



METROPOLITAN TRANSIT AUTHORITY UNION PENSION PLAN

GASB 67 and 68 DISCLOSURE

Fiscal Year: October 1, 2022 to September 30, 2023

Prepared by

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Executive Summary

A. Summary of Key Results

Reporting Date	September 30, 2022	September 30, 2023
Valuation Date	January 1, 2021	January 1, 2022
Participant Data		
Number of participants		
Active Participants	1,365	1,238
Terminated Vested Participants	565	560
Retired Participants	1,445	1,506
Disabled Participants	178	175
Beneficiaries	<u>370</u>	<u>385</u>
Total Participants	3,923	3,864
Covered payroll at reporting date	\$83,722,438	\$85,645,491
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Measurement Date	December 31, 2021	December 31, 2022
Assets		
Fiduciary net position	\$350,728,554	\$290,562,545
Money-weighted rate of return	11.76%	(14.32%)
Net Pension Liability		
Total pension liability	\$446,651,368	\$452,138,996
Fiduciary net position	<u>350,728,554</u>	<u>290,562,545</u>
Net Pension liability	\$95,922,814	\$161,576,451
Discount rate	6.25%	6.25%
Fiduciary net position as of % total pension liability	78.52%	64.26%
Net pension liability as of % covered payroll	114.57%	188.66%
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Reporting Date	September 30, 2022	September 30, 2023
Pension Expense		
Service cost	\$4,675,028	\$4,415,715
Interest on total pension liability	26,720,481	27,387,593
Effect of plan changes	5,234,477	7,798,168
Administrative expenses	417,525	411,191
Member contributions	(164,295)	(142,951)
Expected investment return net of investment expenses	(19,854,950)	(21,590,396)
Recognition of deferred inflows/outflows of resources	<u>(11,301,726)</u>	<u>3,281,243</u>
Pension expense	\$5,726,540	\$21,560,563

B. Purpose of this Report

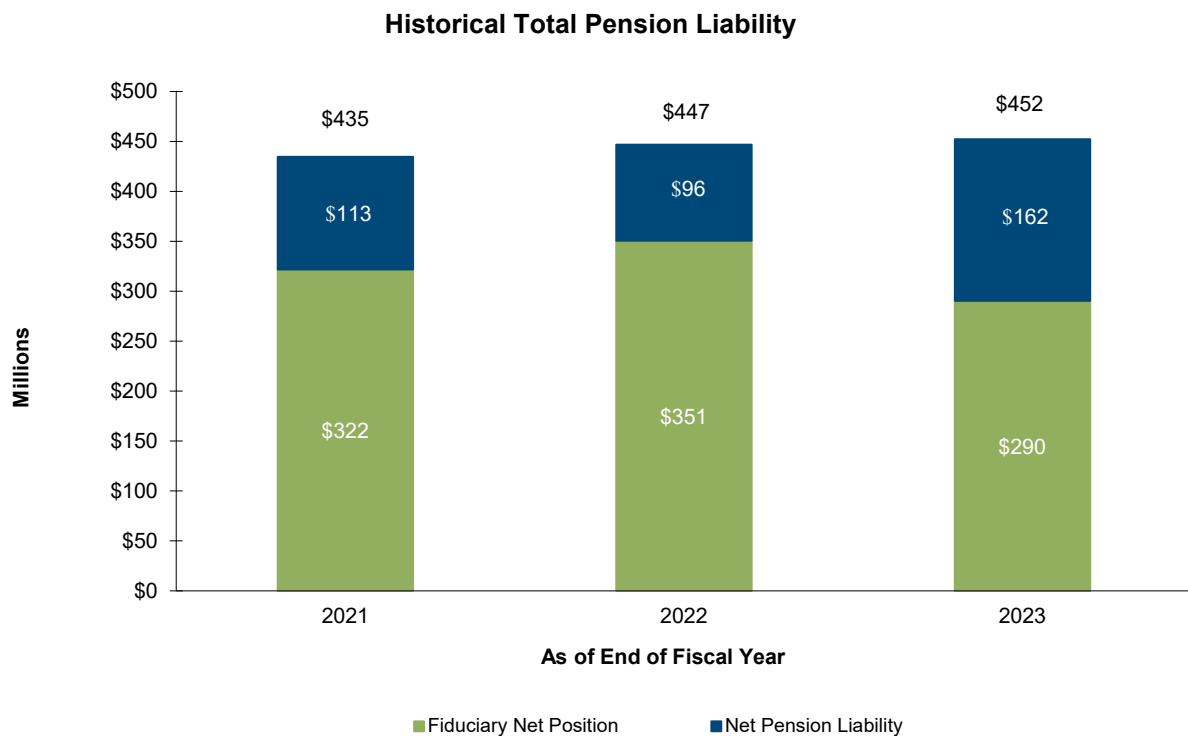
This accounting report has been prepared for the Metropolitan Transit Authority Union Pension Plan for the fiscal year October 1, 2022 to September 30, 2023 to:

- Calculate the Net Pension Liability.
- Prepare the Plan's Pension Expense.
- Review the Plan's depletion date projection.

The Valuation Date is January 1, 2022. This is the date as of which the actuarial valuation is performed. The Measurement Date is December 31, 2022. This is the date as of which the net pension liability is determined. The Reporting Date is September 30, 2023. This is the employer's fiscal year ending date.

