Municipal Employees' Retirement System of Michigan

Annual Actuarial Valuation Report
December 31, 2024 - Chesterfield Twp Lib (5010)

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Spring 2025

Chesterfield Twp Lib

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

This report presents the results of the Annual Actuarial Valuation, prepared for Chesterfield Twp Lib (5010) as of December 31, 2024. The report includes the determination of liabilities and contribution rates resulting from the participation in the Municipal Employees' Retirement System of Michigan ("MERS"). This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Document, Actuarial Policy, the Michigan Constitution, and governing statutes. Chesterfield Twp Lib is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees.

The purposes of this valuation are to:

- Measure funding progress as of December 31, 2024,
- Establish contribution requirements for the fiscal year beginning January 1, 2026,
- Provide information regarding the identification and assessment of risk,
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements, and
- Provide information to assist the local unit of government with State reporting requirements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through December 31, 2024. The valuation was based upon information furnished by MERS concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by MERS.

The Municipal Employees' Retirement Act, PA 427 of 1984 and the MERS' Plan Document Article VI Sec. 71 (1)(d), provides the MERS Board with the authority to set actuarial assumptions and methods after consultation with the actuary. As the fiduciary of the plan, the MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are reviewed regularly through a comprehensive study, most recently in the Spring of 2025. The MERS Retirement Board adopted a Dedicated

Gains Policy at the February 17, 2022 Board meeting. The Dedicated Gains Policy automatically reduces the assumed rate of investment return in conjunction with recognizing excess investment gains to mitigate the impact on employer contributions the first year. The policy was effective with the December 31, 2021 annual actuarial valuation.

The Michigan Department of Treasury provides required assumptions to be used for purposes of Public Act 202, of 2017, reporting. These assumptions are for reporting purposes only and do not impact required contributions. Please refer to the State Reporting page found at the end of this report for information for this filing.

For a full list of all the assumptions used, please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:
https://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2024AnnualActuarialValuation-Appendix.pdf

The actuarial assumptions used for this valuation, including the assumed rate of investment return, are reasonable for purposes of the measurement. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to the Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The LDROM calculation is provided in aggregate, along with aggregate employer results, in a separate report titled "Summary Report of the 79th Annual Actuarial Valuations," and will be available on the MERS website during the fall of 2025.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of Chesterfield Twp Lib as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Rebecca L. Stouffer, Mark Buis, Kurt Dosson, and Shana M. Neeson are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. GRS maintains independent consulting agreements with certain local units of government for services unrelated to the actuarial consulting services provided in this report.

The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

This information is purely actuarial in nature. It is not intended to serve as a substitute for legal, accounting, or investment advice.

This report was prepared at the request of the MERS Retirement Board and may be provided only in its entirety by the municipality to other interested parties (MERS customarily provides the full report on request to associated third parties such as the auditor for the municipality). GRS is not responsible for the consequences of any unauthorized use. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, that conditions have changed since the calculations were made, that the information provided in this report is inaccurate or is in anyway incomplete, or if you need further information in order to make an informed decision on the subject matter in this report, please contact your Regional Manager at 1.800.767.MERS (6377).

Sincerely,
Gabriel, Roeder, Smith & Company

Rebecca L. Stouffer, ASA, FCA, MAAA

Mark Buis, FSA, FCA, EA, MAAA

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Executive Summary

Funded Ratio

The funded ratio of a plan is the percentage of the dollar value of the actuarial accrued liability that is covered by the actuarial value of assets. While the funded ratio may be a useful plan measurement, understanding a plan's funding trend may be more important than a particular point in time. Refer to Table 7 to find a history of this information.

	12/31/2024	12/31/2023
Funded Ratio*	92%	98%

* Reflects assets from Surplus divisions, if any.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS' technology service provider.

Required Employer Contributions

Your required employer contributions are shown in the following table. Employee contributions, if any, are in addition to the employer contributions.

Effective with the December 31, 2021 valuation, the MERS Retirement Board adopted a Dedicated Gains Policy which allows for recognition of asset gains in excess of a set threshold in combination with lowering the assumed rate of investment return. Following the completion of an Experience Study and effective with the 2024 valuations, the MERS Retirement Board adopted updated demographic and economic assumptions. **The combined impact of the implementation of updated assumptions and application of the Dedicated Gains Policy is shown in the contribution requirements below.**

	Percentage of Payroll		Monthly $ Based on Projected Payroll	
Valuation Date:	12/31/2024	12/31/2023	12/31/2024	12/31/2023
Fiscal Year Beginning:	January 1, 2026	January 1, 2025	January 1, 2026	January 1, 2025
Division				
07 - Full-Time	13.67%	11.28%	$ 6,508	$ 5,371
Total Municipality - Estimated Monthly Contribution			**$ 6,508**	**$ 5,371**
Total Municipality - Estimated Annual Contribution			**$ 78,096**	**$ 64,452**

