June 3, 2024 City # 00301

City of Corinth
3300 Corinth Parkway
Corinth, TX 76208

Subject: 2025 City Contribution Rate

Your city's 2025 monthly combined rate is shown below. The combined rate includes your city's full retirement rate and supplemental death benefit rate, if applicable. These rates were determined by your city's December 31, 2023 actuarial valuation.

Normal Cost	11.25 %
Prior Service	4.05
Full Retirement	15.30 %
Supplemental Death Benefit	0.23
Combined Contribution	**15.53 %**

Detailed information on your city's TMRS plan is contained in the attached report.

The December 31, 2023 valuation reflects changes in actuarial assumptions based on the results of TMRS' four-year experience study that was completed in 2023. Details of these changes can be found at tmrs.com.

If you have questions about your city's contribution rate, please contact me at 512-225-3760 or lhardy@tmrs.com.

Sincerely,

Leslee S. Hardy

Leslee S. Hardy, ASA, EA, FCA, MAAA
Director of Plan Design & Funding

Table of Contents

		Page
Executive Summary	A comparison of the highlights of the December 31, 2023 and December 31, 2022 actuarial valuations for your city. Included are membership counts, asset information, actuarial information, and contribution rate requirements.	1
Your City's TMRS Benefits	A summary of plan provisions in effect as of April 1, 2024.	2
Calculation of Contribution Requirements	Details the calculation of the Full Retirement Rate (ADEC) and the Supplemental Death Benefit Rate, if applicable, for your city.	3
UAAL/OAAL Amortization Bases and Payments	Information on the Unfunded Actuarial Accrued Liability (UAAL)/Overfunded Actuarial Accrued Liability (OAAL) amortization bases and payments for your city.	4
Reconciliation of Full Retirement Rate from Prior Actuarial Valuation Report	A detailed reconciliation of changes in your city's Full Retirement Rate (ADEC) since the prior valuation.	5
Historical and Projected Accumulation of the BAF Balance	This schedule provides your city with historical cash flows, interest credits and the year-end balance of its Benefit Accumulation Fund (BAF), as well as projected values for calendar years 2024 and 2025.	7
Rate Stabilization Techniques	A summary of the techniques currently available to assist cities in stabilizing their contribution rates.	8
Risks Associated with Measuring the Actuarial Accrued Liability and Actuarially Determined Employer Contribution	An explanation of risk measurements associated with your city's TMRS plan.	9

Executive Summary

Valuation as of	12/31/2023	12/31/2022
Membership as of the Valuation Date		
• Number of		
- Active Members	168	169
- Retirees and beneficiaries	121	114
- Inactive Members	185	167
- Total	474	450
• Prior year's payroll provided by TMRS	$ 13,780,316	$ 12,494,184
• Valuation Payroll	13,727,147	12,561,487
Benefit Accumulation Fund (BAF) Assets		
• Market BAF Balance	$ 55,232,110	$ 48,039,320
• BAF crediting rate	11.92 %	(7.42) %
• Interest credited on beginning BAF balance	$ 5,727,023	$ (3,750,222)
• Employer contributions	2,164,911	1,884,823
• Employee contributions	964,632	879,868
• Benefit and refund payments	1,663,775	1,527,214
Actuarial Value of Assets (AVA)		
• Market BAF Balance	$ 55,232,110	$ 48,039,320
• Actuarial Value of Assets (AVA)	56,472,467	51,632,229
• AVA as a Percentage of BAF	102.2 %	107.5 %
• Return on AVA	6.54	6.17
Actuarial Information		
• Actuarial Accrued Liability (AAL)	$ 64,079,020	$ 58,669,121
• Actuarial Value of Assets (AVA)	56,472,467	51,632,229
• Unfunded Actuarial Accrued Liability (UAAL)	7,606,553	7,036,892
• UAAL as % of pay	55.2 %	56.3 %
• Funded Ratio (AVA/AAL)	88.1	88.0
• Employer Normal Cost Rate	11.25	11.01
• Prior Service Rate	4.05	4.00
Contribution Rates	2025	2024
• Employee	7.00 %	7.00 %
• Full Retirement (ADEC)	15.30	15.01
• Supplemental Death Benefit	0.23	0.27
Combined Employer Contribution Estimates	2025	2024
• Projected payroll	$ 14,104,644	$ 12,894,366
• Combined Contribution Rate	15.53 %	15.28 %
• Estimated employer contribution	$ 2,190,451	$ 1,970,259

Note: Results from prior year reflect the plan provisions shown on the next page.

