

Maryland Transit Administration Pension Plan

GASB Statement Nos. 67 and 68 Accounting and Financial
Reporting for Pensions
June 30, 2023





October 12, 2023

Ms. Laurie Brown
Deputy CFO
Maryland Transit Administration
6 St. Paul Street, 8th Floor
Baltimore, Maryland 21202

Dear Ms. Brown:

This report provides information on behalf of the Maryland Transit Administration (MTA) Pension Plan that is intended to comply with Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the Maryland Transit Administration Pension Plan. These calculations have been made on a basis that is consistent with our understanding of these Statements.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

The calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan.

A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the MTA only in its entirety and only with the permission of the MTA and the Board. GRS is not responsible for unauthorized use of this report.

The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation, nor is it an appropriate measure for assessing the need for or amount of future employer contributions.

This report is based upon information, provided to us by the MTA, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited. We are not responsible for the accuracy or completeness of the information provided by the MTA.

This report complements the actuarial valuation report that was provided to the Maryland Transit Administration Pension Plan and should be considered in conjunction with that report. Please see the actuarial valuation report as of July 1, 2023 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

The actuarial assumptions in this report are the same as those used in the June 30, 2023 actuarial valuation with the following exceptions:

- The actuarial cost method is the Entry-age Normal Cost method, as required by GASB.
- Projected benefits for purposes of calculating the Single Discount Rate (SDR) and resulting liabilities in this report included an assumed Cost-of-Living Adjustment (COLA) of 2.00%.

Actuarial assumptions were last reviewed in the Experience Study report dated July 20, 2023 covering the 4-year period from July 1, 2018 through June 30, 2022, which includes the rationale for the assumptions. The updated assumptions are reflected in the June 30, 2023 GASB Nos. 67 & 68 report. Additionally, the SDR increased from 5.29% to 5.37%. Overall, assumption changes decreased the Total Pension Liability by about \$29M.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the Maryland Transit Administration Pension Plan. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.



Ms. Laurie Brown
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October 12, 2023
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This information is intended to assist in preparation of the financial statements of the Maryland Transit Administration Pension Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

The signing actuaries are independent of the plan sponsor.

Brad Lee Armstrong, Derek Henning and Kevin T. Noelke are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Brad Lee Armstrong, ASA, EA, FCA, MAAA



Derek Henning, ASA, EA, FCA, MAAA



Kevin T. Noelke, ASA, MAAA, FCA

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Auditor's Note – This information is intended to assist in preparation of the financial statements of the Maryland Transit Administration. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.



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SECTION A



EXECUTIVE SUMMARY

Executive Summary

Actuarial Valuation Date	July 1, 2023
Measurement Date of the Net Pension Liability	June 30, 2023
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2023

Membership

Number of	
- Retirees and Beneficiaries	2,135
- Inactive, Nonretired Members	562
- Active Members	2,532
- Total	5,229
Covered Employee Payroll #	\$ 170,004,336

Net Pension Liability

Total Pension Liability	\$ 1,225,996,376
Plan Fiduciary Net Position	487,366,205
Net Pension Liability	\$ 738,630,171
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	39.75%
Net Pension Liability as a Percentage of Covered Employee Payroll	434.48%

Development of the Single Discount Rate

Single Discount Rate, End of Year	5.37%
Single Discount Rate, Beginning of Year	5.29%
Long-Term Expected Rate of Investment Return, End of Year	6.80%
Long-Term Expected Rate of Investment Return, Beginning of Year	6.80%
Long-Term Municipal Bond Rate, End of Year *	3.86%
Long-Term Municipal Bond Rate, Beginning of Year *	3.69%
Last year ending June 30 in the 2024 to 2123 projection period for which projected benefit payments are fully funded	2052

Total Pension Expense	\$ (28,055,520)
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Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 18,251,507	\$ 46,414,416
Changes in assumptions	104,272,798	294,373,705
Net difference between projected and actual earnings on pension plan investments	41,536,391	27,071,943
Total	\$ 164,060,696	\$ 367,860,064

*Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2022 and June 30, 2023. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.

Valuation payroll as of June 30, 2023.



Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the Net Pension Liability, Pension Expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information is not included in this report if it is not actuarial in nature, such as the notes to the financial statements regarding accounting policies and investments. As a result, the retirement system and/or plan sponsor is responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state and local government employers that contribute to DB pension plans to recognize the Net Pension Liability and the pension expense on their financial statements, along with the related deferred outflows of resources and deferred inflows of resources. The Net Pension Liability is the difference between the Total Pension Liability and the plan's Fiduciary Net Position. In traditional actuarial terms, this is analogous to the accrued liability less the Market Value of Assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective Net Pension Liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to the Maryland Transit Administration Pension Plan subsequent to the measurement date of June 30, 2023.

The Pension Expense recognized each fiscal year is equal to the change in the Net Pension Liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the certain changes in the liability and investment experience. Please see page 6 for more details.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of Fiduciary Net Position and a statement of changes in Fiduciary Net Position in accordance with GASB Statement No. 67. The statement of Fiduciary Net Position presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The statement of changes in Fiduciary Net Position presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the Fiduciary Net Position.