Employee contribution rates:

	Employee Contribution Rate	
Valuation Date:	12/31/2024	12/31/2023
Division		
07 - Full-Time	4.00%	4.00%

The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements. Employers making contributions in excess of the minimum requirements may elect to apply the excess contribution immediately to a particular division, or segregate the excess into one or more "Surplus" divisions. An election in the first case would immediately reduce any unfunded accrued liability and lower the amortization payments throughout the remaining amortization period. Additional contribution into one or more Surplus divisions would not immediately lower future contributions, however the assets from the Surplus division(s) could be transferred to an unfunded division in the future to reduce the unfunded liability in future years, or to be used to pay all or a portion of the minimum required contribution in a future year. For purposes of this report, the assets in any Surplus division have been included in the municipality's total assets, unfunded accrued liability, and funded status; however, these assets are not used in calculating the minimum required contribution.

MERS strongly encourages employers to contribute more than the minimum contribution shown above. With the implemented dedicated gains policy, market gains and losses will continue to be smoothed over five years; however, excess returns are used to lower the investment assumption. Thus, there will be fewer gains to smooth in down markets. Having additional funds in Surplus divisions will assist plans with navigating potential short-term market volatility.

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the fiscal year beginning in 2026 for the entire employer would be $7,048, instead of $6,508.

The required employer contribution rates, or dollars if the division is closed, determined in this report are reasonable under Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, based on:

- The use of reasonable actuarial assumptions and cost methods;
- The use of reasonable amortization and asset valuation methods; and
- Application of the MERS funding policy which will accumulate sufficient assets to make benefit payments when due, assuming all assumptions will be realized, and the required employer contributions are made when due.

How and Why Do These Numbers Change?

In a defined benefit plan, contributions vary from one annual actuarial valuation to the next as a result of the following:

- Changes in benefit provisions (see Table 2);
- Changes in actuarial assumptions and methods (see the Appendix); and
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions.

These impacts are reflected in various tables in the report. For more information, please contact your Regional Manager.

Comments on Investment Rate of Return Assumption

A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided a significant portion of the funding. The larger the share of benefits being provided from investment returns, the smaller the required contributions, and vice versa. Determining the contributions required to prefund the promised retirement benefits requires an assumption of what investment earnings are expected to add to the fund over a long period of time. This is called the **Investment Return Assumption**.

The MERS Investment Return Assumption is **6.93%** per year. This, along with all other actuarial assumptions, is reviewed at least every five years in an Experience Study that compares the assumptions used against actual experience and recommends adjustments if necessary. If your municipality would like to explore contributions at lower assumed investment return assumptions, please review the "What If" projection scenarios later in this report.

Assumption and Method Changes in 2024

Effective February 17, 2022, the MERS Retirement Board adopted a dedicated gains policy that automatically lowers the assumed rate of investment return by using excess asset gains to mitigate large increases in required contributions to the Plan. Full details of this dedicated gains policy are available in the Actuarial Policy found on the MERS website. Some goals of the dedicated gains policy are to:

- Provide a systematic approach to lower the assumed rate of investment return between experience studies; and
- Use excess gains to cover both the increase in normal cost and any increase in UAL payment the first contribution year after application (i.e., minimize the first-year impact (i.e., increase) in employer contributions).

The dedicated gains policy was implemented with the December 31, 2021 annual actuarial valuation and was reflected in the computed employer contribution amounts beginning in fiscal year 2023.

Investment performance measured for the one-year period ending December 31, 2024 resulted in no change to the assumed rate of investment return of 6.93%.

On February 12, 2025, the MERS Retirement Board adopted the results of an Experience Study covering the period, January 1, 2019 through December 31, 2023. The study examined recent experience and trends, with consideration for the COVID-19 pandemic. The study resulted in incremental assumption updates, with limited impact on employer contributions and funded status, for most employers when results are measured on the new assumption basis. The results of this study are reflected in the December 31, 2024 annual actuarial valuations.

MI Local Retirement Grant

Michigan lawmakers adopted Public Act 119 of 2023, which provided relief to local units of government with the most significant burden from qualified pension and retirement health benefit systems on their annual budget and revenues. As authorized under Public Act 119 of 2023, Section 990, the state pension and OPEB grants were awarded to eligible local governments in September 2024.

A smaller number of municipalities qualified for the ***MI Local Retirement Grant*** than the ***Protecting MI Pension Grant Program*** of the previous year. Pension funds received by municipalities were deposited into the MERS trust during September 2024 and are reflected in this valuation.