C. Total Pension Liability and Net Pension Liability

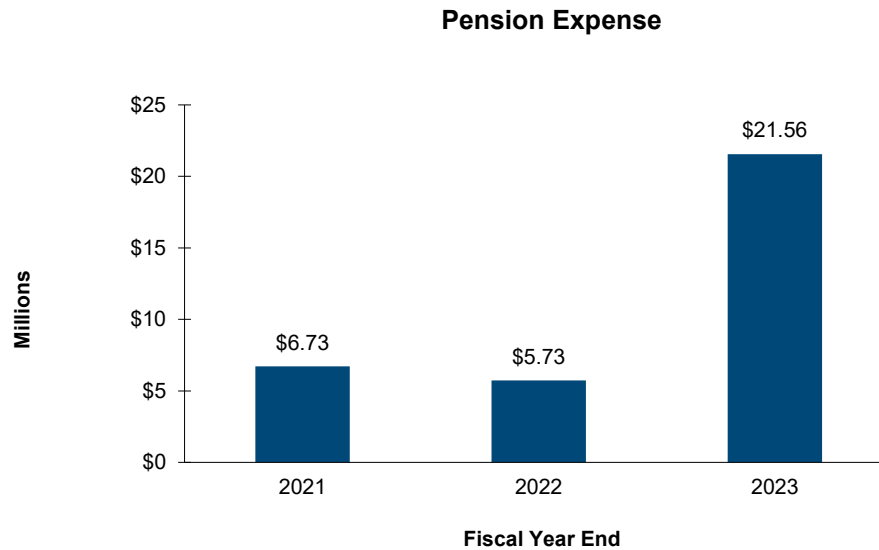
The graph below illustrates the total pension liability and the net pension liability (funded status) for the current and preceding two years.



D. Pension Expense for the 2023 Fiscal Year End

The Pension Expense measured for the plan year ending December 31, 2022 and reported for the fiscal year ending September 30, 2023 is \$21,560,563.

The graph below illustrates the Pension Expense for the current and preceding two fiscal years.



E. Depletion Date

As of December 31, 2022, our projections show the plan will have enough assets to make projected benefit payments under the assumptions outlined on page 9 and developed on page 12 of the report.

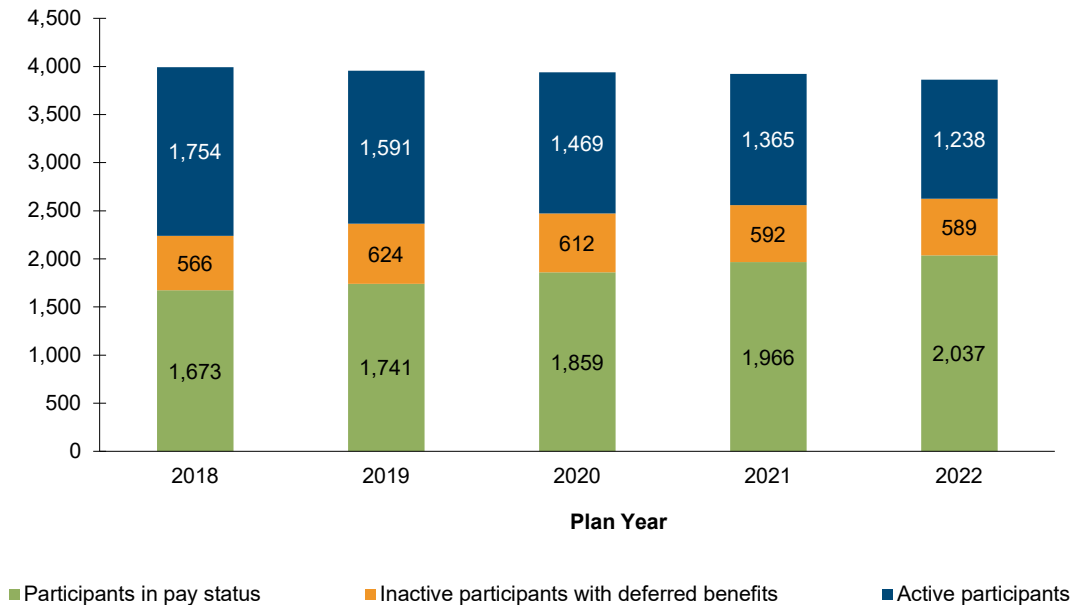
F. Plan Experience

Change in Demographics

From January 1, 2021 to January 1, 2022, the number of active participants in the Plan decreased by 9.3% from 1,365 to 1,238; while the total number of participants decreased by 1.5% from 3,923 to 3,864.

The following graph illustrates the count of participants, by category, as of the valuation date for the current and preceding four plan years.

Historical Participation



Total Pension Liability

Under the Entry Age Normal actuarial cost method, and prior to reflecting any plan, method or assumption changes, liability experience for the 2022 plan year was more favorable than expected, generating a net actuarial gain as follows:

- Demographic experience different from that assumed, which resulted in an actuarial gain of approximately \$7.2 million.