Discussion

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's Fiduciary Net Position, Net Pension Liability, and the pension plan's Fiduciary Net Position as a percentage of the Total Pension Liability;
- The Net Pension Liability using a discount rate that is 1% higher and 1% lower than used to calculate the Total Pension Liability and Net Pension Liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the Total Pension Liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

The financial statements of employers also include required supplementary information showing the 10-year fiscal history of:

- Sources of changes in the Net Pension Liability;
- Information about the components of the Net Pension Liability and related ratios, including the pension plan's Fiduciary Net Position as a percentage of the Total Pension Liability, and the Net Pension Liability as a percent of covered employee payroll; and
- A comparison of actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Discussion

While the first two tables may be built prospectively as the information becomes available, sufficient information is currently available for the third table.

Frequency and Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. For employer reporting, the net pension liability and pension expense should be measured as of a date (measurement date) no earlier than the end of the employer's prior fiscal year, consistently applied from period to period. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The Total Pension Liability shown in this report is based on an actuarial valuation performed as of July 1, 2023 and a measurement date of June 30, 2023.

Benefits Valued

The benefit provisions that were valued in this report are the same as those stated in the July 1, 2023 actuarial valuation. They are required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits. If the plan summary is not in accordance with the actual provisions, please alert the actuaries immediately so they can both be sure the proper provisions are valued.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects: (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's Fiduciary Net Position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the plan's projected Fiduciary Net Position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 3.86%; and the resulting Single Discount Rate is 5.37%.

Discussion

Actuarial Assumptions

The actuarial assumptions in this report are the same as those used in the July 1, 2023 actuarial valuation with the following exceptions:

- The actuarial cost method is the Entry-age Normal Cost method, as required by GASB.
- Projected benefits for purposes of calculating the Single Discount Rate (SDR) and resulting liabilities in this report included an assumed Cost-of-Living Adjustment (COLA) of 2.00%.

Actuarial assumptions were last reviewed in the Experience Study report dated July 20, 2023 covering the four-year period from July 1, 2018 through June 30, 2022, which includes the rationale for the assumptions. The updated assumptions are reflected in the June 30, 2023 GASB Statement Nos. 67 and 68 report. Additionally, the SDR increased from 5.29% to 5.37%. Overall, assumption changes decreased the Total Pension Liability by about \$29M.

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.80% on the actuarial value of assets), then the following outcomes are expected:

1. The employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. The unfunded liability is not expected to be fully amortized during the lifetimes of current members.
3. The funded status of the plan is expected to increase gradually towards a 100% funded ratio.

This funding policy results in an expected crossover date in 2052 and a GASB single discount rate of 5.37%. The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

SECTION B



FINANCIAL STATEMENTS

Statement of Pension Expense under GASB Statement No. 68

Fiscal Years Ended June 30

A. Expense	<u>2023</u>	<u>2022</u>
1. Service Cost	\$ 29,388,577	\$ 50,802,171
2. Interest on the Total Pension Liability	62,494,802	51,484,768
3. Current-Period Benefit Changes	-	-
4. Employee Contributions (made negative for addition here)	(8,302,217)	(6,832,690)
5. Projected Earnings on Plan Investments (made negative for addition here)	(31,715,965)	(31,232,602)
6. Pension Plan Administrative Expense	146,346	4,135,115
7. Other Changes in Plan Fiduciary Net Position	-	-
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	(79,623,606)	(32,125,803)
9. Recognition of Outflow (Inflow) of Resources due to Assets	(443,457)	(3,422,179)
10. Total Pension Expense	\$ (28,055,520)	\$ 32,808,780

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2023

A. Outflows (Inflows) of Resources Due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 21,901,809
2. Assumption Changes (gains) or losses	\$ (29,238,200)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	6.0000
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ 3,650,302
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ (4,873,033)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ (1,222,731)
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ 18,251,507
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ (24,365,167)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ (6,113,660)

B. Outflows (Inflows) of Resources Due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 16,930,102
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ 3,386,020
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 13,544,082

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2023

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 46,956,289	\$ 126,579,895	\$ (79,623,606)
2. Due to Assets	14,490,960	14,934,417	(443,457)
3. Total	\$ 61,447,249	\$ 141,514,312	\$ (80,067,063)

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 6,547,781	\$ 17,552,939	\$ (11,005,158)
2. Assumption Changes	40,408,508	109,026,956	(68,618,448)
3. Net Difference between projected and actual earnings on pension plan investments	14,490,960	14,934,417	(443,457)
4. Total	\$ 61,447,249	\$ 141,514,312	\$ (80,067,063)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 18,251,507	\$ 46,414,416	\$ (28,162,909)
2. Assumption Changes	104,272,798	294,373,705	(190,100,907)
3. Net Difference between projected and actual earnings on pension plan investments	41,536,391	27,071,943	14,464,448
4. Total	\$ 164,060,696	\$ 367,860,064	\$ (203,799,368)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2024	\$ (49,223,247)
2025	(40,767,307)
2026	(41,327,362)
2027	(71,258,716)
2028	(1,222,736)
Thereafter	-
Total	\$ (203,799,368)