Comments on Asset Smoothing

To avoid dramatic spikes and dips in annual contribution requirements due to short-term fluctuations in asset markets, MERS applies a technique called **asset smoothing**. This spreads out each year's investment gains or losses over the prior year and the following four years. After initial application of asset smoothing, remaining excess market gains are used to buy down the assumed rate of investment return and increase the level of valuation assets, to the extent allowed by the dedicated gains policy. This smoothing method is used to determine your actuarial value of assets (valuation assets), which is then used to determine both your funded ratio and your required contributions. **The (smoothed) actuarial rate of return for 2024 was 3.79%, while the actual market rate of return was 7.28%.** The actuarial rate of return is below the assumed rate of return, which will put upward pressure on the employer contribution requirements determined in this valuation. To see historical details of the market rate of return compared to the smoothed actuarial rate of return, refer to this report's Appendix or view the "How Smoothing Works" video on the Defined Benefit resource page of the MERS website.

As of December 31, 2024, the actuarial value of assets is 107% of market value due to asset smoothing. This means that there are deferred investment losses, which will put upward pressure on contributions in the short term.

If the December 31, 2024 valuation results were based on market value instead of actuarial value:

- The funded percent of your entire municipality would be 87% (instead of 92%); and
- Your total employer contribution requirement for the fiscal year starting January 1, 2026 would be $91,500 (instead of $78,096).

Alternate Scenarios to Estimate the Potential Volatility of Results ("What If Scenarios")

The calculations in this report are based on assumptions about long-term economic and demographic behavior. These assumptions will never materialize in a given year, except by coincidence. Therefore, the results will vary from one year to the next. The volatility of the results depends upon the characteristics of the plan. For example:

- Open divisions that have substantial assets compared to their active employee payroll will have more volatile employer contribution rates due to investment return fluctuations.
- Open divisions that have substantial accrued liability compared to their active employee payroll will have more volatile employer contribution rates due to demographic experience fluctuations.
- Small divisions will have more volatile contribution patterns than larger divisions because statistical fluctuations are relatively larger among small populations.
- Shorter amortization periods result in more volatile contribution patterns.

Many assumptions are important in determining the required employer contributions. In the following table, we show the impact of varying the Investment Return assumption. Lower investment returns would generally result in higher required employer contributions, and vice versa. The three economic scenarios below provide a quantitative risk assessment for the impact of investment returns on the plan's projected financial condition for funding purposes.

The relative impact of the economic scenarios below will vary from year to year, as the participant demographics change. The impact of each scenario should be analyzed for a given year, not from year to year. The results in the table are based on the December 31, 2024 valuation and are for the municipality in total, not by division.

It is important to note that calculations in this report are mathematical estimates based upon assumptions regarding future events, which may or may not materialize. Actuarial calculations can and do vary from one valuation to the next, sometimes significantly depending on the group's size. Projections are not predictions. Future valuations will be based on actual future experience.

12/31/2024 Valuation Results	Lower Future Annual Returns	Lower Future Annual Returns	Valuation Assumptions
Investment Return Assumption	**4.93%**	**5.93%**	**6.93%**
Accrued Liability	$ 3,185,956	$ 2,810,544	$ 2,501,325
Valuation Assets[1]	$ 2,308,702	$ 2,308,702	$ 2,308,702
Unfunded Accrued Liability	$ 877,254	$ 501,842	$ 192,623
Funded Ratio	72%	82%	92%
Monthly Normal Cost	$ 8,746	$ 6,622	$ 5,004
Monthly Amortization Payment	$ 5,937	$ 3,660	$ 1,504
Total Employer Contribution[2]	$ 14,683	$ 10,282	$ 6,508

[1] The Valuation Assets include assets from Surplus divisions, if any.

[2] If assets exceed accrued liabilities for a division, the division may have an overfunding credit to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.