In addition, the actuarial assumption changes resulted in an overall gain of approximately \$0.8 million as follows:

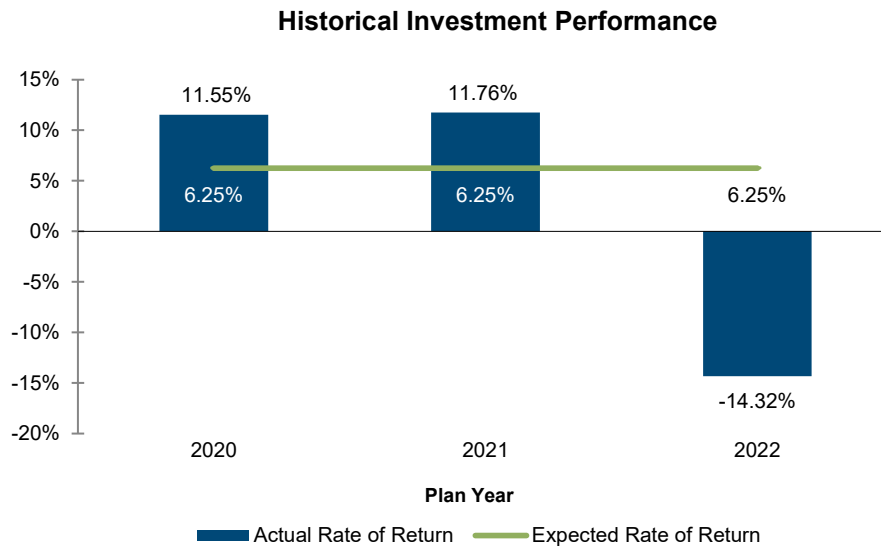
- The revised salary scale assumption resulted in a decrease of the total pension liability of approximately \$0.8 million.

Change in Assets

Asset experience for the 2022 plan year was less favorable than expected.

- The 2022 rate of return on the market value of plan assets was approximately (14.32%), significantly below the assumed rate of 6.25%, resulting in an investment loss of approximately \$71.0 million.

The following graph illustrates the investment performance on a market value basis for the preceding three plan years.



G. Actuarial Methods and Assumptions

The actuarial methods and assumptions used in this measurement are the same as those used in the prior measurement except as follows:

- The salary scale assumption was updated from 3.00% per year to 3.525% for 2022, 4.85% for 2023, 4.25% for 2024, 4.275% for 2025, and 3.00% per year thereafter.
- The retirement rates for active (non-suspended) members were increased by a factor of 1.5 (50% increase) for ages 60 to 69 to anticipate increased retirements in connection with a plan amendment to allow for in-service retirements effective October 1, 2022 for non-suspended active Union members who have attained aged 60.

These changes were made to better reflect anticipated future plan experience.

H. Plan Provisions

In June 2022, an additional plan amendment effective October 1, 2022 was approved by the Board as follows: the Plan was amended to allow eligible Union members (at least age 60 with a minimum 5 years of service and not currently accruing a Non-Union Pension Plan benefit) the option to begin receiving their monthly Union pension benefit while continuing to work for METRO as a Union employee. Union members electing an in-service retirement will not accrue any additional pension benefits. The impact of this benefit amendment, reflected in the December 31, 2022 measurement, results in an increase of the total pension liability of approximately \$7.8 million.

Certification

Actuarial computations presented in this report under Statements No. 67 and 68 of the Governmental Accounting Standards Board are for purposes of assisting METRO in fulfilling its financial accounting requirements. No attempt is being made to offer any accounting opinion or advice. This report is for fiscal year October 1, 2022 to September 30, 2023. The reporting date for determining plan assets and obligations is December 31, 2022. The calculations enclosed in this report have been made on a basis consistent with our understanding of the plan provisions. Determinations for purposes other than meeting financial reporting requirements may be significantly different than the results contained in this report. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security or meeting employer funding requirements.

In preparing this report, we relied, without audit, on information as of January 1, 2022 and December 31, 2022 furnished by METRO. This information includes, but is not limited to, statutory provisions, member census data, and financial information. Please see Milliman's funding valuation report issued August 11, 2022 for more information on the plan's participant group as of January 1, 2022 as well as a summary of the plan provisions and a summary of the actuarial methods used for funding purposes. Please see Milliman's preliminary December 31, 2022 valuation assumptions report dated April 18, 2023 for a summary of the assumptions used in this measurement.

We performed a limited review of the census and financial information used directly in our analysis and have found them to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

We hereby certify that, to the best of our knowledge, this report, including all costs and liabilities based on actuarial assumptions and methods, is complete and accurate and determined in conformance with generally recognized and accepted actuarial principles and practices, which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions and supporting Recommendations of the American Academy of Actuaries.

Each of the assumptions used in this valuation with the exception of those set by law was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Certification

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

Milliman has developed certain models to estimate the values included in this report. The valuation results were developed using models intended for valuations that use standard actuarial techniques. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP).

There is substantial uncertainty regarding the impact of the COVID-19 pandemic on projected plan costs. Therefore, for purposes of this report, we have chosen not to make any adjustments to these costs. However, please be aware that the COVID-19 pandemic could have a material cost impact in future valuations.

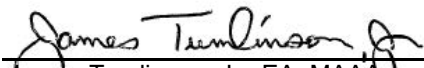
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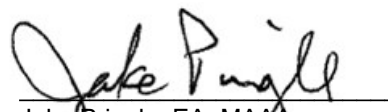
No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are retirement actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.


James Tumlinson, Jr., EA, MAAA
Principal and Consulting Actuary


Jake Pringle, EA, MAAA
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Overview of GASB 67 and GASB 68

The Governmental Accounting Standards Board (GASB) released new accounting standards for public pension plans and participating employers in 2012. These standards, GASB Statements No. 67 and 68, have substantially revised the accounting requirements previously mandated under GASB Statements No. 25 and 27. The most notable change is the distinct separation of funding from financial reporting. The Annual Required Contribution (ARC) has been eliminated under GASB 67 and 68 and is no longer relevant for financial reporting purposes. As a result, plan sponsors have been encouraged to establish a formal funding policy that is separate from financial reporting calculations.