Recognition of Deferred Outflows and Inflows of Resources

Fiscal Year Ended June 30, 2023

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) Due to Differences between Expected and Actual Experience on Liabilities					
2017	\$ (20,741,099)	7.0000	\$ (2,963,015)	\$ -	0.0000
2018	17,384,864	6.0000	2,897,479	-	0.0000
2019	(8,527,580)	6.0000	(1,421,263)	(1,421,265)	1.0000
2020	(17,140,142)	6.0000	(2,856,690)	(5,713,382)	2.0000
2021	(11,808,688)	6.0000	(1,968,115)	(5,904,343)	3.0000
2022	(50,063,138)	6.0000	(8,343,856)	(33,375,426)	4.0000
2023	21,901,809	6.0000	3,650,302	18,251,507	5.0000
Total			\$ (11,005,158)	\$ (28,162,909)	
Deferred Outflow (Inflow) Due to Assumption Changes					
2017	\$ (162,605,699)	7.0000	\$ (23,229,383)	\$ -	0.0000
2018	(36,902,711)	6.0000	(6,150,451)	-	0.0000
2019	(58,175,626)	6.0000	(9,695,938)	(9,695,936)	1.0000
2020	101,716,323	6.0000	16,952,721	33,905,439	2.0000
2021	140,734,720	6.0000	23,455,787	70,367,359	3.0000
2022	(390,468,904)	6.0000	(65,078,151)	(260,312,602)	4.0000
2023	(29,238,200)	6.0000	(4,873,033)	(24,365,167)	5.0000
Total			\$ (68,618,448)	\$ (190,100,907)	
Deferred Outflow (Inflow) Due to Differences between Projected and Actual Earnings on Plan Investments					
2019	\$ (6,992,230)	5.0000	\$ (1,398,446)	\$ -	0.0000
2020	13,306,275	5.0000	2,661,255	2,661,255	1.0000
2021	(67,679,856)	5.0000	(13,535,971)	(27,071,943)	2.0000
2022	42,218,424	5.0000	8,443,685	25,331,054	3.0000
2023	16,930,102	5.0000	3,386,020	13,544,082	4.0000
Total			\$ (443,457)	\$ 14,464,448	

According to paragraph 33 of GASB Statement No. 68, differences between expected and actual experience and changes in assumptions are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 30,804 years. Additionally, the total plan membership (active DB employees and inactive employees) was 5,134. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 6.0000 years.

Additionally, differences between projected and actual earnings on pension plan investments should be recognized in pension expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.

Statement of Fiduciary Net Position as of June 30, 2023

Assets	
Cash and Cash Equivalents	\$ 9,329,973
Collateral for Loaned Securities	43,230,816
Total Cash	<u>\$ 52,560,789</u>
Investments	
U.S. Government Obligations	\$ 46,984,932
Domestic Corporate Obligations	27,587,788
International Obligations	11,942,450
Domestic Stocks	78,099,737
International Stocks	71,984,304
Mortgage and Mortgage Related Securities	12,477,413
Alternative Investments	231,610,180
Total Investments	<u>\$ 480,686,804</u>
Receivables	
Accrued Investment Income	\$ 1,487,432
Investment Sales Proceeds	3,291,042
Total Receivables	<u>\$ 4,778,474</u>
Total Assets	<u>\$ 538,026,067</u>
Liabilities	
Obligation for Collateral for Loaned Securities	\$ 43,230,816
Manager fees payable	92,523
Investment purchases payable	7,336,523
Total Liabilities	<u>\$ 50,659,862</u>
Net Position Held in Trust for Pension Benefits	<u>\$ 487,366,205</u>

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2023

Additions

Contributions		
Employer	\$	54,647,403
Employee		8,302,217
Total Contributions	\$	<u>62,949,620</u>
Investment Income		
Net Appreciation in Fair Value of Investments	\$	(3,687,932)
Interest and Dividends		21,574,370
Net Income from Securities Lending Activities		176,970
Less Investment Expense		<u>(3,277,545)</u>
Total Investment Income	\$	<u>14,785,863</u>
Total Additions	\$	<u>77,735,483</u>

Deductions

Benefit Payments	\$	50,465,093
Administrative Expense		146,346
Other		<u>-</u>
Total Deductions	\$	<u>50,611,439</u>

Net Increase in Net Position \$ 27,124,044

Net Position Held in Trust for Pension Benefits

Beginning of Year	\$	<u>460,242,161</u>
End of Year	\$	<u>487,366,205</u>

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios

Current Period

Fiscal Year Ended June 30, 2023

A. Total Pension Liability	
1. Service Cost	\$ 29,388,577
2. Interest on the Total Pension Liability	62,494,802
3. Changes of benefit terms	-
4. Difference between expected and actual experience of the Total Pension Liability	21,901,809
5. Changes of assumptions	(29,238,200)
6. Benefit payments, including refunds of employee contributions	(50,465,093)
7. Net change in Total Pension Liability	\$ 34,081,895
8. Total Pension Liability – Beginning	1,191,914,481
9. Total Pension Liability – Ending	\$ 1,225,996,376
B. Plan Fiduciary Net Position	
1. Contributions – employer	\$ 54,647,403
2. Contributions – employee	8,302,217
3. Net investment income	14,785,863
4. Benefit payments, including refunds of employee contributions	(50,465,093)
5. Pension Plan Administrative Expense	(146,346)
6. Other	-
7. Net change in Plan Fiduciary Net Position	\$ 27,124,044
8. Plan Fiduciary Net Position – Beginning	460,242,161
9. Plan Fiduciary Net Position – Ending	\$ 487,366,205
C. Net Pension Liability	\$ 738,630,171
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	39.75%
E. Covered-Employee Payroll *	\$ 170,004,336
F. Net Pension Liability as a percentage of Covered-Employee Payroll	434.48%

* Covered-Employee Payroll shown is the valuation payroll.



Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service Cost	\$ 29,388,577	\$ 50,802,171	\$ 43,826,625	\$ 42,307,645	\$ 36,026,872	\$ 37,194,586	\$ 36,333,940	\$ 48,498,923	\$ 24,718,074	\$ 19,438,000
Interest on the Total Pension Liability	62,494,802	51,484,768	56,405,792	55,831,451	56,518,997	54,904,314	57,880,638	31,181,033	39,236,563	43,472,000
Benefit Changes	-	-	-	208,455	(202,648)	3,105,575	2,132,647	82,510,189	-	-
Difference between Expected and Actual Experience Assumption Changes	21,901,809	(50,063,138)	(11,808,688)	(17,140,142)	(8,527,580)	17,384,864	(20,741,099)	(15,023,996)	(19,621,279)	4,025,000
Benefit Payments, including refunds of contributions	(29,238,200)	(390,468,904)	140,734,720	101,716,323	(58,175,626)	(36,902,711)	(162,605,699)	338,949,559	53,480,106	38,643,000
Net Change in Total Pension Liability	(50,465,093)	(47,453,399)	(44,735,513)	(44,432,068)	(42,723,850)	(37,203,253)	(39,062,347)	(35,283,202)	(30,636,207)	(32,598,000)
Total Pension Liability - Beginning	1,191,914,481	1,577,612,983	1,393,190,047	1,254,698,383	1,271,782,218	1,233,298,843	1,359,360,763	908,528,257	841,351,000	768,371,000
Total Pension Liability - Ending (a)	\$ 1,225,996,376	\$ 1,191,914,481	\$ 1,577,612,983	\$ 1,393,190,047	\$ 1,254,698,383	\$ 1,271,782,218	\$ 1,233,298,843	\$ 1,359,360,763	\$ 908,528,257	\$ 841,351,000
Plan Fiduciary Net Position										
Employer Contributions	\$ 54,647,403	\$ 68,605,836	\$ 59,279,675	\$ 43,249,926	\$ 41,597,059	\$ 40,997,059	\$ 40,997,059	\$ 40,997,059	\$ 35,400,000	\$ 39,749,000
Employee Contributions	8,302,217	6,832,690	7,311,254	4,609,744	3,005,759	3,315,683	3,094,029	-	-	-
Pension Plan Net Investment Income	14,785,863	(10,985,822)	93,212,724	12,831,812	31,023,630	20,550,290	27,740,945	12,767,932	14,044,525	15,783,000
Benefit Payments, including refunds of contributions	(50,465,093)	(47,453,399)	(44,735,513)	(44,432,068)	(42,723,850)	(37,203,253)	(39,062,347)	(35,283,202)	(30,636,207)	(32,598,000)
Pension Plan Administrative Expense	(146,346)	(4,135,115)	(3,602,429)	(2,651,571)	(2,325,372)	(2,213,277)	(1,914,322)	(1,967,196)	(1,850,637)	(1,587,000)
Other	-	-	-	-	(6,719,636)	-	(2,630,692)	-	-	-
Net Change in Plan Fiduciary Net Position	27,124,044	12,864,190	111,465,711	13,607,843	23,857,590	25,446,502	28,224,672	16,514,593	16,957,681	21,347,000
Plan Fiduciary Net Position - Beginning	460,242,161	447,377,971	335,912,260	322,304,417	298,446,827	273,000,325	244,775,653	228,261,060	211,303,379	189,957,000
Plan Fiduciary Net Position - Ending (b)	\$ 487,366,205	\$ 460,242,161	\$ 447,377,971	\$ 335,912,260	\$ 322,304,417	\$ 298,446,827	\$ 273,000,325	\$ 244,775,653	\$ 228,261,060	\$ 211,303,000
Net Pension Liability - Ending (a) - (b)	738,630,171	731,672,320	1,130,235,012	1,057,277,787	932,393,966	973,335,391	960,298,518	1,114,585,110	680,267,197	630,048,000
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	39.75 %	38.61 %	28.36 %	24.11 %	25.69 %	23.47 %	22.14 %	18.01 %	25.12 %	25.11 %
Covered-Employee Payroll*	\$ 170,004,336	\$ 163,102,050	\$ 164,552,701	\$ 149,767,952	\$ 148,444,632	\$ 145,833,561	\$ 137,153,770	\$ 137,427,168	\$ 135,544,813	\$ 137,596,326
Net Pension Liability as a Percentage of Covered Employee Payroll	434.48 %	448.60 %	686.85 %	705.94 %	628.11 %	667.43 %	700.16 %	811.04 %	501.88 %	457.90 %

Notes to Schedule:

* Covered-Employee Payroll shown is the valuation payroll. Results prior to FYE 2021 were not calculated by GRS.



