



WORCESTER REGIONAL RETIREMENT SYSTEM

FINANCIAL REPORTING AND DISCLOSURES Governmental Accounting Standards Board Statements 67 and 68

**Disclosures as of
December 31, 2022**

KMS Actuarial, LLC
52 Hunt Road
Kingston, NH 03848

October, 2023



October 26, 2023

Mr. Kevin Blanchette
Chairman
Worcester Regional Retirement System
23 Midstate Drive, Suite 106
Auburn, MA 01501

Dear Kevin:

We are pleased to present the enclosed report providing financial reporting and disclosures under Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans (GASB 67), and GASB Statement No. 68, Accounting and Financial Reporting for Pensions (GASB 68) for the Worcester Regional Retirement System and participating employers as of December 31, 2022. Results are based on liabilities developed in an actuarial valuation performed as of January 1, 2022 and rolled forward to the plan's measurement date of December 31, 2022.

The Principal Valuation Results are provided in Section 1. The Notes to the Financial Statements and the Required Supplementary Information are provided in Sections 2 and 3, respectively. Employer Reporting Amounts Under GASB 68 are provided in Section 4. Finally, a Glossary of Terms is provided in Section 5.

The financial reporting and disclosures contained in this report are based on the member data provided by the Worcester Regional Retirement Board, asset information reported to the Public Employee Retirement Administration Commission (PERAC) by the Retirement Board and plan provisions contained in Chapter 32 of the Massachusetts General Laws. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a long-term investment return assumption of 7.25%, net of investment expense, compounded annually.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions used in the determination of costs are reasonably related to the experience of the Plan and to reasonable expectations, and represent our best estimate of anticipated long-term experience under the Plan.

Mr. Kevin Blanchette

October 26, 2023

Page 2

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

This report is intended for the sole use of the Worcester Regional Retirement System and participating employers and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

KMS Actuaries is completely independent of the Worcester Regional Retirement System and any of its officers or key personnel. None of the actuaries signing this report or anyone closely associated with them has a relationship with the Worcester Regional Retirement System, other than as consulting actuary for this assignment, that would impair our independence.

The undersigned credentialed actuaries are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

Respectfully submitted,



Linda L. Bournival, FSA

Member, American Academy of Actuaries

(603) 792-9494



Amanda J. Makarevich, FSA

Member, American Academy of Actuaries

(603) 792-9494

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
SECTION 1 - PRINCIPAL VALUATION RESULTS	4
Fiduciary Net Position	
Total Pension Liability	
SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS	7
Plan Description	
Net Pension Liability	
Long-Term Real Rates of Return	
Discount Rate	
SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION	11
Exhibit 3.1 - Changes in Net Pension Liability and Related Ratios	
Exhibit 3.2 - Schedule of Employer Contributions	
Exhibit 3.3 - Investment Returns	
Notes to Required Supplementary Information	
SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68	18
Exhibit 4.1 - Deferred Outflows of Resources and Deferred Inflows of Resources	
Exhibit 4.2 - Pension Expense	
Exhibit 4.3 - Proportionate Share of Contributions	
Exhibit 4.4 - Pension Amounts by Employer	
SECTION 5 - GLOSSARY OF TERMS	28
Appendix A	CALCULATION OF MONEY-WEIGHTED RATE OF RETURN
Appendix B	SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES
Appendix C	SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
Appendix D	CALCULATION OF SINGLE DISCOUNT RATE

EXECUTIVE SUMMARY

GASB Accounting Standards

In June 2012, the GASB approved two related Statements that significantly changed the way pension plans and governments account and report pension liabilities. Effective for plans with fiscal years beginning after June 15, 2013, **GASB Statement No. 67**, *Financial Reporting for Pension Plans*, replaced the requirements of Statement No. 25 and effective for employers with fiscal years beginning after June 15, 2014, **GASB Statement No. 68**, *Accounting and Financial Reporting for Pensions*, replaced the requirements of Statement No. 27.

The pension standards reflect changes from those previously in place regarding how governments calculate total pension liability and pension expense. Further, the standards contain requirements for disclosing information in the notes to financial statements and presenting required supplementary information following the notes.

GASB 67 requires defined benefit pension plans, such as the Worcester Regional Retirement System, to present a statement of fiduciary net position (pension plan assets) and a statement of changes in fiduciary net position. Further, the statement requires that notes to financial statements include descriptive information such as the types of benefits provided, the classes of plan members covered and the composition of the pension plan's retirement board. Finally, GASB 67 requires pension plans to present in required supplementary information the sources of the changes in the net pension liability and information about the actuarially determined contributions compared with the actual contributions made to the plan and related ratios.

GASB 67 and GASB 68 require projected benefit payments be discounted to their actuarial present value using the single rate that reflects a long-term expected rate of return on pension plan investments to the extent that the pension plan's assets are sufficient to pay benefits and pension plan assets are expected to be invested using a strategy to achieve that return and a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.

GASB 68 establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources and pension expense by state and local governments.

The effective date for GASB 67 is for plan years beginning after June 15, 2013, which is the fiscal year ending December 31, 2014 for the Worcester Regional Retirement System. The effective date for GASB 68 is for employers' fiscal years beginning after June 15, 2014. The disclosures prepared as of December 31, 2022 (the measurement date) presents information to assist the Worcester Regional Retirement Board in providing the required information under GASB 68 to participating employers.

GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*, clarifies the application of certain provisions of Statements 67 and 68 with regard to the following issues:

- (1) Information about investment-related factors that significantly affect trends in the amounts reported for GASB 67 and GASB 68 should be limited to those factors over which the pension plan or participating governments have influence (such as an investment policy) and
- (2) The contribution-related schedules in the RSI should exclude amounts associated with payables to the pension plan that arose in a prior fiscal year.

GASB Statement No. 82, *Pension Issues - An Amendment of GASB Statements No. 67, No. 68, and No. 73*, clarifies the definition of covered payroll, that a deviation from the Actuarial Standards of Practice with respect to selection of assumptions is not considered to be in conformity with GASB 67, GASB 68 and GASB 73, and that employer-paid member contributions are to be classified as plan member contributions.

EXECUTIVE SUMMARY

A summary of principal results from the current disclosures and prior disclosures follows.

Disclosure Date	December 31, 2022	December 31, 2021	% Change
Valuation Date	January 1, 2022	January 1, 2020	
Membership Data			
Active Plan Members	7,561	7,121	6.2%
Inactive Members Currently in Receipt	4,270	4,112	3.8%
Inactive Members Deferred	2,197	2,714	(19.0%)
Total Plan Members	14,028	13,947	0.6%
Covered Payroll	\$341,237,099	\$316,455,433	7.8%
Net Pension Liability			
Discount Rate	7.25%	7.25%	
Total Pension Liability (TPL)	\$1,984,777,803	\$1,921,828,296	3.3%
Fiduciary Net Position (FNP)	956,499,867	1,079,814,993	(11.4%)
Net Pension Liability (NPL)	\$1,028,277,936	\$842,013,303	22.1%
FNP as % of TPL	48.2%	56.2%	(14.2%)
Pension Expense			
Pension Expense	\$111,155,119	\$78,810,662	41.0%
Deferred Outflows	\$123,884,731	\$72,402,779	
Deferred Inflows	\$31,467,935	\$136,404,861	
Recognition Period	5.53	5.71	

EXECUTIVE SUMMARY

Fiduciary Net Position

Pension plan investments are reported at market value as of the measurement date. The fiduciary net position as of the current and prior measurement dates are shown in Section 1, Fiduciary Net Position.

Total Pension Liability

The Total Pension Liability is based on liabilities developed in an actuarial valuation performed as of January 1, 2022 and rolled forward to the plan's measurement date of December 31, 2022 and is shown in Section 1, Total Pension Liability.

Benefit Changes

All benefit provisions remained the same from the prior measurement date. The Plan provisions used in these disclosures are detailed in Section 5, Summary of Plan Provisions, in the most recent funding actuarial report.

Assumption Changes

All of the Actuarial Assumptions and Methods used in these disclosures are the same as the last measurement date. The Actuarial Assumptions and Methods used in these disclosures are detailed in Section 6, Actuarial Assumptions and Methods, in the most recent funding valuation report.

Pension Expense

The Pension Expense for the fiscal year ending December 31, 2022 is \$111,155,119 and is developed in Exhibit 4.2. Pension Expense, as well as the Net Pension Liability and Deferred Outflows of Resources and Deferred Inflows of Resources, are developed for each member unit and are shown in Appendix C. Amounts by employer are developed using a proportionate share, the proportion of each employer's contribution to the aggregate amount of employer contributions, as shown in Exhibit 4.3.

COVID-19 Pandemic

The assumptions in this report do not reflect the potential impacts of the COVID-19 pandemic on the System. Especially in the short range, it is very likely that the pandemic materially affected the economic and demographic experience in a way not anticipated by the assumptions on which the projections are based.

5% Local COLA Option

On November 16, 2022, Governor Baker signed Chapter 269 of the Acts of 2022 into law. This act provides the local retirement systems with the option to increase the Cost of Living Adjustment ("COLA") for Fiscal Year 2023 to up to 5 percent on the base amount specified pursuant to G.L. c. 32, § 103. The approval of the increase must occur prior to July 1, 2023 and will take effect as of July 1, 2022.

The required approval of two-thirds of the municipal member units (cities and towns) was not adopted as of the Plan's 2022 fiscal year-end, therefore the increased benefits are not included in the measurement of the total pension liability reported by the Plan at December 31, 2022. The impact of the additional COLA will be recognized in the next measurement as of December 31, 2023.

SECTION 1 - PRINCIPAL VALUATION RESULTS

Fiduciary Net Position

Asset information was provided by the Worcester Regional Retirement Board. The Trust Fund Composition, Asset Activity and the Gain or Loss on Pension Plan Investments for the current and prior fiscal years are as follows:

Fiscal Year Ended December 31 2022 2021

Trust Fund Composition at Fiscal Year-End			
		2022	2021
Cash	\$	3,508,459	\$ 3,913,792
Individually Owned Short Term Investments		0	0
Fixed Income Securities		0	0
Equities (at market value)		0	0
Pooled Short Term Funds		0	0
Pooled Domestic Equity Funds		0	0
Pooled International Equity Funds		0	0
Pooled Global Equity Funds		0	0
Pooled Domestic Fixed Income Funds		0	0
Pooled International Fixed Income Funds		0	0
Pooled Global Fixed Income Funds		0	0
Pooled Alternative/Private Equity		22,545	47,220
Pooled Real Estate Funds		0	0
Pooled Domestic Balanced Funds		0	0
Pooled International Balanced Funds		0	0
Hedge Funds		0	0
PRIT Cash		0	0
PRIT Fund		962,232,324	1,082,662,154
Interest Due and Accrued		0	0
Prepaid Expenses		0	0
Accounts Receivable (A)		7,108,318	6,944,235
Land		0	0
Buildings		0	0
Accumulated Depreciation - Buildings		0	0
Accounts Payable (A)		(9,776,571)	(9,968,569)
Auditor or Other Adjustments		(6,595,208)	(3,783,839)
Total Market Value of Assets	\$	956,499,867	\$1,079,814,993

SECTION 1 - PRINCIPAL VALUATION RESULTS

Fiscal Year Ended December 31	Fiduciary Net Position	
	2022	2021
Asset Activity		
Market value as of beginning of year	\$ 1,079,814,993	\$ 898,658,766
Contributions - employer	81,309,364	73,946,616
Contributions - member	41,198,378	38,567,322
Net investment income	(123,862,286)	177,961,091
Benefit payments, including refunds of member contributions	(108,492,192)	(99,647,598)
Administrative expenses	(1,174,806)	(1,125,229)
Other	(12,293,584)	(8,545,975)
Market Value as of end of year	\$ 956,499,867	\$ 1,079,814,993
Money-Weighted Rate of Return	-11.68%	19.74%
(Gain) / Loss on Pension Plan Investments		
Projected earnings	\$ 78,336,534	\$ 67,386,787
Actual earnings	(123,862,286)	177,961,091
(Gain) / Loss on pension plan investments	\$ 202,198,820	\$ (110,574,304)

SECTION 1 - PRINCIPAL VALUATION RESULTS

Total Pension Liability

The Total Pension Liability, developed using the Entry Age Normal funding method, is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service. The total pension liability as of the December 31, 2022 measurement date was developed from an actuarial valuation as of January 1, 2022 and rolled forward to the pension plan's fiscal year-end.

The Service Cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year. Only active employees who have not reached the age at which the probability of retirement is 100% incur a service cost.

Actuarial gains and losses arise from the difference between estimates and actual experience, excluding amounts related to benefit changes and changes in assumptions or other inputs.

The development of the Total Pension Liability from the beginning of the measurement period, December 31, 2021 to the end of the measurement period, December 31, 2022 is shown below:

Measurement Date	December 31, 2022
1. Total Pension Liability, beginning of year:	
a. Actives	\$ 1,051,769,797
b. Retired and Disabled Members and Beneficiaries	839,575,595
c. Inactive Members	30,482,904
d. Total Pension Liability at 7.25% (a. + b. + c.)	\$ 1,921,828,296
2. Service Cost	\$ 55,578,145
3. Benefit Payments	(108,492,192)
4. Interest [7.25% x (1.d. + 2. + .5 x 3)]	\$ 139,429,125
5. Changes of benefit terms	-
6. Differences between expected and actual experience	(23,565,571)
7. Changes of assumptions or other inputs	-
8. Total Pension Liability, end of year (1.d. + 2. + 3. + 4. + 5. + 6. + 7.)	
a. Actives	\$ 953,010,994
b. Retired and Disabled Members and Beneficiaries	1,003,598,018
c. Inactive Members	28,168,791
d. Total Pension Liability at 7.25% (a. + b. + c.)	\$ 1,984,777,803

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Plan Description

Plan administration

The Worcester Regional Retirement System (the "System") is a cost-sharing, multiple-employer defined benefit pension plan that provides pensions for eligible employees of 99 participating employers. The System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws. The System does not have the authority to amend benefit provisions.

The System is governed by a Retirement Board made up of five elected and appointed members.

Plan membership

At December 31, 2022, pension plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefits	4,270
Inactive plan members entitled to but not yet receiving benefits	2,197
Active plan members	7,561
	<hr/>
	14,028

Benefits provided

The System provides retirement, disability and death benefits. Retirement benefits are determined as a percentage of the member's 3-year (5-year for members hired after April 1, 2012) final average compensation times the member's years of service. The percentage is based on the age of the member at retirement and his or her Group classification. Cost-of-living adjustments of 3% of the first \$16,000 of the annual retirement allowance are provided at the discretion of the System's Retirement Board. A summary of the benefits is outlined in the January 1, 2022 actuarial valuation report.

Contributions

Plan members are required to contribute a percentage of their annual compensation that varies according to their membership date, as follows:

Prior to 1975	5% of Salary
1975 - 1983	7% of Salary
1984 - June 30, 1996	8% of Salary
July 1, 1996 - present	9% of Salary
1979 - present	An additional 2% of Salary in excess of \$30,000.
Group 1 members hired on or after April 2, 2012	6% of Salary with 30 or more years of creditable service.