GASB 67 applies to financial reporting for public pension plans and is required to be implemented for plan fiscal years beginning after June 15, 2013. Note that a plan's fiscal year might not be the same as the employer's fiscal year. Even if the plan does not issue standalone financial statements, but rather is considered a pension trust fund of a government, it is subject to GASB 67. Under GASB 67, enhancements to the financial statement disclosures are required, along with certain required supplementary information.

GASB 68 governs the specifics of accounting for public pension plan obligations for participating employers and is required to be implemented for employer fiscal years beginning after June 15, 2014. GASB 68 requires a liability for pension obligations, known as the Net Pension Liability, to be recognized on the balance sheets of participating employers. Changes in the Net Pension Liability will be immediately recognized as Pension Expense on the income statement or reported as deferred inflows/outflows of resources depending on the nature of the change.

Statement of Fiduciary Net Position

	December 31, 2021	December 31, 2022
Assets		
Cash and cash equivalents	\$1,322,070	\$2,287,805
Receivables and prepaid expenses:		
Receivable contributions	0	0
Receivable investment income	21,359	37,464
Receivables from brokers for unsettled trades	147,377	0
Prepaid expenses	0	0
Total receivables	168,736	37,464
Investments:		
Fixed income	85,568,137	73,606,447
Stocks	218,820,381	166,975,102
Short-term investments	0	0
Real estate	45,059,862	47,852,786
Alternative investments	0	0
Total investments	349,448,380	288,434,335
Invested securities lending cash collateral	0	0
Capital assets net of accumulated depreciation	0	0
Total assets	350,939,186	290,759,604
Liabilities		
Accrued expenses and benefits payable	210,632	197,059
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
Total liabilities	210,632	197,059
Net position restricted for pensions	\$350,728,554	\$290,562,545

Statement of Changes in Fiduciary Net Position

	<u>December 31, 2022</u>
Additions	
Pick-Up contributions	\$142,951
Employer contributions	15,668,399
Total contributions	15,811,350
Investment income (loss):	
Interest	50,509
Dividends	1,785,145
Equity fund income, net	0
Net increase in fair value of investments	(50,437,482)
Securities lending income	0
Less investment expenses:	
Direct investment expense	837,193
Securities lending management fees	0
Securities lending borrower rebates	0
Net investment income	(49,439,021)
Other income	0
Total additions	(33,627,671)
Deductions	
Service benefits	26,127,147
Disability benefits	0
Death benefits	0
Refunds of member contributions	0
Administrative expenses	411,191
Total deductions	26,538,338
Net increase (decrease)	(60,166,009)
Net position restricted for pensions	
Beginning of year (December 31, 2021)	350,728,554
End of year (December 31, 2022)	\$290,562,545

Money-Weighted Rate of Return

Measurement Year Ending December 31	Net Money-Weighted Rate of Return
2013	16.91%
2014	4.24%
2015	(3.38%)
2016	7.91%
2017	16.90%
2018	(6.73%)
2019	17.63%
2020	11.55%
2021	11.76%
2022	(14.32%)

Calculation of Money-Weighted Rate of Return

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on an annual basis and are assumed to occur at the middle of the year. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each year. The money-weighted rate of return is calculated net of investment expenses.

	Net External Cash Flows
Beginning Value - January 1, 2022	\$350,728,554
Annual net external cash flows:	
Employer contributions	15,668,399
Employee contributions	142,951
Benefit payments	(26,127,147)
Administrative expenses	(411,191)
Total	(10,726,988)
Investment Income	(49,439,021)
Ending Value - December 31, 2022	290,562,545
Money-Weighted Rate of Return	(14.32%)

Net Pension Liability

Net Pension Liability	<u>December 31, 2021</u>	<u>December 31, 2022</u>
Total pension liability	\$446,651,368	\$452,138,996
Fiduciary net position	<u>350,728,554</u>	<u>290,562,545</u>
Net pension liability	\$95,922,814	\$161,576,451
Fiduciary net position as a % of total pension liability	78.52%	64.26%
Covered payroll	83,722,438	85,645,491
Net pension liability as a % of covered payroll	114.57%	188.66%

The total pension liability was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial assumptions below, and was then projected forward to the measurement date. Any significant changes during this period have been reflected as prescribed by GASB 67 and 68.

Discount Rate

Discount rate	6.25%	6.25%
Long-term expected rate of return, net of investment expense	6.25%	6.25%
Municipal bond rate	N/A	N/A

The plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total pension liability is equal to the long-term expected rate of return.

Other Key Actuarial Assumptions

The actuarial assumptions that determined the total pension liability as of December 31, 2022 were based on the results of an actuarial experience study for the period January 1, 2015 - December 31, 2018.

Valuation date	January 1, 2021	January 1, 2022
Measurement date	December 31, 2021	December 31, 2022
Actuarial cost method	Entry Age Normal	Entry Age Normal
Inflation	2.30%	2.33%
Salary increases including inflation	3.00%	3.525% for 2022, 4.85% for 2023, 4.25% for 2024, 4.275% for 2025, and 3.00% thereafter
Mortality	Pub-2010 Mortality, projected forward (fully generational) with MP-2021	Pub-2010 Mortality, projected forward (fully generational) with MP-2021

Please see Milliman's preliminary assumptions reports for December 31, 2021 measurements, dated April 12, 2022, and for December 31, 2022 measurements, dated April 18, 2023, for more detail.