Schedule of Required Supplementary Information Schedule of the Net Pension Liability

FY Ending June 30,	Total Pension Liability #	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered-Employee Payroll *	Net Pension Liability as a % of Covered Employee Payroll
2014	\$ 841,351,000	\$ 211,303,379	\$ 630,047,621	25.11%	\$ 137,596,326	457.90%
2015	908,528,257	228,261,060	680,267,197	25.12%	135,544,813	501.88%
2016	1,359,360,763	244,775,653	1,114,585,110	18.01%	137,427,168	811.04%
2017	1,233,298,843	273,000,325	960,298,518	22.14%	137,153,770	700.16%
2018	1,271,782,218	298,446,827	973,335,391	23.47%	145,833,561	667.43%
2019	1,254,698,383	322,304,417	932,393,966	25.69%	148,444,632	628.11%
2020	1,393,190,047	335,912,260	1,057,277,787	24.11%	149,767,952	705.94%
2021	1,577,612,983	447,377,971	1,130,235,012	28.36%	164,552,701	686.85%
2022	1,191,914,481	460,242,161	731,672,320	38.61%	163,102,050	448.60%
2023	1,225,996,376	487,366,205	738,630,171	39.75%	170,004,336	434.48%

* Covered-Employee Payroll shown is the valuation payroll.

Results prior to FYE 2021 were not calculated by GRS.

Schedule of Contributions Multiyear

FY Ending June 30,	Actuarially Determined Contribution #	Actual Contribution	Contribution Deficiency (Excess)	Covered-Employee Payroll *	Actual Contribution as a % of Covered Employee Payroll
2014	\$ 39,748,933	\$ 39,748,933	\$ -	\$ 137,596,326	28.89%
2015	40,807,270	35,400,000	5,407,270	135,544,813	26.12%
2016	44,736,075	40,997,059	3,739,016	137,427,168	29.83%
2017	62,217,185	40,997,059	21,220,126	137,153,770	29.89%
2018	66,495,406	40,997,059	25,498,347	145,833,561	28.11%
2019	64,648,783	41,597,059	23,051,724	148,444,632	28.02%
2020	55,213,341	43,249,926	11,963,415	149,767,952	28.88%
2021	58,841,684	59,279,675	(437,991)	164,552,701	36.02%
2022	53,638,723	68,605,836	(14,967,113)	163,102,050	42.06%
2023	55,926,030	54,647,403	1,278,627	170,004,336	32.14%

* Covered-Employee Payroll shown is the valuation payroll.

Contribution rates for FYE 2021 and prior were not calculated by GRS.



Notes to Schedule of Contributions

Valuation Date: July 1, 2022
Notes: Actuarially determined contribution amounts are calculated as of July 1 each year, which is the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for FY Ending June 30, 2023:

Actuarial Cost Method	Entry-Age - Level Dollar Normal Cost
Amortization Method	Level dollar, closed
Remaining Amortization Periods	1-22 years
Asset Valuation Method	5-Year smoothed market for funding
Wage Inflation	2.75%
Salary Increases	2.40% to 8.40% including inflation
Investment Rate of Return	6.80%
Retirement Age	Age-based table of rates that are specific to the type of eligibility condition.
Mortality	Pre-retirement: RP-2014 Blue Collar Employee mortality table, sex distinct, with generational mortality improvements from 2006 using scale MP-2018. Post-retirement Healthy lives: RP-2014 Blue Collar Healthy Retiree mortality table, sex distinct, with generational mortality improvements from 2006 using scale MP-2018. Post-retirement Disabled lives: RP-2014 Disabled Retiree mortality table, sex distinct, with generational mortality improvements from 2006 using scale MP-2018.

Other Information:
Notes: N/A

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

Single Discount Rate

The Single Discount Rate used to measure the June 30, 2022 total pension liability was 5.29%. A Single Discount Rate of 5.37% was used to measure the June 30, 2023 total pension liability. This Single Discount Rate was based on a municipal bond rate of 3.86% and an expected rate of return on pension plan investments of 6.80%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's Fiduciary Net Position and future contributions were sufficient to finance the benefit payments through the year 2052.

Regarding the sensitivity of the Net Pension Liability to changes in the Single Discount Rate, the following presents the plan's Net Pension Liability, calculated using a Single Discount Rate of 5.37%, as well as what the plan's Net Pension Liability would be if it were calculated using a Single Discount Rate that is 1-percentage-point lower or 1-percentage-point higher:

	1% Decrease 4.37%	Current Single Discount Rate 5.37%	1% Increase 6.37%
Total Pension Liability	\$ 1,393,203,868	\$ 1,225,996,376	\$ 1,086,969,816
Plan Fiduciary Net Position	487,366,205	487,366,205	487,366,205
Net Pension Liability/(Asset)	\$ 905,837,663	\$ 738,630,171	\$ 599,603,611

SECTION D

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 68 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Fiduciary Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects: 1) the long-term expected rate of return on pension plan investments (during the period in which the Fiduciary Net Position is projected to be sufficient to pay benefits); and 2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 3.86%; and the resulting SDR is 5.37%.

The tables in this section provide background for the development of the SDR.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan. Contribution amounts shown are strictly for the purpose of testing for a GASB depletion date and may differ from those determined by a funding valuation.