Employer contributions are determined in accordance with the requirements set forth in Section 22D and Section 22F of Chapter 32 of the Massachusetts General Laws ("M.G.L."). The appropriation is comprised of the annual employer normal cost and amortization payments to pay the unfunded actuarial accrued liability.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Net Pension Liability

The components of the Net Pension Liability at December 31, 2022, were as follows:

Total Pension Liability	\$ 1,984,777,803
Fiduciary Net Position	(956,499,867)
Net Pension Liability	\$ 1,028,277,936

Fiduciary Net Position as a percentage of the Total Pension Liability 48.2%

Actuarial assumptions

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2022, rolled forward to the measurement date of December 31, 2022 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.4% per year
Salary increases	Group 1: 6% - 4.25%, based on service Group 4: 7% - 4.75%, based on service
Investment rate of return	7.25%, net of pension plan investment expense, including inflation

Mortality rates were based on the RP-2014 Blue Collar Mortality Table with full generational mortality improvement using Scale MP-2020. For disabled lives, the mortality rates were based on the RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2020.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Long-Term Real Rates of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2022 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rates of Return¹
Global Equity	37%	4.74%
Core Fixed Income	15%	2.10%
Value-Added Fixed Income	8%	5.20%
Private Equity	16%	7.60%
Real Estate	10%	3.10%
Timberland	4%	4.40%
Portfolio Completion (PCS)	10%	3.90%
Total	100%	

¹ Provided by Pension Reserves Investment Board. Inflation of 2.4% is added to the long-term expected real rates of return to approximate the long-term expected rate of return.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Discount Rate

The discount rate used to measure the Total Pension Liability is 7.25%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rates and that contributions from participating employers will be made in accordance with Sections 22D and 22F of Chapter 32 of the Massachusetts General Laws. Based on those assumptions, the pension plan's Fiduciary Net Position was projected to be available to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate:

The following presents the Net Pension Liability calculated using the discount rate of 7.25%, as well as what the Net Pension Liability would be if it were calculated using a discount rate 1-percentage point lower (6.25%) or 1-percentage point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Total Pension Liability	\$ 2,211,275,992	\$ 1,984,777,803	\$ 1,793,288,016
Fiduciary Net Position	956,499,867	956,499,867	956,499,867
Net Pension Liability	\$ 1,254,776,125	\$ 1,028,277,936	\$ 836,788,149

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net Pension Liability and Related Ratios

Fiscal Year Ended December 31	2022	2021	2020	2019	2018
Total Pension Liability					
Service cost	\$ 55,578,145	\$ 51,147,819	\$ 47,971,080	\$ 45,464,593	\$ 44,445,482
Interest	139,429,125	134,128,720	129,435,294	123,507,870	118,116,251
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	(23,565,571)	-	(23,171,133)	-	(8,110,737)
Changes of assumptions	-	49,140,442	35,705,832	17,826,312	-
Benefit payments, including refunds of member contributions	(108,492,192)	(99,647,598)	(93,751,426)	(88,229,714)	(83,571,930)
Net change in Total Pension Liability	<u>\$ 62,949,507</u>	<u>\$ 134,769,383</u>	<u>\$ 96,189,647</u>	<u>\$ 98,569,061</u>	<u>\$ 70,879,066</u>
Total Pension Liability--beginning	<u>\$1,921,828,296</u>	<u>\$1,787,058,913</u>	<u>\$1,690,869,266</u>	<u>\$1,592,300,205</u>	<u>\$1,521,421,139</u>
Total Pension Liability--ending (a)	<u><u>\$1,984,777,803</u></u>	<u><u>\$1,921,828,296</u></u>	<u><u>\$1,787,058,913</u></u>	<u><u>\$1,690,869,266</u></u>	<u><u>\$1,592,300,205</u></u>
Fiduciary Net Position					
Contributions--employer	\$ 81,309,364	\$ 73,946,616	\$ 67,269,029	\$ 60,887,972	\$ 55,674,504
Contributions--member	41,198,378	38,567,322	35,391,500	35,087,583	33,362,836
Net investment income	(123,862,286)	177,961,091	97,497,004	110,458,217	(17,770,572)
Benefit payments, including refunds of member contributions	(108,492,192)	(99,647,598)	(93,751,426)	(88,229,714)	(83,571,930)
Administrative expenses	(1,174,806)	(1,125,229)	(1,045,530)	(1,112,640)	(1,178,272)
Other	(12,293,584)	(8,545,975)	(7,441,086)	(1,890,156)	(6,971,840)
Net change in Fiduciary Net Position	<u>\$ (123,315,126)</u>	<u>\$ 181,156,227</u>	<u>\$ 97,919,491</u>	<u>\$ 115,201,262</u>	<u>\$ (20,455,274)</u>
Fiduciary Net Position--beginning	<u>\$1,079,814,993</u>	<u>\$ 898,658,766</u>	<u>\$ 800,739,275</u>	<u>\$ 685,538,013</u>	<u>\$ 705,993,287</u>
Fiduciary Net Position--ending (b)	<u><u>\$ 956,499,867</u></u>	<u><u>\$1,079,814,993</u></u>	<u><u>\$ 898,658,766</u></u>	<u><u>\$ 800,739,275</u></u>	<u><u>\$ 685,538,013</u></u>
Net Pension Liability and Related Ratios					
Net Pension Liability--ending (a) -- (b)	<u><u>\$1,028,277,936</u></u>	<u><u>\$ 842,013,303</u></u>	<u><u>\$ 888,400,147</u></u>	<u><u>\$ 890,129,991</u></u>	<u><u>\$ 906,762,192</u></u>
Fiduciary Net Position as a percentage of the Total Pension Liability	48.19%	56.19%	50.29%	47.36%	43.05%
Covered Payroll	\$ 341,237,099	\$ 316,455,433	\$ 321,050,145	\$ 301,686,927	\$ 273,888,022
Net Pension Liability as a percentage of Covered Payroll	301.34%	266.08%	276.72%	295.05%	331.07%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net Pension Liability and Related Ratios (continued)

Fiscal Year Ended December 31	2017	2016	2015	2014	2013
Total Pension Liability					
Service cost	\$ 42,736,040	\$ 35,984,130	\$ 31,996,981	\$ 31,996,981	
Interest	112,224,318	99,124,367	91,276,045	84,568,061	
Changes of benefit terms	-	-	49,721,211	-	
Differences between expected and actual experience	-	8,235,183	-	-	
Changes of assumptions	-	94,194,565	31,534,870	-	
Benefit payments, including refunds of member contributions	(77,717,794)	(72,799,275)	(68,086,158)	(61,338,289)	
Net change in Total Pension Liability	<u>\$ 77,242,564</u>	<u>\$ 164,738,970</u>	<u>\$ 136,442,949</u>	<u>\$ 55,226,753</u>	
Total Pension Liability—beginning	<u>\$ 1,444,178,575</u>	<u>\$ 1,279,439,605</u>	<u>\$ 1,142,996,656</u>	<u>\$ 1,087,769,903</u>	
Total Pension Liability—ending (a)	<u><u>\$ 1,521,421,139</u></u>	<u><u>\$ 1,444,178,575</u></u>	<u><u>\$ 1,279,439,605</u></u>	<u><u>\$ 1,142,996,656</u></u>	
Fiduciary Net Position					
Contributions—employer	\$ 50,599,326	\$ 48,574,831	\$ 44,986,040	\$ 39,519,038	
Contributions—member	31,592,837	29,032,767	52,111,046	27,066,085	
Net investment income	103,123,070	40,509,286	1,177,960	40,135,521	
Benefit payments, including refunds of member contributions	(77,717,794)	(72,799,275)	(68,086,158)	(61,338,289)	
Administrative expenses	(1,145,509)	(1,170,184)	(1,055,662)	(1,054,297)	
Other	(7,043,455)	(7,195,247)	(7,429,438)	(3,178,354)	
Net change in Fiduciary Net Position	<u>\$ 99,408,475</u>	<u>\$ 36,952,178</u>	<u>\$ 21,703,788</u>	<u>\$ 41,149,704</u>	
Fiduciary Net Position—beginning	<u>\$ 606,584,812</u>	<u>\$ 569,632,634</u>	<u>\$ 547,928,846</u>	<u>\$ 506,779,142</u>	
Fiduciary Net Position—ending (b)	<u><u>\$ 705,993,287</u></u>	<u><u>\$ 606,584,812</u></u>	<u><u>\$ 569,632,634</u></u>	<u><u>\$ 547,928,846</u></u>	
Net Pension Liability and Related Ratios					
Net Pension Liability—ending (a) – (b)	<u><u>\$ 815,427,852</u></u>	<u><u>\$ 837,593,763</u></u>	<u><u>\$ 709,806,971</u></u>	<u><u>\$ 595,067,810</u></u>	
Fiduciary Net Position as a percentage of the Total Pension Liability	46.40%	42.00%	44.52%	47.94%	
Covered Payroll	\$ 271,037,131	\$ 282,918,805	\$ 269,899,678	\$ 252,829,591	
Net Pension Liability as a percentage of Covered Payroll	300.85%	296.05%	262.99%	235.36%	

Note: Only 9 years are presented here and on the previous page, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Schedule of Employer Contributions

Fiscal Year Ended December 31	2022	2021	2020	2019	2018
Actuarially Determined Contribution	\$ 81,309,364	\$ 73,946,616	\$ 67,269,029	\$ 60,887,972	\$ 55,674,504
Contributions in relation to the Actuarially Determined Contribution	\$ 81,309,364	\$ 73,946,616	\$ 67,269,029	\$ 60,887,972	\$ 55,674,504
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 341,237,099	\$ 316,455,433	\$ 321,050,145	\$ 301,686,927	\$ 273,888,022
Contributions as a percentage of Covered Payroll	23.83%	23.37%	20.95%	20.18%	20.33%

The contribution shown above, \$81,309,364, represents the actual contributions made by member units of the Worcester Regional Retirement System for the 2023 fiscal year.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Schedule of Employer Contributions (continued)

Fiscal Year Ended December 31	2017	2016	2015	2014	2013
Actuarially Determined Contribution	\$ 50,599,326	\$ 48,574,831	\$ 44,986,040	\$ 39,519,038	
Contributions in relation to the Actuarially Determined Contribution	\$ 50,599,326	\$ 48,574,831	\$ 44,986,040	\$ 39,519,038	
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	
Covered Payroll	\$ 271,037,131	\$ 282,918,805	\$ 269,899,678	\$ 252,829,591	
Contributions as a percentage of Covered Payroll	18.67%	17.17%	16.67%	15.63%	

Note: Only 9 years are presented here and on the previous page, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Investment Returns

Fiscal Year Ended December 31	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expense	-11.68%	19.74%	12.03%	16.55%	-2.75%	16.71%	7.06%	0.05%	7.79%	

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. The rate of return is then calculated by solving, through an iterative process, for the rate that equates the sum of the weighted external cash flows into and out of the pension plan investments to the ending fair value of pension plan investments.

Appendix A shows the details of the calculation of the money-weighted rate of return for the current fiscal year.

Note: Only 9 years are presented here, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Notes to the Required Supplementary Information

Changes of benefit terms

All benefit provisions remained the same from the prior measurement date. The Plan provisions used in these disclosures are detailed in Section 5, Summary of Plan Provisions, in the most recent funding actuarial report.

Changes of assumptions

All of the Actuarial Assumptions and Methods used in these disclosures are the same as the last measurement date. The Actuarial Assumptions and Methods used in these disclosures are detailed in Section 6, Actuarial Assumptions and Methods, in the most recent funding valuation report.

Methods and assumptions used in calculations of Actuarially Determined Contributions

The Actuarially Determined Contributions in the schedule of employers' contributions shown in Exhibit 4.3 are calculated as of July 1 of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contributions reported in that schedule:

Valuation date	January 1, 2022	
Actuarial cost method	Entry Age Normal	
Amortization method	UAAL	Increasing dollar amount at 4% to reduce the Unfunded Actuarial Accrued Liability to zero on or before June 30, 2036. The annual increase in appropriation is further limited to 9.95%.
	2002, 2003 ERI	Increasing dollar amount at 4.5% to reduce the 2002 and 2003 ERI Actuarial Accrued Liability to zero on or before June 30, 2028.
Asset valuation method	The Actuarial Value of Assets is the market value of assets as of the valuation date reduced by the sum of: a) 80% of gains and losses of the prior year, b) 60% of gains and losses of the second prior year, c) 40% of gains and losses of the third prior year, and d) 20% of gains and losses of the fourth prior year.	

Investment gains and losses are determined by the excess or deficiency of the expected return over the actual return on the market value. The actuarial valuation of assets is further constrained to be not less than 80% or more than 120% of market value.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Notes to the Required Supplementary Information

Inflation	2.4% per year
Salary increases	Group 1: 6% - 4.25%, based on service Group 4: 7% - 4.75%, based on service
Payroll growth	3.5% per year
Investment rate of return	7.25%, net of pension plan investment expense, including inflation.

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.1 - Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between expected and actual experience are recognized in Pension Expense over the average expected remaining service life of all active and inactive members.

			Balances at December 31, 2022		
	Experience Losses	Experience Gains	Amounts Recognized in Pension Expense through December 31, 2022	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2017	\$ -	\$ -	\$ -	\$ -	\$ -
2018	-	8,110,737	(6,944,125)	-	1,166,612
2019	-	-	-	-	-
2020	-	23,171,133	(12,173,976)	-	10,997,157
2021	-	-	-	-	-
2022	-	23,565,571	(4,261,405)	-	19,304,166
Total				<u>\$ -</u>	<u>\$ 31,467,935</u>

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes of assumptions are recognized in Pension Expense over the average expected remaining service life of all active and inactive members.

			Balances at December 31, 2022		
	Increases in the Total Pension Liability	Decreases in the Total Pension Liability	Amounts Recognized in Pension Expense through December 31, 2022	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2017	\$ -	\$ -	\$ -	\$ -	\$ -
2018	-	-	-	-	-
2019	17,826,312	-	12,209,804	5,616,508	-
2020	35,705,832	-	18,759,633	16,946,199	-
2021	49,140,442	-	17,212,064	31,928,378	-
2022	-	-	-	-	-
Total				<u>\$ 54,491,085</u>	<u>\$ -</u>

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.1 - Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between projected and actual earnings on Pension Plan investments are recognized in Pension Expense over five years.

				Balances at December 31, 2022	
Year	Investment Earnings Less Than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense through December 31, 2022 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) + (c)
2017	\$ -	\$ 56,256,688	\$ (56,256,688)	\$ -	\$ -
2018	72,217,350	-	72,217,350	-	-
2019	-	57,470,605	(45,976,484)	-	11,494,121
2020	-	36,316,766	(21,790,059)	-	14,526,707
2021	-	110,574,304	(44,229,722)	-	66,344,582
2022	202,198,820	-	40,439,764	161,759,056	-
Subtotal				<u>\$ 161,759,056</u>	<u>\$ 92,365,410</u>
Net				<u><u>\$ 69,393,646</u></u>	<u><u>\$ -</u></u>

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.1 - Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes in proportion and differences between employer contributions and proportionate share of contributions are recognized in Pension Expense over the average expected remaining service life of all active and inactive members.