Projection Scenarios

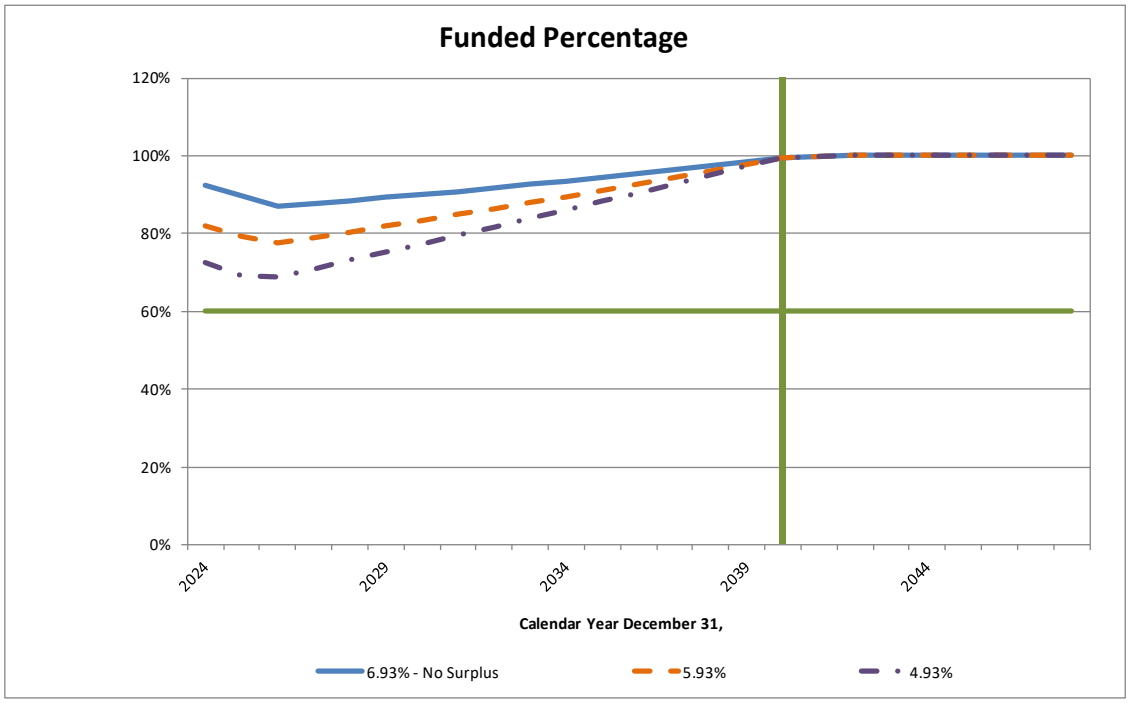
The next two pages show projections of the plan's funded ratio and computed employer contributions under the actuarial assumptions used in the valuation and alternate economic assumption scenarios. All three projections account for the past investment experience that will continue to affect the actuarial rate of return in the short term.

The 6.93% scenario provides an estimate of computed employer contributions based on current actuarial assumptions, and a projected 6.93% market return. The other two scenarios may be useful if the municipality chooses to budget more conservatively and make contributions in addition to the minimum requirements. The 5.93% and 4.93% projection scenarios provide an indication of the potential required employer contribution if these assumptions were met over the long term.

Valuation Year Ending 12/31	Fiscal Year Beginning 1/1	Actuarial Accrued Liability	Valuation Assets[2]	Funded Percentage	Estimated Annual Employer Contribution
6.93%[1]					
2024	2026	$ 2,501,325	$ 2,308,702	92%	$ 78,096
2025	2027	$ 2,630,000	$ 2,360,000	90%	$ 86,800
2026	2028	$ 2,750,000	$ 2,390,000	87%	$ 97,200
2027	2029	$ 2,860,000	$ 2,510,000	88%	$ 100,000
2028	2030	$ 2,980,000	$ 2,630,000	88%	$ 103,000
2029	2031	$ 3,090,000	$ 2,750,000	89%	$ 106,000
5.93%[1]					
2024	2026	$ 2,810,544	$ 2,308,702	82%	$ 123,384
2025	2027	$ 2,960,000	$ 2,340,000	79%	$ 135,000
2026	2028	$ 3,080,000	$ 2,390,000	78%	$ 146,000
2027	2029	$ 3,210,000	$ 2,540,000	79%	$ 150,000
2028	2030	$ 3,340,000	$ 2,690,000	80%	$ 155,000
2029	2031	$ 3,460,000	$ 2,840,000	82%	$ 159,000
4.93%[1]					
2024	2026	$ 3,185,956	$ 2,308,702	72%	$ 176,196
2025	2027	$ 3,350,000	$ 2,320,000	69%	$ 191,000
2026	2028	$ 3,490,000	$ 2,400,000	69%	$ 203,000
2027	2029	$ 3,640,000	$ 2,580,000	71%	$ 209,000
2028	2030	$ 3,780,000	$ 2,760,000	73%	$ 215,000
2029	2031	$ 3,920,000	$ 2,950,000	75%	$ 221,000

[1] Represents both the interest rate for discounting liabilities and the future investment return assumption on the Market Value of assets.

[2] Valuation Assets do not include assets from Surplus divisions, if any.



Notes:
The green indicator lines have been added at 60% funded and 16 years following the valuation date for PA 202 purposes.

