ASSETS

Retirement Plan

	Market	Cost
TRUST ASSETS, January 1, 2023	**$ 8,772,118.51**	**$ 8,805,128.44**
RECEIPTS		
County Contribution for 2023 Plan Year	$ 822,201.00	$ 822,201.00
Employee Contributions for 2023 Plan Year	106,138.38	106,138.38
Employee Contributions for 2022 Plan Year	31,184.37	31,184.37
Net Investment Income	149,288.96	149,288.96
Realized Gain (Loss)	256,597.08	256,597.08
Unrealized Gain (Loss)	658,328.22	N/A
Total Receipts	**$ 2,023,738.01**	**$ 1,365,409.79**
DISBURSEMENTS		
Retirement Benefits Payments	$ 669,403.72	$ 669,403.72
Lump Sum DROP Benefit Accumulation Payments	306,281.06	306,281.06
Return of Employee Contribution Payments	35,287.75	35,287.75
Actuarial Fee	14,230.13	14,230.13
Trustee Fee	8,638.13	8,638.13
Investment Manager Fee	48,420.37	48,420.37
Total Disbursements	**$ 1,082,261.16**	**$ 1,082,261.16**
TRUST ASSETS, December 31, 2023	**$ 9,713,595.36**	**$ 9,088,277.07**

DEVELOPMENT OF ASSETS

Retirement Plan

- Continued -

	Market	Cost
TRUST ASSETS, December 31, 2023	**$ 9,713,595.36**	**$ 9,088,277.07**
Employee Contributions Receivable for 2023 Plan Year	37,249.53	
Due and Unpaid Retirement Benefit Payments - Russ, L.L. (W.M.)	(936.46)	
Due and Unpaid Return of Employee Contributions - Hale, S.M.	(8.24)	
Due and Unpaid Return of Employee Contributions - Miller, S.	(6,338.45)	
ACTUAL MARKET VALUE OF ASSETS, January 1, 2024	**$ 9,743,561.74**	

SCHEDULE OF FUNDING PROGRESS

Retirement Plan

Valuation Date	Valuation Assets*	Accrued Liability**	Unfunded Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Liability as % of Payroll
			Valuation			
1/1/2024	$ 10,125,658	$ 14,192,768	$ 4,067,110	71.3%	$ 3,597,003	113.1%
			Study - Special Early Retirement (at 25 Years); 3 Year Average Compensation; and Normal Retirement (at Age 50 and 8 Years of Service)			
1/1/2024	$ 10,125,658	$ 15,285,692	$ 5,160,034	66.2%	$ 3,597,003	143.5%

* Actuarial Value of Assets.
** Determined under the Frozen Entry Age Actuarial Cost Method.

SUMMARY OF EMPLOYEE DATA

Benefit Plan

PARTICIPANT DATA	2024
Active Participants	42
Dependents Receiving Benefits	5
Disabled Participants Receiving Benefits	0
Retired Participants Entitled to Dependent Benefits	17
Annual Benefits Payable from Benefit Trust	$ 12,000

COST COMPARISON

REQUIRED COUNTY CONTRIBUTION	2025 Valuation	2025 Study
Normal Cost	$ 40,258	$ 0
Interest (to end of plan year)	2,617	0
Insured Disability Benefit*	12,357	12,357
Insured Group Life Benefit*	2,706	2,706
Total	$ 57,938	$ 15,063
Percentage of Approved Payroll	1.6%	0.4%

* Estimated insurance premium replacement cost.

COST DETAILS

Benefit Plan

DEVELOPMENT OF NORMAL COST	2025 Valuation	2025 Study
Present Value of Future Benefits		
Actives - Dependents Benefits	$ 51,641	$ 53,177
- Disability Benefits	824,906	427,255
Dependents Receiving or Entitled to Benefits	258,169	258,169
Disabled Participants	0	0
Total Present Value of Future Benefits	$ 1,134,716	$ 738,601
Less: Actuarial Value of Assets	771,313	771,313
Equals: Present Value of Future Normal Costs	$ 363,403	$ 0
Divided by: 1% of Present Value of Future Salaries	324,713	268,197
Equals: Normal Cost Percentage	1.1192%	0.0000%
Multiplied by: Annual Salaries	3,597,003	3,597,003
Equals: Normal Cost	$ 40,258	$ 0

