



# **Retirement Plan for Sacramento Regional Transit District Salaried Employees**

## **Actuarial Valuation Report as of July 1, 2023**

**Produced by Cheiron**

**March 2024**

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March 4, 2024

Retirement Boards of  
Sacramento Regional Transit District  
2830 G Street  
Sacramento, CA 95816

Dear Members of the Boards:

At your request, we have conducted an actuarial valuation of the Retirement Plan for Salaried Employees of the Sacramento Regional Transit District Employees (SacRT, the Fund, the Plan) as of July 1, 2023. This report contains information on the Plan's assets and liabilities. This report also discloses employer contribution levels. Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of the Plan. This report is for the use of the Retirement Boards and the auditors in preparing financial reports in accordance with applicable law and accounting requirements.

This report was prepared solely for the Retirement Boards for the purposes described herein, and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Sincerely,  
Cheiron



Graham A. Schmidt, FSA, EA, FCA, MAAA  
Principal Consulting Actuary



Anne D. Harper, FSA, EA, MAAA  
Principal Consulting Actuary

## FOREWORD

Cheiron has performed the actuarial valuation of the Retirement Plan for Sacramento Regional Transit District Employees (SacRT, the Fund, the Plan) as of July 1, 2023. The valuation is organized as follows:

- In Section I, the **Executive Summary**, we describe the purpose of an actuarial valuation, summarize the key results found in this valuation, and disclose important trends.
- In Section II, **Disclosures Related to Risk**, we review the primary risks facing the District, and quantify these using various risk and maturity measures.
- The **Main Body** of the report presents details on the Plan's
  - Section III – Assets
  - Section IV – Liabilities
  - Section V – Contributions
- In the **Appendices**, we conclude our report with detailed information describing plan membership (Appendix A), actuarial assumptions and methods employed in the valuation (Appendix B), a summary of pertinent plan provisions (Appendix C), and a glossary of key actuarial terms (Appendix D).

Future results may differ significantly from the results of the current valuation presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and, changes in plan provisions or applicable law.

In preparing our report, we relied on information (some oral and some written) supplied by the District's staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

## SECTION I – EXECUTIVE SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe, and identify the following as of the valuation date:

- The financial condition of the Plan,
- Past and expected trends in the financial progress of the Plan,
- Employer and member contribution rates for Plan Year 2024-2025, and
- An assessment and disclosure of key risks.

The information required under GASB Statements (Nos. 67 and 68) is included in a separate report, with the report for the Fiscal Year Ending June 30, 2023 provided to the Boards in September 2023.

In the balance of this Executive Summary, we present (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key financial results, (C) changes in Plan cost, (D) an examination of the historical trends, and I the projected financial outlook for the Plan.

### A. Valuation Basis

This valuation determines the employer and PEPRAs member contributions for the plan year.

The Plan's funding policy is for the District to contribute an amount equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method, net of any contributions by the members,
- Amortization of the Unfunded Actuarial Liability, and
- The Plan's expected administrative expenses.

This valuation was prepared based on the plan provisions shown in Appendix C. There have been no changes in plan provisions since the prior valuation.

A summary of the assumptions and methods used in the current valuation are shown in Appendix B. There have been no changes in assumptions or methods since the prior valuation.

## SECTION I – EXECUTIVE SUMMARY

### B. Key Findings of this Valuation

The key results of the July 1, 2023 actuarial valuation are as follows:

- The actuarially determined employer contribution rate decreased from 37.32% of payroll last year to 37.21% of payroll for the current valuation. This year's rate decreased due to offsetting factors but primarily from greater than expected payroll growth.
- The Plan's funded ratio, the ratio of Actuarial Value of Assets over Actuarial Liability, increased from 67.9% as of July 1, 2022 to 69.2% as of July 1, 2023. As a point of comparison, a funding ratio of 62.3% or more is required just to fund the liabilities of the inactive members: retired, disabled, terminated with vested benefits, and their beneficiaries. This ratio is sometimes referred to as the Inactive Funded Ratio.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Actuarial Value of Assets. The Plan experienced an increase in the UAL from \$58,983,452 to \$59,250,602 as of July 1, 2023. This increase in the UAL was primarily due to demographic experience losses on the actuarial liability.
- During the year ended June 30, 2023, the return on Plan assets was 8.08% on a market value basis net of investment expenses, as compared to the 6.75% assumption. This resulted in a market value gain on investments of \$1,614,030. The Actuarial Value of Assets recognizes 20% of the annual difference between the expected and actual return on the Market Value of Assets (MVA). This method of smoothing the asset gains and losses returned 6.29% on the smoothed value of assets, an actuarial asset loss of \$578,763.
- The Actuarial Value of Assets is currently 101.6% of the market value. Since actuarial assets are above market assets, there are unrecognized investment losses (approximately \$2.1 million, primarily due to the FYE 2022 asset experience) that will be reflected in the smoothed value in future years.
- During the year, \$248,765 of assets and \$249,432 of liabilities were transferred from ATU to the Salaried plan for active Salaried plan members with prior ATU service. This transfer resulted in a \$689 actuarial loss (including interest at the assumed rate through the end of the year).
- The Plan experienced a liability loss of \$2,936,106 due primarily to higher than expected salary increases among actives. The Plan experienced a \$30,759 gain from expenses being less than expected, and a gain of \$271,612 from contributions being more than the actuarial cost. Combining all sources of actuarial experience, the Plan experienced a total loss of \$3,213,188.
- There were 27 new hires and rehires since July 1, 2022 and the total active population decreased by one. Total projected payroll increased 5.36% from \$30,260,855 to \$31,883,356 for 2023-2024.

**SECTION I – EXECUTIVE SUMMARY**

- The impact of PEPRA continued to lower the employer cost. As more PEPRA members are hired, the average normal cost rate declines, because PEPRA members have lower benefits than the non-PEPRA members and they contribute approximately 50% of the PEPRA Normal Cost. As of June 30, 2023, PEPRA members make up over 50% of the active workforce.

Table I-1 summarizes the key results of the valuation with respect to membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

<b>Table I-1</b>				
<b>Summary of Principal Plan Results</b>				
<b>Valuation Date</b>	<b>July 1, 2022</b>	<b>July 1, 2023</b>	<b>% Change</b>	
<b><u>Participant Counts</u></b>				
Active Participants	273	272	-0.37%	
Participants Receiving a Benefit	368	381	3.53%	
Terminated Vested Participants	52	49	-5.77%	
Transferred Participants	1	2	100.00%	
Non-Vested Participants Due Refund	9	18	100.00%	
<b>Total</b>	<b>703</b>	<b>722</b>	<b>2.70%</b>	
Annual Pay of Active Members	\$ 30,260,855	\$ 31,883,356	5.36%	
<b><u>Assets and Liabilities</u></b>				
Actuarial Liability (AL)	\$ 183,590,990	\$ 192,344,323	4.77%	
Actuarial Value of Assets (AVA)	124,607,538	133,093,721	6.81%	
Unfunded Actuarial Liability (UAL)	\$ 58,983,452	\$ 59,250,602	0.45%	
Funded Ratio (AVA)	67.9%	69.2%	1.32%	
Market Value of Assets (MVA)	\$ 120,583,101	\$ 130,990,428	8.63%	
Funded Ratio (MVA)	65.7%	68.1%	2.42%	
Inactive Funded Ratio	62.4%	62.3%	-0.03%	
<b><u>Contributions</u></b>				
Employer Contribution Payable Monthly	\$ 11,058,968	\$ 11,634,130	5.20%	
Employer Contribution (after phase in)	\$ 11,058,966	\$ 11,634,130	5.20%	
Employer Contribution as a Percentage of Payroll	37.32%	37.21%	-0.11%	

**SECTION I – EXECUTIVE SUMMARY**

**C. Changes in Contributions**

Table I-2 summarizes the impact of actuarial experience on contributions.

<b>Table I-2 Employer Contribution Reconciliation</b>				
<b>Item</b>	<b>Total</b>	<b>Normal Cost</b>	<b>UAL Amortization</b>	<b>Admin Expense</b>
FYE 2024 Employer Contribution Rate	37.32%	14.22%	22.16%	0.94%
Change due to phase-in of assumption changes	0.00%	0.00%	0.00%	0.00%
Change due to asset losses	0.13%	0.00%	0.13%	0.00%
Change due to PEPRA	-0.16%	-0.16%	0.00%	0.00%
Change due to demographic losses	0.51%	-0.16%	0.67%	0.00%
Change due to amortization payroll	-0.58%	0.00%	-0.55%	-0.03%
Change due to contribution surplus	-0.07%	0.00%	-0.07%	0.00%
Change due to ATU Transfer	<u>0.06%</u>	<u>0.06%</u>	<u>0.00%</u>	<u>0.00%</u>
Total Change	-0.11%	-0.26%	0.18%	-0.03%
FYE 2025 Employer Contribution Rate	37.21%	13.96%	22.34%	0.91%

An analysis of the cost changes from the prior valuation reveals the following:

- Asset experience produced an investment loss on an actuarial basis.

The actuarial return on assets was 6.29%, which is less than the assumed rate of 6.75%. This resulted in an increase in the contribution rate by 0.13% of payroll.

The Market Value of Assets is less than the actuarial value; there are approximately \$2.1 million in net deferred asset losses.

- Liability experience and changes in demographics (including PEPRA new hires) resulted in a net increase in the contribution rate.

The liability experience of the Plan – including rates of retirement, death, disability, and termination – was somewhat different than predicted by the actuarial assumptions in aggregate, causing an actuarial loss that increased the contribution rate by 0.51% of payroll. In particular, there were losses caused by higher than expected salary increases among continuing actives.

This was offset by the fact that the employer portion of the normal cost for the new hires under the PEPRA benefit formula is lower than the normal cost for the non-PEPRA membership. The growth in the PEPRA membership resulted in a decrease in the average employer normal cost rate of 0.16% of payroll.

The net impact on the contribution rate from changes in liabilities and demographics was an increase of 0.35% of payroll.



## SECTION I – EXECUTIVE SUMMARY

- Overall payroll growth was greater than expected.

The projected payroll grew by 5.4%, more than the assumed rate of 2.75%, which decreased the contribution rate by 0.58% of pay, since it results in the Plan's Unfunded Actuarial Liability and administrative expenses being spread over a larger payroll base.

- Contributions were slightly greater than the actuarially determined contribution.

Actual contributions were more than the total actuarially determined contribution (including expenses), which resulted in a decrease in the contribution rate by 0.07%.

- Salaried members with prior ATU service had the liabilities and assets associated with their ATU service transferred into the Salaried plan.

As a result of an arbitration agreement, the assets and liabilities associated with Salaried members with prior ATU service (but who did not become vested in the ATU plan) were transferred from the ATU plan into the Salaried plan. The net impact on the employer contribution rate was an increase of 0.06% of payroll.

The total impact on employer Plan contribution from all changes is a decrease of 0.11% of pay.

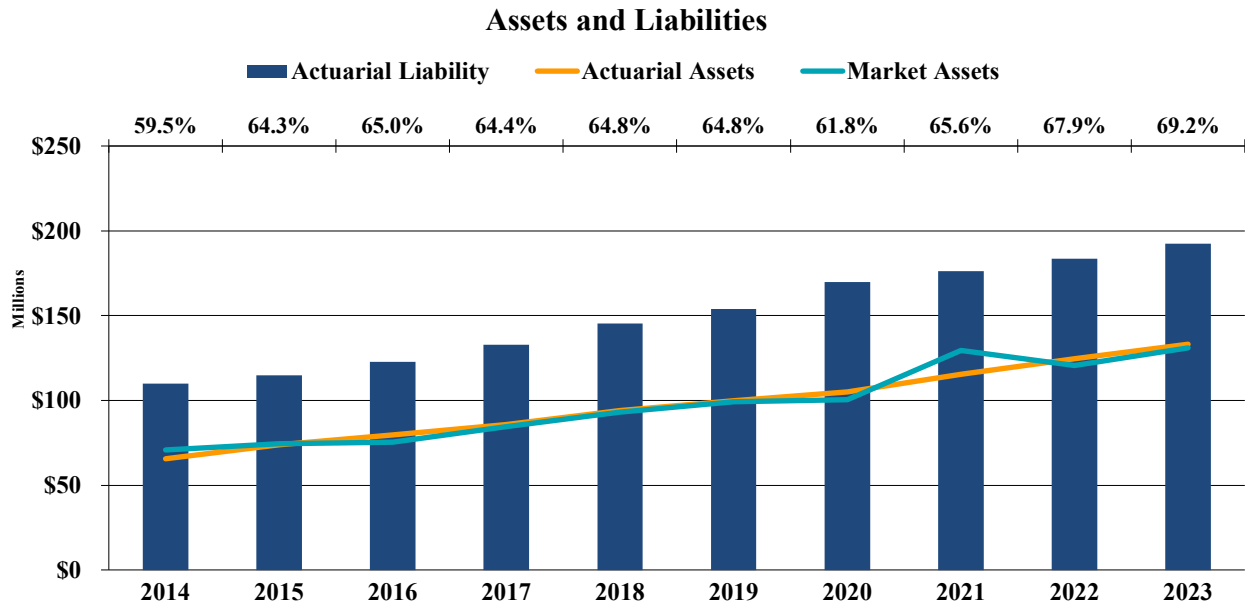
**SECTION I – EXECUTIVE SUMMARY**

**D. Historical Trends**

Despite the fact that for most retirement plans the greatest attention is given to the current valuation results and in particular, the size of the current Unfunded Actuarial Liability and the employer contribution, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is also important to judge a current year’s valuation result relative to historical trends, as well as trends expected into the future.