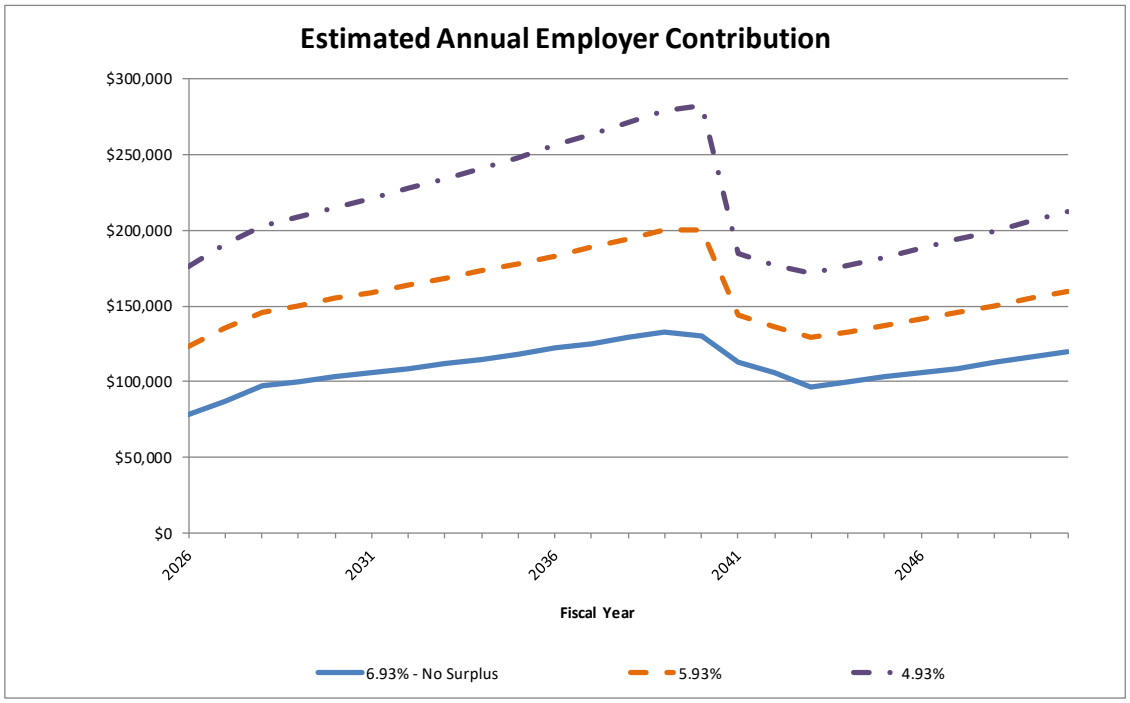


Table 1: Employer Contribution Details for the Fiscal Year Beginning January 1, 2026

Division	Total Normal Cost	Employee Contribution Rate	Employer Contributions[1]			Blended ER Rate[5]	Employee Contribution Conversion Factor[2]
			Employer Normal Cost[6]	Payment of the Unfunded Accrued Liability[4]	Computed Employer Contribution		
Percentage of Payroll							
07 - Full-Time	14.51%	4.00%	10.51%	3.16%	13.67%		0.92%
Estimated Monthly Contribution[3]							
07 - Full-Time			$ 5,004	$ 1,504	$ 6,508		
Total Municipality			**$ 5,004**	**$ 1,504**	**$ 6,508**		
Estimated Annual Contribution[3]			**$ 60,048**	**$ 18,048**	**$ 78,096**		

[1] The above employer contribution requirements are in addition to the employee contributions, if any.

[2] If employee contributions are increased/decreased by 1.00% of pay, the employer contribution requirement will decrease/increase by the Employee Contribution Conversion Factor. The conversion factor is usually under 1% because employee contributions may be refunded at termination of employment and not used to fund retirement pensions. Employer contributions will all be used to fund pensions.

[3] For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires (i.e., closed divisions), invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the Appendix.

[4] Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions not to add across.

[5] For linked divisions, the employer will be invoiced the Computed Employer Contribution rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-MERS (6377).

[6] For divisions with a negative employer normal cost, employee contributions cover the normal cost and a portion of the payment of any unfunded accrued liability.

Please see the Comments on Asset Smoothing in the Executive Summary of this report.

Table 2: Benefit Provisions

07 - Full-Time: Open Division

	2024 Valuation	2023 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	5 years	5 years
Employee Contributions:	4.00%	4.00%
Act 88:	Yes (Adopted 5/19/2004)	Yes (Adopted 5/19/2004)

Table 3: Participant Summary

Division	2024 Valuation Number	2024 Valuation Annual Payroll[1]	2023 Valuation Number	2023 Valuation Annual Payroll[1]	2024 Valuation Average Age	2024 Valuation Average Benefit Service[2]	2024 Valuation Average Eligibility Service[2]
07 - Full-Time							
Active Employees	9	$ 538,509	9	$ 538,578	41.8	7.0	9.7
Vested Former Employees	3	31,761	3	31,761	48.5	10.0	14.7
Retirees and Beneficiaries	6	113,715	5	100,993	64.1		
Pending Refunds	1		2				
Total Municipality							
Active Employees	**9**	**$ 538,509**	**9**	**$ 538,578**	**41.8**	**7.0**	**9.7**
Vested Former Employees	**3**	**31,761**	**3**	**31,761**	**48.5**	**10.0**	**14.7**
Retirees and Beneficiaries	**6**	**113,715**	**5**	**100,993**	**64.1**		
Pending Refunds	**1**		**2**				
Total Participants	**19**		**19**				

1 Annual payroll for active employees; annual deferred benefits payable for vested former employees; annual benefits being paid for retirees and beneficiaries.