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

Benefit Plan

	2020	2021	2022	2023
1. Prior Year Market Value of Assets	$ 561,460	$ 656,267	$ 757,312	$ 639,070
2. Benefit Payments	(12,000)	(11,400)	(11,200)	(12,000)
3. Net Operational Expenses	(14,024)	(14,576)	(28,707)	(824)
4. County Contributions	40,748	41,912	28,277	28,819
5. Employee Contributions	N/A	N/A	N/A	N/A
6. Expected Return	39,123	44,454	48,810	41,383
7. Expected Market Value of Assets [(1) + (2) + (3) + (4) + (5) + (6)]	$ 615,307	$ 716,657	$ 794,492	$ 696,448
8. Actual Market Value of Assets	$ 656,267	$ 757,312	$ 639,070	$ 726,776
9. Gain/(Loss) [(8) - (7)]	$ 40,960	$ 40,655	$ (155,422)	$ 30,328
10. Portion of Gain/(Loss) Offset for 2024	20%	40%	60%	80%
11. Adjustment to 2024 Assets [(9) * (10)]	$ 8,192	$ 16,262	$ (93,253)	$ 24,262
12. Total Adjustment to 2024 Assets [Sum of (11) for 2020 through 2023]				$ (44,537)
13. 2024 Actuarial Value of Assets* [(8) for 2023 - (12)]				$ 771,313
14. Ratio of Actuarial Value of Assets to Actual Market Value of Assets [(13) / (8)]				106.13%

* This amount cannot be less than 80% or greater than 120% of the Actual Market Value of Assets.

DEVELOPMENT OF ASSETS

Benefit Plan

	Market		Cost	
TRUST ASSETS, January 1, 2023	**$**	**639,469.97**	**$**	**655,568.32**
RECEIPTS				
County Contribution for 2023 Plan Year	$	28,819.00	$	28,819.00
Net Investment Income		7,551.64		7,551.64
Realized Gain (Loss)		4,881.33		4,881.33
Unrealized Gain (Loss)		63,003.40		N/A
Total Receipts	**$**	**104,255.37**	**$**	**41,251.97**
DISBURSEMENTS				
Dependents Benefit Payments	$	12,000.00	$	12,000.00
Insurance Premiums Paid for 2024 Plan Year		0.00		0.00
Trustee Fee		824.02		824.02
Investment Manager Fee		3,725.55		3,725.55
Total Disbursements	**$**	**16,549.57**	**$**	**16,549.57**
TRUST ASSETS, December 31, 2023	**$**	**727,175.77**	**$**	**680,270.72**
Due and Unpaid Dependents Benefits - Russ, L.L. (W.M.)		(400.00)		
ACTUAL MARKET VALUE OF ASSETS, January 1, 2024	**$**	**726,775.77**		

SCHEDULE OF FUNDING PROGRESS

Benefit Plan

Valuation Date	Valuation Assets*	Accrued Liability**	Unfunded Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Liability as % of Payroll
			Valuation			
1/1/2024	$ 771,313	$ 771,313	$ 0	100.0%	$ 3,597,003	0.0%
Study - Special Early Retirement (at 25 Years); 3 Year Average Compensation; and Normal Retirement (at Age 50 and 8 Years of Service)						
1/1/2024	$ 771,313	$ 771,313	$ 0	100.0%	$ 3,597,003	0.0%

* Actuarial Value of Assets.

** Determined under the Entry Age Actuarial Cost Method. For purposes of this exhibit, when assets exceed the accrued liability, the unfunded liability is reset to zero and the liability is deemed equal to the assets.

AGE GROUPS BY SERVICE GROUPS OF ACTIVE PARTICIPANTS

Retirement Plan

Service Group	Age Group 18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 And Over	Total
0	1	1	0	0	1	0	0	0	0	0	3
1	1	0	0	0	0	0	0	0	2	0	3
2	0	2	0	0	0	0	0	0	0	0	2
3	0	0	1	1	0	0	0	0	0	0	2
4	0	2	1	0	0	0	0	0	0	0	3
5-9	0	1	6	4	1	1	2	0	0	0	15
10-14	0	0	3	2	4	0	1	0	0	0	10
15-19	0	0	0	0	2	0	1	0	0	0	3
20-24	0	0	0	0	1	0	0	0	0	0	1
25-29	0	0	0	0	0	0	0	0	0	0	0
30+	0	0	0	0	0	0	0	0	0	0	0
Total	2	6	11	7	9	1	4	0	2	0	42