**Assets and Liabilities**

The chart compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the Actuarial Liabilities. The percentage shown at the top of the chart below is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio increased from 59.5% in 2014 to 69.2% in 2023, due to net gains on the AVA and contributions made to the Plan, despite decreases in the assumed rate of return from 7.75% to 6.75% over the same time period.

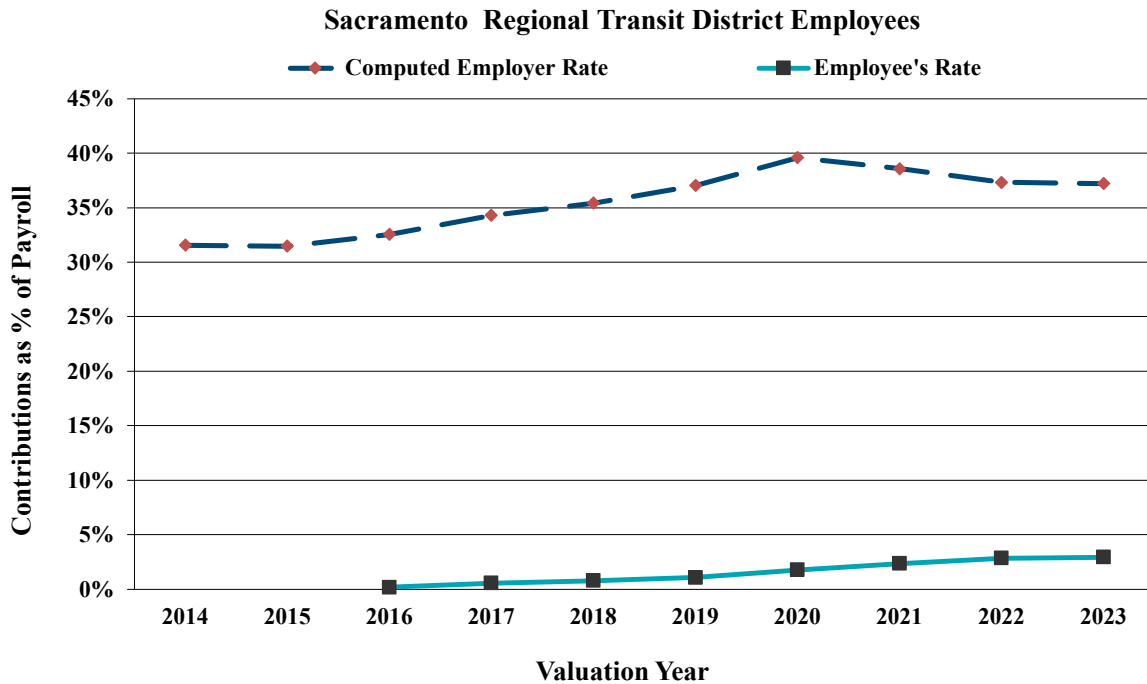


## SECTION I – EXECUTIVE SUMMARY

### Contribution Trends

In the following chart, we present the Plan’s historical actuarially determined contribution rates and employee contribution rates. Employer contribution rates remained relatively stable from 2014 to 2016. Continual increases occurred from 2017 to 2020 due to changes in assumptions in 2017 and 2020, as well as actuarial losses each year (starting in 2018) on both assets and liabilities. The employer rates shown include the three-year phase-in of the impact of the 2020 assumption changes on the UAL payment. The contribution rate decreased in 2021 due to favorable investment experience and also decreased in 2022 due to greater than expected payroll growth and increasing PEPRA membership whose contributions offset the employer cost.

The average employee contribution rate continues to increase as more PEPRA members enter and contribute to the plan.

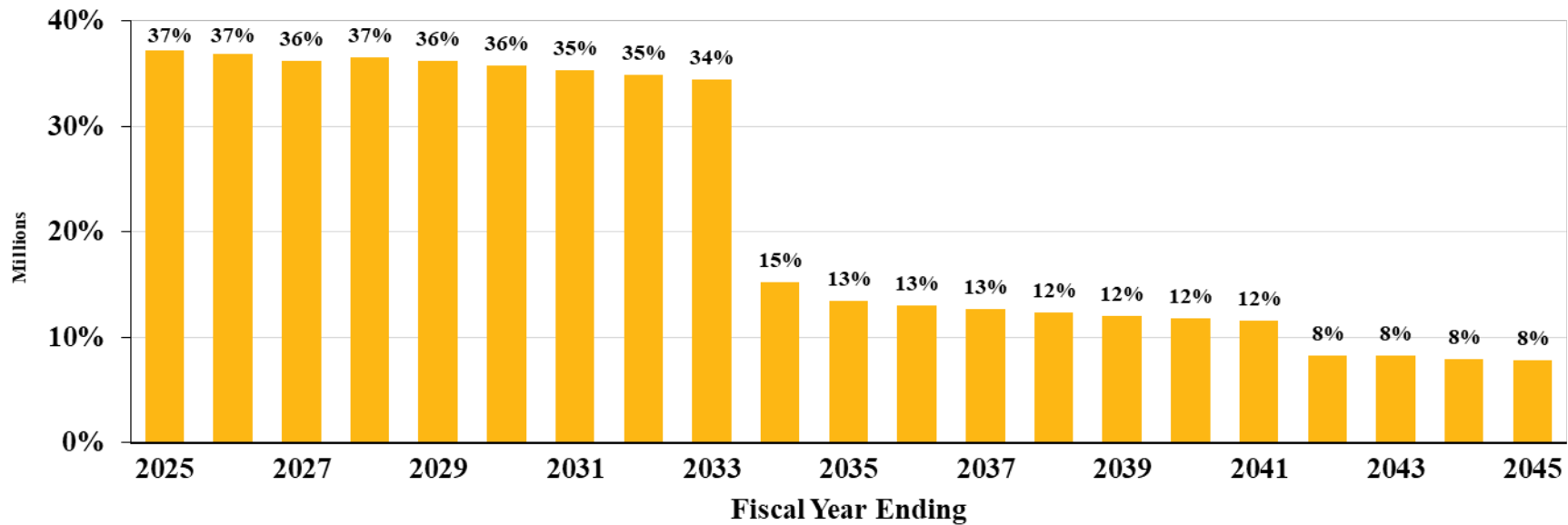


**SECTION I – EXECUTIVE SUMMARY**

**E. Future Expected Financial Trends**

The analysis of projected financial trends is perhaps the most important component of this valuation. In this section, we present our assessment of the implications of the July 1, 2023 valuation results in terms of contribution levels and benefit security (assets over liabilities) and contribution levels. All the projections in this section are based on the assumption that the Plan will achieve exactly the 6.75% assumption each year, which is clearly an impossibility. We have also assumed future payroll growth of 2.75% per year and that there are no actuarial gains or losses or changes to the assumptions or funding policy.

**Projection of Employer Contributions 6.75% return each year**



The graph shows that the District’s contribution rate is expected to remain relatively level over the next several years, declining gradually as the current year asset losses continue to be recognized, offsetting the prior year gains, and as the employer-paid portion of

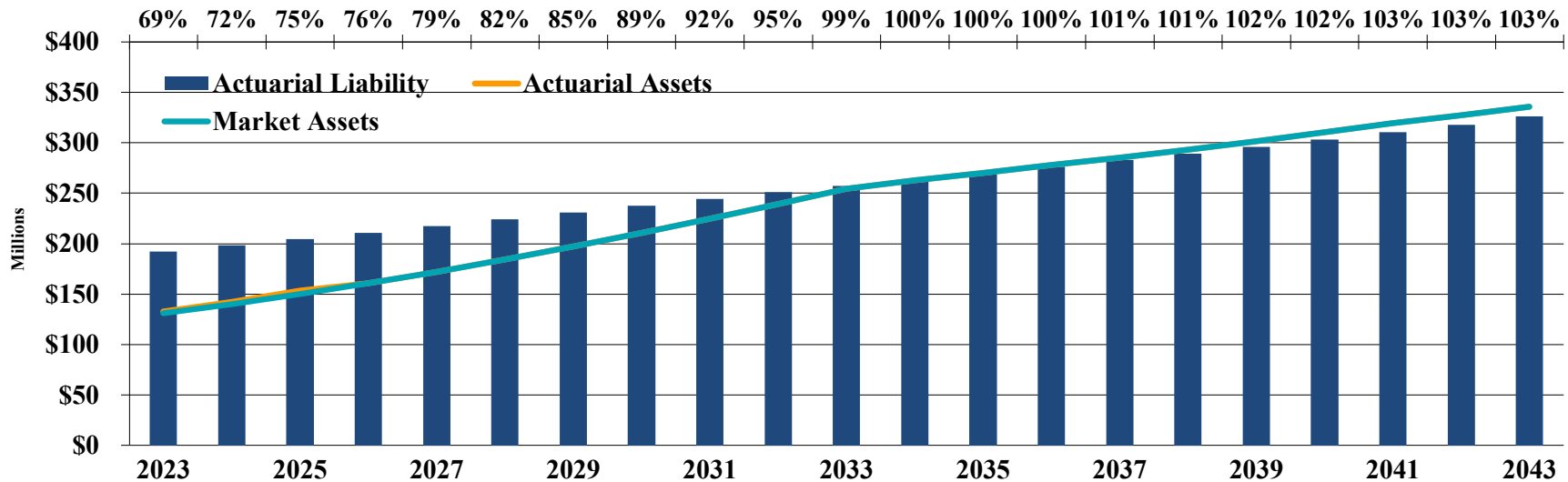
**SECTION I – EXECUTIVE SUMMARY**

the normal cost decreases as PEPR membership increases. The employer contribution rate is expected to decline substantially in FYE 2034, once the largest layer of the unfunded liability (the UAL that existed as of June 30, 2019) is fully amortized.

The employer actuarial cost will be approximately \$12.2 million in 2024-2025, and is expected to increase to \$14.0 million in 2032-2033 with payroll growth, then expected to drop significantly between \$4.3 million and \$6.4 million in the following years, when the bulk of the unfunded liability amortization payment disappears.

The following graph shows the projection of assets and liabilities assuming that assets will earn 6.75% each year during the projection period and that all other actuarial assumptions are met. The graph shows that the funded status is expected to increase steadily as the existing unfunded liability is fully amortized. The Plan is expected to be fully funded in 2034, equal to the projection in the July 1, 2022 valuation. However, it is primarily the actual return on Plan assets that will determine the future funding status and contribution rate to the Plan.

**Projection of Assets and Liabilities 6.75% return each year**



## SECTION II – DISCLOSURES RELATED TO RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may vary significantly.

Actuarial Standard of Practice (ASOP 51) requires actuaries to identify and assess risks that “may reasonably be anticipated to significantly affect the plan’s future financial condition.” This section of the report is intended to identify the primary risks to the Plan, provide some background information about those risks, and provide an assessment of those risks.

### Identification of Risks

The fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. Even in the case that the Plan remains affordable, the contributions needed to support the Plan may differ significantly from expectations. While there are a number of factors that could lead to contribution amounts deviating from expectations, we believe the primary risks are:

- Investment risk,
- Assumption change risk,
- Longevity and other demographic risk, and
- Contribution risk.

Other risks that we have not identified may also turn out to be important.

*Investment Risk* is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the Plan’s asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsor or other contribution base.

*Assumption change risk* is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades (which have recently reversed) resulted in higher investment returns for fixed-income investments, but lower expected future returns necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

*Longevity and other demographic risks* are the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time and are often dwarfed by other changes, particularly those due to

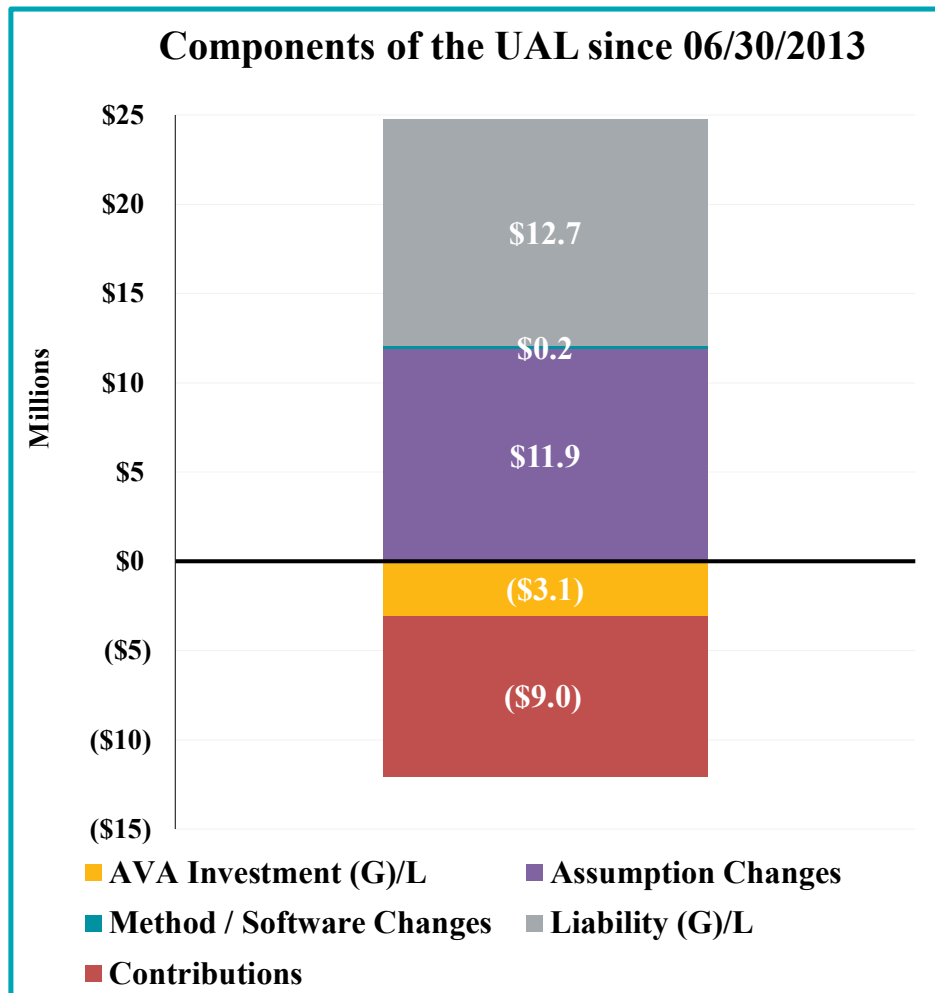
**SECTION II – DISCLOSURES RELATED TO RISK**

investment returns. However, for this plan there have been substantial liability losses over the last five years, driven by higher-than-expected pay increases for continuing active members.