Single Discount Rate Development

Projection of Contributions Ending June 30, 2073

Year	Covered Employee Payroll	Service Cost		Administrative Expense Contributions	UAL Contributions	Total Contributions
		Contributions and Contributions from Current Employees				
0	\$ 170,004,336					
1	173,677,082	\$ 13,248,164	\$	149,508	\$ 50,720,895	\$ 64,118,567
2	165,938,289	12,248,845		142,846	51,502,999	63,894,690
3	159,570,643	11,403,352		137,364	51,673,662	63,214,378
4	153,392,183	10,645,605		132,046	38,169,681	48,947,332
5	147,010,897	9,935,551		126,552	38,624,571	48,686,674
6	140,766,831	9,282,905		121,177	38,624,571	48,028,652
7	134,336,706	8,667,359		115,642	38,624,571	47,407,572
8	128,265,145	8,096,921		110,415	38,624,571	46,831,907
9	122,246,313	7,552,130		105,234	38,592,880	46,250,244
10	116,566,382	7,045,302		100,345	38,586,928	45,732,575
11	110,907,527	6,557,256		95,473	38,586,928	45,239,657
12	105,463,376	6,098,112		90,787	38,586,928	44,775,827
13	100,196,476	5,664,929		86,253	38,586,928	44,338,109
14	94,913,630	5,250,187		81,705	38,586,928	43,918,820
15	89,746,204	4,854,874		77,257	38,586,928	43,519,059
16	84,613,584	4,475,997		72,838	38,586,928	43,135,763
17	79,421,416	4,109,374		68,369	35,996,579	40,174,322
18	74,421,488	3,767,343		64,065	32,487,976	36,319,384
19	69,399,820	3,439,446		59,742	35,261,211	38,760,399
20	64,494,921	3,128,927		55,520	36,099,184	39,283,632
21	59,611,738	2,830,039		51,316	34,940,172	37,821,527
22	54,821,239	2,546,902		47,192	2,109,813	4,703,907
23	50,055,233	2,276,237		43,089	1,950,822	4,270,148
24	45,232,123	2,013,626		38,937	454,889	2,507,452
25	40,540,565	1,767,050		34,899	-	1,801,949
26	36,011,700	1,537,758		31,000	-	1,568,758
27	31,578,335	1,320,387		27,184	-	1,347,571
28	27,520,965	1,127,327		23,691	-	1,151,018
29	23,771,958	953,920		20,464	-	974,384
30	20,368,473	800,992		17,534	-	818,526
31	17,314,615	667,537		14,905	-	682,442
32	14,618,156	552,408		12,584	-	564,992
33	12,299,324	456,035		10,588	-	466,623
34	10,277,880	373,757		8,848	-	382,605
35	8,563,917	305,434		7,372	-	312,806
36	7,062,545	246,976		6,080	-	253,056
37	5,809,368	198,893		5,001	-	203,894
38	4,701,885	157,713		4,048	-	161,761
39	3,741,190	122,979		3,221	-	126,200
40	2,931,407	94,441		2,523	-	96,964
41	2,221,706	70,171		1,913	-	72,084
42	1,688,856	52,150		1,454	-	53,604
43	1,239,775	37,523		1,067	-	38,590
44	916,649	27,193		789	-	27,982
45	672,697	19,549		579	-	20,128
46	485,136	13,757		418	-	14,175
47	353,531	9,823		304	-	10,127
48	254,483	6,959		219	-	7,178
49	177,183	4,686		153	-	4,839
50	120,265	3,122		104	-	3,226

Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending June 30, 2073

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.80%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 487,366,205	\$ 64,118,567	\$ 52,421,737	\$ 149,508	\$ 33,527,054	\$ 532,440,581
2	532,440,581	63,894,690	56,479,082	142,846	36,449,167	576,162,511
3	576,162,511	63,214,378	60,170,480	137,364	39,276,248	618,345,292
4	618,345,292	48,947,332	63,915,049	132,046	41,542,531	644,788,059
5	644,788,059	48,686,674	67,470,575	126,552	43,213,206	669,090,812
6	669,090,812	48,028,652	70,952,583	121,177	44,727,527	690,773,231
7	690,773,231	47,407,572	74,283,955	115,642	46,069,943	709,851,150
8	709,851,150	46,831,907	77,464,046	110,415	47,241,821	726,350,417
9	726,350,417	46,250,244	80,438,754	105,234	48,245,016	740,301,689
10	740,301,689	45,732,575	83,220,901	100,345	49,083,518	751,796,535
11	751,796,535	45,239,657	85,951,560	95,473	49,757,531	760,746,690
12	760,746,690	44,775,827	88,425,090	90,787	50,268,070	767,274,711
13	767,274,711	44,338,109	90,822,535	86,253	50,617,317	771,321,349
14	771,321,349	43,918,820	93,016,604	81,705	50,805,248	772,947,108
15	772,947,108	43,519,059	95,013,764	77,257	50,835,793	772,210,938
16	772,210,938	43,135,763	96,907,139	72,838	50,709,747	769,076,471
17	769,076,471	40,174,322	98,569,387	68,369	50,342,133	760,955,170
18	760,955,170	36,319,384	100,067,540	64,065	49,611,016	746,753,965
19	746,753,965	38,760,399	101,427,183	59,742	48,681,641	732,709,080
20	732,709,080	39,283,632	102,578,996	55,520	47,705,710	717,063,905
21	717,063,905	37,821,527	103,586,222	51,316	46,559,402	697,807,296
22	697,807,296	4,703,907	104,477,684	47,192	44,112,798	642,099,125
23	642,099,125	4,270,148	105,345,427	43,089	40,281,256	581,262,013
24	581,262,013	2,507,452	106,077,645	38,937	36,061,039	513,713,922
25	513,713,922	1,801,949	106,621,393	34,899	31,426,128	440,285,707
26	440,285,707	1,568,758	107,018,831	31,000	26,412,051	361,216,684
27	361,216,684	1,347,571	107,200,252	27,184	21,022,021	276,358,841
28	276,358,841	1,151,018	107,188,588	23,691	15,245,622	185,543,203
29	185,543,203	974,384	106,930,696	20,464	9,072,984	88,639,411
30	88,639,411	818,526	106,396,188	17,534	2,496,286	-
31	-	682,442	105,550,249	14,905	-	-
32	-	564,992	104,356,625	12,584	-	-
33	-	466,623	102,867,366	10,588	-	-
34	-	382,605	101,035,276	8,848	-	-
35	-	312,806	98,965,368	7,372	-	-
36	-	253,056	96,695,707	6,080	-	-
37	-	203,894	94,248,737	5,001	-	-
38	-	161,761	91,687,873	4,048	-	-
39	-	126,200	89,017,784	3,221	-	-
40	-	96,964	86,243,559	2,523	-	-
41	-	72,084	83,350,159	1,913	-	-
42	-	53,604	80,347,172	1,454	-	-
43	-	38,590	77,221,067	1,067	-	-
44	-	27,982	73,957,978	789	-	-
45	-	20,128	70,622,273	579	-	-
46	-	14,175	67,223,465	418	-	-
47	-	10,127	63,763,340	304	-	-
48	-	7,178	60,265,162	219	-	-
49	-	4,839	56,739,583	153	-	-
50	-	3,226	53,197,901	104	-	-