Average Age = 38.0

Average Service = 7.8

PAYOUT PROJECTION

Retirement Plan

(January 1, 2024 - December 31, 2033)

	Valuation		Study	
	Estimated Number of New Retirees	Estimated Annual Payout*	Estimated Number of New Retirees	Estimated Annual Payout*
Pre January 1, 2024	N/A	$ 1,010,973	N/A	$ 1,010,973
January 1, 2024 to December 31, 2024	1	698,266	1	698,320
January 1, 2025 to December 31, 2025	2	683,791	5	773,062
January 1, 2026 to December 31, 2026	2	701,326	4	844,109
January 1, 2027 to December 31, 2027	5	770,344	3	858,493
January 1, 2028 to December 31, 2028	2	789,915	1	853,426
January 1, 2029 to December 31, 2029	1	777,072	2	887,877
January 1, 2030 to December 31, 2030	1	764,435	2	979,871
January 1, 2031 to December 31, 2031	2	857,747	1	1,003,118
January 1, 2032 to December 31, 2032	1	905,832	2	1,069,949
January 1, 2033 to December 31, 2033	1	904,107	3	1,166,424

This table is produced on the assumption that all active employees will retire in accordance with the assumed retirement rate (see Disclosure of Actuarial Assumptions).

* These amounts include estimated DROP Accumulation Lump Sums.

Summary of Risk Analysis as of January 1, 2024

Introduction

The measurement of pension obligations and the calculation of contribution requirements, including the Actuarially Determined Contribution, requires the use of assumptions related to expected future economic and demographic experience. The effects on liability measurement of actual future experience differing from the assumptions utilized may not be intuitive or fully understood. Potential volatility of pension obligations (and the corresponding contribution requirements) are the effects of greatest concern to most plan sponsors.

Definition of Risk

Risk can be defined as an uncertain event or condition that, if it occurs, has an effect on at least one objective or outcome. In this definition, the effect of the uncertainty includes both the downside (negatively perceived) and upside (positively perceived) results. In regard to a pension plan, risk refers to the potential of actual future experience deviating from expected future experience and the results of the occurrence of such events/deviations are called actuarial gains and losses.

Investment Risk

Investment risk is the potential that investment returns will be different than expected. The plan uses a long-term outlook when selecting the investment/asset return assumption which is currently 6.50%. The long-term assumption should be viewed as the average or expected return, realizing that there will be years with lower returns, which are expected to be offset by years with higher returns. The volatility of investment returns directly affects the fair market value of assets, therefore a 5 year smoothing method is utilized by the plan to "smooth" the variability of the returns to help maintain a more stable contribution rate. The investment risk closely corresponds to the asset allocation of the plan and it should be noted that any smoothing method does not mitigate or eliminate any investment risk. McCready & Keene/OneAmerica does not provide investment advice and relies on information provided by the investment advisor when evaluating the investment return assumption.

Longevity Risk

One of the key features of a defined benefit plan is the standard form of payment of the benefit as an annuity. The longevity risk is the potential that the actual number of annuity payments made will be different than the expected payments determined based upon the mortality tables utilized in valuing the plan liabilities. A participant who might decease earlier in retirement could produce an actuarial gain to the plan (payments would cease, but the participant might have been expected receive payments for a few more years), and correspondingly, a participant who lives longer than expected could produce an actuarial loss. The effect of the gains offsetting the losses for a population is referred to as risk pooling. Generally plans with a larger participant base (100's or 1,000's of participants) will see more stable/predictable effects of the risk pooling than a smaller plan.

Other Demographic Risks

The other demographic risks encompasses the potential that actual experience may differ from the expectations based upon assumptions of such items as termination, disablement, retirement (early or late), etc. Some of these risks might be less intuitive such as a retirement earlier than expected producing an actuarial loss from early retirement subsidies, or the actuarial gain/loss from the election of an optional form of payment due to the difference between the actuarial assumptions used by the plan document for actuarial equivalence and the assumptions used for plan funding. These demographic risks can also change the expected timing of payments and lead to the risk of asset/liability mismatch.