*Contribution risk* is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk ranging from the sponsor choosing to not make contributions in accordance with the funding policy to material changes in the contribution base (e.g., covered employees, covered payroll, sponsor revenue) that affect the amount of contributions the Plan can collect.

The chart below shows the components contributing to the Unfunded Actuarial Liability (UAL) from June 30, 2013 through June 30, 2023. Over the last 10 years, the UAL has increased by approximately \$12.7 million. The liability losses (gray bar) resulting in a total UAL increase of \$12.7 million is the largest source of UAL growth, followed by assumption changes (\$11.9 million, purple bar). The contributions have been above the “tread water” level (described later in this section, shown in the red bar), resulting in a decrease of \$9.0 million in the UAL. Net investment gains (gold bar) have decreased the UAL by \$3.1 million over the 10-year period.

**Chart II-1**

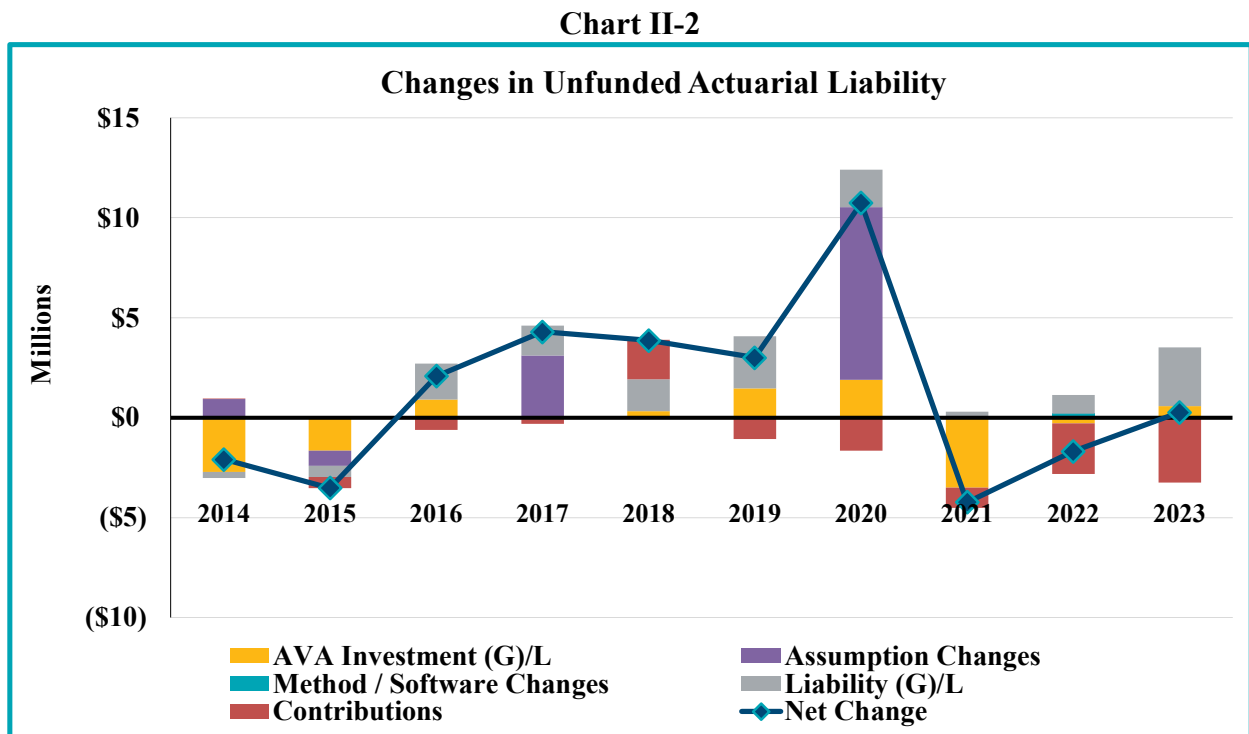


**SECTION II – DISCLOSURES RELATED TO RISK**

Each year, the UAL is expected to increase for benefits earned in the current year (the normal cost), administrative expenses, and interest on the UAL. This expected increase is referred to as the tread water level. If contributions are greater than the tread water level, the UAL is expected to decrease. Conversely, if contributions are less than the tread water level, the UAL is expected to increase. The amortization policy (as well as the contribution-timing lag) can impact whether or not the contributions exceed the tread water level. Contributions above the “tread-water” level (red bar) have decreased the UAL by \$9.0 million.

In addition, actuarial method and software changes (teal bar) have increased the UAL by \$0.2 million since June 30, 2013.

Chart II-2 below details the annual sources of the UAL change (colored bars) for each valuation year. The net UAL change for each year is represented by the blue diamonds.



The impact of all assumption changes is represented by the purple bars. In 2015 and 2020, there were experience studies performed. The experience study in 2015 resulted in a slight reduction in the liabilities. In 2020, significant increases were primarily due to salary merit and retirement rate changes and reductions in the discount rate. The assumed rate of return was also reduced in 2014 and 2017.

On the liability side (gray bars), the Plan has mostly experienced losses, increasing the UAL by approximately \$12.7 million over the 10-year period resulting from participants retiring, terminating, becoming disabled and dying at rates different from the actuarial assumptions as well as unexpected changes in salaries. Most of this type of activity is normal in the course of



## SECTION II – DISCLOSURES RELATED TO RISK

Plan experience. The Plan will experience actuarial gains and losses over time because we cannot predict exactly how people will behave. However, the Plan experienced some significant liability losses from 2016 to 2020, which indicated the potential need to update some of the assumptions, which was done as part of the 2020 experience study.

The shortening of the amortization period has resulted in UAL reductions from contributions over the last several years, except in 2018, where the shortfall was due to the phase-in of the 2017 assumption change impact.

While the net investment gains and losses have not been the largest driver of UAL changes over the past 10 years, the year-to-year investment volatility can have a large impact on the UAL and is unpredictable. For example, the actuarial investment gain in 2021 was \$3.5 million compared to the \$1.9 million actuarial loss in the 2020 valuation.

Table II-1 below shows the same information as Chart II-2, but the annual source of the UAL change is shown numerically.

Table II-1 Unfunded Actuarial Liability (UAL) Change by Source						
Valuation Year	Assumption Changes	Method / Software Changes	Contributions	Investment Experience	Liability Experience	Total UAL Change
2014	933,160	0	5,520	(2,704,686)	(323,933)	(2,089,939)
2015	(757,047)	0	(562,761)	(1,662,717)	(541,993)	(3,524,518)
2016	0	0	(614,979)	917,324	1,775,915	2,078,260
2017	3,108,901	0	(229,830)	(85,065)	1,495,305	4,289,311
2018	(18,542)	0	1,958,532	321,313	1,603,565	3,864,868
2019	0	0	(1,060,592)	1,451,131	2,611,134	3,001,672
2020	8,637,242	0	(1,661,284)	1,894,074	1,867,525	10,737,558
2021	0	0	(1,025,135)	(3,497,592)	290,705	(4,232,022)
2022	0	191,914	(2,550,308)	(277,153)	945,804	(1,689,742)
2023	0	0	(3,247,719)	578,763	2,936,106	267,150
<b>Total</b>	<b>\$ 11,903,714</b>	<b>\$ 191,914</b>	<b>\$ (8,988,555)</b>	<b>\$ (3,064,608)</b>	<b>\$ 12,660,133</b>	<b>\$ 12,702,598</b>

## SECTION II – DISCLOSURES RELATED TO RISK

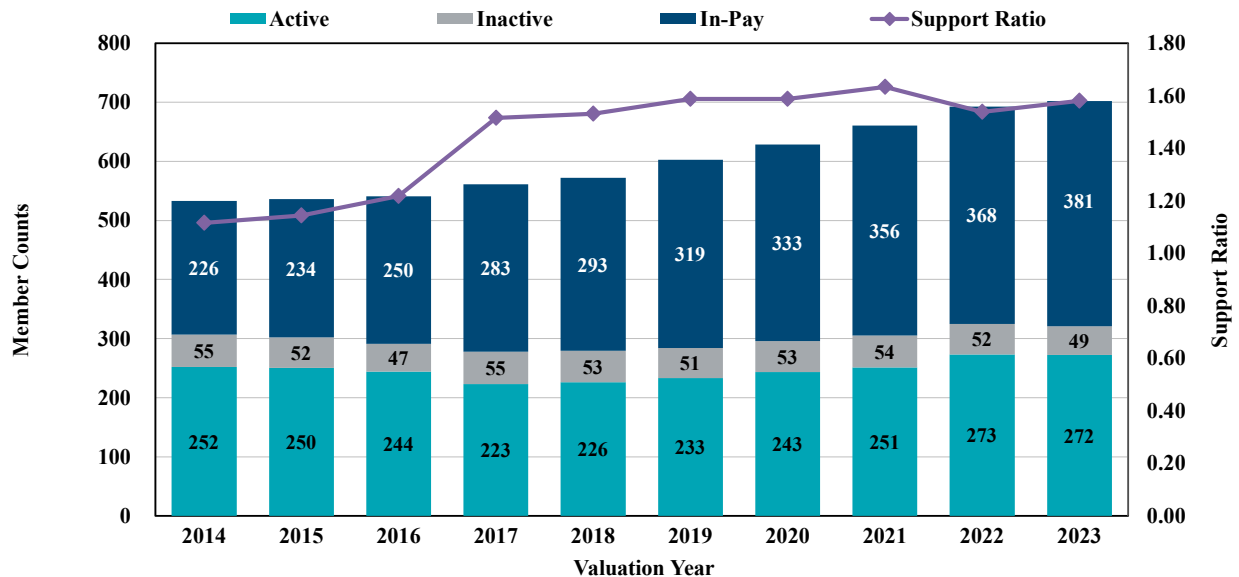
### Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of the plan compared to other plans and how the maturity has changed over time.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic – the larger the plan is compared to the contribution or revenue base that supports it; the more sensitive the plan will be to risk. The measures on the following pages have been selected as the most important in understanding the primary risks identified for the plan.

#### Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or inactives – those entitled to a deferred benefit) to the number of active members. The Support Ratio is expected to increase gradually as a plan matures. The chart below shows the Support Ratio has gradually grown from 1.1 in 2014 to 1.6 in 2023 as the number of retired members increased at a faster rate than the number of active members, particularly from 2016 to 2017 when the active population declined while the retiree population grew by 13%.



#### Leverage Ratios

Leverage or volatility ratios measure the size of the plan compared to its revenue base more directly. The asset leverage ratio is simply the Market Value of Assets to active member payroll and indicates the sensitivity of the Plan to investment returns. The liability leverage ratio is the

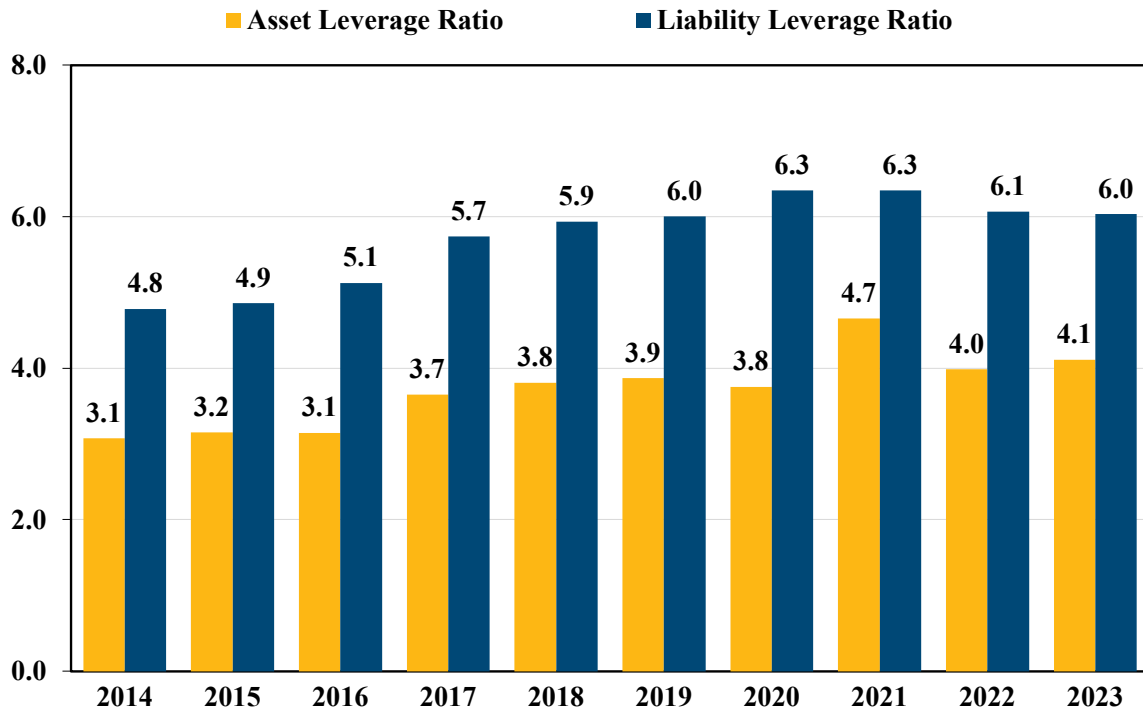
**SECTION II – DISCLOSURES RELATED TO RISK**

Plan’s Actuarial Liability to active member payroll and indicates the sensitivity of the Plan to assumption changes or demographic experience.