Long-Term Expected Rate of Return

The assumption for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of January 1, 2023 based on a 30-year investment horizon.

Asset Class	Index	Actual Allocation*	Long-Term Expected Arithmetic Real Rate of Return	Long-Term Expected Geometric Real Rate of Return
US Cash	BAML 3-Month T-Bills	0.50%	0.61%	0.59%
US Core Fixed Income (Aggregate)	Barclays Aggregate	17.50%	2.27%	2.13%
Global Bonds	FTSE WGBI	7.81%	0.72%	0.42%
US Large & Mid Cap Equity	Russell 1000 TR	15.29%	5.65%	4.03%
US Small Cap Equity	Russell 2000 TR	6.00%	7.25%	4.67%
US Large & Mid Cap Value Equity	Russell 1000 Value TR	5.40%	5.41%	3.88%
US Mid Cap Growth Equity	Russell Mid Cap Growth TR	4.97%	6.57%	3.56%
US MidCap Value	Russell MidCap Value	4.02%	5.41%	3.51%
Global Equity	MSCI ACWI NR	6.57%	6.43%	4.82%
Non-US Equity	MSCI ACWI Ex USA NR	10.25%	7.65%	5.81%
Non-US Small Cap Equity	MSCI EAFE Small Cap NR	5.18%	7.51%	5.31%
US REITs	FTSE Nareit All Equity REITs TR	16.51%	6.71%	4.50%
		100.00%		
Assumed Inflation - Mean			2.33%	2.33%
Assumed Inflation - Standard Deviation			1.41%	1.41%
Portfolio Real Mean Return			5.30%	4.36%
Portfolio Nominal Mean Return			7.63%	6.83%
Portfolio Standard Deviation				13.39%
Long-Term Expected Rate of Return				6.25%

* Actual allocation as of December 31, 2022.

Depletion Date Projection

In order to determine if the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, we have prepared a depletion date projection using the following techniques and assumptions:

- Pick-up contributions which began October 1, 2018 have been reflected in this projection.
- The employer contributes the actuarially determined contribution amounts.
- Benefit payments are projected based on the actuarial assumptions and the current plan provisions.
- Members are assumed to receive pay increases, terminate, retire, become disabled, die, and so forth according to the actuarial assumptions used for the December 31, 2022 measurement.
- Terminating and retiring members will not be replaced with new employees.
- Current administrative expenses are assumed to increase by 1.00% per year.
- All cash flows are assumed to occur on average halfway through the year.
- The long-term expected rate of return on pension plan investments is 6.25%.
- The tax-exempt, high-quality general obligation municipal bond index rate is N/A.
- The funding policy used to determine actuarially determined contributions does not change. See the last page of this report for details.
- The actuarial assumptions do not change.
- The plan provisions do not change except if any material future changes have been agreed upon as of the measurement date.

Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

In accordance with ASOP 51, please refer to Appendix C of the valuation report issued August 11, 2022 which identifies, assesses, and provides illustrations of risks that are significant to the Plan, and in some cases to the Plan's participants.

Projection of Contributions

Year	Projected Payroll Current Employees	Projected Payroll Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	Contributions from Future Employees	Total Contributions
1	\$69,362,626	\$0	\$69,362,626	\$168,012	\$15,295,342	\$0	\$15,463,354
2	64,115,034	0	64,115,034	149,136	15,285,177	0	15,434,313
3	58,310,146	0	58,310,146	132,600	15,862,162	0	15,994,762
4	53,169,462	0	53,169,462	117,936	16,730,562	0	16,848,498
5	48,710,069	0	48,710,069	104,520	17,951,537	0	18,056,057
6	44,426,716	0	44,426,716	93,132	17,695,523	0	17,788,655
7	40,420,598	0	40,420,598	82,680	17,449,575	0	17,532,255
8	36,785,019	0	36,785,019	73,164	17,222,616	0	17,295,780
9	33,516,351	0	33,516,351	64,896	17,016,472	0	17,081,368
10	30,120,428	0	30,120,428	57,408	16,820,435	0	16,877,843

Note: Years subsequent to year 10 have been omitted from this table.

Projection of Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings	Projected Ending Fiduciary Net Position
1	\$290,562,545	\$15,463,354	\$28,826,807	\$415,303	\$17,729,573	\$294,513,362
2	294,513,362	15,434,313	30,491,635	419,456	17,923,436	296,960,020
3	296,960,020	15,994,762	31,975,646	423,651	18,047,360	298,602,845
4	298,602,845	16,848,498	33,236,931	427,888	18,137,168	299,923,692
5	299,923,692	18,056,057	34,242,888	432,167	18,225,887	301,530,581
6	301,530,581	17,788,655	34,978,016	436,489	18,294,854	302,199,585
7	302,199,585	17,532,255	35,604,181	440,854	18,308,950	301,995,755
8	301,995,755	17,295,780	36,094,409	445,263	18,273,363	301,025,226
9	301,025,226	17,081,368	36,453,323	449,716	18,194,649	299,398,204
10	299,398,204	16,877,843	36,674,345	454,213	18,079,553	297,227,042

Note: Years subsequent to year 10 have been omitted from this table.