Contribution Risk

Contribution risk is the potential that contributions to the plan fail to be made at a level that promotes plan solvency or the ability to make the promised payments. The actuarial report does not evaluate the ability or willingness of the plan sponsor to make contributions to the plan, but does indirectly assume that a sound funding policy will be utilized. The contributions are determined on a basis that is expected to fund the normal cost (or benefits accruing during the current period) and a portion of any unfunded liability. Contributions that fail to meet funding requirements may affect future expectations of return, increase contribution requirements, and erode the funded status of the plan.

Plan Maturity Measures

Plan maturity refers to the lifecycle of the plan and generally whether the plan is in either an accumulation phase, where the plan is expected to receive more contributions and investment returns than it pays in benefits resulting in the build up of assets, or a decumulation phase, where the plan is expected to transition to a point where the payment of benefits may exceed the contributions and investment ultimately resulting in the erosion of assets in a super-mature plan. Generally as a plan matures, adverse experience may potentially have a much greater impact to the plan sponsor if the inherent risks of the plan are not completely understood.

Ratio of Liability to Payroll

The ratio of liability to payroll can be used as a metric to reflect the relative size of the accrued pension plan benefits compared to the size of the sponsor/county. A higher liability to payroll ratio indicates that there is potential that the plan sponsor my have fewer resources to manage any shortfalls and may experience more volatile employer contribution rates. For example, a plan with a liability to payroll ratio of 6 has the potential to experience twice the contribution rate volatility of a plan with a ratio of 3.

Ratio of Assets to Payroll

The ratio of market value of assets to payroll can be used as a metric to assess the relative size of the trust assets allocated to the pension plan compared to the size of the sponsor/county. A higher market value of assets to payroll ratio indicates the potential to experience more volatile employer contribution rates due to inherent variations in market investment returns. This measure is a current measure that should be expected to increase over time, but generally tends to stabilize as an effect of plan maturity.

For a more detailed analysis of the Study scenario, please provide a request for additional information.

DISCLOSURE OF ACTUARIAL METHODS

	Retirement Plan	Benefit Plan
ACTUARIAL COST METHOD	Entry Age Normal Cost	Aggregate Level
ASSET VALUATION METHOD	5-Year Asset Smoothing*	5-Year Asset Smoothing*

Entry Age Normal Cost

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The unfunded actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date less the actuarial value of assets.

The funding policy requires unfunded actuarial accrued liability bases/tiers to be amortized utilizing the level dollar amortization method over a closed period. Three fixed periods, of 10 years, 15 years and 20 years, are used to provide a range of possible contributions for the plan. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

Aggregate Level

The effect of this valuation method is to spread all actuarial gains and losses resulting from experience different than anticipated in our assumptions, over the normal costs to be paid on current and future anniversaries. The purpose of this method is to give a smooth progression of the costs from year to year.

Five Year Asset Smoothing

The actual asset return for each year is compared to the expected return for the year. A portion of this gain or loss is deferred to future years. In the first year after the gain or loss occurred, 20% of the gain or loss is recognized. Each year thereafter an additional 20% of the gain or loss for that year is recognized.

* Limited to 80% and 120% of Market Value.

DISCLOSURE OF ACTUARIAL ASSUMPTIONS

Retirement Plan and Benefit Plan

ECONOMIC ASSUMPTIONS

Discount Rate: Methodology		The Plan's projected future benefit cash flows are discounted back to the Plan's valuation date using the expected rate of return on plan assets.
Single Effective Interest Rate	3	6.50% per annum
Expected Rate of Return on Plan Assets	3	6.50% per annum
Future Salary Increases	3	4.00% per annum (For the purpose of GASB reporting, 3.00% increases due to inflation and 1.00% due to merit/seniority.)
Inflation Rate	2	3.00% per annum
Cost of Living Increase	3	Retirement Plan - Not Applicable; Benefit Plan - Not Applicable
Mandatory Employee Contribution Credited Interest Rate	1	Retirement Plan - 3.00% per annum; Benefit Plan - Not Applicable