2 Descriptions can be found under Miscellaneous and Technical Assumptions in the Appendix.

Table 4: Reported Assets (Market Value)

Division	2024 Valuation		2023 Valuation	
	Employer and Retiree[1]	Employee[2]	Employer and Retiree[1]	Employee[2]
07 - Full-Time	$ 1,937,167	$ 229,881	$ 1,837,297	$ 224,661
Municipality Total[3]	**$ 1,937,167**	**$ 229,881**	**$ 1,837,297**	**$ 224,661**
Combined Assets[3]	**$2,167,048**		**$2,061,958**	

[1] Reserve for Employer Contributions and Benefit Payments.

[2] Reserve for Employee Contributions.

[3] Totals may not add due to rounding.

The December 31, 2024 valuation assets (actuarial value of assets) are equal to 1.065367 times the reported market value of assets (compared to 1.099555 as of December 31, 2023). Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 5: Flow of Valuation Assets

Year Ended 12/31	Employer Contributions		Employee Contributions	Investment Income (Valuation Assets)	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2014	$ 0	$ 54,651	$ 8,479	$ 73,755	$ (21,403)	$ 0	$ 0	$ 1,308,920
2015	0	40,493	9,797	72,466	(21,403)	0	0	1,410,273
2016	0	41,520	10,404	81,556	(21,403)	0	0	1,522,350
2017	224	25,164	8,614	91,115	(75,267)	(6,796)	0	1,565,404
2018	0	58,061	9,738	59,748	(75,267)	0	0	1,617,684
2019	0	27,813	10,430	77,608	(75,267)	0	0	1,658,268
2020	8,359	36,420	11,347	135,164	(75,267)	0	0	1,774,291
2021	33,368	252	12,608	301,738	(75,267)	0	0	2,046,990
2022	57,911	53,000	17,976	82,832	(84,094)	0	0	2,174,615
2023	55,368	0	21,740	113,984	(98,471)	0	0	2,267,236
2024	52,290	0	21,160	86,136	(111,595)	(6,525)	0	2,308,702

Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to employer and employee payments for service credit purchases (if any) that the governing body has approved.

The investment income column reflects the recognized investment income based on Valuation Assets. It does not reflect the market value investment return in any given year.

The Valuation Asset balance includes assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.

Table 6: Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2024

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
07 - Full-Time	$ 915,509	$ 349,256	$ 1,234,459	$ 2,101	$ 2,501,325	$ 2,308,702	92.3%	$ 192,623
Total	**$ 915,509**	**$ 349,256**	**$ 1,234,459**	**$ 2,101**	**$ 2,501,325**	**$ 2,308,702**	**92.3%**	**$ 192,623**

Please see the Comments on Asset Smoothing in the Executive Summary of this report.

The December 31, 2024 valuation assets (actuarial value of assets) are equal to 1.065367 times the reported market value of assets. Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 7: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2010	$ 810,380	$ 983,264	121%	$ (172,884)
2011	802,553	1,057,737	132%	(255,184)
2012	860,042	1,112,498	129%	(252,456)
2013	961,564	1,193,438	124%	(231,874)
2014	1,043,072	1,308,920	126%	(265,848)
2015	1,158,339	1,410,273	122%	(251,934)
2016	1,249,972	1,522,350	122%	(272,378)
2017	1,319,270	1,565,404	119%	(246,134)
2018	1,424,239	1,617,684	114%	(193,445)
2019	1,624,423	1,658,268	102%	(33,845)
2020	1,839,428	1,774,291	96%	65,137
2021	2,035,168	2,046,990	101%	(11,822)
2022	2,123,003	2,174,615	102%	(51,612)
2023	2,311,421	2,267,236	98%	44,185
2024	2,501,325	2,308,702	92%	192,623

Notes: Actuarial assumptions were revised for the 2010, 2011, 2012, 2015, 2019, 2020, 2021, 2023, and 2024 actuarial valuations.