Single Discount Rate Development

Present Values of Projected Benefits

Ending June 30, 2123

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments Using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments Using Municipal Bond Rate (v _i)	Present Value of Benefit Payments Using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*v _i ^a ((a)-.5)	(h)=(c)/(1+sdr) ^a ((a)-.5)
1	\$ 487,366,205	\$ 52,421,737	\$ 52,421,737	\$ -	\$ 50,725,435	\$ -	\$ 51,070,598
2	532,440,581	56,479,082	56,479,082	-	51,171,807	-	52,223,532
3	576,162,511	60,170,480	60,170,480	-	51,045,251	-	52,805,743
4	618,345,292	63,915,049	63,915,049	-	50,769,600	-	53,237,773
5	644,788,059	67,470,575	67,470,575	-	50,181,516	-	53,339,660
6	669,090,812	70,952,583	70,952,583	-	49,411,305	-	53,238,169
7	690,773,231	74,283,955	74,283,955	-	48,437,518	-	52,901,622
8	709,851,150	77,464,046	77,464,046	-	47,295,060	-	52,359,226
9	726,350,417	80,438,754	80,438,754	-	45,984,312	-	51,603,297
10	740,301,689	83,220,901	83,220,901	-	44,545,672	-	50,671,481
11	751,796,535	85,951,560	85,951,560	-	43,078,008	-	49,671,128
12	760,746,690	88,425,090	88,425,090	-	41,495,987	-	48,500,347
13	767,274,711	90,822,535	90,822,535	-	39,907,356	-	47,280,496
14	771,321,349	93,016,604	93,016,604	-	38,269,128	-	45,958,724
15	772,947,108	95,013,764	95,013,764	-	36,601,877	-	44,556,706
16	772,210,938	96,907,139	96,907,139	-	34,954,360	-	43,132,179
17	769,076,471	98,569,387	98,569,387	-	33,290,199	-	41,639,619
18	760,955,170	100,067,540	100,067,540	-	31,644,359	-	40,121,484
19	746,753,965	101,427,183	101,427,183	-	30,032,134	-	38,597,325
20	732,709,080	102,578,996	102,578,996	-	28,439,308	-	37,049,330
21	717,063,905	103,586,222	103,586,222	-	26,890,032	-	35,509,371
22	697,807,296	104,477,684	104,477,684	-	25,394,613	-	33,992,538
23	642,099,125	105,345,427	105,345,427	-	23,975,214	-	32,530,805
24	581,262,013	106,077,645	106,077,645	-	22,604,736	-	31,090,096
25	513,713,922	106,621,393	106,621,393	-	21,273,976	-	29,659,350
26	440,285,707	107,018,831	107,018,831	-	19,993,704	-	28,255,081
27	361,216,684	107,200,252	107,200,252	-	18,752,432	-	26,862,797
28	276,358,841	107,188,588	107,188,588	-	17,556,547	-	25,493,123
29	185,543,203	106,930,696	106,930,696	-	16,399,163	-	24,137,704
30	88,639,411	106,396,188	88,639,411	17,756,777	12,728,432	5,809,500	22,794,953
31	-	105,550,249	-	105,550,249	-	33,249,533	21,463,027
32	-	104,356,625	-	104,356,625	-	31,651,770	20,140,526
33	-	102,867,366	-	102,867,366	-	30,040,508	18,842,888
34	-	101,035,276	-	101,035,276	-	28,408,897	17,565,558
35	-	98,965,368	-	98,965,368	-	26,792,686	16,330,190
36	-	96,695,707	-	96,695,707	-	25,205,301	15,143,779
37	-	94,248,737	-	94,248,737	-	23,654,399	14,009,469
38	-	91,687,873	-	91,687,873	-	22,156,439	12,935,318
39	-	89,017,784	-	89,017,784	-	20,711,737	11,919,583
40	-	86,243,559	-	86,243,559	-	19,320,488	10,960,492
41	-	83,350,159	-	83,350,159	-	17,978,338	10,053,768
42	-	80,347,172	-	80,347,172	-	16,686,505	9,198,396
43	-	77,221,067	-	77,221,067	-	15,441,243	8,390,665
44	-	73,957,978	-	73,957,978	-	14,239,121	7,627,192
45	-	70,622,273	-	70,622,273	-	13,091,564	6,912,584
46	-	67,223,465	-	67,223,465	-	11,998,375	6,245,090
47	-	63,763,340	-	63,763,340	-	10,957,822	5,622,221
48	-	60,265,162	-	60,265,162	-	9,971,746	5,043,387
49	-	56,739,583	-	56,739,583	-	9,039,464	4,506,726
50	-	53,197,901	-	53,197,901	-	8,160,236	4,010,408