The Plan assets are currently just above four times of covered payroll. As the Plan becomes better funded, the asset leverage ratio will increase, and if it was 100% funded, the asset leverage ratio would be six and equal the Actuarial Liability (AL) leverage ratio. Although both of these ratios are lower than those of many other public plans, the increase in the asset leverage ratio expected to accompany an improvement in the Plan’s funding still represents a substantial increase in the volatility of the contributions.

An asset leverage ratio of 4.1 means that if the Plan’s assets lose 10% of their value (a 16.75% actuarial loss compared to the expected return of 6.75%), the loss is about 69% of payroll (4.1 x 16.75%). Based on the proposed amortization policy, the contribution rate would ultimately increase by approximately 5.0% of payroll if asset smoothing were not applied and the loss were amortized over 20 years. The same investment loss if the Plan were 100% funded would be around 101% of payroll and an ultimate contribution rate increase of about 7.3% of payroll, if amortized over 20 years.

The chart below shows the historical leverage ratios of the Plan. Both leverage ratios have increased since 2014.

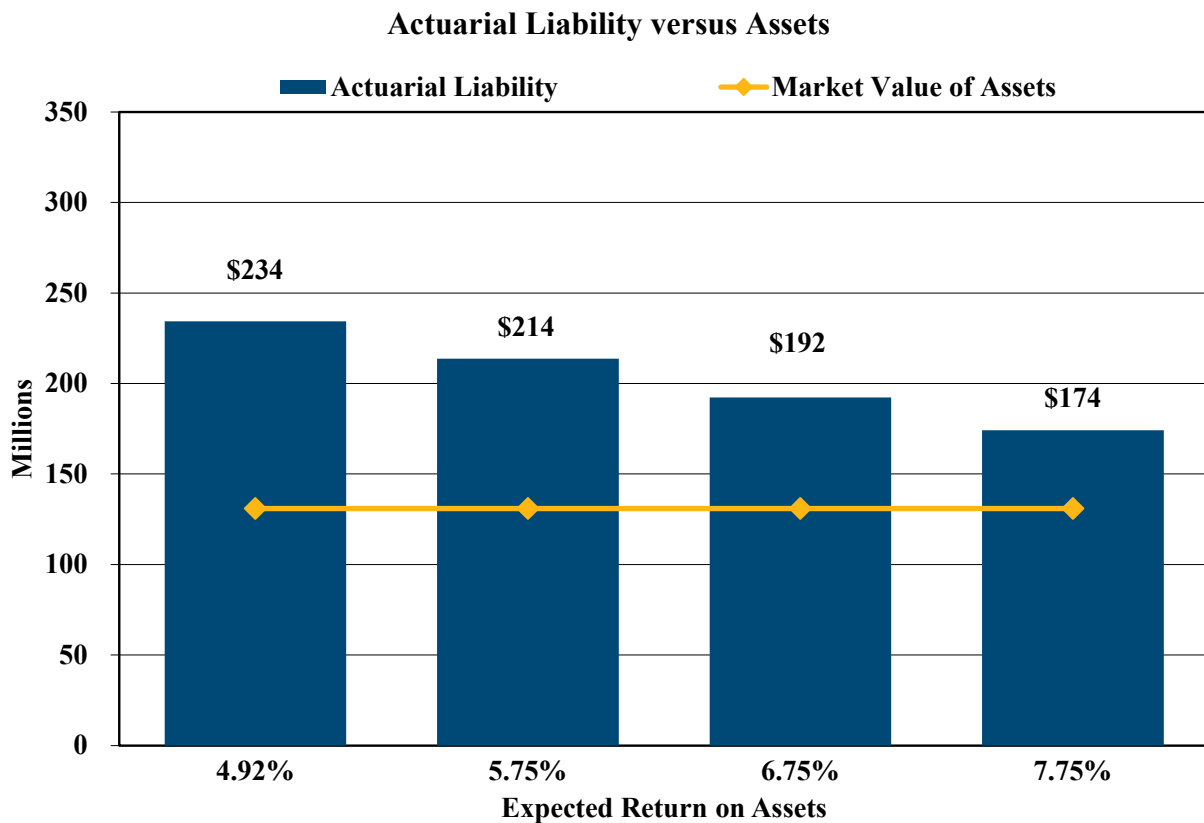


**SECTION II – DISCLOSURES RELATED TO RISK**

**Assessing Costs and Risks**

**Sensitivity to Investment Returns**

The chart below compares the Market Value of Assets (line) to the Actuarial Liabilities (bars) discounted at the current expected rate of return (6.75%) and at discount rates 100 basis points above and below the expected rate of return. In addition, we have added an additional measurement, the Low Default Risk Obligation Measure (LDRM), which is the Actuarial Liability using a discount rate derived from low-default-risk fixed income securities that approximately match the benefit payments of the plan.



If investments return 6.75% annually, the Plan would need approximately \$192 million in assets today to pay the benefits associated with service earned to date, compared to the current Market Value of Assets of \$131 million. If investment returns are only 5.75%, the Plan would need approximately \$214 million in assets today, and if investment returns are 7.75%, the Plan would need approximately \$174 million in assets today.

The Plan is invested in a diversified portfolio to achieve the best possible returns at an acceptable level of risk. The average geometric return over the last 10 years is 7.0%. Please refer to Table III-5 (page 25) for the asset returns by year since 2010.

## SECTION II – DISCLOSURES RELATED TO RISK

The low-risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows approximately match the benefit cash flows of the plan. However, such a portfolio would have a lower expected rate of return (4.92% as of June 30, 2023<sup>1</sup>) than the diversified portfolio (6.75%). The LDROM represents what the present value of future benefits would be if the Plan's assets were invested in such a portfolio. As of June 30, 2023, the LDROM is \$234 million compared to the Actuarial Liability of \$192 million for the Plan. The \$42 million difference can be viewed as the expected savings from taking on the investment risk of the diversified portfolio. Alternatively, it can be viewed as the potential cost of minimizing the investment risk.

If the Plan were to be invested in the LDROM portfolio and not a diversified portfolio, the funded status would be lower, and the expected contribution requirements would increase. The security of the Plan's pension benefits relies on current assets, future investment earnings, and the ability and willingness of employers to make future contributions. If the Plan were to be invested in the LDROM portfolio, it would not change current assets, but it could potentially reduce future investment earnings, potentially changing the level of reliance on future employer contributions. However, investing in an LDROM portfolio would generate more predictable future investment earnings and future contributions.

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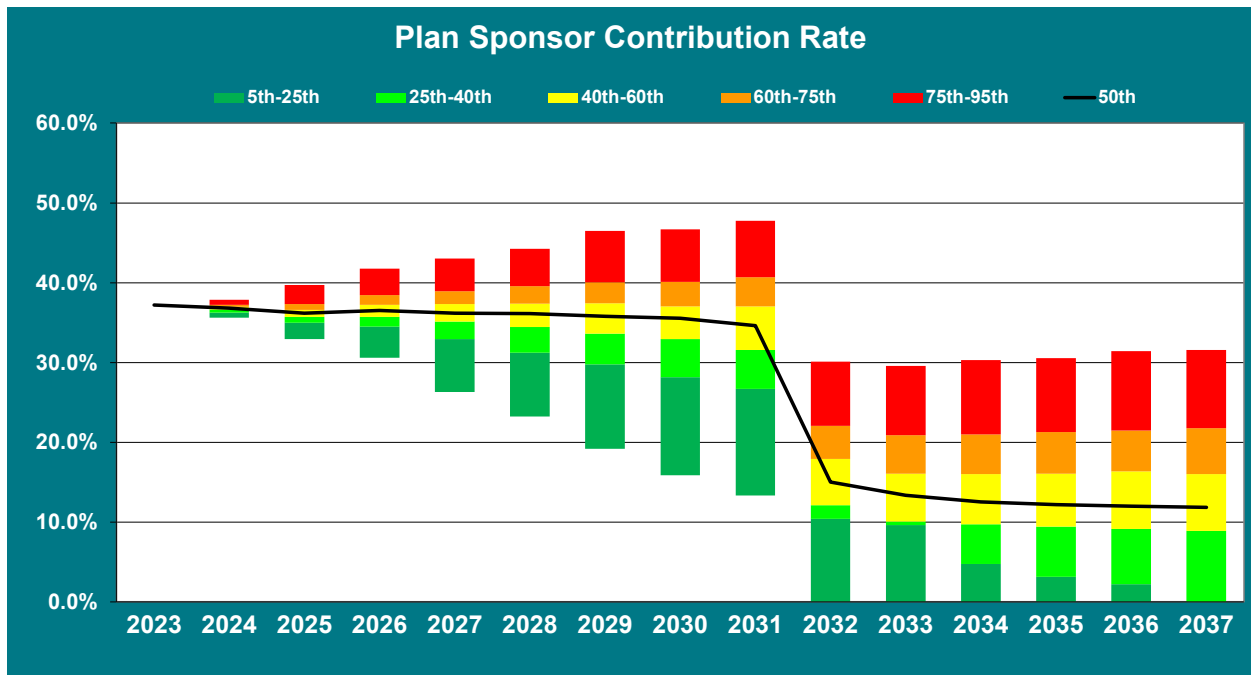
<sup>1</sup> Assumes a 4.92% discount rate, which is based on the June 30, 2023 FTSE Pension Liability Index and all other assumptions and methods as used to calculate the Actuarial Liability.

**SECTION II – DISCLOSURES RELATED TO RISK**

**Stochastic Projections**

Stochastic projections serve to show the range of probable outcomes of various measurements. The chart below and on the following page show the projected range of the employer contribution rate and of the funded ratio on an Actuarial Value of Assets basis. The range in both scenarios is driven by the volatility of investment returns (assumed to be based on a 12.4% standard deviation of annual returns, as provided by the Plan’s investment consultant and described in the 2020 Experience Study Report). The stochastic projections of investment returns are based on an assumption that each future year’s investment return is independent from all other years and is identically distributed according to a lognormal distribution. This assumption may result in an unrealistically wide range of compound investment returns over longer periods.

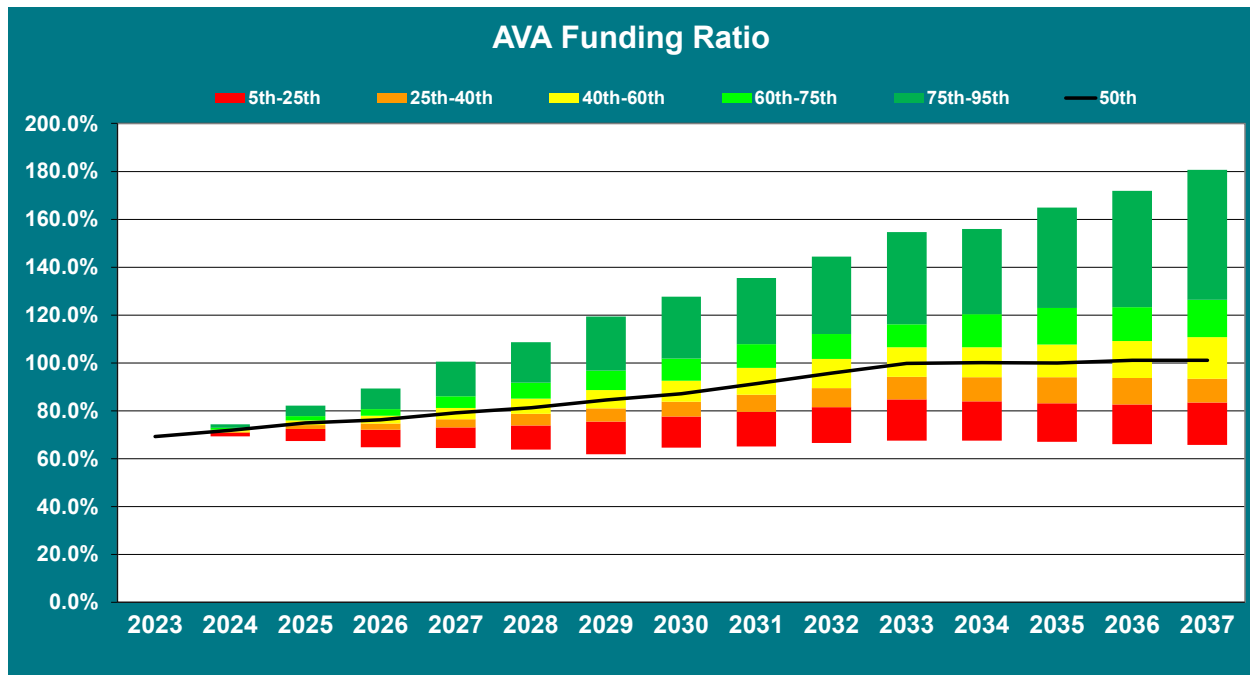
**Stochastic Projection of Employer Contributions as a Percent of Pay**



The stochastic projection of employer contributions, shown here as of the valuation date and payable the following fiscal year, shows the probable range of future contribution rates as a percentage of pay. The baseline contribution rate (black line), which is based on the median of the simulations using an average return of 6.75%, aligns closely with the projections discussed in subsection D of the Executive Summary of this report. In the most pessimistic scenario shown, the 95<sup>th</sup> percentile, the projected employer contribution rate is about 48% of pay for the 2031 valuation (FYE 2033). Conversely, the most optimistic scenario shown, the 5<sup>th</sup> percentile, the projected employer contribution falls below 20% starting with the 2029 valuation (FYE 2031). We note that these projections set the employer contribution to not fall below the normal cost unless the funded ratio exceeds 120%, as required under PEPR.