				Balances at December 31, 2022	
Year	Proportionate Share* Outflows	Proportionate Share* Inflows	Amounts Recognized in Pension Expense through December 31, 2022	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) - (c)
2017	\$ 22,317,342	\$ 22,317,342	\$ 22,317,342	\$ -	\$ -
2018	2,319,170	2,319,170	1,985,590	333,580	333,580
2019	12,790,409	12,790,409	8,760,551	4,029,858	4,029,858
2020	2,440,894	2,440,894	1,282,433	1,158,461	1,158,461
2021	15,038,822	15,038,822	5,267,540	9,771,282	9,771,282
2022	1,929,085	1,929,085	348,837	1,580,248	1,580,248
Total				<u>\$ 16,873,429</u>	<u>\$ 16,873,429</u>

* Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources will be recognized in Pension Expense as follows:

Year ended December 31		
2023	\$	7,993,114
2024	\$	20,165,452
2025	\$	24,228,135
2026	\$	42,288,641
2027	\$	(2,258,546)
Thereafter	\$	-
Total Deferred Outflows	\$	140,758,160
Total Deferred Inflows	\$	48,341,364

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.2 - Pension Expense

The Pension Expense and deferred outflows and inflows of resources primarily result from changes in the components of the net pension liability (NPL). Most changes in the NPL are included in the Pension Expense in the period of the change, including service cost, interest on total pension liability, changes in benefit terms and projected earnings on the pension plan's investments. Other changes in the net pension liability are included in Pension Expense over the current and future periods. These include the effects on the total pension liability of changes of economic and demographic assumptions and differences between expected and actual experience. In addition, the effect on the net pension liability of differences between the projected earnings on pension plan investments and actual experience with regard to those earnings are included in Pension Expense over the current and future periods. The Pension Expense for the reporting period ending December 31, 2022 is presented below:

Fiscal Year Ended December 31, 2022

1. Service cost		\$ 55,578,145
2. Interest on the total pension liability		
a. Total Pension Liability, beginning of year	1,921,828,296	
b. Service cost, beginning of year	55,578,145	
c. Benefit payments, including refunds of employee contributions	<u>(108,492,192)</u>	
d. Interest on Total Pension Liability		139,429,125
3. Differences between expected and actual experience		(9,708,222)
4. Changes of benefit terms		-
5. Changes of assumptions		17,911,694
6. Employee contributions		(41,198,378)
7. Projected earnings on pension plan investments		
a. Fiduciary Net Position, beginning of year	1,079,814,993	
b. Employer contributions	81,309,364	
c. Employee contributions	41,198,378	
d. Benefit payments, including refunds of employee contributions	<u>(108,492,192)</u>	
e. Administrative expenses and other	<u>(13,468,390)</u>	
f. Total projected earnings		(78,336,534)
8. Differences between projected and actual earnings on plan investments		14,010,899
9. Pension plan administrative expenses		1,174,806
10. Other changes in Fiduciary Net Position		<u>12,293,584</u>
11. Total Pension Expense		<u><u>\$111,155,119</u></u>

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.3 - Proportionate Share of Contributions

The basis of an employer's allocation of the collective pension amount is consistent with the manner in which contributions to the plan are made. The schedule of employer allocations for 2022 and 2021, based on employer contributions made for the 2023 fiscal year and 2022 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2022		2021	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Ashburnham	1,132,577	1.392923%	1,035,010	1.399672%
Ashburnham-Westminster Regional	868,640	1.068315%	791,626	1.070537%
Athol	1,994,321	2.452757%	1,802,550	2.437637%
Athol Housing Authority	48,737	0.059940%	44,249	0.059839%
Athol-Royalston Regional	741,299	0.911702%	670,136	0.906243%
Auburn	4,279,768	5.263561%	3,900,522	5.274781%
Auburn Housing Authority	85,236	0.104829%	77,473	0.104769%
Auburn Water District	131,100	0.161236%	118,050	0.159642%
Barre	446,614	0.549277%	410,048	0.554519%
Barre Housing Authority	33,684	0.041427%	30,207	0.040850%
Berlin	605,652	0.744874%	551,425	0.745707%
Berlin-Boylston Regional	346,494	0.426143%	319,456	0.432009%
Blackstone	1,015,222	1.248592%	920,201	1.244413%
Blackstone Housing Authority	21,232	0.026113%	18,702	0.025291%
Blackstone-Millville Regional	671,346	0.825669%	610,102	0.825057%
Bolton	659,084	0.810588%	602,296	0.814501%
Boylston	770,858	0.948056%	705,353	0.953868%
Boylston Water District	16,669	0.020501%	14,790	0.020001%
Brookfield	399,212	0.490979%	364,534	0.492969%
Charlton	1,889,749	2.324147%	1,725,580	2.333548%
Cherry Valley-Rochdale Water	73,262	0.090103%	65,335	0.088354%
Cherry Valley Sewer District	-	0.000000%	-	0.000000%
Douglas	1,396,060	1.716973%	1,277,098	1.727054%
Dudley	1,197,724	1.473046%	1,091,367	1.475885%
Dudley Housing Authority	24,975	0.030716%	22,528	0.030465%
Dudley-Charlton Regional	1,352,035	1.662828%	1,229,539	1.662739%
East Brookfield	203,155	0.249854%	185,493	0.250847%
Grafton	2,579,015	3.171855%	2,348,007	3.175273%
Grafton Housing Authority	61,868	0.076090%	55,802	0.075463%
Hardwick	240,011	0.295182%	218,312	0.295229%
Harvard	1,241,423	1.526790%	1,128,337	1.525881%
Hillcrest Water District	11,342	0.013949%	10,010	0.013537%

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.3 - Proportionate Share of Contributions

The basis of an employer's allocation of the collective pension amount is consistent with the manner in which contributions to the plan are made. The schedule of employer allocations for 2022 and 2021, based on employer contributions made for the 2023 fiscal year and 2022 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2022		2021	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Holden	2,972,584	3.655894%	2,690,938	3.639028%
Holden Housing Authority	26,411	0.032482%	23,264	0.031461%
Hopedale	1,316,665	1.619328%	1,201,711	1.625106%
Hopedale Housing Authority	3,821	0.004699%	3,365	0.004551%
Hubbardston	351,383	0.432156%	323,533	0.437522%
Lancaster	838,022	1.030659%	760,156	1.027979%
Lancaster Housing Authority	17,221	0.021180%	15,694	0.021223%
Lancaster Sewer	2,891	0.003556%	2,778	0.003757%
Leicester	1,717,353	2.112122%	1,556,343	2.104685%
Leicester Housing Authority	65,967	0.081131%	60,068	0.081232%
Leicester Water District	58,500	0.071947%	56,036	0.075779%
Lunenburg	1,689,147	2.077432%	1,531,070	2.070507%
Lunenburg Housing Authority	2,560	0.003148%	2,372	0.003208%
Lunenburg Water District	75,899	0.093346%	66,753	0.090272%
Mendon	909,987	1.119166%	828,542	1.120460%
Mendon-Upton Regional	1,013,683	1.246699%	924,930	1.250808%
Millbury	2,429,017	2.987377%	2,200,435	2.975708%
Millbury Housing Authority	127,765	0.157134%	115,397	0.156054%
Millville	225,736	0.277626%	211,847	0.286486%
Narragansett Regional	617,693	0.759682%	565,061	0.764147%
Nashoba Regional	1,329,615	1.635254%	1,210,965	1.637621%
Nashoba Valley Dispatch	60,987	0.075006%	56,172	0.075963%
New Braintree	73,160	0.089977%	65,854	0.089056%
Northboro	2,812,709	3.459268%	2,548,279	3.446106%
Northboro Housing Authority	89,557	0.110144%	81,206	0.109817%
Northboro-Southboro Regional	567,141	0.697510%	518,953	0.701794%
North Brookfield	725,548	0.892330%	661,563	0.894649%
North Brookfield Housing Authority	24,200	0.029763%	21,896	0.029611%
Oakham	85,337	0.104953%	77,089	0.104250%
Oxford	2,718,666	3.343608%	2,476,316	3.348789%
Oxford Housing Authority	94,854	0.116658%	85,990	0.116287%
Oxford-Rochdale Sewer District	46,629	0.057348%	42,156	0.057009%

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.3 - Proportionate Share of Contributions

The basis of an employer's allocation of the collective pension amount is consistent with the manner in which contributions to the plan are made. The schedule of employer allocations for 2022 and 2021, based on employer contributions made for the 2023 fiscal year and 2022 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2022		2021	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Paxton	999,629	1.229414%	914,200	1.236297%
Petersham	204,612	0.251646%	185,492	0.250846%
Phillipston	164,088	0.201807%	150,222	0.203149%
Princeton	523,409	0.643725%	471,980	0.638271%
Quabbin Regional	1,358,209	1.670421%	1,230,031	1.663404%
Quaboag Regional	469,671	0.577635%	435,854	0.589417%
Royalston	74,266	0.091338%	65,881	0.089093%
Rutland	850,288	1.045744%	775,974	1.049371%
Southboro	2,558,308	3.146388%	2,321,536	3.139476%
Southboro Housing Authority	33,135	0.040752%	30,823	0.041683%
Spencer	1,202,612	1.479057%	1,092,846	1.477885%
Spencer-East Brookfield Regional	782,690	0.962607%	714,866	0.966733%
Spencer Housing Authority	68,053	0.083696%	61,064	0.082578%
Sterling	1,379,365	1.696441%	1,256,404	1.699069%
Sterling Housing Authority	12,489	0.015360%	11,448	0.015481%
Sturbridge	1,825,683	2.245354%	1,674,824	2.264910%
Sutton	1,564,366	1.923968%	1,419,336	1.919406%
Tantasqua Regional	917,249	1.128098%	819,211	1.107841%
Templeton	1,064,999	1.309811%	964,560	1.304400%
Templeton Housing Authority	59,185	0.072790%	54,770	0.074067%
Upton	841,271	1.034655%	757,724	1.024691%
Uxbridge	2,416,713	2.972244%	2,194,484	2.967660%
Uxbridge Housing Authority	77,195	0.094940%	69,494	0.093979%
Wachusett Regional	2,570,982	3.161975%	2,350,170	3.178198%
Warren	499,592	0.614434%	462,757	0.625799%
Warren Water District	24,264	0.029842%	22,179	0.029993%
Westboro	5,584,708	6.868468%	5,057,623	6.839560%
Westboro Housing Authority	61,447	0.075572%	56,435	0.076319%
West Boylston	1,657,286	2.038247%	1,514,443	2.048022%
West Boylston Housing Authority	20,162	0.024797%	18,422	0.024913%
West Boylston Water District	85,383	0.105010%	76,511	0.103468%
West Brookfield	367,845	0.452402%	336,330	0.454828%

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.3 - Proportionate Share of Contributions

The basis of an employer's allocation of the collective pension amount is consistent with the manner in which contributions to the plan are made. The schedule of employer allocations for 2022 and 2021, based on employer contributions made for the 2023 fiscal year and 2022 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2022		2021	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Westminster	1,150,937	1.415504%	1,039,322	1.405503%
Winchendon	2,052,984	2.524905%	1,865,573	2.522865%
Winchendon Housing Authority	157,217	0.193357%	142,957	0.193325%
Total	81,309,364	100.000000%	73,946,616	100.000000%

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.4 - Pension Amounts by Employer

The Schedule of Pension Amounts by Employer is provided in Appendix C. The schedule shows the Net Pension Liability, the various categories of Deferred Outflows of Resources and Deferred Inflows of Resources and Pension Expense for each employer. The schedule includes the differences between expected and actual experience, differences between projected and actual investment earnings and changes of assumptions. Further, each employer is required to recognize Deferred Outflows of Resources and Deferred Inflows of Resources related to (1) the net impact from changes in proportion between periods and (2) differences between actual contributions made by an employer and their proportionate share of contributions.

Each employer's allocation of Pension Expense and Net Pension Liability can be based on the proportion of its contributions to the aggregate amount of employer contributions.

Under GASB 68, gains and losses (investment, experience or assumption changes) and changes in employer's proportionate shares related to pensions are recognized in Pension Expense systematically over time.

The first amortized amounts are recognized in Pension Expense for the year the gain or loss occurs. The remaining amounts are categorized as Deferred Inflows and Deferred Outflows to be recognized in future Pension Expense.

The amortization period differs depending on the source of the gain or loss:

Difference between projected and actual earnings	5 year straight-line amortization
All other amounts	Straight-line amortization over the average expected remaining service lives of all members that are provided with benefits (actives, inactives and retirees) as of the beginning of the measurement period

For 2022:

- ◆ Net Pension Liability, Deferred Outflows of Resources, Deferred Inflows of Resources and Pension Expense are allocated to each employer based on its proportionate share of Total Employer Contribution shown in Exhibit 4.3.
- ◆ The difference between expected and actual experience is amortized over the average of the expected future service lives of all participants, with the first amortized amount recognized in Pension Expense in the current year. Similar Deferred Outflows of Resources and Deferred Inflows of Resources were established during prior years, with the first amortized amount recognized in Pension Expense in 2015.
- ◆ Net difference between projected and actual investment earnings (loss on pension plan investments for 2022) is amortized over 5 years, with the first amortized amount recognized in Pension Expense in the current year. Similar Deferred Outflows of Resources and Deferred Inflows of Resources were established during prior years, with the first amortized amount recognized in Pension Expense in 2014.
- ◆ The change in Total Pension Liability as a result of changes in assumptions is amortized over the average of the expected future service lives of all participants, with the first amortized amount recognized in Pension Expense in the current year. Similar Deferred Outflows of Resources and Deferred Inflows of Resources were established during prior years, with the first amortized amount recognized in Pension Expense in 2015.

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.4 - Pension Amounts by Employer

For 2022 (continued):

- ◆ There are no differences between employer contributions and the proportionate share of contributions because the Plan utilizes employer contributions as the method of allocation.

- ◆ The net effect of the change in the employer's proportionate shares of the collective Net Pension Liability, collective Deferred Outflows and Deferred Inflows is amortized over the average expected remaining service lives of all members, with the first amortized amount recognized in Pension Expense in the current year. Similar Deferred Outflows of Resources and Deferred Inflows of Resources were established during prior years, with the first amortized amount recognized in 2015.

- ◆ No adjustments have been made for employer contributions made subsequent to the measurement date as defined in paragraph 57 of GASB 68.

SECTION 5 - GLOSSARY OF TERMS

Actuarial Assumptions – Assumptions, based upon past experience or standard tables, used to predict the occurrence of future events affecting the commencement, amount and duration of pension benefits, such as: changes in compensation, mortality, withdrawal, disablement and retirement; rates of investment earnings and asset appreciation or depreciation; and any other relevant items.

Actuarial Cost Method (or Funding Method) – A procedure for allocating the Actuarial Present Value of projected benefit payments to the current year (Service Cost) and the past (Total Pension Liability).

Actuarial (Experience) Gain or Loss – A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions during the period between the valuation date and the most recent immediately preceding valuation date.

Actuarial Present Value of Projected Benefit Payments – The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

Actuarially Determined Contribution – A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial Valuation Date – The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

Covered Payroll – The payroll on which contributions to a pension plan are based.

Deferred Inflow of Resources – Acquisition of resources by a government that is applicable to future reporting periods. Under GASB 68, deferred inflows of resources are made up of experience gains, assumption changes reducing the Total Pension Liability and investment gains that are recognized in future reporting periods.

Deferred Outflow of Resources – Consumption of resources by a government that is applicable to future reporting periods. Under GASB 68, deferred outflows of resources are made up of experience losses, assumption changes increasing the Total Pension Liability and investment losses that are recognized in future reporting periods.

Discount Rate – Single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the sum of:

- (1) a long-term expected rate of return on pension plan investments *to the extent that the pension plan's assets are sufficient to pay benefits and pension plan assets are expected to be invested using a strategy to achieve that return and*
- (2) a tax-exempt, high-quality municipal bond rate *to the extent that the conditions for use of the long-term expected rate of return are not met.*

Entry Age Normal Actuarial Cost Method – A method under which the actuarial present value of the projected benefits of each individual in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age.

SECTION 5 - GLOSSARY OF TERMS

Fiduciary Net Position – The fair market value of assets as of the measurement date.

Funded Ratio – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

GASB – Governmental Accounting Standards Board.

Long-Term Expected Rate of Return – Long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits, net of investment expenses.

Measurement Date – The date as of which the Total Pension Liability and Fiduciary Net Position are measured.

Municipal Bond Rate – Yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.

Net Pension Liability – The liability of the employer for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Fiduciary Net Position.

Present Value of Future Benefits – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

Reporting Date – The last day of the Plan or employer's fiscal year.

Service Cost – The portion of the actuarial present value of projected benefit amounts that is attributed to a valuation year.

Total Pension Liability – The portion of the actuarial present value of projected benefit amounts that is attributed to past periods of employee service using the Entry Age Normal cost method based on the requirements of GASB 67 and GASB 68.

Unfunded Actuarial Accrued Liability – The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

APPENDIX A - CALCULATION OF MONEY-WEIGHTED RATE OF RETURN

	Plan Investments/ Net External Cash Flows (a)	Periods Invested (b)	Period Weight (c)=(b)÷12	(d)=(a) x (1+r _{mw}) ^(c)
Beginning value - January 1, 2022	\$ 1,079,814,993	12	1.00	\$ 953,651,598
Monthly net external cash flows:				
January	(3,501,612)	11	0.92	(3,124,676)
February	(5,872,839)	10	0.83	(5,295,192)
March	(6,376,727)	9	0.75	(5,809,358)
April	(5,793,181)	8	0.67	(5,332,662)
May	(5,236,992)	7	0.58	(4,870,858)
June	(3,871,911)	6	0.50	(3,638,694)
July	67,348,881	5	0.42	63,950,981
August	(5,794,906)	4	0.33	(5,559,809)
September	(7,530,317)	3	0.25	(7,300,008)
October	(5,128,547)	2	0.17	(5,023,438)
November	(8,871,690)	1	0.08	(8,780,307)
December	(6,367,710)	0	0.00	(6,367,710)
Ending value - December 31, 2022				\$ 956,499,867
Money-weighted rate of return				-11.68%

Note: Beginning and ending values are based on amounts reported in the System's 2022 Annual Statement with GAAP adjustments for 3(8)(c) amounts due to the Commonwealth, and monthly cash flows are based on amounts provided by the Retirement Board.

APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Year	Differences between Expected and Actual Experience	Recognition Period (Years)											
			2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
2017	-	5.86	-	-	-	-	-	-	-	-	-	-	-
2018	(8,110,737)	5.84	(1,388,825)	(1,166,612)	-	-	-	-	-	-	-	-	-
2019	-	5.84	-	-	-	-	-	-	-	-	-	-	-
2020	(23,171,133)	5.71	(4,057,992)	(4,057,992)	(4,057,992)	(2,881,173)	-	-	-	-	-	-	-
2021	-	5.71	-	-	-	-	-	-	-	-	-	-	-
2022	(23,565,571)	5.53	(4,261,405)	(4,261,405)	(4,261,405)	(4,261,405)	(4,261,405)	(2,258,546)	-	-	-	-	-
Net Increase (Decrease) in Pension Expense			(9,708,222)	(9,486,009)	(8,319,397)	(7,142,578)	(4,261,405)	(2,258,546)	-	-	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)											
			2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
2017	-	5.86	-	-	-	-	-	-	-	-	-	-	-
2018	-	5.84	-	-	-	-	-	-	-	-	-	-	-
2019	17,826,312	5.84	3,052,451	3,052,451	2,564,057	-	-	-	-	-	-	-	-
2020	35,705,832	5.71	6,253,211	6,253,211	6,253,211	4,439,777	-	-	-	-	-	-	-
2021	49,140,442	5.71	8,606,032	8,606,032	8,606,032	8,606,032	6,110,282	-	-	-	-	-	-
2022	-	5.53	-	-	-	-	-	-	-	-	-	-	-
Net Increase (Decrease) in Pension Expense			17,911,694	17,911,694	17,423,300	13,045,809	6,110,282	-	-	-	-	-	-

APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2017	(56,256,688)	5	-	-	-	-	-	-	-	-	-	-
2018	72,217,350	5	14,443,470	-	-	-	-	-	-	-	-	-
2019	(57,470,605)	5	(11,494,121)	(11,494,121)	-	-	-	-	-	-	-	-
2020	(36,316,766)	5	(7,263,353)	(7,263,353)	(7,263,354)	-	-	-	-	-	-	-
2021	(110,574,304)	5	(22,114,861)	(22,114,861)	(22,114,861)	(22,114,860)	-	-	-	-	-	-
2022	202,198,820	5	40,439,764	40,439,764	40,439,764	40,439,764	40,439,764	-	-	-	-	-
Net Increase (Decrease) in Pension Expense			14,010,899	(432,571)	11,061,549	18,324,904	40,439,764	-	-	-	-	-