The Valuation Assets include assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Tables 8 and 9: Division-Based Comparative Schedules

Division 07 - Full-Time

Table 8-07: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2014	$ 1,043,072	$ 1,308,920	126%	$ (265,848)
2015	1,158,339	1,410,273	122%	(251,934)
2016	1,249,972	1,522,350	122%	(272,378)
2017	1,319,270	1,565,404	119%	(246,134)
2018	1,424,239	1,617,684	114%	(193,445)
2019	1,624,423	1,658,268	102%	(33,845)
2020	1,839,428	1,774,291	96%	65,137
2021	2,035,168	2,046,990	101%	(11,822)
2022	2,123,003	2,174,615	102%	(51,612)
2023	2,311,421	2,267,236	98%	44,185
2024	2,501,325	2,308,702	92%	192,623

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021, 2023, and 2024 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-07: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2014	5	$ 282,640	0.00%	3.00%
2015	6	326,961	0.38%	3.00%
2016	4	181,097	0.00%	3.00%
2017	5	255,713	0.00%	3.00%
2018	6	321,943	2.29%	3.00%
2019	6	347,664	7.94%	3.00%
2020	7	408,010	11.83%	3.00%
2021	7	420,248	11.16%	3.00%
2022	9	523,598	10.01%	4.00%
2023	9	538,578	11.28%	4.00%
2024	9	538,509	13.67%	4.00%

[1] For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

[2] For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the full employer contribution requirement.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Table 10: Division-Based Layered Amortization Schedule

Division 07 - Full-Time

Table 10-07: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance[1]	Original Amortization Period[2]	Amounts for Fiscal Year Beginning 1/1/2026		
				Outstanding UAL Balance[3]	Remaining Amortization Period[2]	Annual Amortization Payment
Experience	12/31/2023	$ 44,185	15	$ 46,202	14	$ 4,308
Experience	12/31/2024	145,376	15	155,451	15	13,740
Total				**$ 201,653**		**$ 18,048**

[1] For each type of UAL (layer), this is the original balance as of the date the layer was established.

[2] According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

[3] This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2024 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2024 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

GASB Statement No. 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. GASB Statement No. 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at http://www.mersofmich.com/.

Actuarial Valuation Date:	12/31/2024
Measurement Date of the Total Pension Liability (TPL):	12/31/2024

At 12/31/2024, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	6
Inactive employees entitled to but not yet receiving benefits (including refunds):	4
Active employees:	9
	19

Total Pension Liability as of 12/31/2023 measurement date:	$	2,244,978
Total Pension Liability as of 12/31/2024 measurement date:	$	2,432,561
Service Cost for the year ending on the 12/31/2024 measurement date:	$	74,476
Change in the Total Pension Liability due to:		
- Benefit changes[1]:	$	0
- Differences between expected and actual experience[2]:	$	74,379
- Changes in assumptions[2]:	$	(2,775)
Average expected remaining service lives of all employees (active and inactive):		4

[1] A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

[2] Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Covered employee payroll (Needed for Required Supplementary Information):	$	538,509

Note: Covered employee payroll may differ from the GASB Statement No. 68 definition.

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (6.18%)	Current Discount Rate (7.18%)	1% Increase (8.18%)
Change in Net Pension Liability as of 12/31/2024:	$ 295,108	$ 0	$ (246,234)

Note: The current discount rate shown for GASB Statement No. 68 purposes is higher than the MERS assumed rate of return. This is because for GASB Statement No. 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.

GASB Statement No. 68 Information

This page is for those municipalities who need to "roll forward" their total pension liability due to the timing of completion of the actuarial valuation in relation to their fiscal year-end.

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. GASB Statement No. 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at www.mersofmich.com.

Actuarial Valuation Date:	12/31/2024
Measurement Date of the Total Pension Liability (TPL):	12/31/2025

At 12/31/2024, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	6
Inactive employees entitled to but not yet receiving benefits (including refunds):	4
Active employees:	9
	19

Total Pension Liability as of 12/31/2024 measurement date:	$	2,369,425
Total Pension Liability as of 12/31/2025 measurement date:	$	2,562,533
Service Cost for the year ending on the 12/31/2025 measurement date:	$	77,320
Change in the Total Pension Liability due to:		
- Benefit changes[1]:	$	0
- Differences between expected and actual experience[2]:	$	70,643
- Changes in assumptions[2]:	$	(3,778)
Average expected remaining service lives of all employees (active and inactive):		4

[1] A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

[2] Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Covered employee payroll (Needed for Required Supplementary Information):	$	538,509

Note: Covered employee payroll may differ from the GASB Statement No. 68 definition.

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (6.18%)	Current Discount Rate (7.18%)	1% Increase (8.18%)
Change in Net Pension Liability as of 12/31/2025:	$ 307,361	$ 0	$ (256,296)

Note: The current discount rate shown for GASB Statement No. 68 purposes is higher than the MERS assumed rate of return. This is because for GASB Statement No. 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.

Benefit Provision History

The following benefit provision history is provided by MERS. Any corrections to this history or discrepancies between this information and information displayed elsewhere in the valuation report should be reported to MERS. All provisions are listed by date of adoption.