**SECTION II – DISCLOSURES RELATED TO RISK**

**Stochastic Projection of Funded Ratio on an Actuarial Value of Assets Basis**



The graph above shows the projection of the funded ratio based on the Actuarial Value of Assets. It is based on the Plan’s layered amortization policy, where the UAL as of July 1, 2019 is paid off over the next nine years, and all future gains or losses are amortized over a new closed 20-year period. While the baseline-funded ratio (black line) is projected to be nearly 100% at the end of the period shown here, there is a wide range of potential outcomes. Good investment returns have the likelihood of bringing the funded ratio well over 100%.

Under the current funding policy of the Plan, even in scenarios with unfavorable investment returns the Plan is projected to remain close to 60-65% funded on an Actuarial Value of Assets basis, as long as the actuarially determined contributions continue to be made.

**Contribution Risk**

While investment returns are typically the dominant factor in volatility, contribution rates can also be sensitive to future salary increases and the hiring of new members. When member payroll growth stagnates or even declines, the dollar level of contributions made to the Plan also stagnates or declines since contributions are based on payroll levels, though this will generally only present a funding issue if there is an extended period of payroll reductions.

There is also a risk of the contribution rate increasing even higher when payroll decreases since the Plan’s funding policy amortizes the UAL as a level percentage of pay. This means that the UAL payments increase at the assumed payroll growth rate of 2.75%, so that the payment is expected to remain constant as a percentage of payroll. If payroll growth is less than the expected

## **SECTION II – DISCLOSURES RELATED TO RISK**

2.75% or there is a decline in payroll, the UAL payments are spread over a smaller payroll base and the contribution rate as a percentage of pay increases, making the Plan less affordable for those sponsors with declining payroll bases.

For example, the UAL Amortization rate as of June 30, 2023 for the FYE 2025 is 22.34% after reflecting the phase in. If the projected payroll for FYE 2025 were 2.75% lower, all else being equal, the UAL Amortization rate would increase to 22.97%.

### **More Detailed Assessment**

While a more detailed assessment is always valuable to enhance the understanding of the risks identified above, we believe the scenarios illustrated above cover the primary risks facing the Plan at this time. We would be happy to provide the Board with a more in-depth analysis at their request.



### SECTION III – ASSETS

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, employer contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on Plan assets including:

- **Disclosure** of Plan assets as of June 30, 2022 and June 30, 2023
- Statement of the **changes** in market values during the year
- Development of the **Actuarial Value of Assets**

#### Disclosure

There are two types of asset values disclosed in the valuation, the Market Value of Assets and the Actuarial Value of Assets. The market value represents “snap-shot” or “cash-out” values, which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the Actuarial Value of Assets, which reflect smoothing of annual investment returns.

Table III-1 discloses and compares each component of the market asset value as of June 30, 2022 and June 30, 2023.

<b>Table III-1</b>			
<b>Statement of Assets at Market Value</b>			
<b>June 30,</b>			
<b>Investments</b>	<b>2022</b>	<b>2023</b>	
Cash and Cash Equivalents	\$ 4,053,487	\$	6,625,345
Equity Securities	79,141,858		91,300,409
Fixed Income Securities	30,436,954		28,355,454
Real Estate	12,685,497		11,252,703
Total Investments	\$ 126,317,796	\$	137,533,911
<b>Receivables:</b>			
Securities Sold	\$ 3,464,477	\$	2,327,121
Interest and Dividends	205,687		210,244
Other Receivable	94,197		43,849
Total Receivables	\$ 3,764,361	\$	2,581,214
<b>Payables</b>			
Accounts Payable	\$ (140,577)	\$	(138,825)
Benefits Payable	0		0
Other Payable	(9,358,479)		(8,985,872)
Total Payables	\$ (9,499,056)	\$	(9,124,697)
<b>Market Value of Assets</b>	<b>\$ 120,583,101</b>	<b>\$</b>	<b>130,990,428</b>

**SECTION III – ASSETS**

**Changes in Market Value**

The components of asset change are:

- Contributions (employer and employee)
- Benefit payments
- Expenses (investment and administrative)
- Investment income (realized and unrealized)

Table III-2 shows the components of a change in the Market Value of Assets during 2022 and 2023.

<b>Table III-2</b>		
<b>Changes in Market Values</b>		
	<b><u>2022</u></b>	<b><u>2023</u></b>
<b>Contributions</b>		
Employer's Contribution	\$ 10,993,228	\$ 11,561,711
Members' Contributions	705,053	858,224
Total Contributions	<u>\$ 11,698,281</u>	<u>\$ 12,419,935</u>
<b>Investment Income</b>		
Interest & Dividends	\$ 1,790,970	\$ 2,281,018
Realized & Unrealized Gain/(Loss)	(10,960,741)	8,114,860
Other Investment Income	0	0
Investment Expenses	(631,831)	(621,476)
Total Investment Income	<u>\$ (9,801,602)</u>	<u>\$ 9,774,402</u>
<b>Disbursements</b>		
Benefit Payments	\$ (11,086,271)	\$ (11,781,877)
Administrative Expenses	(262,018)	(253,898)
Transfer from/(to) Union Plans	667,990	248,765
Total Disbursements	<u>\$ (10,680,299)</u>	<u>\$ (11,787,010)</u>
<b>Net increase (Decrease)</b>	<b>\$ (8,783,620)</b>	<b>\$ 10,407,327</b>
<b>Net Assets Held in Trust for Benefits:</b>		
Beginning of Year	<u>\$ 129,366,721</u>	<u>\$ 120,583,101</u>
End of Year	<u>\$ 120,583,101</u>	<u>\$ 130,990,428</u>
Approximate Return	-7.55%	8.08%
Administrative Expenses as a Percentage of Mean Assets	0.22%	0.19%

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**SECTION III – ASSETS**

**Actuarial Value of Assets (AVA)**

The Actuarial Value of Assets represents a “smoothed” value developed by the actuary to reduce the volatile results that could develop due to short-term fluctuations in the Market Value of Assets. For this Plan, the Actuarial Value of Assets is calculated on a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, investment earnings which are greater than (or less than) the assumed investment return.

Table III-3 Development of Actuarial Value of Assets as of July 1, 2023							
	(a)	(b)	(c)	(d)	(e) = (d) – (c)	(f)	(g) = (e) x (f)
Year	Total Contributions	Total Disbursements	Expected Return	Actual Return	Additional Earnings	Not Recognized	Unrecognized Earnings
2018-2019	8,697,108	(8,290,228)	6,766,681	5,649,123	(1,117,558)	0%	0
2019-2020	9,519,564	(9,679,636)	7,185,291	1,526,151	(5,659,140)	20%	(1,131,828)
2020-2021	10,273,680	(10,435,774)	6,781,890	28,976,644	22,194,754	40%	8,877,902
2021-2022	11,698,281	(10,680,299)	8,766,050	(9,801,602)	(18,567,652)	60%	(11,140,591)
2022-2023	12,419,935	(11,787,010)	8,160,372	9,774,402	1,614,030	80%	1,291,224
1. Total Unrecognized Dollars							(2,103,293)
2. Market Value of Assets as of June 30, 2023							130,990,428
3. Actuarial Value of Assets as of June 30, 2023: [(2) - (1)]							133,093,721
4. Ratio of Actuarial Value to Market Value [(3) ÷ (2)]							101.61%

**SECTION III – ASSETS**

**Investment Performance**

The following table calculates the investment related gain/loss for the plan year on both a market value and an actuarial value basis. The market value gain/loss is an appropriate measure for comparing the actual asset performance to the previous valuation’s long-term 6.75% assumption.

<b>Table III-4 Asset Gain/(Loss)</b>		
	<b>Market Value</b>	<b>Actuarial Value</b>
<b>July 1, 2022 value</b>	<b>\$ 120,583,101</b>	<b>\$ 124,607,538</b>
Employer Contributions	11,561,711	11,561,711
Employee Contributions	858,224	858,224
Benefit Payments and Expenses	(12,035,775)	(12,035,775)
Transfer In / (Out) from ATU	248,765	248,765
Expected Investment Earnings (6.75%)	8,160,372	8,432,021
Expected Value June 30, 2023	<b>\$ 129,376,398</b>	<b>\$ 133,672,484</b>
Investment <b>Gain / (Loss)</b>	<b>1,614,030</b>	<b>(578,763)</b>
<b>July 1, 2023 value</b>	<b>\$ 130,990,428</b>	<b>\$ 133,093,721</b>
Return	8.08%	6.29%

**SECTION III – ASSETS**

The table below shows the historical annual asset returns on a market value and actuarial value basis.

<b>Table III-5 Historical Return on Assets</b>		
<b>Year Ended June 30</b>	<b>Market Value Return</b>	<b>Actuarial Value Return</b>
2010	14.58%	2.04%
2011	19.71%	5.16%
2012	1.95%	3.62%
2013	13.96%	6.88%
2014	15.23%	12.42%
2015	2.98%	10.16%
2016	-0.53%	6.27%
2017	12.47%	7.61%
2018	7.07%	6.88%
2019	6.05%	5.71%
2020	1.54%	5.35%
2021	28.84%	10.08%
2022	-7.55%	6.99%
2023	8.08%	6.29%

## SECTION IV – LIABILITIES

In this section, we present detailed information on Plan liabilities including:

- **Disclosure** of Plan liabilities on July 1, 2022 and July 1, 2023
- Statement of **changes** in these liabilities during the year

### Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future Plan obligations, represents the amount of money needed today to fully fund all benefits of the Plan both earned as of the valuation date and those to be earned in the future by current plan participants, under the current Plan provisions.
- **Actuarial Liability:** Used for funding calculations, the normal cost rate is equal to the total projected value of benefits at entry age, divided by present value of future salary at entry age. The dollar amount of the normal cost equal to the normal cost rate multiplied by each member’s projected pay. The Actuarial Liability is the portion of the present value of future benefits not covered by future expected normal costs. This method is called **Entry Age to Final Decrement (EAFD)**.
- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Actuarial Value of Assets.

Table IV-1 discloses each of these liabilities for the current and prior valuations.

Table IV-1			
Liabilities/Net (Surplus)/Unfunded			
	July 1, 2022		July 1, 2023
<b><u>Present Value of Future Benefits</u></b>			
Active Participant Benefits	\$	109,162,656	\$ 113,439,077
Retiree and Inactive Benefits		114,503,572	119,903,019
<b>Present Value of Future Benefits (PVB)</b>	<b>\$</b>	<b>223,666,228</b>	<b>\$ 233,342,096</b>
<b><u>Actuarial Liability</u></b>			
Present Value of Future Benefits (PVB)	\$	223,666,228	\$ 233,342,096
Present Value of Future Normal Costs (PVFNC)		40,075,238	40,997,773
<b>Actuarial Liability (AL = PVB – PVFNC)</b>	<b>\$</b>	<b>183,590,990</b>	<b>\$ 192,344,323</b>
Actuarial Value of Assets (AVA)		124,607,538	133,093,721
<b>Net (Surplus)/Unfunded (AL – AVA)</b>	<b>\$</b>	<b>58,983,452</b>	<b>\$ 59,250,602</b>

**SECTION IV – LIABILITIES**

**Changes in Liabilities**

Each of the Liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method or software
- Transfers of liabilities from one plan to another

Unfunded liabilities will change because of all of the above, and also due to changes in Plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets
- Transfer of assets from one plan to another

<b>Table IV-2</b>	
<b>Changes in Actuarial Liability</b>	
Actuarial Liability at July 1, 2022	\$ 183,590,990
Actuarial Liability at July 1, 2023	\$ 192,344,323
Liability Increase (Decrease)	8,753,333
Change due to:	
Actuarial Methods / Software Changes	\$ 0
Plan Changes	0
Assumption Changes	0
Transfer In / (Out) from ATU	249,432
Accrual of Benefits	5,168,554
Actual Benefit Payments	(11,781,877)
Interest	12,181,118
Actuarial (Gain)/Loss	2,936,106

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**SECTION IV – LIABILITIES**

<b>Table IV-3</b>		
<b>Development of Actuarial Gain / (Loss)</b>		
1. Unfunded Actuarial Liability at Start of Year (not less than zero)	\$	58,983,452
2. Employer Normal Cost at Middle of Year		5,168,554
3. Interest on 1. and 2. to End of Year		4,152,973
4. Expected Contributions and Admin Expenses in Prior Year		11,873,382
5. Interest on 4. to End of Year		394,183
6. Change in Unfunded Actuarial Liability Due to Changes in Actuarial Methods		0
7. Change in Unfunded Actuarial Liability Due to Changes in Assumptions		0
8. Change in Unfunded Actuarial Liability Due to Changes in Plan Design		0
9. Expected Unfunded Actuarial Liability at End of Year [1. + 2. + 3. – 4. – 5. + 6. + 7. + 8.]	\$	56,037,414
10. Actual Unfunded Actuarial Liability at End of Year (not less than zero)		59,250,602
11. Actuarial Gain / (Loss) [9. – 10.]	\$	(3,213,188)
Actuarial Gain / (Loss) From Liabilities more than expected		(2,936,106)
Actuarial Gain / (Loss) From Actuarial Asset returns less than expected		(578,763)
Actuarial Gain / (Loss) From Expenses less than expected		30,759
Actuarial Gain / (Loss) From Contributions more than Actuarial Cost		271,612
Actuarial Gain / (Loss) From Transfer from ATU		(689)



## SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this Plan, the actuarial funding method used to determine the normal cost and the Unfunded Actuarial Liability is the **Entry Age to Final Decrement (EAFD)** cost method.

The normal cost rate for each member is determined with the normal cost percentage equal to the total projected value of benefits at entry age, divided by present value of future salary at entry age. Normal cost contributions are assumed to be made throughout the year, or on average mid-year.