Actuarial Present Value of Projected Benefit Payments

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments*	Present Value of "Unfunded" Benefit Payments**	Present Value of Total Benefit Payments***
1	\$290,562,545	\$28,826,807	\$28,826,807	\$0	\$27,966,111	\$0	\$27,966,111
2	294,513,362	30,491,635	30,491,635	0	27,841,159	0	27,841,159
3	296,960,020	31,975,646	31,975,646	0	27,478,750	0	27,478,751
4	298,602,845	33,236,931	33,236,931	0	26,882,498	0	26,882,499
5	299,923,692	34,242,888	34,242,888	0	26,066,947	0	26,066,947
6	301,530,581	34,978,016	34,978,016	0	25,060,285	0	25,060,285
7	302,199,585	35,604,181	35,604,181	0	24,008,382	0	24,008,382
8	301,995,755	36,094,409	36,094,409	0	22,907,247	0	22,907,247
9	301,025,226	36,453,323	36,453,323	0	21,774,147	0	21,774,147
10	299,398,204	36,674,345	36,674,345	0	20,617,569	0	20,617,569
95	54,410	0	0	0	0	0	0
96	54,872	0	0	0	0	0	0
97	55,449	0	0	0	0	0	0
98	56,024	0	0	0	0	0	0
99	56,595	0	0	0	0	0	0
Total					475,142,294	0	475,142,294

Note: Years 11-94 have been omitted from this table.

* Discounted at the long-term expected rate of return, 6.25%.

** Discounted at the municipal bond rate, N/A.

*** Discounted at the single interest rate that produces a total actuarial present value equal to the sum of the actuarial present values of "funded" and "unfunded" benefit payments, 6.25%.

Changes in Net Pension Liability

Changes in Net Pension Liability	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances as of December 31, 2021	\$446,651,368	\$350,728,554	\$95,922,814
Changes for the year:			
Service cost	4,415,715		4,415,715
Interest on total pension liability	27,387,593		27,387,593
Effect of plan changes	7,798,168		7,798,168
Effect of economic/demographic gains or losses	(7,167,707)		(7,167,707)
Effect of assumptions changes or inputs	(818,994)		(818,994)
Benefit payments	(26,127,147)	(26,127,147)	0
Employer contributions		15,668,399	(15,668,399)
Member contributions		142,951	(142,951)
Net investment income		(49,439,021)	49,439,021
Administrative expenses		(411,191)	411,191
Balances as of December 31, 2022	\$452,138,996	\$290,562,545	\$161,576,451

Sensitivity Analysis

The following presents the net pension liability of METRO, calculated using the discount rate of 6.25%, as well as what METRO's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.25%) or 1 percentage point higher (7.25%) than the current rate.

	1% Decrease 5.25%	Current Discount Rate 6.25%	1% Increase 7.25%
Total pension liability	\$499,627,520	\$452,138,996	\$411,706,246
Fiduciary net position	<u>290,562,545</u>	<u>290,562,545</u>	<u>290,562,545</u>
Net pension liability	\$209,064,975	\$161,576,451	\$121,143,701

Pension Expense

Pension Expense	October 1, 2021 to September 30, 2022	October 1, 2022 to September 30, 2023
Service cost	\$4,675,028	\$4,415,715
Interest on total pension liability	26,720,481	27,387,593
Effect of plan changes	5,234,477	7,798,168
Administrative expenses	417,525	411,191
Member contributions	(164,295)	(142,951)
Expected investment return net of investment expenses	(19,854,950)	(21,590,396)
Recognition of Deferred Inflows/Outflows of Resources		
Recognition of economic/demographic gains or losses	(2,011,997)	(4,141,180)
Recognition of assumption changes or inputs	352,447	(1,990,485)
Recognition of investment gains or losses	<u>(9,642,176)</u>	<u>9,412,908</u>
Pension Expense	\$5,726,540	\$21,560,563

As of September 30, 2023, the deferred inflows and outflows of resources are as follows:

Deferred Inflows / Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual experience	(\$4,704,888)	\$0
Changes of assumptions	(595,247)	268,744
Net difference between projected and actual earnings	0	34,518,596
Contributions made subsequent to measurement date*	N/A	Employer determined

Amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended September 30:	
2024	(\$1,705,525)
2025	6,282,819
2026	10,704,026
2027	14,205,885
2028	0
Thereafter**	0

* Contributions to the pension plan from the employer subsequent to the measurement date of the net pension liability and before the end of the reporting period should be reported as a deferred outflow of resources related to pensions.