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Ashburnham
◆ Current Proportionate Share		1.392923%
◆ Prior Proportionate Share		1.399672%
Beginning Net Pension Liability	\$ 842,013,303	\$ 11,785,424
Ending Net Pension Liability	\$ 1,028,277,936	\$ 14,323,122
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	966,600
◆ Changes of Assumptions	54,491,085	759,019
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	531,109
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,256,728
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 438,324
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	107,863
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 546,187
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,548,305
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	191,007
Total Employer Pension Expense	\$ 111,155,119	\$ 1,739,312
Covered Payroll:	\$ 341,237,099	\$ 3,858,146
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 14,323,122
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 17,478,068
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 11,655,816
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 213,626
◆ 2024	\$ 20,165,452	\$ 390,306
◆ 2025	\$ 24,228,135	\$ 464,297
◆ 2026	\$ 42,288,641	\$ 679,632
◆ 2027	\$ (2,258,546)	\$ (37,320)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Ashburnham- Westminster Regional
◆ Current Proportionate Share		1.068315%
◆ Prior Proportionate Share		1.070537%
Beginning Net Pension Liability	\$ 842,013,303	\$ 9,014,065
Ending Net Pension Liability	\$ 1,028,277,936	\$ 10,985,246
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	741,343
◆ Changes of Assumptions	54,491,085	582,136
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,323,479
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 336,177
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	81,810
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 417,987
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,187,487
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	43,784
Total Employer Pension Expense	\$ 111,155,119	\$ 1,231,271
Covered Payroll:	\$ 341,237,099	\$ 4,419,463
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 10,985,246
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 13,404,960
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 8,939,532
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 60,005
◆ 2024	\$ 20,165,452	\$ 193,886
◆ 2025	\$ 24,228,135	\$ 239,121
◆ 2026	\$ 42,288,641	\$ 438,539
◆ 2027	\$ (2,258,546)	\$ (26,059)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Athol
◆ Current Proportionate Share		2.452757%
◆ Prior Proportionate Share		2.437637%
Beginning Net Pension Liability	\$ 842,013,303	\$ 20,525,227
Ending Net Pension Liability	\$ 1,028,277,936	\$ 25,221,158
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,702,057
◆ Changes of Assumptions	54,491,085	1,336,534
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	307,146
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 3,345,737
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 771,832
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	13,876
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 785,708
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,726,365
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,089,621)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,636,744
Covered Payroll:	\$ 341,237,099	\$ 6,643,968
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 25,221,158
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 30,776,607
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 20,524,379
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 281,456
◆ 2024	\$ 20,165,452	\$ 590,084
◆ 2025	\$ 24,228,135	\$ 659,013
◆ 2026	\$ 42,288,641	\$ 1,071,744
◆ 2027	\$ (2,258,546)	\$ (42,268)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Athol Housing Authority
◆ Current Proportionate Share		0.059940%
◆ Prior Proportionate Share		0.059839%
Beginning Net Pension Liability	\$ 842,013,303	\$ 503,853
Ending Net Pension Liability	\$ 1,028,277,936	\$ 616,352
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	41,595
◆ Changes of Assumptions	54,491,085	32,662
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	16,770
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 91,027
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 18,862
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	29,154
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 48,016
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 66,627
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(71,393)
Total Employer Pension Expense	\$ 111,155,119	\$ (4,766)
Covered Payroll:	\$ 341,237,099	\$ 336,935
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 616,352
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 752,115
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 501,573
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (5,896)
◆ 2024	\$ 20,165,452	\$ 3,018
◆ 2025	\$ 24,228,135	\$ 18,752
◆ 2026	\$ 42,288,641	\$ 28,404
◆ 2027	\$ (2,258,546)	\$ (1,267)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Athol-Royalston Regional
◆ Current Proportionate Share		0.911702%
◆ Prior Proportionate Share		0.906243%
Beginning Net Pension Liability	\$ 842,013,303	\$ 7,630,686
Ending Net Pension Liability	\$ 1,028,277,936	\$ 9,374,829
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	632,663
◆ Changes of Assumptions	54,491,085	496,796
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	76,179
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,205,638
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 286,894
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	187,676
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 474,570
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,013,403
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(617,522)
Total Employer Pension Expense	\$ 111,155,119	\$ 395,881
Covered Payroll:	\$ 341,237,099	\$ 3,090,644
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 9,374,829
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 11,439,818
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 7,629,013
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 24,248
◆ 2024	\$ 20,165,452	\$ 137,925
◆ 2025	\$ 24,228,135	\$ 210,066
◆ 2026	\$ 42,288,641	\$ 374,681
◆ 2027	\$ (2,258,546)	\$ (15,852)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Auburn
◆ Current Proportionate Share		5.263561%
◆ Prior Proportionate Share		5.274781%
Beginning Net Pension Liability	\$ 842,013,303	\$ 44,414,357
Ending Net Pension Liability	\$ 1,028,277,936	\$ 54,124,037
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	3,652,577
◆ Changes of Assumptions	54,491,085	2,868,172
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	329,119
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 6,849,868
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 1,656,334
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	277,200
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,933,534
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 5,850,718
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	463,519
Total Employer Pension Expense	\$ 111,155,119	\$ 6,314,237
Covered Payroll:	\$ 341,237,099	\$ 17,198,399
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 54,124,037
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 66,045,907
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 44,044,855
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 503,031
◆ 2024	\$ 20,165,452	\$ 1,141,362
◆ 2025	\$ 24,228,135	\$ 1,212,196
◆ 2026	\$ 42,288,641	\$ 2,188,368
◆ 2027	\$ (2,258,546)	\$ (128,623)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Auburn Housing Authority
◆ Current Proportionate Share		0.104829%
◆ Prior Proportionate Share		0.104769%
Beginning Net Pension Liability	\$ 842,013,303	\$ 882,167
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,077,936
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	72,745
◆ Changes of Assumptions	54,491,085	57,123
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	1,393
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 131,261
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 32,988
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	15,198
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 48,186
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 116,523
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,784)
Total Employer Pension Expense	\$ 111,155,119	\$ 114,739
Covered Payroll:	\$ 341,237,099	\$ 315,940
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,077,936
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,315,372
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 877,199
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 1,448
◆ 2024	\$ 20,165,452	\$ 15,333
◆ 2025	\$ 24,228,135	\$ 24,829
◆ 2026	\$ 42,288,641	\$ 43,780
◆ 2027	\$ (2,258,546)	\$ (2,315)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Auburn Water District
◆ Current Proportionate Share		0.161236%
◆ Prior Proportionate Share		0.159642%
Beginning Net Pension Liability	\$ 842,013,303	\$ 1,344,209
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,657,955
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	111,888
◆ Changes of Assumptions	54,491,085	87,859
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	62,110
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 261,857
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 50,738
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	51,020
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 101,758
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 179,222
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(14,503)
Total Employer Pension Expense	\$ 111,155,119	\$ 164,719
Covered Payroll:	\$ 341,237,099	\$ 658,039
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,657,955
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 2,023,151
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 1,349,204
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 2,570
◆ 2024	\$ 20,165,452	\$ 25,103
◆ 2025	\$ 24,228,135	\$ 54,806
◆ 2026	\$ 42,288,641	\$ 79,877
◆ 2027	\$ (2,258,546)	\$ (2,257)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Barre
◆ Current Proportionate Share		0.549277%
◆ Prior Proportionate Share		0.554519%
Beginning Net Pension Liability	\$ 842,013,303	\$ 4,669,123
Ending Net Pension Liability	\$ 1,028,277,936	\$ 5,648,099
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	381,164
◆ Changes of Assumptions	54,491,085	299,307
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	155,343
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 835,814
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 172,846
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	65,876
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 238,722
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 610,550
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	43,420
Total Employer Pension Expense	\$ 111,155,119	\$ 653,970
Covered Payroll:	\$ 341,237,099	\$ 2,676,719
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 5,648,099
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 6,892,202
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 4,596,289
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 65,896
◆ 2024	\$ 20,165,452	\$ 142,977
◆ 2025	\$ 24,228,135	\$ 156,216
◆ 2026	\$ 42,288,641	\$ 248,957
◆ 2027	\$ (2,258,546)	\$ (16,954)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Barre Housing Authority
◆ Current Proportionate Share		0.041427%
◆ Prior Proportionate Share		0.040850%
Beginning Net Pension Liability	\$ 842,013,303	\$ 343,960
Ending Net Pension Liability	\$ 1,028,277,936	\$ 425,984
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	28,748
◆ Changes of Assumptions	54,491,085	22,574
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	72,025
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 123,347
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 13,036
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 13,036
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 46,048
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	23,836
Total Employer Pension Expense	\$ 111,155,119	\$ 69,884
Covered Payroll:	\$ 341,237,099	\$ 62,178
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 425,984
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 519,816
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 346,656
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 25,359
◆ 2024	\$ 20,165,452	\$ 29,166
◆ 2025	\$ 24,228,135	\$ 26,854
◆ 2026	\$ 42,288,641	\$ 29,366
◆ 2027	\$ (2,258,546)	\$ (434)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Berlin
◆ Current Proportionate Share		0.744874%
◆ Prior Proportionate Share		0.745707%
Beginning Net Pension Liability	\$ 842,013,303	\$ 6,278,951
Ending Net Pension Liability	\$ 1,028,277,936	\$ 7,659,371
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	516,895
◆ Changes of Assumptions	54,491,085	405,890
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 922,785
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 234,396
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	376,044
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 610,440
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 827,965
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(61,828)
Total Employer Pension Expense	\$ 111,155,119	\$ 766,137
Covered Payroll:	\$ 341,237,099	\$ 2,001,164
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 7,659,371
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 9,346,496
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 6,233,014
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (67,301)
◆ 2024	\$ 20,165,452	\$ 32,208
◆ 2025	\$ 24,228,135	\$ 104,087
◆ 2026	\$ 42,288,641	\$ 260,898
◆ 2027	\$ (2,258,546)	\$ (17,547)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Berlin-Boylston Regional
◆ Current Proportionate Share		0.426143%
◆ Prior Proportionate Share		0.432009%
Beginning Net Pension Liability	\$ 842,013,303	\$ 3,637,573
Ending Net Pension Liability	\$ 1,028,277,936	\$ 4,381,932
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	295,716
◆ Changes of Assumptions	54,491,085	232,210
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	1,095,065
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,622,991
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 134,098
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	47,730
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 181,828
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 473,680
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	327,533
Total Employer Pension Expense	\$ 111,155,119	\$ 801,213
Covered Payroll:	\$ 341,237,099	\$ 2,326,343
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 4,381,932
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 5,347,138
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 3,565,912
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 350,035
◆ 2024	\$ 20,165,452	\$ 391,958
◆ 2025	\$ 24,228,135	\$ 356,161
◆ 2026	\$ 42,288,641	\$ 357,726
◆ 2027	\$ (2,258,546)	\$ (14,717)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Blackstone
◆ Current Proportionate Share		1.248592%
◆ Prior Proportionate Share		1.244413%
Beginning Net Pension Liability	\$ 842,013,303	\$ 10,478,120
Ending Net Pension Liability	\$ 1,028,277,936	\$ 12,838,993
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	866,443
◆ Changes of Assumptions	54,491,085	680,371
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	193,260
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,740,074
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 392,906
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	793,717
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,186,623
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,387,874
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,992)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,385,882
Covered Payroll:	\$ 341,237,099	\$ 4,503,114
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 12,838,993
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 15,667,031
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 10,448,068
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (18,711)
◆ 2024	\$ 20,165,452	\$ 118,187
◆ 2025	\$ 24,228,135	\$ 95,584
◆ 2026	\$ 42,288,641	\$ 382,962
◆ 2027	\$ (2,258,546)	\$ (24,571)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Blackstone Housing Authority
◆ Current Proportionate Share		0.026113%
◆ Prior Proportionate Share		0.025291%
Beginning Net Pension Liability	\$ 842,013,303	\$ 212,955
Ending Net Pension Liability	\$ 1,028,277,936	\$ 268,510
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	18,120
◆ Changes of Assumptions	54,491,085	14,229
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	6,098
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 38,447
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 8,217
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	32,563
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 40,780
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 29,026
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(6,666)
Total Employer Pension Expense	\$ 111,155,119	\$ 22,360
Covered Payroll:	\$ 341,237,099	\$ 41,190
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 268,510
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 327,655
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 218,507
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (8,944)
◆ 2024	\$ 20,165,452	\$ (4,178)
◆ 2025	\$ 24,228,135	\$ 2,097
◆ 2026	\$ 42,288,641	\$ 8,570
◆ 2027	\$ (2,258,546)	\$ 122
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Blackstone-Millville Regional
◆ Current Proportionate Share		0.825669%
◆ Prior Proportionate Share		0.825057%
Beginning Net Pension Liability	\$ 842,013,303	\$ 6,947,093
Ending Net Pension Liability	\$ 1,028,277,936	\$ 8,490,169
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	572,962
◆ Changes of Assumptions	54,491,085	449,916
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	5,775
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,028,653
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 259,821
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	273,737
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 533,558
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 917,773
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(118,947)
Total Employer Pension Expense	\$ 111,155,119	\$ 798,826
Covered Payroll:	\$ 341,237,099	\$ 3,047,067
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 8,490,169
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 10,360,294
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 6,909,098
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (17,653)
◆ 2024	\$ 20,165,452	\$ 87,204
◆ 2025	\$ 24,228,135	\$ 138,286
◆ 2026	\$ 42,288,641	\$ 305,376
◆ 2027	\$ (2,258,546)	\$ (18,118)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Bolton
◆ Current Proportionate Share		0.810588%
◆ Prior Proportionate Share		0.814501%
Beginning Net Pension Liability	\$ 842,013,303	\$ 6,858,208
Ending Net Pension Liability	\$ 1,028,277,936	\$ 8,335,098
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	562,497
◆ Changes of Assumptions	54,491,085	441,698
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	332,963
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,337,158
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 255,075
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	37,350
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 292,425
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 901,010
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	147,104
Total Employer Pension Expense	\$ 111,155,119	\$ 1,048,114
Covered Payroll:	\$ 341,237,099	\$ 2,756,129
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 8,335,098
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 10,171,066
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 6,782,905
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 169,376
◆ 2024	\$ 20,165,452	\$ 262,735
◆ 2025	\$ 24,228,135	\$ 252,544
◆ 2026	\$ 42,288,641	\$ 381,782
◆ 2027	\$ (2,258,546)	\$ (21,704)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Boylston
◆ Current Proportionate Share		0.948056%
◆ Prior Proportionate Share		0.953868%
Beginning Net Pension Liability	\$ 842,013,303	\$ 8,031,694
Ending Net Pension Liability	\$ 1,028,277,936	\$ 9,748,647
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	657,890
◆ Changes of Assumptions	54,491,085	516,606
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,174,496
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 298,334
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	810,793
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,109,127
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,053,812
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(93,541)
Total Employer Pension Expense	\$ 111,155,119	\$ 960,271
Covered Payroll:	\$ 341,237,099	\$ 3,616,888
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 9,748,647
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 11,895,976
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 7,933,217
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (155,246)
◆ 2024	\$ 20,165,452	\$ (26,941)
◆ 2025	\$ 24,228,135	\$ 18,292
◆ 2026	\$ 42,288,641	\$ 255,721
◆ 2027	\$ (2,258,546)	\$ (26,457)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Boylston Water District
◆ Current Proportionate Share		0.020501%
◆ Prior Proportionate Share		0.020001%
Beginning Net Pension Liability	\$ 842,013,303	\$ 168,410
Ending Net Pension Liability	\$ 1,028,277,936	\$ 210,804
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	14,226
◆ Changes of Assumptions	54,491,085	11,171
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	7,928
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 33,325
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 6,451
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	1,119
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 7,570
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 22,788
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	5,250
Total Employer Pension Expense	\$ 111,155,119	\$ 28,038
Covered Payroll:	\$ 341,237,099	\$ 71,935
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 210,804
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 257,238
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 171,548
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 4,462
◆ 2024	\$ 20,165,452	\$ 6,420
◆ 2025	\$ 24,228,135	\$ 5,627
◆ 2026	\$ 42,288,641	\$ 9,274
◆ 2027	\$ (2,258,546)	\$ (28)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Brookfield
◆ Current Proportionate Share		0.490979%
◆ Prior Proportionate Share		0.492969%
Beginning Net Pension Liability	\$ 842,013,303	\$ 4,150,866
Ending Net Pension Liability	\$ 1,028,277,936	\$ 5,048,630
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	340,708
◆ Changes of Assumptions	54,491,085	267,540
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	147,948
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 756,196
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 154,501
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	64,550
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 219,051
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 545,748
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	52,426
Total Employer Pension Expense	\$ 111,155,119	\$ 598,174
Covered Payroll:	\$ 341,237,099	\$ 1,858,889
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 5,048,630
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 6,160,689
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 4,108,455
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 47,884
◆ 2024	\$ 20,165,452	\$ 114,584
◆ 2025	\$ 24,228,135	\$ 154,811
◆ 2026	\$ 42,288,641	\$ 232,681
◆ 2027	\$ (2,258,546)	\$ (12,815)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Charlton
◆ Current Proportionate Share		2.324147%
◆ Prior Proportionate Share		2.333548%
Beginning Net Pension Liability	\$ 842,013,303	\$ 19,648,787
Ending Net Pension Liability	\$ 1,028,277,936	\$ 23,898,689
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,612,810
◆ Changes of Assumptions	54,491,085	1,266,453
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	1,023,032
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 3,902,295
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 731,361
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	111,112
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 842,473
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,583,408
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	388,417
Total Employer Pension Expense	\$ 111,155,119	\$ 2,971,825
Covered Payroll:	\$ 341,237,099	\$ 6,766,038
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 23,898,689
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 29,162,839
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 19,448,185
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 518,603
◆ 2024	\$ 20,165,452	\$ 780,684
◆ 2025	\$ 24,228,135	\$ 723,130
◆ 2026	\$ 42,288,641	\$ 1,098,061
◆ 2027	\$ (2,258,546)	\$ (60,656)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Cherry Valley- Rochdale Water
◆ Current Proportionate Share		0.090103%
◆ Prior Proportionate Share		0.088354%
Beginning Net Pension Liability	\$ 842,013,303	\$ 743,955
Ending Net Pension Liability	\$ 1,028,277,936	\$ 926,507
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	62,526
◆ Changes of Assumptions	54,491,085	49,098
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	39,312
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 150,936
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 28,353
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	13,447
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 41,800
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 100,154
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	11,272
Total Employer Pension Expense	\$ 111,155,119	\$ 111,426
Covered Payroll:	\$ 341,237,099	\$ 345,769
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 926,507
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,130,588
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 753,969
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 20,347
◆ 2024	\$ 20,165,452	\$ 27,431
◆ 2025	\$ 24,228,135	\$ 23,480
◆ 2026	\$ 42,288,641	\$ 38,395
◆ 2027	\$ (2,258,546)	\$ (517)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Cherry Valley Sewer District
◆ Current Proportionate Share		0.000000%
◆ Prior Proportionate Share		0.000000%
Beginning Net Pension Liability	\$ 842,013,303	\$ -
Ending Net Pension Liability	\$ 1,028,277,936	\$ -
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	-
◆ Changes of Assumptions	54,491,085	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	148
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 148
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ -
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	8,097
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 8,097
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ -
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,129)
Total Employer Pension Expense	\$ 111,155,119	\$ (1,129)
Covered Payroll:	\$ 341,237,099	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ -
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ -
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ -
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (4,253)
◆ 2024	\$ 20,165,452	\$ (3,696)
◆ 2025	\$ 24,228,135	\$ -
◆ 2026	\$ 42,288,641	\$ -
◆ 2027	\$ (2,258,546)	\$ -
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Douglas
◆ Current Proportionate Share		1.716973%
◆ Prior Proportionate Share		1.727054%
Beginning Net Pension Liability	\$ 842,013,303	\$ 14,542,025
Ending Net Pension Liability	\$ 1,028,277,936	\$ 17,655,257
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,191,470
◆ Changes of Assumptions	54,491,085	935,597
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,127,067
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 540,296
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	432,234
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 972,530
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,908,504
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,696
Total Employer Pension Expense	\$ 111,155,119	\$ 1,917,200
Covered Payroll:	\$ 341,237,099	\$ 6,900,219
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 17,655,257
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 21,544,170
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 14,367,428
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 2,917
◆ 2024	\$ 20,165,452	\$ 228,969
◆ 2025	\$ 24,228,135	\$ 311,587
◆ 2026	\$ 42,288,641	\$ 658,598
◆ 2027	\$ (2,258,546)	\$ (47,534)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Dudley
◆ Current Proportionate Share		1.473046%
◆ Prior Proportionate Share		1.475885%
Beginning Net Pension Liability	\$ 842,013,303	\$ 12,427,148
Ending Net Pension Liability	\$ 1,028,277,936	\$ 15,147,003
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,022,200
◆ Changes of Assumptions	54,491,085	802,679
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	327,954
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,152,833
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 463,537
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	96,149
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 559,686
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,637,366
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(18,731)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,618,635
Covered Payroll:	\$ 341,237,099	\$ 4,129,721
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 15,147,003
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 18,483,424
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 12,326,271
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 163,575
◆ 2024	\$ 20,165,452	\$ 351,884
◆ 2025	\$ 24,228,135	\$ 432,378
◆ 2026	\$ 42,288,641	\$ 681,041
◆ 2027	\$ (2,258,546)	\$ (35,731)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Dudley Housing Authority
◆ Current Proportionate Share		0.030716%
◆ Prior Proportionate Share		0.030465%
Beginning Net Pension Liability	\$ 842,013,303	\$ 256,521
Ending Net Pension Liability	\$ 1,028,277,936	\$ 315,846
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	21,315
◆ Changes of Assumptions	54,491,085	16,737
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	31,372
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 69,424
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 9,666
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 9,666
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 34,142
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(11,419)
Total Employer Pension Expense	\$ 111,155,119	\$ 22,723
Covered Payroll:	\$ 341,237,099	\$ 127,470
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 315,846
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 385,417
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 257,028
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 12,761
◆ 2024	\$ 20,165,452	\$ 14,674
◆ 2025	\$ 24,228,135	\$ 14,840
◆ 2026	\$ 42,288,641	\$ 17,957
◆ 2027	\$ (2,258,546)	\$ (474)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Dudley-Charlton Regional
◆ Current Proportionate Share		1.662828%
◆ Prior Proportionate Share		1.662739%
Beginning Net Pension Liability	\$ 842,013,303	\$ 14,000,481
Ending Net Pension Liability	\$ 1,028,277,936	\$ 17,098,495
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,153,897
◆ Changes of Assumptions	54,491,085	906,093
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	35,684
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,095,674
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 523,258
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	110,192
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 633,450
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,848,319
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	4,461
Total Employer Pension Expense	\$ 111,155,119	\$ 1,852,780
Covered Payroll:	\$ 341,237,099	\$ 6,110,020
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 17,098,495
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 20,864,771
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 13,914,349
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 118,776
◆ 2024	\$ 20,165,452	\$ 322,213
◆ 2025	\$ 24,228,135	\$ 374,464
◆ 2026	\$ 42,288,641	\$ 684,247
◆ 2027	\$ (2,258,546)	\$ (37,476)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	East Brookfield
◆ Current Proportionate Share		0.249854%
◆ Prior Proportionate Share		0.250847%
Beginning Net Pension Liability	\$ 842,013,303	\$ 2,112,167
Ending Net Pension Liability	\$ 1,028,277,936	\$ 2,569,197
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	173,383
◆ Changes of Assumptions	54,491,085	136,148
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	16,332
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 325,863
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 78,624
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	24,438
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 103,062
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 277,726
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	50,668
Total Employer Pension Expense	\$ 111,155,119	\$ 328,394
Covered Payroll:	\$ 341,237,099	\$ 975,083
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 2,569,197
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 3,135,113
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 2,090,752
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 18,780
◆ 2024	\$ 20,165,452	\$ 51,680
◆ 2025	\$ 24,228,135	\$ 55,435
◆ 2026	\$ 42,288,641	\$ 103,409
◆ 2027	\$ (2,258,546)	\$ (6,503)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Grafton
◆ Current Proportionate Share		3.171855%
◆ Prior Proportionate Share		3.175273%
Beginning Net Pension Liability	\$ 842,013,303	\$ 26,736,222
Ending Net Pension Liability	\$ 1,028,277,936	\$ 32,615,484
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,201,066
◆ Changes of Assumptions	54,491,085	1,728,378
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	720,631
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 4,650,075
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 998,117
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	37,874
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,035,991
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,525,679
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	273,633
Total Employer Pension Expense	\$ 111,155,119	\$ 3,799,312
Covered Payroll:	\$ 341,237,099	\$ 12,786,214
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 32,615,484
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 39,799,677
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 26,541,705
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 485,658
◆ 2024	\$ 20,165,452	\$ 859,705
◆ 2025	\$ 24,228,135	\$ 905,065
◆ 2026	\$ 42,288,641	\$ 1,438,260
◆ 2027	\$ (2,258,546)	\$ (74,604)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Grafton Housing Authority
◆ Current Proportionate Share		0.076090%
◆ Prior Proportionate Share		0.075463%
Beginning Net Pension Liability	\$ 842,013,303	\$ 635,405
Ending Net Pension Liability	\$ 1,028,277,936	\$ 782,413
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	52,801
◆ Changes of Assumptions	54,491,085	41,462
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	8,716
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 102,979
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 23,944
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	72,414
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 96,358
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 84,578
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(25,927)
Total Employer Pension Expense	\$ 111,155,119	\$ 58,651
Covered Payroll:	\$ 341,237,099	\$ 236,422
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 782,413
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 954,755
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 636,709
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (16,547)
◆ 2024	\$ 20,165,452	\$ (4,606)
◆ 2025	\$ 24,228,135	\$ 6,034
◆ 2026	\$ 42,288,641	\$ 22,915
◆ 2027	\$ (2,258,546)	\$ (1,175)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Hardwick
◆ Current Proportionate Share		0.295182%
◆ Prior Proportionate Share		0.295229%
Beginning Net Pension Liability	\$ 842,013,303	\$ 2,485,869
Ending Net Pension Liability	\$ 1,028,277,936	\$ 3,035,296
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	204,838
◆ Changes of Assumptions	54,491,085	160,848
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	4,518
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 370,204
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 92,888
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	189,643
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 282,531
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 328,110
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(126,755)
Total Employer Pension Expense	\$ 111,155,119	\$ 201,355
Covered Payroll:	\$ 341,237,099	\$ 1,096,184
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 3,035,296
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 3,703,879
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 2,470,052
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (47,945)
◆ 2024	\$ 20,165,452	\$ (5,484)
◆ 2025	\$ 24,228,135	\$ 43,573
◆ 2026	\$ 42,288,641	\$ 104,239
◆ 2027	\$ (2,258,546)	\$ (6,710)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Harvard
◆ Current Proportionate Share		1.526790%
◆ Prior Proportionate Share		1.525881%
Beginning Net Pension Liability	\$ 842,013,303	\$ 12,848,117
Ending Net Pension Liability	\$ 1,028,277,936	\$ 15,699,642
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,059,495
◆ Changes of Assumptions	54,491,085	831,964
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	269,947
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,161,406
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 480,449
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	58,933
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 539,382
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,697,105
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	26,843
Total Employer Pension Expense	\$ 111,155,119	\$ 1,723,948
Covered Payroll:	\$ 341,237,099	\$ 5,653,864
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 15,699,642
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 19,157,793
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 12,775,995
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 171,496
◆ 2024	\$ 20,165,452	\$ 355,300
◆ 2025	\$ 24,228,135	\$ 440,125
◆ 2026	\$ 42,288,641	\$ 688,802
◆ 2027	\$ (2,258,546)	\$ (33,699)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Hillcrest Water District
◆ Current Proportionate Share		0.013949%
◆ Prior Proportionate Share		0.013537%
Beginning Net Pension Liability	\$ 842,013,303	\$ 113,982
Ending Net Pension Liability	\$ 1,028,277,936	\$ 143,436
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	9,680
◆ Changes of Assumptions	54,491,085	7,601
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	48,041
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 65,322
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 4,390
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	29,851
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 34,241
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 15,505
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(2,358)
Total Employer Pension Expense	\$ 111,155,119	\$ 13,147
Covered Payroll:	\$ 341,237,099	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 143,436
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 175,031
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 116,725
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 3,243
◆ 2024	\$ 20,165,452	\$ 4,461
◆ 2025	\$ 24,228,135	\$ 8,245
◆ 2026	\$ 42,288,641	\$ 15,089
◆ 2027	\$ (2,258,546)	\$ 43
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Holden
◆ Current Proportionate Share		3.655894%
◆ Prior Proportionate Share		3.639028%
Beginning Net Pension Liability	\$ 842,013,303	\$ 30,641,099
Ending Net Pension Liability	\$ 1,028,277,936	\$ 37,592,749
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,536,958
◆ Changes of Assumptions	54,491,085	1,992,136
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	737,669
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 5,266,763
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 1,150,434
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	509,999
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,660,433
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 4,063,713
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(215,672)
Total Employer Pension Expense	\$ 111,155,119	\$ 3,848,041
Covered Payroll:	\$ 341,237,099	\$ 11,333,737
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 37,592,749
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 45,873,283
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 30,592,086
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 230,358
◆ 2024	\$ 20,165,452	\$ 702,401
◆ 2025	\$ 24,228,135	\$ 1,073,059
◆ 2026	\$ 42,288,641	\$ 1,668,438
◆ 2027	\$ (2,258,546)	\$ (67,926)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Holden Housing Authority
◆ Current Proportionate Share		0.032482%
◆ Prior Proportionate Share		0.031461%
Beginning Net Pension Liability	\$ 842,013,303	\$ 264,902
Ending Net Pension Liability	\$ 1,028,277,936	\$ 334,006
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	22,541
◆ Changes of Assumptions	54,491,085	17,700
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	14,853
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 55,094
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 10,221
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	135,854
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 146,075
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 36,106
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(34,140)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,966
Covered Payroll:	\$ 341,237,099	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 334,006
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 407,578
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 271,806
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (29,238)
◆ 2024	\$ 20,165,452	\$ (25,105)
◆ 2025	\$ 24,228,135	\$ (26,837)
◆ 2026	\$ 42,288,641	\$ (9,954)
◆ 2027	\$ (2,258,546)	\$ 153
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Hopedale
◆ Current Proportionate Share		1.619328%
◆ Prior Proportionate Share		1.625106%
Beginning Net Pension Liability	\$ 842,013,303	\$ 13,683,610
Ending Net Pension Liability	\$ 1,028,277,936	\$ 16,651,189
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,123,710
◆ Changes of Assumptions	54,491,085	882,389
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	223,007
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,229,106
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 509,569
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	236,722
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 746,291
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,799,966
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	74,947
Total Employer Pension Expense	\$ 111,155,119	\$ 1,874,913
Covered Payroll:	\$ 341,237,099	\$ 5,798,933
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 16,651,189
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 20,318,937
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 13,550,342
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 95,338
◆ 2024	\$ 20,165,452	\$ 306,032
◆ 2025	\$ 24,228,135	\$ 405,038
◆ 2026	\$ 42,288,641	\$ 718,003
◆ 2027	\$ (2,258,546)	\$ (41,596)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Hopedale Housing Authority
◆ Current Proportionate Share		0.004699%
◆ Prior Proportionate Share		0.004551%
Beginning Net Pension Liability	\$ 842,013,303	\$ 38,316
Ending Net Pension Liability	\$ 1,028,277,936	\$ 48,322
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	3,261
◆ Changes of Assumptions	54,491,085	2,561
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	3,422
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 9,244
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 1,479
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	25,578
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 27,057
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 5,224
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(11,579)
Total Employer Pension Expense	\$ 111,155,119	\$ (6,355)
Covered Payroll:	\$ 341,237,099	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 48,322
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 58,966
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 39,323
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (5,812)
◆ 2024	\$ 20,165,452	\$ (5,453)
◆ 2025	\$ 24,228,135	\$ (4,366)
◆ 2026	\$ 42,288,641	\$ (2,203)
◆ 2027	\$ (2,258,546)	\$ 21
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Hubbardston
◆ Current Proportionate Share		0.432156%
◆ Prior Proportionate Share		0.437522%
Beginning Net Pension Liability	\$ 842,013,303	\$ 3,683,997
Ending Net Pension Liability	\$ 1,028,277,936	\$ 4,443,761
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	299,889
◆ Changes of Assumptions	54,491,085	235,486
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	180,609
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 715,984
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 135,990
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	197,906
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 333,896
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 480,363
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(18,380)
Total Employer Pension Expense	\$ 111,155,119	\$ 461,983
Covered Payroll:	\$ 341,237,099	\$ 1,342,045
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 4,443,761
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 5,422,586
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 3,616,227
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (13,678)
◆ 2024	\$ 20,165,452	\$ 63,122
◆ 2025	\$ 24,228,135	\$ 138,541
◆ 2026	\$ 42,288,641	\$ 208,524
◆ 2027	\$ (2,258,546)	\$ (14,421)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Lancaster
◆ Current Proportionate Share		1.030659%
◆ Prior Proportionate Share		1.027979%
Beginning Net Pension Liability	\$ 842,013,303	\$ 8,655,724
Ending Net Pension Liability	\$ 1,028,277,936	\$ 10,598,036
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	715,212
◆ Changes of Assumptions	54,491,085	561,617
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	219,832
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,496,661
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 324,327
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	317,759
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 642,086
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,145,630
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	27,465
Total Employer Pension Expense	\$ 111,155,119	\$ 1,173,095
Covered Payroll:	\$ 341,237,099	\$ 3,135,422
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 10,598,036
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 12,932,459
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 8,624,430
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 108,541
◆ 2024	\$ 20,165,452	\$ 216,695
◆ 2025	\$ 24,228,135	\$ 170,863
◆ 2026	\$ 42,288,641	\$ 379,431
◆ 2027	\$ (2,258,546)	\$ (20,955)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Lancaster Housing Authority
◆ Current Proportionate Share		0.021180%
◆ Prior Proportionate Share		0.021223%
Beginning Net Pension Liability	\$ 842,013,303	\$ 178,704
Ending Net Pension Liability	\$ 1,028,277,936	\$ 217,785
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	14,697
◆ Changes of Assumptions	54,491,085	11,541
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	167
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 26,405
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 6,665
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	29,281
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 35,946
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 23,542
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	1,059
Total Employer Pension Expense	\$ 111,155,119	\$ 24,601
Covered Payroll:	\$ 341,237,099	\$ 55,810
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 217,785
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 265,757
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 177,228
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (6,575)
◆ 2024	\$ 20,165,452	\$ (3,892)
◆ 2025	\$ 24,228,135	\$ (2,240)
◆ 2026	\$ 42,288,641	\$ 3,681
◆ 2027	\$ (2,258,546)	\$ (515)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Lancaster Sewer
◆ Current Proportionate Share		0.003556%
◆ Prior Proportionate Share		0.003757%
Beginning Net Pension Liability	\$ 842,013,303	\$ 31,632
Ending Net Pension Liability	\$ 1,028,277,936	\$ 36,561
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,467
◆ Changes of Assumptions	54,491,085	1,937
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	7,918
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 12,322
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 1,119
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	2,677
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 3,796
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,952
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	4,699
Total Employer Pension Expense	\$ 111,155,119	\$ 8,651
Covered Payroll:	\$ 341,237,099	\$ 46,800
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 36,561
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 44,614
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 29,752
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 4,392
◆ 2024	\$ 20,165,452	\$ 1,570
◆ 2025	\$ 24,228,135	\$ 1,055
◆ 2026	\$ 42,288,641	\$ 1,767
◆ 2027	\$ (2,258,546)	\$ (258)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Leicester
◆ Current Proportionate Share		2.112122%
◆ Prior Proportionate Share		2.104685%
Beginning Net Pension Liability	\$ 842,013,303	\$ 17,721,724
Ending Net Pension Liability	\$ 1,028,277,936	\$ 21,718,485
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,465,678
◆ Changes of Assumptions	54,491,085	1,150,918
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	265,554
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,882,150
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 664,641
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	352,010
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,016,651
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,347,732
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	5,049
Total Employer Pension Expense	\$ 111,155,119	\$ 2,352,781
Covered Payroll:	\$ 341,237,099	\$ 6,387,084
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 21,718,485
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 26,502,403
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 17,673,987
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 197,152
◆ 2024	\$ 20,165,452	\$ 436,698
◆ 2025	\$ 24,228,135	\$ 434,888
◆ 2026	\$ 42,288,641	\$ 838,007
◆ 2027	\$ (2,258,546)	\$ (41,246)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Leicester Housing Authority
◆ Current Proportionate Share		0.081131%
◆ Prior Proportionate Share		0.081232%
Beginning Net Pension Liability	\$ 842,013,303	\$ 683,981
Ending Net Pension Liability	\$ 1,028,277,936	\$ 834,251
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	56,300
◆ Changes of Assumptions	54,491,085	44,209
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	43,991
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 144,500
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 25,530
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	748
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 26,278
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 90,181
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	13,490
Total Employer Pension Expense	\$ 111,155,119	\$ 103,671
Covered Payroll:	\$ 341,237,099	\$ 227,636
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 834,251
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,018,011
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 678,894
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 25,415
◆ 2024	\$ 20,165,452	\$ 32,295
◆ 2025	\$ 24,228,135	\$ 24,642
◆ 2026	\$ 42,288,641	\$ 37,790
◆ 2027	\$ (2,258,546)	\$ (1,920)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Leicester Water District
◆ Current Proportionate Share		0.071947%
◆ Prior Proportionate Share		0.075779%
Beginning Net Pension Liability	\$ 842,013,303	\$ 638,069
Ending Net Pension Liability	\$ 1,028,277,936	\$ 739,820
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	49,927
◆ Changes of Assumptions	54,491,085	39,205
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	41,464
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 130,596
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 22,640
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	76,348
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 98,988
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 79,973
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(27,195)
Total Employer Pension Expense	\$ 111,155,119	\$ 52,778
Covered Payroll:	\$ 341,237,099	\$ 468,584
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 739,820
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 902,779
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 602,048
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (5,105)
◆ 2024	\$ 20,165,452	\$ 4,522
◆ 2025	\$ 24,228,135	\$ 16,560
◆ 2026	\$ 42,288,641	\$ 20,586
◆ 2027	\$ (2,258,546)	\$ (4,955)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Lunenburg
◆ Current Proportionate Share		2.077432%
◆ Prior Proportionate Share		2.070507%
Beginning Net Pension Liability	\$ 842,013,303	\$ 17,433,946
Ending Net Pension Liability	\$ 1,028,277,936	\$ 21,361,778