The Unfunded Actuarial Liability is the difference between the EAFD Actuarial Liability and the Actuarial Value of Assets. The UAL rate is based on a nine year level percentage of payroll amortization of the remainder of the Unfunded Actuarial Liability as of July 1, 2019, again assuming mid-year payment to reflect the fact that employer contributions are made throughout the year. Effective July 1, 2020, unexpected changes in the UAL are amortized over new closed 20-year schedules, known as layered amortization. The payment for the UAL layer associated with the assumption changes adopted as part of the July 1, 2020 actuarial valuation was phased-in over a three-year period.

Beginning with the July 1, 2013 actuarial valuation, an amount equal to the expected administrative expenses for the Plan is added directly to the actuarial cost calculation. Previously, this cost was implicitly included in the calculation of the normal cost and unfunded liability payment, based on the use of a discount rate that was net of anticipated administrative expenses.

Members hired on or after January 1, 2015 contribute half of the normal cost of the Plan rounded to the nearest 0.25%. Once established, contribution rate for New Members is adjusted to reflect a change in the normal cost rate, but only if the normal cost rate changes by more than 1% of payroll. For the Fiscal Year 2023-2024, the contribution rate for PEPRA members was 6.50% of payroll (based on 1/2 of 13.08%, rounded to the nearest quarter). The normal cost rate for the PEPRA members as of the July 1, 2023 valuation is 13.71%, and since the increase is less than 1%, the rate for the following fiscal year will not change. Table V-2 contains the details of this calculation.

The tables on the following pages present the employer contributions for the Plan for the current and prior valuations as well as details on the amortization of the UAL.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
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**SECTION V – CONTRIBUTIONS**

<b>Table V-1</b>		
<b>Development of Employer Contribution Amount</b>		
	<b>July 1, 2022</b>	<b>July 1, 2023</b>
1. Entry Age Normal Cost (Middle of Year)		
a. Termination	\$ 424,361	\$ 416,798
b. Retirement	4,313,018	4,499,876
c. Disability	-	-
d. Death	102,019	104,821
e. Refunds	49,391	89,759
f. Total Normal Cost (a) + (b) + (c) + (d) + (e)	\$ 4,888,789	\$ 5,111,254
2. Entry Age Actuarial Liability		
<u>Active Members</u>		
a. Termination	\$ 349,583	\$ 680,075
b. Retirement	67,853,568	70,909,697
c. Disability	-	-
d. Death	1,037,511	1,124,726
e. Refunds	(153,244)	(273,194)
f. Total Active Liability: (a) + (b) + (c) + (d) + (e)	\$ 69,087,418	\$ 72,441,304
<u>Inactive Members</u>		
g. Termination	\$ 6,488,732	\$ 5,904,769
h. Retirement	101,818,425	107,329,047
i. Disability	912,338	895,499
j. Death	5,210,660	5,658,180
k. Non-Vested Due Refund	67,257	106,704
l. Transfer	6,160	8,820
m. Total Inactive Liability: (g) + (h) + (i) + (j) + (k) + (l)	\$ 114,503,572	\$ 119,903,019
n. Total Entry Age Actuarial Liability: (2f) + (2m)	\$ 183,590,990	\$ 192,344,323
3. Actuarial Value of Assets	\$ 124,607,538	\$ 133,093,721
4. Unfunded Actuarial Liability: (2n) - (3)	\$ 58,983,452	\$ 59,250,602
5. Unfunded Actuarial Liability Amortization at Middle of Year as a Level Percentage of Payroll	\$ 6,704,828	\$ 7,122,115
6. Expected Administrative Expenses	\$ 283,669	\$ 290,760
7. Expected Member Contributions	\$ (818,317)	\$ (889,999)
8. Employer Contribution Payable in Monthly Installments: (1f) + (5) + (6) + (7)	\$ 11,058,968	\$ 11,634,130
9. Covered Payroll (Normal Cost)	\$ 28,618,777	\$ 30,238,083
10. Covered Payroll (UAL Amort and Expenses)	\$ 30,260,855	\$ 31,883,356
11. Employer Contribution as a Percent of Covered Payroll: [(1f) + (7)] / (9) + [(5) + (6)] / (10)	37.32%	37.21% <sup>1</sup>

<sup>1</sup> The District will begin paying this percentage of payroll July 1, 2024.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**SECTION V – CONTRIBUTIONS**

<b>Table V-2</b>						
<b>Development of Amortization Payment</b>						
<b><u>Type of Base</u></b>	<b><u>Date Established</u></b>	<b><u>Initial Amount</u></b>	<b><u>Initial Amortization Years</u></b>	<b><u>07/01/2023 Outstanding Balance</u></b>	<b><u>Remaining Amortization Years</u></b>	<b><u>Amortization Amount</u></b>
Remaining UAL as of 2019	07/01/2019	\$ 54,167,658	13	\$ 45,028,381	9	\$ 5,993,253
7/1/2020 Experience	07/01/2020	3,804,295	20	3,689,881	17	299,131
Assumption changes <sup>1</sup>	07/01/2020	8,637,242	20	9,001,056	17	729,697
7/1/2021 Experience	07/01/2021	(2,388,330)	20	(2,346,919)	18	(182,768)
7/1/2022 Experience	07/01/2022	669,966	20	665,015	19	49,897
7/1/2023 Experience	07/01/2023	3,213,188	20	3,213,188	20	232,904
<b>Total Unfunded Actuarial Liability (UAL)</b>				<b>\$ 59,250,602</b>		<b>\$ 7,122,115</b>

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**SECTION V – CONTRIBUTIONS**

Table V-3 shows the allocation of the cost calculation between the groups.

Table V-3 Allocation of Liabilities, Assets, and Cost among Groups						
	AEA	AFSCME	MCEG	AFST	PEPRA	Total
Actuarial Liability						
Active	6,428,437	24,870,246	29,471,018	4,052,175	7,619,429	72,441,304
Inactive	<u>37,348,450</u>	<u>31,505,526</u>	<u>43,610,060</u>	<u>7,104,074</u>	<u>334,908</u>	<u>119,903,019</u>
Total Actuarial Liability	43,776,887	56,375,772	73,081,078	11,156,249	7,954,337	192,344,323
Market Value of Assets						130,990,428
Actuarial Value of Assets						133,093,721
Unfunded Actuarial Liability (UAL)						59,250,602
UAL Amortization (Middle of Year)	387,262	1,871,189	1,433,373	225,088	3,205,203	7,122,115
Total Normal Cost (Middle of Year)	300,082	1,611,488	1,127,782	194,106	1,877,796	5,111,254
Expected Employee Contributions	0	0	0	0	(889,999)	(889,999)
Administrative Expense	<u>15,810</u>	<u>76,391</u>	<u>58,517</u>	<u>9,189</u>	<u>130,852</u>	<u>290,760</u>
Employer Contribution Payable Monthly	703,154	3,559,068	2,619,673	428,384	4,323,852	11,634,130
Covered Payroll (Normal Cost)	1,677,672	7,705,242	6,197,627	965,249	13,692,293	30,238,083
Covered Payroll (UAL Amort and Admin)	1,733,644	8,376,694	6,416,738	1,007,646	14,348,634	31,883,356
Total Normal Cost as a % of Payroll	17.89%	20.91%	18.20%	20.11%	13.71%	16.90%
Employee Contribution Rate	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>( 6.50%)</u>	<u>( 2.94%)</u>
Employer Normal Cost as a % of Payroll	17.89%	20.91%	18.20%	20.11%	7.21%	13.96%
UAL Amortization Rate	22.34%	22.34%	22.34%	22.34%	22.34%	22.34%
Administrative Expense Rate	<u>0.91%</u>	<u>0.91%</u>	<u>0.91%</u>	<u>0.91%</u>	<u>0.91%</u>	<u>0.91%</u>
Total Contribution as a % of Payroll	41.14%	44.16%	41.45%	43.36%	30.46%	37.21% <sup>1</sup>

<sup>1</sup> The District will begin paying this percentage of payroll July 1, 2024.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**SECTION V – CONTRIBUTIONS**

Table V-4 shows the allocation of the cost calculation between PEPRA and Non-PEPRA members.

<b>Table V-4</b>			
<b>Salaried PEPRA/Non-PEPRA Summary</b>			
	<b>Non-PEPRA</b>	<b>PEPRA</b>	<b>Total</b>
1. Entry Age Normal Cost (Middle of Year)	\$ 3,233,458	\$ 1,877,796	\$ 5,111,254
2. Covered Payroll (Normal Cost)	\$ 16,545,790	\$ 13,692,293	\$ 30,238,083
3. Normal Cost as a Percent of Covered Payroll: (1) / (2)	19.54%	13.71%	16.90%
4. Expected Employee Contributions as a Percent of Covered Payroll	0.00%	( 6.50%)	( 2.94%)
5. Entry Age Actuarial Liability	\$ 184,389,986	\$ 7,954,337	\$ 192,344,323
6. Actuarial Value of Assets			\$ 133,093,721
7. Unfunded Actuarial Liability: (5) - (6)			\$ 59,250,602
8. Unfunded Actuarial Liability Amortization at Middle of Year as a Level Percentage of Payroll	\$ 3,916,912	\$ 3,205,203	\$ 7,122,115
9. Expected Administrative Expenses	\$ 159,908	\$ 130,852	\$ 290,760
10. Expected Employee Contributions	\$ 0	\$ (889,999)	\$ (889,999)
11. Employer Contribution Payable in Monthly Installments: (1) + (8) + (9) + (10)	\$ 7,310,278	\$ 4,323,852	\$ 11,634,130
12. Covered Payroll (UAL Amort and Expenses)	\$ 17,534,722	\$ 14,348,634	\$ 31,883,356
13. Total Contribution as a Percent of Covered Payroll: [(1) + (10)] / (2) + [(8) + (9)] / (12)	42.79%	30.46%	37.21% <sup>1</sup>

<sup>1</sup> The District will begin paying this percentage of payroll July 1, 2024.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

The data for this valuation was provided by the Sacramento Regional District Transit staff as of July 1, 2023.

<b>Active Participants</b>	<b>July 1, 2022</b>	<b>July 1, 2023</b>
Classic	137	133
PEPRA	136	139
Total Number	273	272
Number Vested	160	165
Average Age	47.0	48.0
Average Service	10.3	10.4
Average Pay	\$110,846	\$117,218
<b>Retired</b>		
Number	340	350
Average Age	68.7	69.2
Average Annual Benefit	\$29,677	\$30,681
<b>Beneficiaries</b>		
Number	22	25
Average Age	69.5	70.1
Average Annual Benefit	\$24,720	\$23,845
<b>Disabled</b>		
Number	6	6
Average Age	66.1	67.3
Average Annual Benefit	\$17,921	\$17,921
<b>Term Vested</b>		
Number	52	49
Average Age	48.1	47.9
Average Annual Benefit	\$14,404	\$14,223
<b>Transferred</b>		
Number	1	2
Average Age	61.6	54.8
Average Annual Benefit	\$422	\$441
<b>Terminated Due Refund of Employee Contributions</b>		
Number	9	18
Average Estimated Refund	\$7,473	\$5,928

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Changes in Plan Membership: AEA								
	Actives	Actives with Transfer Service <sup>1</sup>	Non-Vested Terms with Funds on Account	Vested Terminations	Disabled	Retired	Beneficiaries <sup>2</sup>	Total
July 1, 2022	34	0	0	17	5	179	10	245
New Entrants	5	0	0	0	0	0	0	5
Rehires	0	0	0	0	0	0	0	0
Disabilities	0	0	0	0	0	0	0	0
Retirements	(1)	0	0	(3)	0	4	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0
Died, With Beneficiary, QDRO	0	0	0	0	0	(2)	2	0
Transfers	2	0	0	0	0	0	0	2
Died, No Beneficiary, & Other Terminations	(2)	0	2	0	0	(1)	0	(1)
Transfer Retirement	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0
Funds Transferred	0	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0	0
July 1, 2023	<b>37</b>	<b>0</b>	<b>2</b>	<b>15</b>	<b>5</b>	<b>180</b>	<b>12</b>	<b>251</b>

<sup>1</sup> Transfers with service from another Non-Contract group will be excluded from the Actives with Transfer Service count.

<sup>2</sup> Beneficiary counts do not include DROs where benefits are paid over the member's lifetime.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Changes in Plan Membership: AFSC								
	Actives	Actives with Transfer Service <sup>1</sup>	Non-Vested Terms with Funds on Account	Vested Terminations	Disabled	Retired	Beneficiaries <sup>2</sup>	Total
July 1, 2022	107	1	2	8	1	64	1	184
New Entrants	3	0	0	0	0	0	0	3
Rehires	0	0	0	0	0	0	0	0
Disabilities	0	0	0	0	0	0	0	0
Retirements	(7)	0	0	0	0	7	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0
Died, With Beneficiary, QDRO	0	0	0	0	0	(1)	1	0
Transfers	4	1	0	0	0	0	0	5
Died, No Beneficiary, & Other Terminations	(2)	0	2	0	0	0	0	0
Transfer Retirement	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0
Funds Transferred	0	0	0	0	0	0	0	0
Refund of Contributions	(1)	0	0	0	0	0	0	(1)
Data Corrections	0	0	0	0	0	0	0	0
July 1, 2023	<b>103</b>	<b>2</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>70</b>	<b>2</b>	<b>191</b>

<sup>1</sup> Transfers with service from another Non-Contract group are excluded from the Actives with Transfer Service count.

<sup>2</sup> Beneficiary counts do not include DROs where benefits are paid over the member's lifetime.



RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Changes in Plan Membership: AFST								
	Actives	Actives with Transfer Service <sup>1</sup>	Non-Vested Terms with Funds on Account	Vested Terminations	Disabled	Retired	Beneficiaries <sup>2</sup>	Total
July 1, 2022	40	0	4	8	0	22	1	75
New Entrants	10	0	0	0	0	0	0	10
Rehires	0	0	0	0	0	0	0	0
Disabilities	0	0	0	0	0	0	0	0
Retirements	(2)	0	0	0	0	2	0	0
Vested Terminations	0	0	0	0	0	0	0	0
Died, With Beneficiary, QDRO	0	0	0	0	0	0	0	0
Transfers	(4)	0	0	0	0	0	0	(4)
Died, No Beneficiary, & Other Terminations	(4)	0	4	0	0	(1)	0	(1)
Transfer Retirement	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0
Funds Transferred	0	0	0	0	0	0	0	0
Refund of Contributions	(3)	0	(2)	0	0	0	0	(5)
Data Corrections	0	0	0	0	0	0	0	0
July 1, 2023	<b>37</b>	<b>0</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>75</b>

<sup>1</sup> Transfers with service from another Non-Contract group are excluded from the Actives with Transfer Service count.

<sup>2</sup> Beneficiary counts do not include DROs where benefits are paid over the member's lifetime.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Changes in Plan Membership: MCEG								
	Actives	Actives with Transfer Service <sup>1</sup>	Non-Vested Terms with Funds on Account	Vested Terminations	Disabled	Retired	Beneficiaries <sup>2</sup>	Total
July 1, 2022	92	0	3	19	0	75	10	199
New Entrants	9	0	0	0	0	0	0	9
Rehires	0	0	0	0	0	0	0	0
Disabilities	0	0	0	0	0	0	0	0
Retirements	0	0	0	(3)	0	3	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0
Died, With Beneficiary, QDRO	0	0	0	0	0	0	0	0
Transfers	4	0	0	0	0	0	0	4
Died, No Beneficiary, & Other Terminations	(4)	0	4	0	0	(1)	0	(1)
Transfer Retirement	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0
Funds Transferred	0	0	0	0	0	0	0	0
Refund of Contributions	(5)	0	(1)	0	0	0	0	(6)
Data Corrections	0	0	0	0	0	0	0	0
July 1, 2023	<b>95</b>	<b>0</b>	<b>6</b>	<b>17</b>	<b>0</b>	<b>77</b>	<b>10</b>	<b>205</b>

<sup>1</sup> Transfers with service from another Non-Contract group excluded from the Actives with Transfer Service count.

<sup>2</sup> Beneficiary counts do not include DROs where benefits are paid over the member's lifetime.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Changes in Plan Membership: All Non-Contract								
	Actives	Actives with Transfer Service <sup>1</sup>	Non-Vested Terms with Funds on Account	Vested Terminations	Disabled	Retired	Beneficiaries <sup>2</sup>	Total
July 1, 2022	273	1	9	52	6	340	22	703
New Entrants	27	0	0	0	0	0	0	27
Rehires	0	0	0	0	0	0	0	0
Disabilities	0	0	0	0	0	0	0	0
Retirements	(10)	0	0	(6)	0	16	0	0
Vested Terminations	(3)	0	0	3	0	0	0	0
Died, With Beneficiary, QDRO	0	0	0	0	0	(3)	3	0
Transfers	6	1	0	0	0	0	0	7
Died, No Beneficiary, & Other Terminations	(12)	0	12	0	0	(3)	0	(3)
Transfer Retirement	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0
Funds Transferred	0	0	0	0	0	0	0	0
Refund of Contributions	(9)	0	(3)	0	0	0	0	(12)
Data Corrections	0	0	0	0	0	0	0	0
July 1, 2023	<b>272</b>	<b>3</b>	<b>18</b>	<b>49</b>	<b>6</b>	<b>350</b>	<b>25</b>	<b>723</b>

<sup>1</sup> Transfers with service from another Non-Contract group are excluded from the Actives with Transfer Service count.

<sup>2</sup> Beneficiary counts do not include DROs where benefits are paid over the member's lifetime.

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Age / Service Distribution Of Non-Union Active Participants As of July 1, 2023														
Age	Service												Total	
	Under 1	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 to 24	0	1	0	0	0	0	0	0	0	0	0	0	0	1
25 to 29	3	5	1	1	0	0	0	0	0	0	0	0	0	10
30 to 34	2	2	2	0	2	8	0	0	0	0	0	0	0	16
35 to 39	4	2	4	2	6	9	5	1	0	0	0	0	0	33
40 to 44	4	7	3	2	5	8	4	9	2	0	0	0	0	44
45 to 49	2	5	3	3	3	7	6	9	11	1	0	0	0	50
50 to 54	3	1	3	5	2	4	6	15	6	1	1	0	0	47
55 to 59	3	0	2	6	1	4	5	7	9	2	1	0	0	40
60 to 64	3	1	0	0	1	3	3	2	7	4	0	0	0	24
65 to 69	1	0	0	0	1	2	0	1	0	0	0	0	0	5
70 & up	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Total	25	24	18	19	21	45	29	44	35	10	2	0	0	272

Average Age = 48.0

Average Service = 10.4

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

Payroll Distribution Of Non-Union Active Participants As of July 1, 2023														
Age	Service												Total	
	Under 1	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 to 24	0	71,561	0	0	0	0	0	0	0	0	0	0	0	71,561
25 to 29	70,703	73,923	84,062	56,725	0	0	0	0	0	0	0	0	0	72,251
30 to 34	72,634	109,718	92,959	0	99,672	109,656	0	0	0	0	0	0	0	101,701
35 to 39	88,281	117,446	85,613	120,640	116,691	111,733	117,234	124,910	0	0	0	0	0	108,745
40 to 44	130,979	99,864	92,864	88,568	120,209	110,020	125,775	124,905	101,902	0	0	0	0	113,430
45 to 49	86,243	92,123	114,949	81,229	101,087	116,645	98,738	122,584	150,948	92,986	0	0	0	115,810
50 to 54	72,210	143,055	122,371	119,473	122,657	113,445	132,080	141,832	137,122	151,640	88,339	0	0	127,786
55 to 59	128,775	0	126,417	107,085	121,040	128,488	130,800	152,189	136,588	177,124	169,460	0	0	134,725
60 to 64	84,440	102,510	0	0	126,468	112,615	113,404	88,380	123,260	144,311	0	0	0	115,716
65 to 69	80,578	0	0	0	109,120	91,560	0	150,856	0	0	0	0	0	104,735
70 & up	0	0	0	0	0	0	0	0	0	198,143	0	0	0	198,143
<b>Total</b>	<b>93,750</b>	<b>95,864</b>	<b>103,101</b>	<b>103,090</b>	<b>114,559</b>	<b>112,627</b>	<b>119,600</b>	<b>133,471</b>	<b>136,545</b>	<b>157,240</b>	<b>128,899</b>	<b>0</b>	<b>0</b>	<b>117,218</b>

Average Salary = \$ 117,218

RETIREMENT PLAN FOR SACRAMENTO REGIONAL TRANSIT DISTRICT EMPLOYEES:  
SALARIED ACTUARIAL VALUATION REPORT AS OF JULY 1, 2023

**APPENDIX A – MEMBERSHIP INFORMATION**

**Service Retired Participants and Beneficiaries**

Age	Number	Average Monthly Benefit
35-39	0	\$0
40-44	0	\$0
45-49	0	\$0
50-54	6	\$3,446
55-59	42	\$2,749
60-64	69	\$2,484
65-69	93	\$2,765
70-74	86	\$2,738
75-79	48	\$1,977
80-84	20	\$1,684
85-89	7	\$1,933
90-94	3	\$716
95+	1	\$193
<b>Total</b>	<b>375</b>	<b>\$2,519</b>

**Disabled Participants**

Age	Number	Average Monthly Benefit
35-39	0	\$0
40-44	0	\$0
45-49	1	\$579
50-54	1	\$2,517
55-59	1	\$1,739
60-64	0	\$0
65-69	0	\$0
70-74	1	\$2,561
75-79	1	\$978
80-84	0	\$0
85-89	1	\$586
90-94	0	\$0
95+	0	\$0
<b>Total</b>	<b>6</b>	<b>\$1,493</b>

**Terminated Vested Participants**

Age	Number	Average Monthly Benefit
25-29	0	\$0
30-34	1	\$637
35-39	1	\$325
40-44	16	\$836
45-49	11	\$1,138
50-54	19	\$1,630
55-59	0	\$0
60-64	0	\$0
65-69	1	\$263
70-74	0	\$0
75-79	0	\$0
80-84	0	\$0
85-89	0	\$0
90+	0	\$0
<b>All Ages</b>	<b>49</b>	<b>\$1,185</b>

**Tranferred Participants**

Age	Number	Average Monthly Benefit
25-29	0	\$0
30-34	0	\$0
35-39	0	\$0
40-44	0	\$0
45-49	1	\$25
50-54	0	\$0
55-59	0	\$0
60-64	1	\$49
65-69	0	\$0
70-74	0	\$0
75-79	0	\$0
80-84	0	\$0
85-89	0	\$0
90+	0	\$0
<b>All Ages</b>	<b>2</b>	<b>\$37</b>

## **APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

The assumptions and methods used in the actuarial valuation reflect the results of an experience study performed by Cheiron covering the period from July 1, 2015 through June 30, 2020 and adopted by the Board at their May 5, 2021 meeting. More details on the rationale for the demographic and economic assumptions can be found in the experience study presentation from that meeting. The combined effect of the assumptions is expected to have no significant bias for the purpose of this measurement.

### **A. Contribution Allocation Procedure**

The contribution allocation procedure primarily consists of an actuarial cost method, an asset valuation method, and an amortization method as described below. This contribution allocation procedure, combined with reasonable assumptions, produces a Reasonable Actuarially Determined Contribution as defined in Actuarial Standard of Practice No. 4. The contribution allocation procedure was selected to balance benefit security, intergenerational equity, and the stability of actuarially determined contributions. The selection also considered the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due. There were no changes to the contribution allocation procedures from the prior valuation.

#### **1. Actuarial Cost Method**

The Entry Age Normal actuarial funding method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each Member's date of hire and assumed retirement. The Actuarial Liability is the difference between the Present Value of Future Benefits and the Present Value of Future Normal Cost. The Unfunded Actuarial Liability (UAL) is the difference between the Actuarial Liability and the Actuarial Value of Assets.

#### **2. Amortization Method**

The UAL is amortized as a percentage of projected payroll.

- The amortization period as of July 1, 2023 is 9 years for the UAL determined as of July 1, 2019 with 20-year layered amortization for UAL changes after 2019.
- Effective July 1, 2020, unexpected changes in the UAL are amortized over new closed 20-year amortization layers.
- The payment for the UAL layer associated with the assumption changes adopted as part of the July 1, 2020 actuarial valuation was phased-in over a three-year period.

#### **3. Actuarial Value of Plan Assets**

The actuarial value of Plan assets is calculated on a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, investment earnings which are greater than (or less than) the assumed investment return on the Market Value of Assets.

## **APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

### **B. Modeling**

Cheiron utilizes ProVal actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this valuation.

Deterministic and stochastic projections in this valuation report were developed using R-scan, a proprietary tool used to illustrate the impact of changes in assumptions, methods, plan provisions, or actual experience (particularly investment experience) on the future financial status of the Plan. R-scan uses standard roll-forward techniques that implicitly assume a stable active population. Because R-scan does not automatically capture how changes in one variable affect all other variables, some scenarios may not be consistent. We have relied on Cheiron colleagues who developed the tool, and we have used the tool in accordance with its purpose.

### **C. Actuarial Assumptions**

The actuarial assumptions were developed based on an experience study covering the period from July 1, 2015 through June 30, 2020.

#### **1. Rate of Return**

The annual rate of return on all Plan assets is assumed to be 6.75% for the current valuation net of investment, but not administrative, expenses.

#### **2. Low-Default-Risk Obligation Measure Discount Rate (effective June 30, 2023)**

The discount rate used to calculate the Low-Default-Risk Obligation Measure (LDROM) is the FTSE Pension Liability Index as of the valuation date. This index was selected because it reflects the types of fixed-income securities the Plan would likely invest in if the Trustees wanted to match cash flows. The rate for this valuation is 4.92%.

#### **3. Cost of Living**

The cost of living as measured by the Consumer Price Index (CPI) is assumed to increase at the rate of 2.50% per year.

#### **4. Increases in Pensionable Payroll / Amortization Payments**

Overall pensionable compensation (used in the calculation of amortization payments) is expected to grow by 2.75% per year. The PEPR Compensation Limit is assumed to increase by 2.50% per year (in line with the increase in the CPI).



## APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

### 5. Plan Expenses

Administrative expenses are assumed to be \$290,760 for Fiscal Year 2023-24 and are added directly to the actuarial cost calculation. The expenses are assumed to increase with CPI in future years.

### 6. Increases in Pay

Assumed pay increases for active Participants consist of increases due to wage inflation and those due to longevity and promotion.

Based on an analysis of pay levels and service for the Salaried Plan Participants, we assume that pay increases due to longevity and promotion will occur in accordance with the following table:

Pay Increases	
Base Increase	2.75%
Longevity & Promotion	2.50%
Total (Compound)	5.32%

### 7. Family Composition

85% of participants are assumed to be married. Males are assumed to be three years older than their spouses, and females are assumed to be three years younger than their spouses. This assumption is applied to active members, as well as retired members with a joint and survivor benefit where the data is missing the beneficiary date of birth.

### 8. Terminal Payments

Retirement benefits are assumed to be increased by 7% due to the application of payments for unused vacation and sick leave to Average Final Monthly Earnings.

No liability adjustment for retirement is used for members who joined the plan on or after January 1, 2015.