** Note that additional future deferred inflows and outflows of resources may impact these numbers.

Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Rec. Period*	Amount Recognized in Pension Expense for FYE 09/30/2023	Amount Recognized in Pension Expense through 09/30/2023	Balance of Deferred Inflows as of 09/30/2023	Balance of Deferred Outflows as of 09/30/2023
Economic/ demographic gains or losses	(\$7,167,707)	9/30/2023	2.4	(\$2,986,545)	(\$2,986,545)	(\$4,181,162)	\$0
	(1,472,895)	9/30/2022	2.9	(507,895)	(1,015,790)	(457,105)	0
	(1,065,945)	9/30/2021	3.2	(333,108)	(999,324)	(66,621)	0
	(1,881,792)	9/30/2020	3.6	<u>(313,632)</u>	(1,881,792)	<u>0</u>	<u>0</u>
		Total		(4,141,180)		(4,704,888)	0
Assumption changes or inputs	(818,994)	9/30/2023	2.4	(341,248)	(341,248)	(477,746)	0
	865,954	9/30/2022	2.9	298,605	597,210	0	268,744
	(1,880,019)	9/30/2021	3.2	(587,506)	(1,762,518)	(117,501)	0
	(8,162,008)	9/30/2020	3.6	<u>(1,360,336)</u>	(8,162,008)	<u>0</u>	<u>0</u>
		Total		(1,990,485)		(595,247)	268,744
Investment gains or losses	71,029,417	9/30/2023	5.0	14,205,883	14,205,883	0	56,823,534
	(17,509,281)	9/30/2022	5.0	(3,501,856)	(7,003,712)	(10,505,569)	0
	(15,450,473)	9/30/2021	5.0	(3,090,095)	(9,270,285)	(6,180,188)	0
	(28,095,897)	9/30/2020	5.0	(5,619,179)	(22,476,716)	(5,619,181)	0
	37,090,779	9/30/2019	5.0	<u>7,418,155</u>	37,090,779	<u>0</u>	<u>0</u>
		Total		9,412,908		(22,304,938)	56,823,534
Employer contributions made subsequent to measurement date.**							
Total for economic/demographic gains or losses and assumption changes or inputs						(5,300,135)	268,744
Net deferred (inflows)/outflows for investment gains or losses						0	34,518,596
Total deferred (inflows)/outflows						(5,300,135)	34,787,340
Total net deferrals							29,487,205

* Investment (gains)/losses are recognized in pension expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the average remaining service life for all active and inactive members.

** Contributions to the pension plan from the employer subsequent to the measurement date of the net pension liability and before the end of the reporting period should be reported as a deferred outflow of resources related to pensions.

Schedule of Changes in Net Pension Liability and Related Ratios (in 1,000s)

	Fiscal Year Ending September 30									
	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service cost	\$4,416	\$4,675	\$5,231	\$4,956	\$4,647	\$4,930	\$5,329	\$5,550	\$5,435	N/A
Interest on total pension liability	27,388	26,720	26,440	27,494	25,780	25,075	24,589	24,786	22,447	N/A
Effect of plan changes	7,798	5,234	0	0	13,851	0	0	0	0	N/A
Effect of economic/demographic gains or losses	(7,168)	(1,473)	(1,066)	(1,882)	(4,970)	(2,013)	(10,556)	(2,781)	0	N/A
Effect of assumption changes or inputs	(819)	866	(1,880)	(8,162)	22,299	(2,089)	(5,369)	25,680	0	N/A
Benefit payments	(26,127)	(24,084)	(23,306)	(21,934)	(19,795)	(18,800)	(17,657)	(16,567)	(15,924)	N/A
Net change in total pension liability	\$5,488	\$11,939	\$5,419	\$472	\$41,812	\$7,104	(\$3,664)	\$36,668	\$11,958	N/A
Total pension liability, beginning	\$446,651	\$434,712	\$429,293	\$428,821	\$387,010	\$379,906	\$383,569	\$346,901	\$334,943	N/A
Total pension liability, ending (a)	\$452,139	\$446,651	\$434,712	\$429,293	\$428,821	\$387,010	\$379,906	\$383,569	\$346,901	N/A
Fiduciary Net Position										
Employer contributions	\$15,668	\$15,836	\$17,079	\$17,806	\$15,631	\$15,414	\$16,565	\$19,062	\$13,477	N/A
Pick-up contributions	143	164	184	200	0	0	0	0	0	N/A
Net investment income	(49,439)	37,364	33,667	44,495	(18,517)	40,370	17,696	(7,810)	9,448	N/A
Benefit payments	(26,127)	(24,084)	(23,306)	(21,934)	(19,795)	(18,800)	(17,657)	(16,567)	(15,924)	N/A
Administrative expenses	(411)	(418)	(388)	(337)	(326)	(315)	(278)	(314)	(1,333)	N/A
Net change in plan fiduciary net position	(\$60,166)	\$28,863	\$27,235	\$40,230	(\$22,957)	\$36,669	\$16,327	(\$5,629)	\$5,668	N/A
Fiduciary net position, beginning	\$350,729	\$321,865	\$294,630	\$254,400	\$277,357	\$240,688	\$224,361	\$229,990	\$224,322	N/A
Fiduciary net position, ending (b)	\$290,563	\$350,729	\$321,865	\$294,630	\$254,400	\$277,357	\$240,688	\$224,361	\$229,990	N/A
Net pension liability, ending = (a) - (b)	\$161,576	\$95,923	\$112,847	\$134,663	\$174,421	\$109,652	\$139,217	\$159,208	\$116,911	N/A
Fiduciary net position as a % of total pension liability	64.26%	78.52%	74.04%	68.63%	59.33%	71.67%	63.35%	58.49%	66.30%	N/A
Covered payroll	\$85,645	\$83,722	\$90,602	\$94,602	\$97,251	\$103,246	\$106,575	\$93,228	\$92,277	N/A
Net pension liability as a % of covered payroll	188.66%	114.57%	124.55%	142.35%	179.35%	106.21%	130.63%	170.77%	126.70%	N/A

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not reported in accordance with the current GASB standards, they should not be reported.

Notes to Schedule:

Please see Milliman's preliminary December 31, 2022 valuation assumptions report dated April 18, 2023 for a description of changes in principal plan provisions and actuarial assumptions since the prior valuation.