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,441,606
◆ Changes of Assumptions	54,491,085	1,132,015
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	171,490
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,745,111
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 653,725
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	951,645
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,605,370
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,309,172
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(158,202)
Total Employer Pension Expense	\$ 111,155,119	\$ 2,150,970
Covered Payroll:	\$ 341,237,099	\$ 7,853,347
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 21,361,778
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 26,067,125
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 17,383,707
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (16,698)
◆ 2024	\$ 20,165,452	\$ 222,055
◆ 2025	\$ 24,228,135	\$ 267,550
◆ 2026	\$ 42,288,641	\$ 707,743
◆ 2027	\$ (2,258,546)	\$ (40,909)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Lunenburg Housing Authority
◆ Current Proportionate Share		0.003148%
◆ Prior Proportionate Share		0.003208%
Beginning Net Pension Liability	\$ 842,013,303	\$ 27,009
Ending Net Pension Liability	\$ 1,028,277,936	\$ 32,375
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,185
◆ Changes of Assumptions	54,491,085	1,716
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	3,936
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 7,837
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 991
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	946
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,937
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,500
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(4,308)
Total Employer Pension Expense	\$ 111,155,119	\$ (808)
Covered Payroll:	\$ 341,237,099	\$ 11,264
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 32,375
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 39,506
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 26,346
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 1,209
◆ 2024	\$ 20,165,452	\$ 1,641
◆ 2025	\$ 24,228,135	\$ 1,370
◆ 2026	\$ 42,288,641	\$ 1,803
◆ 2027	\$ (2,258,546)	\$ (123)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Lunenburg Water District
◆ Current Proportionate Share		0.093346%
◆ Prior Proportionate Share		0.090272%
Beginning Net Pension Liability	\$ 842,013,303	\$ 760,101
Ending Net Pension Liability	\$ 1,028,277,936	\$ 959,856
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	64,776
◆ Changes of Assumptions	54,491,085	50,865
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	54,745
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 170,386
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 29,374
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	49,918
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 79,292
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 103,759
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,838)
Total Employer Pension Expense	\$ 111,155,119	\$ 101,921
Covered Payroll:	\$ 341,237,099	\$ 373,362
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 959,856
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,171,283
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 781,108
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 15,202
◆ 2024	\$ 20,165,452	\$ 22,305
◆ 2025	\$ 24,228,135	\$ 18,068
◆ 2026	\$ 42,288,641	\$ 34,958
◆ 2027	\$ (2,258,546)	\$ 561
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Mendon
◆ Current Proportionate Share		1.119166%
◆ Prior Proportionate Share		1.120460%
Beginning Net Pension Liability	\$ 842,013,303	\$ 9,434,419
Ending Net Pension Liability	\$ 1,028,277,936	\$ 11,508,140
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	776,630
◆ Changes of Assumptions	54,491,085	609,846
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	442,210
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,828,686
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 352,179
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	33,654
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 385,833
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,244,011
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	204,334
Total Employer Pension Expense	\$ 111,155,119	\$ 1,448,345
Covered Payroll:	\$ 341,237,099	\$ 3,066,522
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 11,508,140
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 14,043,032
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 9,365,051
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 229,561
◆ 2024	\$ 20,165,452	\$ 359,928
◆ 2025	\$ 24,228,135	\$ 348,616
◆ 2026	\$ 42,288,641	\$ 531,146
◆ 2027	\$ (2,258,546)	\$ (26,398)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Mendon-Upton Regional
◆ Current Proportionate Share		1.246699%
◆ Prior Proportionate Share		1.250808%
Beginning Net Pension Liability	\$ 842,013,303	\$ 10,531,968
Ending Net Pension Liability	\$ 1,028,277,936	\$ 12,819,530
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	865,130
◆ Changes of Assumptions	54,491,085	679,340
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	9,049
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,553,519
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 392,310
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	187,596
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 579,906
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,385,770
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(25,591)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,360,179
Covered Payroll:	\$ 341,237,099	\$ 4,775,640
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 12,819,530
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 15,643,281
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 10,432,229
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 45,531
◆ 2024	\$ 20,165,452	\$ 206,384
◆ 2025	\$ 24,228,135	\$ 255,848
◆ 2026	\$ 42,288,641	\$ 497,573
◆ 2027	\$ (2,258,546)	\$ (31,723)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Millbury
◆ Current Proportionate Share		2.987377%
◆ Prior Proportionate Share		2.975708%
Beginning Net Pension Liability	\$ 842,013,303	\$ 25,055,853
Ending Net Pension Liability	\$ 1,028,277,936	\$ 30,718,536
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,073,050
◆ Changes of Assumptions	54,491,085	1,627,854
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	136,109
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 3,837,013
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 940,066
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	585,610
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,525,676
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,320,622
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(193,618)
Total Employer Pension Expense	\$ 111,155,119	\$ 3,127,004
Covered Payroll:	\$ 341,237,099	\$ 8,485,566
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 30,718,536
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 37,484,890
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 24,998,014
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 17,302
◆ 2024	\$ 20,165,452	\$ 414,987
◆ 2025	\$ 24,228,135	\$ 696,267
◆ 2026	\$ 42,288,641	\$ 1,240,119
◆ 2027	\$ (2,258,546)	\$ (57,338)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Millbury Housing Authority
◆ Current Proportionate Share		0.157134%
◆ Prior Proportionate Share		0.156054%
Beginning Net Pension Liability	\$ 842,013,303	\$ 1,313,999
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,615,779
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	109,041
◆ Changes of Assumptions	54,491,085	85,624
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	10,855
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 205,520
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 49,447
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	30,351
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 79,798
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 174,663
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(9,168)
Total Employer Pension Expense	\$ 111,155,119	\$ 165,495
Covered Payroll:	\$ 341,237,099	\$ 455,025
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,615,779
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,971,685
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 1,314,882
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 4,150
◆ 2024	\$ 20,165,452	\$ 24,694
◆ 2025	\$ 24,228,135	\$ 35,137
◆ 2026	\$ 42,288,641	\$ 64,352
◆ 2027	\$ (2,258,546)	\$ (2,611)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Millville
◆ Current Proportionate Share		0.277626%
◆ Prior Proportionate Share		0.286486%
Beginning Net Pension Liability	\$ 842,013,303	\$ 2,412,254
Ending Net Pension Liability	\$ 1,028,277,936	\$ 2,854,768
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	192,655
◆ Changes of Assumptions	54,491,085	151,281
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	81,431
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 425,367
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 87,363
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	150,414
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 237,777
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 308,596
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	22,671
Total Employer Pension Expense	\$ 111,155,119	\$ 331,267
Covered Payroll:	\$ 341,237,099	\$ 651,000
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 2,854,768
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 3,483,586
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 2,323,142
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 2,418
◆ 2024	\$ 20,165,452	\$ 49,073
◆ 2025	\$ 24,228,135	\$ 42,207
◆ 2026	\$ 42,288,641	\$ 107,861
◆ 2027	\$ (2,258,546)	\$ (13,969)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Narragansett Regional
◆ Current Proportionate Share		0.759682%
◆ Prior Proportionate Share		0.764147%
Beginning Net Pension Liability	\$ 842,013,303	\$ 6,434,221
Ending Net Pension Liability	\$ 1,028,277,936	\$ 7,811,647
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	527,171
◆ Changes of Assumptions	54,491,085	413,959
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	638,113
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,579,243
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 239,056
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	61,536
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 300,592
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 844,426
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	119,218
Total Employer Pension Expense	\$ 111,155,119	\$ 963,644
Covered Payroll:	\$ 341,237,099	\$ 3,027,130
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 7,811,647
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 9,532,314
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 6,356,933
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 210,551
◆ 2024	\$ 20,165,452	\$ 305,441
◆ 2025	\$ 24,228,135	\$ 347,629
◆ 2026	\$ 42,288,641	\$ 436,063
◆ 2027	\$ (2,258,546)	\$ (21,033)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Nashoba Regional
◆ Current Proportionate Share		1.635254%
◆ Prior Proportionate Share		1.637621%
Beginning Net Pension Liability	\$ 842,013,303	\$ 13,788,983
Ending Net Pension Liability	\$ 1,028,277,936	\$ 16,814,961
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,134,763
◆ Changes of Assumptions	54,491,085	891,068
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,025,831
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 514,581
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	565,991
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,080,572
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,817,669
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(7,806)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,809,863
Covered Payroll:	\$ 341,237,099	\$ 6,648,761
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 16,814,961
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 20,518,783
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 13,683,616
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (68,523)
◆ 2024	\$ 20,165,452	\$ 155,399
◆ 2025	\$ 24,228,135	\$ 283,688
◆ 2026	\$ 42,288,641	\$ 613,683
◆ 2027	\$ (2,258,546)	\$ (38,988)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Nashoba Valley Dispatch
◆ Current Proportionate Share		0.075006%
◆ Prior Proportionate Share		0.075963%
Beginning Net Pension Liability	\$ 842,013,303	\$ 639,618
Ending Net Pension Liability	\$ 1,028,277,936	\$ 771,271
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	52,049
◆ Changes of Assumptions	54,491,085	40,872
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	192,702
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 285,623
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 23,603
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	9,420
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 33,023
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 83,373
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	103,878
Total Employer Pension Expense	\$ 111,155,119	\$ 187,251
Covered Payroll:	\$ 341,237,099	\$ 870,168
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 771,271
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 941,159
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 627,642
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 103,510
◆ 2024	\$ 20,165,452	\$ 71,747
◆ 2025	\$ 24,228,135	\$ 35,715
◆ 2026	\$ 42,288,641	\$ 44,151
◆ 2027	\$ (2,258,546)	\$ (2,523)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	New Braintree
◆ Current Proportionate Share		0.089977%
◆ Prior Proportionate Share		0.089056%
Beginning Net Pension Liability	\$ 842,013,303	\$ 749,865
Ending Net Pension Liability	\$ 1,028,277,936	\$ 925,217
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	62,439
◆ Changes of Assumptions	54,491,085	49,030
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	22,052
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 133,521
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 28,314
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	37,947
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 66,261
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 100,014
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(40,547)
Total Employer Pension Expense	\$ 111,155,119	\$ 59,467
Covered Payroll:	\$ 341,237,099	\$ 218,152
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 925,217
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,129,014
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 752,920
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 6,728
◆ 2024	\$ 20,165,452	\$ 15,501
◆ 2025	\$ 24,228,135	\$ 13,966
◆ 2026	\$ 42,288,641	\$ 32,297
◆ 2027	\$ (2,258,546)	\$ (1,232)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Northboro
◆ Current Proportionate Share		3.459268%
◆ Prior Proportionate Share		3.446106%
Beginning Net Pension Liability	\$ 842,013,303	\$ 29,016,674
Ending Net Pension Liability	\$ 1,028,277,936	\$ 35,570,892
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,400,512
◆ Changes of Assumptions	54,491,085	1,884,993
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	459,430
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 4,744,935
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 1,088,560
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	330,864
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,419,424
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,845,154
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	171,141
Total Employer Pension Expense	\$ 111,155,119	\$ 4,016,295
Covered Payroll:	\$ 341,237,099	\$ 11,059,672
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 35,570,892
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 43,406,072
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 28,946,747
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 404,675
◆ 2024	\$ 20,165,452	\$ 771,511
◆ 2025	\$ 24,228,135	\$ 794,901
◆ 2026	\$ 42,288,641	\$ 1,421,123
◆ 2027	\$ (2,258,546)	\$ (66,699)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Northboro Housing Authority
◆ Current Proportionate Share		0.110144%
◆ Prior Proportionate Share		0.109817%
Beginning Net Pension Liability	\$ 842,013,303	\$ 924,674
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,132,582
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	76,433
◆ Changes of Assumptions	54,491,085	60,018
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	4,128
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 140,579
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 34,660
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	13,289
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 47,949
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 122,430
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	3,843
Total Employer Pension Expense	\$ 111,155,119	\$ 126,273
Covered Payroll:	\$ 341,237,099	\$ 288,758
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,132,582
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,382,055
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 921,668
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 5,939
◆ 2024	\$ 20,165,452	\$ 19,584
◆ 2025	\$ 24,228,135	\$ 24,470
◆ 2026	\$ 42,288,641	\$ 44,842
◆ 2027	\$ (2,258,546)	\$ (2,205)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Northboro- Southboro Regional
◆ Current Proportionate Share		0.697510%
◆ Prior Proportionate Share		0.701794%
Beginning Net Pension Liability	\$ 842,013,303	\$ 5,909,200
Ending Net Pension Liability	\$ 1,028,277,936	\$ 7,172,342
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	484,028
◆ Changes of Assumptions	54,491,085	380,081
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	363,102
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,227,211
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 219,492
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	53,084
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 272,576
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 775,318
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	161,397
Total Employer Pension Expense	\$ 111,155,119	\$ 936,715
Covered Payroll:	\$ 341,237,099	\$ 2,589,568
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 7,172,342
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 8,752,190
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 5,836,682
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 144,922
◆ 2024	\$ 20,165,452	\$ 233,089
◆ 2025	\$ 24,228,135	\$ 245,851
◆ 2026	\$ 42,288,641	\$ 350,246
◆ 2027	\$ (2,258,546)	\$ (19,473)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	North Brookfield
◆ Current Proportionate Share		0.892330%
◆ Prior Proportionate Share		0.894649%
Beginning Net Pension Liability	\$ 842,013,303	\$ 7,533,067
Ending Net Pension Liability	\$ 1,028,277,936	\$ 9,175,634
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	619,220
◆ Changes of Assumptions	54,491,085	486,240
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	517,334
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,622,794
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 280,798
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	30,684
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 311,482
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 991,871
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	156,958
Total Employer Pension Expense	\$ 111,155,119	\$ 1,148,829
Covered Payroll:	\$ 341,237,099	\$ 2,704,994
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 9,175,634
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 11,196,746
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 7,466,913
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 263,939
◆ 2024	\$ 20,165,452	\$ 351,492
◆ 2025	\$ 24,228,135	\$ 288,181
◆ 2026	\$ 42,288,641	\$ 429,867
◆ 2027	\$ (2,258,546)	\$ (22,167)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	North Brookfield Housing Authority
◆ Current Proportionate Share		0.029763%
◆ Prior Proportionate Share		0.029611%
Beginning Net Pension Liability	\$ 842,013,303	\$ 249,325
Ending Net Pension Liability	\$ 1,028,277,936	\$ 306,045
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	20,654
◆ Changes of Assumptions	54,491,085	16,218
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	18,536
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 55,408
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 9,366
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	15,856
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 25,222
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 33,083
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(2,013)
Total Employer Pension Expense	\$ 111,155,119	\$ 31,070
Covered Payroll:	\$ 341,237,099	\$ 58,237
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 306,045
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 373,457
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 249,052
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (219)
◆ 2024	\$ 20,165,452	\$ 3,686
◆ 2025	\$ 24,228,135	\$ 11,836
◆ 2026	\$ 42,288,641	\$ 15,424
◆ 2027	\$ (2,258,546)	\$ (541)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Oakham
◆ Current Proportionate Share		0.104953%
◆ Prior Proportionate Share		0.104250%
Beginning Net Pension Liability	\$ 842,013,303	\$ 877,795
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,079,213
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	72,831
◆ Changes of Assumptions	54,491,085	57,190
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	9,893
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 139,914
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 33,027
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	73,948
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 106,975
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 116,661
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(37,705)
Total Employer Pension Expense	\$ 111,155,119	\$ 78,956
Covered Payroll:	\$ 341,237,099	\$ 402,042
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,079,213
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,316,931
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 878,238
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (8,332)
◆ 2024	\$ 20,165,452	\$ 4,495
◆ 2025	\$ 24,228,135	\$ 7,088
◆ 2026	\$ 42,288,641	\$ 31,451
◆ 2027	\$ (2,258,546)	\$ (1,763)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Oxford
◆ Current Proportionate Share		3.343608%
◆ Prior Proportionate Share		3.348789%
Beginning Net Pension Liability	\$ 842,013,303	\$ 28,197,247
Ending Net Pension Liability	\$ 1,028,277,936	\$ 34,381,578
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,320,251
◆ Changes of Assumptions	54,491,085	1,821,968
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	624,591
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 4,766,810
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 1,052,164
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	493,797
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,545,961
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,716,591
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(343,426)
Total Employer Pension Expense	\$ 111,155,119	\$ 3,373,165
Covered Payroll:	\$ 341,237,099	\$ 10,139,165
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 34,381,578
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 41,954,789
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 27,978,911
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 227,835
◆ 2024	\$ 20,165,452	\$ 609,889
◆ 2025	\$ 24,228,135	\$ 950,329
◆ 2026	\$ 42,288,641	\$ 1,512,813
◆ 2027	\$ (2,258,546)	\$ (80,017)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Oxford Housing Authority
◆ Current Proportionate Share		0.116658%
◆ Prior Proportionate Share		0.116287%
Beginning Net Pension Liability	\$ 842,013,303	\$ 979,149
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,199,570
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	80,953
◆ Changes of Assumptions	54,491,085	63,568
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	57,658
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 202,179
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 36,710
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	48,500
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 85,210
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 129,672
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	14,549
Total Employer Pension Expense	\$ 111,155,119	\$ 144,221
Covered Payroll:	\$ 341,237,099	\$ 349,291
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,199,570
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,463,799
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 976,182
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 26,861
◆ 2024	\$ 20,165,452	\$ 35,783
◆ 2025	\$ 24,228,135	\$ 15,976
◆ 2026	\$ 42,288,641	\$ 40,659
◆ 2027	\$ (2,258,546)	\$ (2,310)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Oxford-Rochdale Sewer District
◆ Current Proportionate Share		0.057348%
◆ Prior Proportionate Share		0.057009%
Beginning Net Pension Liability	\$ 842,013,303	\$ 480,021
Ending Net Pension Liability	\$ 1,028,277,936	\$ 589,693
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	39,796
◆ Changes of Assumptions	54,491,085	31,249
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	16,820
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 87,865
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 18,046
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 18,046
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 63,745
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	23,441
Total Employer Pension Expense	\$ 111,155,119	\$ 87,186
Covered Payroll:	\$ 341,237,099	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 589,693
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 719,584
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 479,878
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 11,623
◆ 2024	\$ 20,165,452	\$ 17,385
◆ 2025	\$ 24,228,135	\$ 16,137
◆ 2026	\$ 42,288,641	\$ 25,675
◆ 2027	\$ (2,258,546)	\$ (1,001)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Paxton
◆ Current Proportionate Share		1.229414%
◆ Prior Proportionate Share		1.236297%
Beginning Net Pension Liability	\$ 842,013,303	\$ 10,409,788
Ending Net Pension Liability	\$ 1,028,277,936	\$ 12,641,797
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	853,135
◆ Changes of Assumptions	54,491,085	669,921
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	214,117
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,737,173
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 386,871
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	165,524
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 552,395
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,366,557
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	259,201
Total Employer Pension Expense	\$ 111,155,119	\$ 1,625,758