Your City's TMRS Benefits

Plan provisions are adopted by your city's governing body from the options available in the TMRS Act. Your city's plan provisions in effect as of April 1, 2024 were as follows:

Employee Contribution Rate	7%
City Matching Ratio	2 : 1
Years Required for Vesting	5
Retirement Eligibility (Age/Service)	60/5, AnyAge/20
Updated Service Credit	100% Repeating Transfers
Retiree Cost of Living Adjustment (COLA)	70% of CPI Retroactive Repeating
Supplemental Death Benefit to Active Members	Yes
Supplemental Death Benefit to Retirees	Yes

If you have any questions about your city's benefit provisions or would like to discuss plan changes, please contact the City Services Department at cityservices@tmrs.com or call Colin Davidson at 512-225-3742.

Calculation of Contribution Requirements

	From Valuation Report as of December 31, 2023		From Valuation Report as of December 31, 2022
	New Assumptions	Old Assumptions	
1. Prior year's payroll reported to TMRS	$ 13,780,316	$ 13,780,316	$ 12,494,184
2. Valuation Payroll	13,727,147	13,727,147	12,561,487
3. Employer Normal Cost Rate	11.25%	10.91%	11.01%
4. Actuarial Accrued Liability			
a. Active Members	$ 29,757,587	$ 29,684,903	$ 26,981,236
b. Inactive Members	12,902,932	12,881,303	12,276,443
c. Annuitants	21,418,501	21,624,906	19,411,442
d. Total Actuarial Accrued Liability	$ 64,079,020	$ 64,191,112	$ 58,669,121
5. Actuarial Value of Assets	56,472,467	56,472,467	51,632,229
6. Unfunded Actuarial Accrued Liability (4d - 5)	$ 7,606,553	$ 7,718,645	$ 7,036,892
7. Funded Ratio (5 / 4d)	88.1 %	88.0 %	88.0 %
8. Equivalent single amortization period*	19.8 Years	19.8 Years	20.7 Years
9. Assumed payroll growth rate	2.75 %	2.65 %	2.65 %

Contribution Rates:	2025		2024
10. Full Retirement			
a. Normal Cost	11.25 %	10.91 %	11.01 %
b. Prior Service	4.05	4.14	4.00
c. Full Retirement	15.30 %	15.05 %	15.01 %
11. Supplemental Death Benefit	0.23	0.28	0.27
12. Combined Contribution	15.53 %	15.33 %	15.28 %

* New losses are laddered over a 20-year period.

UAAL/OAAL Amortization Bases and Payments

Year Established	Description	Years Remaining	Remaining Base	Payment
2013	2013 Valuation (Fresh Start)	20	$ 7,572,451	$ 548,784
2014	2014 Experience	20	(313,604)	(22,727)
2015	2015 Experience	20	(268,609)	(19,466)
2015	2015 Actuarial Changes	20	(169,820)	(12,307)
2016	2016 Experience	18	490,296	38,175
2017	2017 Experience	20	(605,497)	(43,881)
2018	2018 Experience	20	(325,239)	(23,570)
2019	2019 Experience	20	(29,129)	(2,111)
2019	2019 Actuarial Changes	21	201,533	14,143
2020	2020 Experience	20	(394,448)	(28,586)
2021	2021 Experience	20	(72,002)	(5,218)
2022	2022 Experience	19	907,138	68,052
2023	2023 Experience	20	725,575	52,583
2023	2023 Actuarial Changes	20	(112,092)	(8,123)
	Total		7,606,553	555,748

TMRS amortizes the UAAL/OAAL through the process of laddering each base created during the valuation process. The city's UAAL/OAAL equals the total of the remaining amortization bases. The city's Prior Service Rate equals the total amortization payments divided by the Valuation Payroll (Item 2 of the prior page).

Reconciliation of Full Retirement Rate from Prior Actuarial Valuation Report

Actuarial valuations are based on long-term assumptions, and results in a specific year can, and almost certainly will, differ as actual plan experience deviates from the assumptions. The following table provides a detailed breakdown of changes in your city's Full Retirement Rate (ADEC) from 2024 to 2025. A brief description of such changes follows the table.