### 9. Bridging Service

The Plan has been modified to enable members who are rehired after a previous period of non-vested service to use this prior service for benefit and eligibility purposes. As the impact on the liabilities and contribution level of the Plan is expected to be minor and will depend on the number of members actually rehired (if any), no additional liability is currently being included for this provision.

## APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

### 10. Missed Pay Periods

A 0.57% load is applied to the normal cost for Salaried PEPRA members to adjust for the missed pay periods in which service is credited yet no contributions are made by the member.

### 11. Employment Status

No Plan Participants are assumed to transfer between the Salaried Plan and the ATU or IBEW Plans.

### 12. Rates of Termination

Rates of termination for all Participants from causes other than death, disability, and service retirement are based on the Participant's age, service, and sex.

Representative rates are shown in the following table:

Termination Rates <sup>1</sup>	
Years of Service	Rate
0-4	10.00%
5-9	5.00%
10-19	3.00%
20+	1.50%

<sup>1</sup> No terminations are assumed after eligibility for normal retirement or after 25 years of service for non-PEPRA members. PEPRA members terminating with at least five years of service are expected to receive a deferred annuity benefit; those terminating with less than five years of service are expected to receive a refund of contributions (with interest).

### 13. Rates of Disability

No assumed incidence of disability.

### 14. Rates of Mortality for Active Healthy Lives

Rates of mortality for active Participants are given by the Retired Pensioners (RP) 2014 Male and Female Employee Mortality Tables projected with Scale MP-2020 published by the Society of Actuaries, with the base tables adjusted 130% for females.

### 15. Rates of Mortality for Disabled Retirees

Rates of mortality for all disabled Participants are given by Retired Pensioners (RP) 2014 Male and Female Disabled Retiree Mortality Tables projected with Scale MP-2020 published by the Society of Actuaries, with the base tables adjusted 130% for males and 115% for females.

**APPENDIX B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

**16. Retired Member and Beneficiary Mortality**

Rates of mortality for retired Participants and their beneficiaries are given by the Private Retirement (Pri) 2012 Bottom Quartile Tables for Healthy Annuitants Mortality Tables projected with Scale MP-2020 published by the Society of Actuaries, with the base tables adjusted 105% for females.

**17. Rates of Retirement**

Rates of service retirement among all Participants eligible to retire are given by the following table:

Rates of Retirement <sup>1</sup>					
Age	Years of Service				
	5-9	10-19	20-24	25-29	30+
Under 55	0.00%	0.00%	0.00%	10.00%	15.00%
55-59	5.00%	5.00%	10.00%	10.00%	15.00%
60	15.00%	15.00%	20.00%	25.00%	35.00%
61-64	8.25%	15.00%	20.00%	25.00%	35.00%
65+	25.00%	25.00%	20.00%	35.00%	35.00%

<sup>1</sup> The rate of service retirement among all Participants eligible to retire with 30 or more years of service is assumed to be 25.0% per year, and 100% per year for all Participants 70 or older. PEPRAs members are assumed to begin retiring at age 52, with at least five years of service.

**18. Since Last Valuation**

The LDROM discount rate assumption was added.

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

### 1. Definitions

Average Final  
Monthly  
Earnings:

A Participant's Average Final Monthly Earnings is the highest average consecutive 48 months' Compensation paid. Payments for accumulated vacation or sick leave not actually taken prior to retirement are included in computing Average Final Monthly Earnings if the last 48 months of compensation are used in the calculation, except for PEPRA members.

Compensation:

A Participant's Compensation is the earnings paid in cash to the participant during the applicable period of employment with the District.

PEPRA member's Compensation is computed using base salary, without overtime or other special compensation such as terminal payments. Pensionable compensation for PEPRA members is limited to the PEPRA Compensation Limit (for 2024, \$151,446 for those participating in Social Security; increased by the CPI-U in subsequent years).

Service:

Service is computed from the date in which the Participant becomes a full or part-time employee and remains in continuous employment to the date employment ceases. Service includes time with the District or predecessor companies immediately prior to August 1, 1968 and subsequent to hire.

For AFSCME employees, service earned prior to January 1, 2015 is measured in completed quarters of a year and completed months for service earned on or after January 1, 2015. For MCEG and AEA employees, service is measured in completed months.

### 2. Participation

Eligibility:

Any person employed by the District in a full or part-time position in an authorized job classification covered by one of the defined employee groups of (i) Non-union Management and Confidential Employees, (ii) Employee members of the Administrative Employee Association (AEA), or (iii) Employee members of American Federation of State, County and Municipal Employees (AFSCME), is eligible to participate in the Plan.

Any member joining the Plan for the first time on or after January 1, 2015 is a New Member and will follow PEPRA provisions. Employees

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

who transfer from and are eligible for reciprocity with another public employer will not be New Members if the service in the reciprocal system was under a pre-PEPRA plan.

### 2. Retirement Benefit

**Eligibility:** Prior to January 1, 2006, a Participant is eligible for normal service retirement upon attaining age 55 and completing nine or more years of service.

On and after January 1, 2006, a Participant is eligible for normal service retirement upon attaining age 55 and completing five or more years of service.

Effective January 1, 2000, employees with 25 years of credited service will be eligible for an early retirement option.

PEPRA members are eligible upon attaining age 52 and completing five or more years of service.

**Benefit Amount:** The normal service retirement benefit is the greater of the benefit accrued under the plan provisions in effect prior to February 1, 1994 or the Participant's benefit under the current plan provisions. Under the current plan provision, the member would receive a percentage of the Participant's Average Final Monthly Earnings multiplied by the Participant's service at retirement. For AFSCME members with at least five but less than nine years of service, a vesting schedule is applied unless the member has reached age 62.

For retirements and terminations prior to January 1, 2005, the percentage is equal to:

- 2.0%, if the member retires prior to age 65, and
- 2.5%, if the member retires at age 65 or later.

For AEA and MCEG retirements and terminations on and after July 1, 2006 and prior to January 1, 2008, the percentage is equal to:

- 2.0%, if the member retires at age 55 or with 25 years of service,
- 2.125%, if the member retires at age 56 or with 26 years of service,
- 2.25%, if the member retires between the ages of 57 and 64 or with 27 or more years of service, and
- 2.5%, if the member retires at age 65 or later.

### APPENDIX C – SUMMARY OF PLAN PROVISIONS

For retirements and terminations on and after January 1, 2008 (July 1, 2006 for AFSCME members), the percentage is equal to:

- 2.0%, if the member retires at age 55 or with 25 years of service,
- 2.1%, if the member retires at age 56 or with 26 years of service,
- 2.2%, if the member retires at age 57 or with 27 years of service,
- 2.3%, if the member retires at age 58 or with 28 years of service,
- 2.4%, if the member retires at age 59 or with 29 years of service, and
- 2.5%, if the member retires at age 60 or later or with 30 or more years of service.

For PEPRA members, the benefit multiplier will be 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age.

**Form of Benefit:** The benefit begins at retirement and continues for the Participant's life with no cost of living adjustments. A Participant may elect to receive reduced benefits in the form of a contingent annuity with 50% or 100% continuing to a beneficiary after death, or in the form of an increased benefit prior to receiving Social Security benefits, and a reduced benefit thereafter.

### 3. Disability Benefit

**Eligibility:** A Participant is eligible for a disability benefit if the Participant is unable to perform the duties of his or her job with the District, cannot be transferred to another job with the District, and has submitted satisfactory medical evidence of permanent disqualification from his or her job. Nine years of service is required to qualify for disability. Effective January 1, 2006, five years of service is needed to qualify for disability retirement for AEA and MCEG members.

**Benefit Amount:** For AEA and MCEG members, the disability benefit is equal to the Normal Retirement Benefit, using the Participant's Average Final Monthly Earnings and service accrued through the date of disability. For AFSCME members, the disability benefit is equal to 2% of the Participant's Average Final Monthly Earnings multiplied by service accrued through the date of disability. The disability benefit cannot exceed the Retirement Benefit the member would be entitled to on the

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

basis of Average Final Monthly Earnings determined at the date of disability multiplied by the service the member would have attained had employment continued until age 62.

**Form of Benefit:** The benefit begins at disability and continues until recovery or for the Participant's life with no cost of living adjustments. A Participant may elect to receive reduced benefits in the form of a contingent annuity with 50% or 100% continuing to a beneficiary after death, or in the form of an increased benefit prior to receiving Social Security benefits, and a reduced benefit thereafter.

### 5. Pre-Retirement Death Benefit

**Eligibility:** For deaths prior to January 1, 2006, a Participant's surviving spouse, Domestic Partner or minor dependent child is eligible for a pre-retirement death benefit if the Participant has completed nine years of service with the District.

For deaths on and after January 1, 2006, a Participant's surviving spouse, Domestic Partner, or minor dependent child is eligible for a pre-retirement death benefit if the Participant has completed five years of service with the District.

**Benefit Amount:** The pre-retirement death benefit is the actuarial equivalent of the Normal Retirement Benefit, as if the member retired on the day prior to his/her death. The amount payable to the spouse or Domestic Partner is equal to the Life benefit payable under Article V of the Plan document.

**Form of Benefit:** The death benefit begins when the Participant dies and continues for the life of the surviving spouse or Domestic Partner, or until the death, marriage, or attainment of 21 years of age of a dependent minor child. No optional form of benefit may be elected. No cost of living increases are payable.

### 6. Termination Benefit

**Eligibility:** A Participant is eligible for a termination benefit after earning five years of service. The Participant will be eligible to commence benefits at age 55.

**Benefit Amount:** For AFSCME terminations, and AEA and MCEG terminations prior to January 1, 2006, the benefit payable to a vested terminated Participant is a percentage of the Normal Retirement Benefit earned on the date of termination, based on the age, service, and Average Final Monthly

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

Earnings accrued by the Participant at that point. The percentage is based on the Participant’s service with the District, as shown in the table below:

Service	Vested Percentage
5	20%
6	40%
7	60%
8	80%
9 or more	100%

For AEA and MCEG terminations on and after January 1, 2006, a Participant is eligible after earning five years of service for the full Normal Retirement Benefit earned on the date of termination, based on the age, service, and Average Final Monthly Earnings accrued by the Participant at that point.

PEPRA members are eligible after earning five years of service for the full Normal Retirement Benefit earned on the date of termination, based on the service and Average Final Monthly Earnings accrued by the Participant at that point, and using the factor based on the age at which the benefit commences.

Form of Benefit: The termination benefit is payable for the life of the Participant only beginning at age 55. For PEPRA members the benefit can begin as early as age 52. No cost of living increases are payable.

### 7. Withdrawal Benefit

Eligibility: PEPRA members who are not eligible for a termination benefit upon termination.

Benefit Amount: The withdrawal benefit is a refund of the Participant’s accumulated contributions with interest.

Form of Benefit: The withdrawal benefit is paid in a lump sum upon election by the Participant.

### 8. Reciprocity Benefit

Eligibility: A Participant who transfers from this Plan to the RT Union Plan, and who is vested under this Plan, is eligible for a retirement benefit from this Plan.



### APPENDIX C – SUMMARY OF PLAN PROVISIONS

- Benefit Amount:** The benefit payable to a vested transferred Participant is equal to the Normal Retirement Benefit based on service earned under this Plan to the date of transfer and based on Average Final Earnings computed under this Plan and the Union Plan together, as if the plans were a single plan.
- Form of Benefit:** The reciprocity benefit begins at retirement and continues for the Participant's life with no cost of living adjustments. A Participant may elect to receive reduced benefits in the form of a contingent annuity with 50% or 100% continuing to a beneficiary after death, or in the form of an increased benefit prior to receiving Social Security benefits, and a reduced benefit thereafter.

#### 9. Funding

Members hired on or after January 1, 2015 contribute half of the normal cost of the Plan rounded to the nearest 0.25%. Once established, contribution rate for New Members is adjusted to reflect a change in the normal cost rate, but only if the normal cost rate changes by more than 1% of payroll. For the Fiscal Year 2023-2024, the contribution rate for PEPRA members was 6.50% of payroll (based on 1/2 of 13.08%, rounded to the nearest quarter). The normal cost rate for the PEPRA members as of the July 1, 2023 valuation is 13.71%, and since the increase is less than 1%, the rate for the following fiscal year will not change.

The remaining cost of the Plan is paid by the District.

#### 10. Changes in Plan Provisions

None.

## APPENDIX D – GLOSSARY

### 1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs such as mortality, withdrawal, disability, retirement, changes in compensation, and rates of investment return.

### 2. Actuarial Cost Method

A procedure for determining the actuarial present value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an Actuarial Liability.

### 3. Actuarial Gain (Loss)

The difference between actual experience and that expected based upon a set of actuarial Assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

### 4. Actuarial Liability

The portion of the actuarial present value of projected benefits that will not be paid by future normal costs. It represents the value of the past normal costs with interest to the valuation date.

### 5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments. The actuarial present value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made.

### 6. Actuarial Valuation

The determination, as of a specified date, of the normal cost, Actuarial Liability, Actuarial Value of Assets, and related actuarial present values for a pension plan.

### 7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values.

### 8. Actuarially Equivalent

Of equal actuarial present value, determined as of a given date, with each value based on the same set of actuarial assumptions.

## APPENDIX D – GLOSSARY

### 9. Amortization Payment

The portion of the pension plan contribution, which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

### 10. Entry Age Normal Actuarial Cost Method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

### 11. Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

### 12. Normal Cost

That portion of the actuarial present value of pension plan benefits and expenses that is allocated to a valuation year by the actuarial cost method.

### 13. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of actuarial assumptions, taking into account such items as increases in future compensation and service credits.

### 14. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets. The Unfunded Actuarial Liability is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan's benefit obligation in the event of a plan termination or other similar action. However, it is an appropriate measure for assessing the need for or the amount of future contributions.



*Classic Values, Innovative Advice*