DEMOGRAPHIC (AND OTHER NON-ECONOMIC) ASSUMPTIONS

Retirement	1	Benefits are assumed to commence at the earlier of 1) attainment of Normal Retirement Age (Valuation - age 55; Study - age 50 and 8 years of service), or 2) attainment of Special Early Retirement Age (Valuation - the later of age 52 and 25 years of service; Study - 25 years of service), but no earlier than one year from the valuation date. If later, the Sheriff is assumed to retire at the end of his four year term. DROP participants are assumed to retire at the end of their DROP Period.
Termination of Employment	3	According to Sarason Table T-2

DISCLOSURE OF ACTUARIAL ASSUMPTIONS

Retirement Plan and Benefit Plan

DEMOGRAPHIC (AND OTHER NON-ECONOMIC) ASSUMPTIONS (continued)

Disability	[3] According to 150% of 1964 OASDI Disability Experience Table
January 1, 2024 Mortality Assumption	[2] Pub-2010 Safety Amount-Weighted Mortality Projected Generationally with Scale MP-2021 (separate employee, retiree, contingent survivor, and disabled retiree tables and male & female tables)
January 1, 2023 Mortality Assumption	[2] Pub-2010 Safety Amount-Weighted Mortality Projected Generationally with Scale MP-2021 (separate employee, retiree, contingent survivor, and disabled retiree tables and male & female tables)
Benefit Payment Form	[1] 100% of participants are assumed to elect a single life annuity at retirement
Marriage	[3] 100% of participants are assumed to be married when the participant dies
Spouse Age	[3] Males are assumed to be two years older than females (unless provided)
Dependent Children	[3] Participants are assumed to have 2.5 children with an average age of 5 years.
Mandatory Employee Contribution	[1] Retirement Plan - 4.00% of compensation (3.00% of compensation prior to March 1, 2019); Benefit Plan - Not Applicable
Administrative Expense Loading	[1] Retirement Plan - Flat Loading; Benefit Plan - Insurance Premium Only
Insurance Contract Provider	Retirement Plan - Not Applicable; Benefit Plan - The Standard Insurance Co.

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[1] Represents an estimate of future experience

[2] Represents actuary's observation of estimates inherent in market data

[3] Represents both (1) an estimate of future experience, and (2) actuary's observation of estimates inherent in market data

ACTUARIAL METHODS AND ASSUMPTIONS - OTHER DISCLOSURES

Retirement Plan and Benefit Plan

OTHER DISCLOSURES PERTAINING TO ECONOMIC ASSUMPTIONS

Any known change in circumstances that occurs after the valuation date that would affect economic assumptions selected as of the valuation date?	None

OTHER DISCLOSURES PERTAINING TO DEMOGRAPHIC ASSUMPTIONS

Any known change in circumstances that occurs after the valuation date that would affect demographic assumptions selected as of the valuation date?	None

OTHER DISCLOSURES PERTAINING TO PRESCRIBED ASSUMPTIONS OR METHODS

Any prescribed assumption or method set by another party that significantly conflicts with what, in the actuary's professional judgment, would be reasonable for the purpose of the valuation?	None
Any prescribed assumption or method set by another party that the actuary is unable to evaluate for reasonableness for the purpose of the valuation?	None

SUMMARY OF PLAN PROVISIONS

Retirement Plan

EFFECTIVE DATE	January 1, 1973 Restated effective January 1, 2013. Latest amended effective September 1, 2022.
PARTICIPATION	Immediate upon enrollment authorizing payroll deductions of required Participant contributions.
ELIGIBILITY FOR BENEFITS:	
Normal Retirement	Valuation - Age 55; Study - Age 50 and 8 years of service
Early Retirement	Age 45 and 20 years of service
Special Early Retirement	Valuation - Age 52 and 25 years of service; Study - 25 years of service
In-Service Retirement	Elected official after age 55 and 32 years of service
Late Retirement	Subject to continued employment after normal retirement
Severance	8 years of service
Deferred Retirement Option Program (DROP)	Attainment of Normal Retirement Age or Special Early Retirement Age, but not yet credited with 32 years of service
Disability	Medically determined
Death	8 years of service

SUMMARY OF PLAN PROVISIONS

Retirement Plan

AMOUNT OF BENEFITS:

Final Average Monthly Salary	One-twelfth (1/12) of the average of the participant's salary for the five (5) calendar years of employment (three (3) calendar years of employment for the purpose of the Study) that produce the highest such average.
Normal Retirement Benefit	The standard retirement benefit is a monthly pension payable for life equal to 2 1/2% of the Final Average Monthly Salary plus $1.00; this sum multiplied by credited service at Normal Retirement Date (not to exceed 20); plus 2% of Final Average Monthly Salary multiplied by years of service in excess of 20 (not to exceed 12). This retirement benefit is not to exceed 74% of Final Average Monthly Salary plus $20.
Early Retirement Benefit	The accrued retirement benefit as of the early retirement date payable commencing at normal retirement. However, a participant may elect to have his benefit commence prior to normal retirement in a reduced amount equal to the normal retirement benefit reduced by 5/12% for each month by which the commencement precedes the normal retirement date. For participants with 25 year of more of service, the benefit shall be reduced by 5/12% for each month by which the commencement precedes the special early retirement date.
Special Early Retirement Benefit	The accrued retirement benefit as of the early retirement date payable commencing at normal retirement. However, a participant may elect to have his benefit commence prior to normal retirement in an unreduced amount for an early commencement.
In-Service Retirement Benefit	The standard retirement benefit based upon service and salary as of in-service retirement date payable commencing as of the first day of the month following the in-service retirement date.

SUMMARY OF PLAN PROVISIONS

Retirement Plan

AMOUNT OF BENEFITS:

Late Retirement Benefit	The standard retirement benefit based upon service and salary as of late retirement date payable commencing at late retirement date.
Severance Benefit	After completion of 8 years of credited service, a participant shall be entitled to a deferred vested benefit equal to his accrued retirement benefit at date of separation. In lieu of a vested monthly benefit, a lump sum equaling the 'net amount' of participant contributions may be elected. 'Net amount' is the total of a participant's contributions, less any returned to him from the fund, plus interest compounded annually at the rate of 3.0%. Prior to completion of 8 years of credited service, a participant shall be entitled to the 'net amount' of his contributions paid in the form of a lump sum.
DROP Benefit	The DROP Frozen Benefit is the standard retirement benefit based on service and salary as of the DROP entry date payable commencing no later than 3 years from the DROP entry date and shall not extend beyond the date of completion of 32 years of service. In addition, the DROP Benefit Accumulation will be paid upon actual retirement in the amount of the accumulated DROP Frozen Benefits that would have been payable during the DROP period credited with interest at an annual rate of 3%.
Disability Benefit	The 'net amount' of a participant's contributions payable as a monthly benefit or a lump sum amount.

AMOUNT OF BENEFITS:

Death Benefit	A lump sum equaling the 'net amount' of a participant's contributions. In addition, the surviving spouse would be entitled to a monthly benefit payable for her life equal to the survivor benefit that would have been payable if the participant had received the benefit he was entitled to at his date of death in the form of a joint and 100% survivor option.
Optional Forms of Benefit	Life Annuity; Life Annuity with 120 or 240 Months Certain; or Joint and 50%, 66-2/3%, or 100% Survivor Annuity.

NOTE: If information given in this Summary disagrees or appears to disagree with the provisions of the plan legal document, the provisions of the document prevail.

SUMMARY OF PLAN PROVISIONS

Benefit Plan

EFFECTIVE DATE	January 1, 1973 Restated effective January 1, 1988.
PARTICIPATION	Participation in Monroe County Police Retirement Plan.
ELIGIBILITY FOR BENEFITS:	
Disability	Medically determined
Death	Payable to designated beneficiary
AMOUNT OF BENEFITS:	
Disability Benefit	Prior to age 65, a monthly benefit is payable as specified in the insurance contract. The Sheriff and the Merit Board may approve a monthly benefit in addition to the insured benefit. The amount of any additional monthly benefit will depend on whether or not the disability was the result of line of duty activities. After age 65, the entire disability benefit will be paid from the Plan's trust fund.
Death Benefit	Each eligible employee is insured by a life insurance contract for the amount of $25,000. In addition, a monthly benefit payable to the surviving spouse at the time of death in the amount of $200 and a monthly benefit payable on behalf of each dependent child under age 18 in the amount of $30 payable until the earlier of the child's eighteenth birthday or death.

NOTE: If information given in this Summary disagrees or appears to disagree with the provisions of the plan legal document, the provisions of the document prevail.