Change in Full Retirement Rate		
Full Retirement Rate from 12/31/2022 Valuation (2024 Rate)		15.01 %
Benefit Changes	0.00 %	
Return on Actuarial Value of Assets	0.06	
Contributions/Fully Amortized Prior Bases	(0.16)	
Payroll Growth	(0.27)	
Normal Cost	(0.10)	
Liability Growth	0.51	
Subtotal Experience Change	0.04 %	
Actuarial Changes	0.25	
Total Change	0.29 %	
Full Retirement Rate from 12/31/2023 Valuation (2025 Rate)		15.30 %

Benefit Changes - Shows the increase or decrease in the contribution rate associated with any plan changes.

Return on Actuarial Value of Assets (AVA) - Shows the change in the contribution rate associated with the return on the AVA being different than the assumed 6.75%. For the year ending December 31, 2023, the return on an AVA basis was 6.54%. The impact may show as 0.00% due to rounding.

Contributions/Fully Amortized Prior Bases - Shows the total increase or decrease in the contribution rate associated with contributions different than the Full Retirement Rate, the contribution lag (see below), and the impact of the amortization bases which become fully amortized as of this valuation since payments for those bases are no longer part of the Prior Service Rate calculation. Contributions different from the Full Retirement Rate may include phase-in contributions, contributions in excess of the Full Retirement Rate, and/or lump sum contributions. The effect of the contribution lag refers to the time delay between the actuarial valuation date and the date the contribution rate becomes effective (i.e., the Actuarial Valuation as of December 31, 2023 sets the rate effective for 2025). This impact is expected to become immaterial once a city is contributing the Full Retirement Rate and the Full Retirement Rate stabilizes.

Payroll Growth - Shows the increase or decrease in the contribution rate associated with higher or lower than expected growth in the city's overall payroll. The amortization payments were calculated assuming payroll grows at 2.75% per year. Overall payroll growth greater (less) than 2.75% will typically cause a decrease (increase) in the Prior Service Rate.

Normal Cost - Shows the increase or decrease in the contribution rate associated with changes in the average Normal Cost Rate for the city's active Members. The Normal Cost Rate for a Member is the contribution rate which, if applied to a Member's compensation throughout their period of anticipated covered service with the city, would be sufficient to meet all benefits payable on their behalf. The salary-weighted average of the individual rates is the city's total Normal Cost Rate. The employer Normal Cost Rate is the pay-weighted average of the individual Normal Cost Rates less the Member Contribution Rate and will generally increase (decrease) as the average entry age of the group increases (decreases).

Liability Growth - Shows the increase or decrease in the contribution rate associated with larger or lower than expected growth in the city's overall plan liabilities. The most significant sources for variance will be turnover and individual salary increases differing from the assumptions.

Actuarial Changes - Shows the increase or decrease in the contribution rate associated with changes in actuarial assumptions based on the results of the 2023 experience study.

Historical and Projected Accumulation of the BAF Balance

Year Ending December 31 (1)	Payroll for the Year (2)	Effective Retirement Contribution Rate [a] (3)	Employer Contributions for the Year (4)	Employee Contributions for the Year (5)	Benefit Payments (6)	External Cash Flow for the Year (7)	Interest Credit (8)	BAF Balance [b] (9)
		(4) / (2)				(4) + (5) + (6)		
2021	$ 11,879,334	15.85%	$ 1,882,874	$ 831,553	$ (1,486,392)	$ 1,228,035	$ 5,385,173	$ 50,552,065
2022	12,494,184	15.09%	1,884,823	879,868	(1,527,214)	1,237,477	(3,750,222)	48,039,320
2023	13,780,316	15.71%	2,164,911	964,632	(1,663,775)	1,465,768	5,727,023	55,232,110
2024	13,727,147	15.01%	2,060,445	960,900	(2,395,320)	626,025	3,728,167	59,586,302
2025	14,104,644	15.30%	2,158,011	987,325	(2,343,718)	801,618	4,022,075	64,409,996

a. Effective retirement contribution rate is the employer contribution received divided by the payroll paid.
b. BAF Balance may not sum due to rounding.

Rate Stabilization Techniques

Contribution rate stabilization for cities is a strategic goal of the TMRS Board of Trustees. Since 2007, the Board has approved many actuarial changes to minimize short-term volatility in contribution rates while maximizing long-term System sustainability. Under the current funding policy in which rates are actuarially determined each year, contribution rate stabilization is fully optimized at the System level; therefore, any further rate stabilization must be achieved at the city level.

Cities with an Unfunded Liability - For cities with an Unfunded Actuarial Accrued Liability (UAAL), the most effective way for a city to stabilize its TMRS contribution rate is to determine an affordable rate that exceeds the required rate and continue to pay that same rate even when the calculated rate decreases in subsequent valuations. These additional contributions at a predetermined fixed rate accomplish the following:

- Provide a stable annual contribution rate for budgeting purposes;
- Directly reduce the UAAL dollar for dollar;
- Pay off the UAAL quicker;
- Produce cost savings over the long run; and
- Provide a cushion for future adverse plan experience.