Schedule of Employer Contributions

Fiscal Year Ending September 30	Actuarially Determined Contribution	Actual Employer Contribution*	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a % of Covered Payroll
2014	\$14,335,058	\$14,335,058	\$0	\$91,830,000	15.61%
2015	13,477,182	13,477,182	0	92,277,465	14.61%
2016	15,410,109	19,062,423	(3,652,314)	93,227,967	20.45%
2017	16,565,280	16,565,280	0	106,574,630	15.54%
2018	15,413,823	15,413,823	0	103,245,714	14.93%
2019	15,631,361	15,680,817	(49,456)	97,250,761	16.12%
2020	17,805,961	17,805,961	0	94,602,405	18.82%
2021	17,078,683	17,078,683	0	90,601,821	18.85%
2022	15,836,027	15,836,027	0	83,722,438	18.91%
2023	15,165,514	15,668,399	(502,885)	85,645,491	18.29%

*2019 includes \$49,456 in pick-up contributions, none shown for 2020 (valued as employee contributions going forward).

Actuarial Methods and Assumptions Used for Funding Policy

The following actuarial methods and assumptions were used in the January 1, 2022 valuation unless stated otherwise. Please see Milliman's valuation report issued August 11, 2022 for more detail.

Valuation Timing	Actuarially determined contribution amounts are calculated based on valuations performed as of January 1st 20 months prior to the end of the fiscal year in which the contributions are reported.
Actuarial Cost Method	Entry Age Normal
Amortization Method	
Level percent or level dollar	Level dollar
Closed, open, or layered periods	Closed
Amortization period at 01/01/2022	21 years
Amortization growth rate	0.00%
Asset Valuation Method	
Smoothing period	5 years
Recognition method	Non-asymptotic
Corridor	80% - 120% of Market Value
Inflation	2.33%, adopted for December 31, 2022 measurement and beyond.
Salary Increases	3.525% for 2022, 4.85% for 2023, 4.25% for 2024, 4.275% for 2025, and 3.00% thereafter, adopted for December 31, 2022 measurement and beyond.
Investment Rate of Return	6.25%, adopted for December 31, 2019 measurement and beyond.
Cost of Living Adjustments	None.
Retirement	See retirement rates in the January 1, 2022 valuation report. Effective October 1, 2022, retirement rates were increased by 50% for participants age 60+ with at least 5 years of service to anticipate in-service benefits for currently active participants (excluding transfers).
Turnover	See turnover rates in the January 1, 2022 valuation report.
Mortality	Pub-2010 Mortality, projected forward (fully generational) with MP-2021 used for December 31, 2022 measurement).

Summary Chart

	Total	Plan	Net	Net Investment				Net Pension Liability plus Net Deferrals	Annual Expense
	Pension Liability	Fiduciary Net Position	Pension Liability	Deferred (Inflows)	Deferred Outflows	(Inflows)/ Outflows	Net Deferrals		
Balances as of September 30, 2022	(\$446,651,368)	\$350,728,554	(\$95,922,814)	(\$3,743,704)	\$567,349	(\$27,097,913)	(\$30,274,268)	(\$126,197,082)	
Service cost	(4,415,715)		(4,415,715)						4,415,715
Interest on total pension liability	(27,387,593)		(27,387,593)						27,387,593
Effect of plan changes	(7,798,168)		(7,798,168)						7,798,168
Effect of liability gains or losses	7,167,707		7,167,707	(7,167,707)			(7,167,707)		
Effect of assumption changes or inputs	818,994		818,994	(818,994)			(818,994)		
Benefit payments	26,127,147	(26,127,147)	0						
Administrative expenses		(411,191)	(411,191)						411,191
Member contributions		142,951	142,951						(142,951)
Expected net investment income		21,590,396	21,590,396						(21,590,396)
Investment gains or losses		(71,029,417)	(71,029,417)			71,029,417	71,029,417		
Employer contributions		15,668,399	15,668,399					15,668,399	
Recognition of liability gains or losses				4,141,180			4,141,180		(4,141,180)
Recognition of assumption changes or inputs				2,289,090	(298,605)		1,990,485		(1,990,485)
Recognition of investment gains or losses						(9,412,908)	(9,412,908)		9,412,908
Annual expense								(21,560,563)	21,560,563
Balances as of September 30, 2023	(452,138,996)	290,562,545	(161,576,451)	(5,300,135)	268,744	34,518,596	29,487,205	(132,089,246)	

Glossary

Actuarially Determined Contribution	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined based on the funding policy and most recent measurement available when the contribution for the reporting period was adopted.
Deferred Inflows/Outflows of Resources	Portion of changes in net pension liability that is not immediately recognized in Pension Expense. These changes include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on plan investments.
Discount Rate	Single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the sum of: <ol style="list-style-type: none">1) The actuarial present value of benefit payments projected to be made in future periods where the plan assets are projected to be sufficient to meet benefit payments, calculated using the Long-Term Expected Rate of Return.2) The actuarial present value of projected benefit payments not included in (1), calculated using the Municipal Bond Rate.
Fiduciary Net Position	Equal to market value of assets.
Long-Term Expected Rate of Return	Long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits, net of investment expenses.
Money-Weighted Rate of Return	The internal rate of return on pension plan investments, net of investment expenses.
Net Pension Liability	Total Pension Liability minus the Plan's Fiduciary Net Position (unfunded accrued liability).
Projected Benefit Payments	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and expected future service.
Service Cost	The portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Liability	The portion of actuarial present value of projected benefit payments that is attributable to past periods of member service using the Entry Age Normal cost method based on the requirements of GASB 67 and 68.