07 - Full-Time

7/1/2022	Participant Contribution Rate 4%
1/1/2021	Contract Employees - Included
1/1/2021	Gross Wages
1/1/2021	Service Credit Qualification - 130 hrs
1/1/2021	Sick Eligibility - No Max
12/1/2016	Service Credit Purchase Estimates - Yes
6/1/2004	2.25% Multiplier (Capped at 80% of FAC)
6/1/2004	6 Year Vesting
6/1/2004	Benefit F55 (With 15 Years of Service)
6/1/2004	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/2004	Day of work defined as 7.5 Hours a Day for All employees.
6/1/2004	Fiscal Month - January
6/1/2004	Member Contribution Rate 3.00%
5/19/2004	Covered by Act 88
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years
	Normal Retirement Age (DB) - 60

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the Appendix. Some actuarial assumptions are specific to this municipality and its divisions. These are listed below.

Increase in Final Average Compensation

Division	Increase Assumption
All Divisions	2.00%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Not Linked Divisions: The default funding policy for closed not linked divisions, including open divisions with zero active members, is to follow a non-accelerated amortization, where each closed period decreases by one year each year until the period is exhausted.

Risk Commentary

Determination of the accrued liability, the employer contribution, and the funded ratio requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability, the actuarially determined contribution and the funded ratio that result from the differences between actual experience and the actuarial assumptions.

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

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- **Investment Risk** – actual investment returns may differ from the expected returns;
- **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
- **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
- **Other Demographic Risks –** members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

  The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	Ratio of:				
December 31,	Market Value of Assets to Total Payroll	Actuarial Accrued Liability to Payroll	Actives to Retirees and Beneficiaries	Market Value of Assets to Benefit Payments	Net Cash Flow to Market Value of Assets (BOY)
2018	4.6	4.4	2.0	19.6	-0.5%
2019	4.7	4.7	2.0	21.7	-2.5%
2020	4.5	4.5	2.3	24.2	-1.2%
2021	4.9	4.8	2.3	27.2	-1.6%
2022	3.6	4.1	2.3	22.3	2.2%
2023	3.8	4.3	1.8	20.9	-1.1%
2024	4.0	4.6	1.5	18.3	-2.2%

Ratio of Market Value of Assets to Total Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Market Value of Assets to Benefit Payments

The MERS' Actuarial Policy requires a total minimum contribution equal to the excess (if any) of three times the expected annual benefit payments over the projected market value of assets as of the participating municipality or court's Fiscal Year for which the contribution applies. The ratio of market value of assets to benefit payments as of the valuation date provides an indication of whether the division is at risk for triggering the minimum contribution rule in the near term. If the division triggers this minimum contribution rule, the required employer contributions could increase dramatically relative to previous valuations.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

State Reporting

The following information has been prepared to provide some of the information necessary to complete the Public Act 202 pension reporting requirements for the State of Michigan's Local Government Retirement System Annual Report (Form No. 5572). Additional resources are available at www.mersofmich.com and on the State website.

Form 5572 Line Reference	Description	Result
10	**Membership as of December 31, 2024**	
11	Indicate number of active members	9
12	Indicate number of inactive members (excluding pending refunds)	3
13	Indicate number of retirees and beneficiaries	6
14	**Investment Performance for Calendar Year Ending December 31, 2024**[1]	
15	Enter actual rate of return - prior 1-year period	7.72%
16	Enter actual rate of return - prior 5-year period	6.91%
17	Enter actual rate of return - prior 10-year period	6.62%
18	**Actuarial Assumptions**	
19	Actuarial assumed rate of investment return[2]	6.93%
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Level Percent
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any[3]	15
22	Is each division within the system closed to new employees?[4]	No
23	**Uniform Assumptions**	
24	Enter retirement pension system's actuarial value of assets using uniform assumptions	$2,240,017
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions[5]	$2,501,325
27	Actuarially Determined Contribution (ADC) using uniform assumptions, Fiscal Year Ending December 31, 2025	$82,632

1 The Municipal Employees' Retirement System's investment performance has been provided to GRS from MERS Investment Staff and is included here for reporting purposes. The investment performance figures reported are net of investment expenses on a rolling calendar year basis for the previous 1-, 5-, and 10-year periods as required under PA 530.

2 Net of administrative and investment expenses.

3 Populated with the longest amortization period remaining in the amortization schedule, across all divisions in the plan. This is when each division and the plan in total is expected to reach 100% funded if all assumptions are met.

4 If all divisions within the employer are closed, "yes." If at least one division is open (including shadow divisions), "no."

5 Line 25 actuarial accrued liability is determined under PA 202 uniform assumptions which may differ from the valuation assumptions. In accordance with the March 4, 2025 memo on the selection of Uniform Assumptions, "[f]or retirement systems that utilize an investment rate of return that is less than 7.00% for funding purposes, the local government should use the lower investment rate of return for the uniform assumption as well." In particular, the assumed rate of return for PA 202 purposes is 6.93%.