Cities with a Surplus - For cities with an Overfunded Actuarial Accrued Liability (surplus), the contribution rate is determined by decreasing the Normal Cost Rate (the cost of the current year accruals for active Members) by a Prior Service Rate calculated to keep the funded ratio at approximately the same level. The result is a required contribution rate less than the Normal Cost. It is important to note that adverse plan experience could still result in the funded ratio dropping below 100%. TMRS encourages cities in a surplus position to consider paying the full Normal Cost Rate (or as much as possible toward the full Normal Cost Rate) until the funded ratio is at least 110%. Doing so will dampen contribution rate volatility and increase the likelihood of maintaining a funded ratio greater than 100%.

How to make Additional Contributions - No formal action needs to be taken by a city to contribute at a higher level than the required monthly minimum. Additional monthly contributions may be made during the normal payroll reporting process by simply providing the increased rate in the "Optional Employer Rate" field. Because additional contributions are entirely voluntary, a city may revert to paying the minimum required rate at any time during the year if financial circumstances change.

If your city would like to explore the impact of any of these rate stabilization techniques on your TMRS plan, please contact Actuarial Services at ActuarialServices@tmrs.com.

Risks Associated with Measuring the Actuarial Accrued Liability and Actuarially Determined Employer Contribution

Risk measures help with illustrating the potential volatility in the Actuarial Accrued Liability and the Actuarially Determined Employer Contribution that results from the differences between actual plan experience and the actuarial assumptions. 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 payment status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

Ratio of Market Value of Assets to Payroll	4.0	
Ratio of Actuarial Accrued Liability to Payroll	4.7	
Ratio of Active Members to Retirees and Beneficiaries	1.4	
Net Cash Flow as a Percentage of Market Value of Assets	2.7	%
Duration of Liabilities	19.7	
Change in Contribution Rate with 10% Decline in Assets (Smoothed)	0.30	%
Change in Contribution Rate with 10% Decline in Assets (Unsmoothed)	2.98	%

Ratio of Market Value of Assets to 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 4 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in city contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll - The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the Actuarial Accrued Liability is 5 times the payroll, a change in liability 2% 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 liability (and also city contributions) as a percentage of payroll.

The relationship between the Actuarial Accrued Liability and payroll is a useful indicator of the potential longer term asset-related volatility once the current UAAL is fully amortized. 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 Active Members to Retirees and Beneficiaries - A young plan with many active Members and few retirees will have a high ratio of active Members to retirees. A mature open plan may have close to the same number of active Members to retirees resulting in a ratio near 1. A very mature or closed plan may have significantly more retirees than active Members resulting in a ratio below 1.

Net Cash Flow as a Percentage of 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 very mature plan or a need for additional contributions.

Duration of Liabilities - The duration of the Present Value of Future Benefits (PVFB) may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the PVFB would increase approximately 10% if the assumed rate of return were lowered 1%.

Change in Contribution Rate with 10% Decline in Assets (Smoothed) - This shows the rate impact in one year if the Actuarial Value of Assets (AVA) was 10% lower than in the current actuarial valuation with the asset loss smoothed over a 10-year period as is done in the system-wide calculation of the AVA.

Change in Contribution Rate with 10% Decline in Assets (Unsmoothed): This shows the rate impact if the AVA was 10% lower than in the current actuarial valuation with the full asset loss recognized in the current valuation.

Low-Default-Risk Obligation Measure: Actuarial Standards of Practice No. 4 (ASOP No. 4) was revised and reissued in December 2021 by the Actuarial Standards Board (ASB). It includes a new calculation called a low-default-risk obligation measure (LDROM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

"The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the "right" liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date."

The LDROM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The current model expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDROM model creates higher expected costs but more predictability when compared to the current model. Thus, the difference between the two measures (Valuation and LDROM) is one illustration of the possible costs the city could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 4.80%.

The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

A. LDROM measure of benefits earned as of the measurement date:	$	86,807,885
B. Valuation liability at 6.75% on measurement date:		64,079,020
C. Cost to mitigate investment risk in the System's portfolio:	$	22,728,865

Disclosures: Discount rate used to calculate LDROM: 4.80% Intermediate FTSE Pension Discount Curve as of December 31, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the city's benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service.