Single Discount Rate Development Present Values of Projected Benefits Ending June 30, 2123 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments Using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments Using Municipal Bond Rate (v _i)	Present Value of Benefit Payments Using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{-(a)-.5}	(g)=(e)*v ^{f^{-(a)-.5}}	(h)=(c)/(1+sdr) ^{(a)-.5}
51	\$ -	\$ 49,654,402	\$ -	\$ 49,654,402	\$ -	\$ 7,333,608	\$ 3,552,801
52	-	46,123,375	-	46,123,375	-	6,558,925	3,132,228
53	-	42,613,436	-	42,613,436	-	5,834,583	2,746,615
54	-	39,143,787	-	39,143,787	-	5,160,334	2,394,601
55	-	35,746,579	-	35,746,579	-	4,537,338	2,075,506
56	-	32,443,237	-	32,443,237	-	3,964,994	1,787,857
57	-	29,254,004	-	29,254,004	-	3,442,352	1,530,076
58	-	26,202,160	-	26,202,160	-	2,968,649	1,300,720
59	-	23,307,319	-	23,307,319	-	2,542,528	1,098,141
60	-	20,586,367	-	20,586,367	-	2,162,244	920,586
61	-	18,052,285	-	18,052,285	-	1,825,614	766,189
62	-	15,713,829	-	15,713,829	-	1,530,067	633,002
63	-	13,575,109	-	13,575,109	-	1,272,692	519,021
64	-	11,636,026	-	11,636,026	-	1,050,356	422,246
65	-	9,893,036	-	9,893,036	-	859,831	340,730
66	-	8,339,640	-	8,339,640	-	697,883	272,613
67	-	6,967,156	-	6,967,156	-	561,361	216,159
68	-	5,765,492	-	5,765,492	-	447,275	169,775
69	-	4,723,511	-	4,723,511	-	352,822	132,014
70	-	3,829,146	-	3,829,146	-	275,387	101,573
71	-	3,069,758	-	3,069,758	-	212,568	77,286
72	-	2,432,346	-	2,432,346	-	162,170	58,122
73	-	1,903,703	-	1,903,703	-	122,207	43,175
74	-	1,470,757	-	1,470,757	-	90,905	31,659
75	-	1,120,712	-	1,120,712	-	66,695	22,896
76	-	841,398	-	841,398	-	48,212	16,315
77	-	621,694	-	621,694	-	34,299	11,442
78	-	451,573	-	451,573	-	23,987	7,888
79	-	322,072	-	322,072	-	16,473	5,339
80	-	225,306	-	225,306	-	11,095	3,545
81	-	154,428	-	154,428	-	7,322	2,306
82	-	103,606	-	103,606	-	4,730	1,469
83	-	67,971	-	67,971	-	2,988	914
84	-	43,569	-	43,569	-	1,844	556
85	-	27,268	-	27,268	-	1,111	330
86	-	16,656	-	16,656	-	653	192
87	-	9,932	-	9,932	-	375	108
88	-	5,785	-	5,785	-	210	60
89	-	3,296	-	3,296	-	115	32
90	-	1,837	-	1,837	-	62	17
91	-	1,002	-	1,002	-	33	9
92	-	536	-	536	-	17	5
93	-	281	-	281	-	8	2
94	-	145	-	145	-	4	1
95	-	73	-	73	-	2	1
96	-	36	-	36	-	1	-
97	-	16	-	16	-	-	-
98	-	7	-	7	-	-	-
99	-	3	-	3	-	-	-
100	-	1	-	1	-	-	-
Totals					\$ 1,052,849,040	\$ 448,752,608	\$ 1,501,601,647



SECTION E

GLOSSARY OF TERMS

Glossary of Terms

<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered Employee Payroll</i>	The payroll of employees that are provided with pensions through the pension plan.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Deferred Retirement Option Program (DROP)</i>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plans’ Fiduciary Net Position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Glossary of Terms

Entry Age Actuarial Cost Method (EAN)

The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position

The Fiduciary Net Position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For GASB purposes, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Municipal Bond Rate

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Net Pension Liability (NPL)

The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.

Non-Employer Contributing Entities

Non-employer contributing entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

Normal Cost

The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.



Glossary of Terms

<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<i>Total Pension Expense</i>	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none">1. Service Cost2. Interest on the Total Pension Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. Pension Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
<i>Total Pension Liability (TPL)</i>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<i>Valuation Assets</i>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement No. 68, the valuation assets are equal to the market value of assets.