Covered Payroll:	\$ 341,237,099	\$ 3,696,886
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 12,641,797
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 15,426,398
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 10,287,594
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 160,816
◆ 2024	\$ 20,165,452	\$ 300,530
◆ 2025	\$ 24,228,135	\$ 258,487
◆ 2026	\$ 42,288,641	\$ 498,687
◆ 2027	\$ (2,258,546)	\$ (33,742)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Petersham
◆ Current Proportionate Share		0.251646%
◆ Prior Proportionate Share		0.250846%
Beginning Net Pension Liability	\$ 842,013,303	\$ 2,112,155
Ending Net Pension Liability	\$ 1,028,277,936	\$ 2,587,623
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	174,627
◆ Changes of Assumptions	54,491,085	137,125
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	5,941
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 317,693
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 79,188
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	86,309
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 165,497
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 279,718
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(37,686)
Total Employer Pension Expense	\$ 111,155,119	\$ 242,032
Covered Payroll:	\$ 341,237,099	\$ 576,818
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 2,587,623
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 3,157,598
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 2,105,746
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (11,605)
◆ 2024	\$ 20,165,452	\$ 23,538
◆ 2025	\$ 24,228,135	\$ 47,631
◆ 2026	\$ 42,288,641	\$ 97,619
◆ 2027	\$ (2,258,546)	\$ (4,987)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Phillipston
◆ Current Proportionate Share		0.201807%
◆ Prior Proportionate Share		0.203149%
Beginning Net Pension Liability	\$ 842,013,303	\$ 1,710,544
Ending Net Pension Liability	\$ 1,028,277,936	\$ 2,075,137
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	140,041
◆ Changes of Assumptions	54,491,085	109,967
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	8,001
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 258,009
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 63,505
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	130,846
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 194,351
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 224,319
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(35,977)
Total Employer Pension Expense	\$ 111,155,119	\$ 188,342
Covered Payroll:	\$ 341,237,099	\$ 618,443
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 2,075,137
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 2,532,226
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 1,688,697
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (16,607)
◆ 2024	\$ 20,165,452	\$ 9,230
◆ 2025	\$ 24,228,135	\$ 14,708
◆ 2026	\$ 42,288,641	\$ 62,051
◆ 2027	\$ (2,258,546)	\$ (5,724)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Princeton
◆ Current Proportionate Share		0.643725%
◆ Prior Proportionate Share		0.638271%
Beginning Net Pension Liability	\$ 842,013,303	\$ 5,374,329
Ending Net Pension Liability	\$ 1,028,277,936	\$ 6,619,286
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	446,705
◆ Changes of Assumptions	54,491,085	350,773
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	268,694
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,066,172
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 202,567
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	97,432
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 299,999
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 715,534
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(29,375)
Total Employer Pension Expense	\$ 111,155,119	\$ 686,159
Covered Payroll:	\$ 341,237,099	\$ 1,869,526
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 6,619,286
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 8,077,312
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 5,386,618
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 79,912
◆ 2024	\$ 20,165,452	\$ 157,159
◆ 2025	\$ 24,228,135	\$ 223,529
◆ 2026	\$ 42,288,641	\$ 315,376
◆ 2027	\$ (2,258,546)	\$ (9,803)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Quabbin Regional
◆ Current Proportionate Share		1.670421%
◆ Prior Proportionate Share		1.663404%
Beginning Net Pension Liability	\$ 842,013,303	\$ 14,006,083
Ending Net Pension Liability	\$ 1,028,277,936	\$ 17,176,574
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,159,166
◆ Changes of Assumptions	54,491,085	910,231
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	103,207
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,172,604
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 525,647
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	316,607
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 842,254
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,856,759
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(141,157)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,715,602
Covered Payroll:	\$ 341,237,099	\$ 5,526,266
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 17,176,574
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 20,960,049
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 13,977,888
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 79,883
◆ 2024	\$ 20,165,452	\$ 257,148
◆ 2025	\$ 24,228,135	\$ 354,452
◆ 2026	\$ 42,288,641	\$ 670,502
◆ 2027	\$ (2,258,546)	\$ (31,635)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Quaboag Regional
◆ Current Proportionate Share		0.577635%
◆ Prior Proportionate Share		0.589417%
Beginning Net Pension Liability	\$ 842,013,303	\$ 4,962,970
Ending Net Pension Liability	\$ 1,028,277,936	\$ 5,939,689
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	400,842
◆ Changes of Assumptions	54,491,085	314,759
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	14,106
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 729,707
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 181,770
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	141,193
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 322,963
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 642,070
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(37,126)
Total Employer Pension Expense	\$ 111,155,119	\$ 604,944
Covered Payroll:	\$ 341,237,099	\$ 2,727,474
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 5,939,689
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 7,248,021
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 4,833,578
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 17,170
◆ 2024	\$ 20,165,452	\$ 88,659
◆ 2025	\$ 24,228,135	\$ 106,892
◆ 2026	\$ 42,288,641	\$ 217,301
◆ 2027	\$ (2,258,546)	\$ (23,278)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Royalston
◆ Current Proportionate Share		0.091338%
◆ Prior Proportionate Share		0.089093%
Beginning Net Pension Liability	\$ 842,013,303	\$ 750,172
Ending Net Pension Liability	\$ 1,028,277,936	\$ 939,204
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	63,382
◆ Changes of Assumptions	54,491,085	49,771
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	28,302
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 141,455
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 28,742
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	35,870
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 64,612
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 101,526
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(12,008)
Total Employer Pension Expense	\$ 111,155,119	\$ 89,518
Covered Payroll:	\$ 341,237,099	\$ 156,599
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 939,204
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,146,082
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 764,302
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 4,128
◆ 2024	\$ 20,165,452	\$ 15,019
◆ 2025	\$ 24,228,135	\$ 20,954
◆ 2026	\$ 42,288,641	\$ 36,854
◆ 2027	\$ (2,258,546)	\$ (112)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Rutland
◆ Current Proportionate Share		1.045744%
◆ Prior Proportionate Share		1.049371%
Beginning Net Pension Liability	\$ 842,013,303	\$ 8,835,840
Ending Net Pension Liability	\$ 1,028,277,936	\$ 10,753,157
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	725,680
◆ Changes of Assumptions	54,491,085	569,837
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	223,564
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,519,081
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 329,074
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	37,256
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 366,330
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,162,398
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	179,972
Total Employer Pension Expense	\$ 111,155,119	\$ 1,342,370
Covered Payroll:	\$ 341,237,099	\$ 4,744,229
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 10,753,157
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 13,121,749
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 8,750,664
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 139,024
◆ 2024	\$ 20,165,452	\$ 270,091
◆ 2025	\$ 24,228,135	\$ 297,722
◆ 2026	\$ 42,288,641	\$ 472,683
◆ 2027	\$ (2,258,546)	\$ (26,769)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Southboro
◆ Current Proportionate Share		3.146388%
◆ Prior Proportionate Share		3.139476%
Beginning Net Pension Liability	\$ 842,013,303	\$ 26,434,803
Ending Net Pension Liability	\$ 1,028,277,936	\$ 32,353,613
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,183,393
◆ Changes of Assumptions	54,491,085	1,714,501
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	163,382
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 4,061,276
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 990,103
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	511,190
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,501,293
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,497,371
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(35,047)
Total Employer Pension Expense	\$ 111,155,119	\$ 3,462,324
Covered Payroll:	\$ 341,237,099	\$ 10,715,927
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 32,353,613
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 39,480,124
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 26,328,601
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 182,323
◆ 2024	\$ 20,165,452	\$ 552,375
◆ 2025	\$ 24,228,135	\$ 646,283
◆ 2026	\$ 42,288,641	\$ 1,244,061
◆ 2027	\$ (2,258,546)	\$ (65,059)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Southboro Housing Authority
◆ Current Proportionate Share		0.040752%
◆ Prior Proportionate Share		0.041683%
Beginning Net Pension Liability	\$ 842,013,303	\$ 350,974
Ending Net Pension Liability	\$ 1,028,277,936	\$ 419,041
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	28,279
◆ Changes of Assumptions	54,491,085	22,206
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	100,442
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 150,927
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 12,824
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	15,700
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 28,524
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 45,298
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	20,652
Total Employer Pension Expense	\$ 111,155,119	\$ 65,950
Covered Payroll:	\$ 341,237,099	\$ 61,504
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 419,041
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 511,343
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 341,006
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 24,321
◆ 2024	\$ 20,165,452	\$ 31,056
◆ 2025	\$ 24,228,135	\$ 33,824
◆ 2026	\$ 42,288,641	\$ 34,930
◆ 2027	\$ (2,258,546)	\$ (1,728)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Spencer
◆ Current Proportionate Share		1.479057%
◆ Prior Proportionate Share		1.477885%
Beginning Net Pension Liability	\$ 842,013,303	\$ 12,443,989
Ending Net Pension Liability	\$ 1,028,277,936	\$ 15,208,819
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,026,372
◆ Changes of Assumptions	54,491,085	805,954
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	175,577
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,007,903
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 465,429
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	159,175
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 624,604
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,644,048
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	45,798
Total Employer Pension Expense	\$ 111,155,119	\$ 1,689,846
Covered Payroll:	\$ 341,237,099	\$ 3,955,679
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 15,208,819
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 18,558,857
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 12,376,575
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 83,597
◆ 2024	\$ 20,165,452	\$ 273,937
◆ 2025	\$ 24,228,135	\$ 404,113
◆ 2026	\$ 42,288,641	\$ 654,038
◆ 2027	\$ (2,258,546)	\$ (32,386)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Spencer-East Brookfield Regional
◆ Current Proportionate Share		0.962607%
◆ Prior Proportionate Share		0.966733%
Beginning Net Pension Liability	\$ 842,013,303	\$ 8,140,017
Ending Net Pension Liability	\$ 1,028,277,936	\$ 9,898,280
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	667,988
◆ Changes of Assumptions	54,491,085	524,535
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	1,277
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,193,800
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 302,913
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	295,845
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 598,758
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,069,987
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(102,909)
Total Employer Pension Expense	\$ 111,155,119	\$ 967,078
Covered Payroll:	\$ 341,237,099	\$ 3,291,529
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 9,898,280
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 12,078,569
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 8,054,985
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (29,734)
◆ 2024	\$ 20,165,452	\$ 95,295
◆ 2025	\$ 24,228,135	\$ 183,353
◆ 2026	\$ 42,288,641	\$ 371,449
◆ 2027	\$ (2,258,546)	\$ (25,321)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Spencer Housing Authority
◆ Current Proportionate Share		0.083696%
◆ Prior Proportionate Share		0.082578%
Beginning Net Pension Liability	\$ 842,013,303	\$ 695,322
Ending Net Pension Liability	\$ 1,028,277,936	\$ 860,631
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	58,080
◆ Changes of Assumptions	54,491,085	45,607
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	59,295
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 162,982
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 26,338
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 26,338
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 93,033
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	14,549
Total Employer Pension Expense	\$ 111,155,119	\$ 107,582
Covered Payroll:	\$ 341,237,099	\$ 310,919
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 860,631
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,050,202
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 700,361
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 26,758
◆ 2024	\$ 20,165,452	\$ 34,802
◆ 2025	\$ 24,228,135	\$ 32,358
◆ 2026	\$ 42,288,641	\$ 43,646
◆ 2027	\$ (2,258,546)	\$ (920)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Sterling
◆ Current Proportionate Share		1.696441%
◆ Prior Proportionate Share		1.699069%
Beginning Net Pension Liability	\$ 842,013,303	\$ 14,306,387
Ending Net Pension Liability	\$ 1,028,277,936	\$ 17,444,124
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,177,222
◆ Changes of Assumptions	54,491,085	924,409
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	292,212
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,393,843
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 533,835
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	510,104
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,043,939
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,885,680
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	64,261
Total Employer Pension Expense	\$ 111,155,119	\$ 1,949,941
Covered Payroll:	\$ 341,237,099	\$ 5,487,627
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 17,444,124
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 21,286,531
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 14,195,613
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 152,369
◆ 2024	\$ 20,165,452	\$ 338,825
◆ 2025	\$ 24,228,135	\$ 276,040
◆ 2026	\$ 42,288,641	\$ 623,266
◆ 2027	\$ (2,258,546)	\$ (40,596)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Sterling Housing Authority
◆ Current Proportionate Share		0.015360%
◆ Prior Proportionate Share		0.015481%
Beginning Net Pension Liability	\$ 842,013,303	\$ 130,356
Ending Net Pension Liability	\$ 1,028,277,936	\$ 157,942
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	10,659
◆ Changes of Assumptions	54,491,085	8,370
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	37,677
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 56,706
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 4,833
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	19,101
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 23,934
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 17,073
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	739
Total Employer Pension Expense	\$ 111,155,119	\$ 17,812
Covered Payroll:	\$ 341,237,099	\$ 58,528
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 157,942
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 192,732
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 128,529
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 1,311
◆ 2024	\$ 20,165,452	\$ 5,008
◆ 2025	\$ 24,228,135	\$ 13,667
◆ 2026	\$ 42,288,641	\$ 13,239
◆ 2027	\$ (2,258,546)	\$ (453)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Sturbridge
◆ Current Proportionate Share		2.245354%
◆ Prior Proportionate Share		2.264910%
Beginning Net Pension Liability	\$ 842,013,303	\$ 19,070,840
Ending Net Pension Liability	\$ 1,028,277,936	\$ 23,088,479
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,558,133
◆ Changes of Assumptions	54,491,085	1,223,518
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	190,520
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,972,171
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 706,567
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	352,651
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,059,218
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,495,826
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	41,552
Total Employer Pension Expense	\$ 111,155,119	\$ 2,537,378
Covered Payroll:	\$ 341,237,099	\$ 8,964,171
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 23,088,479
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 28,174,165
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 18,788,856
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 88,281
◆ 2024	\$ 20,165,452	\$ 396,040
◆ 2025	\$ 24,228,135	\$ 542,377
◆ 2026	\$ 42,288,641	\$ 953,952
◆ 2027	\$ (2,258,546)	\$ (67,697)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Sutton
◆ Current Proportionate Share		1.923968%
◆ Prior Proportionate Share		1.919406%
Beginning Net Pension Liability	\$ 842,013,303	\$ 16,161,656
Ending Net Pension Liability	\$ 1,028,277,936	\$ 19,783,737
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,335,111
◆ Changes of Assumptions	54,491,085	1,048,391
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	151,806
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,535,308
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 605,433
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	203,693
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 809,126
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,138,589
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	38,186
Total Employer Pension Expense	\$ 111,155,119	\$ 2,176,775
Covered Payroll:	\$ 341,237,099	\$ 7,529,401
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 19,783,737
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 24,141,489
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 16,099,535
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 166,947
◆ 2024	\$ 20,165,452	\$ 388,434
◆ 2025	\$ 24,228,135	\$ 428,185
◆ 2026	\$ 42,288,641	\$ 782,112
◆ 2027	\$ (2,258,546)	\$ (39,496)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Tantasqua Regional
◆ Current Proportionate Share		1.128098%
◆ Prior Proportionate Share		1.107841%
Beginning Net Pension Liability	\$ 842,013,303	\$ 9,328,169
Ending Net Pension Liability	\$ 1,028,277,936	\$ 11,599,979
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	782,828
◆ Changes of Assumptions	54,491,085	614,713
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	313,177
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,710,718
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 354,989
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	433,537
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 788,526
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,253,938
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	6,672
Total Employer Pension Expense	\$ 111,155,119	\$ 1,260,610
Covered Payroll:	\$ 341,237,099	\$ 4,757,757
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 11,599,979
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 14,155,100
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 9,439,787
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 77,329
◆ 2024	\$ 20,165,452	\$ 213,725
◆ 2025	\$ 24,228,135	\$ 210,417
◆ 2026	\$ 42,288,641	\$ 428,611
◆ 2027	\$ (2,258,546)	\$ (7,890)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Templeton
◆ Current Proportionate Share		1.309811%
◆ Prior Proportionate Share		1.304400%
Beginning Net Pension Liability	\$ 842,013,303	\$ 10,983,225
Ending Net Pension Liability	\$ 1,028,277,936	\$ 13,468,498
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	908,926
◆ Changes of Assumptions	54,491,085	713,730
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	81,144
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,703,800
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 412,170
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	121,999
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 534,169
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,455,922
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(62,425)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,393,497
Covered Payroll:	\$ 341,237,099	\$ 4,315,139
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 13,468,498
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 16,435,196
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 10,960,343
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 89,376
◆ 2024	\$ 20,165,452	\$ 246,140
◆ 2025	\$ 24,228,135	\$ 312,497
◆ 2026	\$ 42,288,641	\$ 546,502
◆ 2027	\$ (2,258,546)	\$ (24,884)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Templeton Housing Authority
◆ Current Proportionate Share		0.072790%
◆ Prior Proportionate Share		0.074067%
Beginning Net Pension Liability	\$ 842,013,303	\$ 623,654
Ending Net Pension Liability	\$ 1,028,277,936	\$ 748,482
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	50,512
◆ Changes of Assumptions	54,491,085	39,664
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	29,952
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 120,128
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 22,905
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	22,254
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 45,159
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 80,910
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,835)
Total Employer Pension Expense	\$ 111,155,119	\$ 79,075
Covered Payroll:	\$ 341,237,099	\$ 64,611
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 748,482
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 913,350
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 609,097
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 5,249
◆ 2024	\$ 20,165,452	\$ 16,267
◆ 2025	\$ 24,228,135	\$ 21,784
◆ 2026	\$ 42,288,641	\$ 34,422
◆ 2027	\$ (2,258,546)	\$ (2,753)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Upton
◆ Current Proportionate Share		1.034655%
◆ Prior Proportionate Share		1.024691%
Beginning Net Pension Liability	\$ 842,013,303	\$ 8,628,031
Ending Net Pension Liability	\$ 1,028,277,936	\$ 10,639,124
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	717,984
◆ Changes of Assumptions	54,491,085	563,794
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	139,667
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,421,445
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 325,584
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	64,450
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 390,034
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,150,071
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	121,093
Total Employer Pension Expense	\$ 111,155,119	\$ 1,271,164
Covered Payroll:	\$ 341,237,099	\$ 3,631,891
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 10,639,124
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 12,982,598
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 8,657,866
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 116,358
◆ 2024	\$ 20,165,452	\$ 235,105
◆ 2025	\$ 24,228,135	\$ 253,131
◆ 2026	\$ 42,288,641	\$ 441,531
◆ 2027	\$ (2,258,546)	\$ (14,714)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Uxbridge
◆ Current Proportionate Share		2.972244%
◆ Prior Proportionate Share		2.967660%
Beginning Net Pension Liability	\$ 842,013,303	\$ 24,988,090
Ending Net Pension Liability	\$ 1,028,277,936	\$ 30,562,933
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,062,549
◆ Changes of Assumptions	54,491,085	1,619,608
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	105,102
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 3,787,259
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 935,304
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	662,413
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,597,717
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,303,802
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(289,458)
Total Employer Pension Expense	\$ 111,155,119	\$ 3,014,344
Covered Payroll:	\$ 341,237,099	\$ 11,177,360
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 30,562,933
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 37,295,013
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 24,871,389
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 49,555
◆ 2024	\$ 20,165,452	\$ 415,195
◆ 2025	\$ 24,228,135	\$ 614,649
◆ 2026	\$ 42,288,641	\$ 1,173,291
◆ 2027	\$ (2,258,546)	\$ (63,148)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Uxbridge Housing Authority
◆ Current Proportionate Share		0.094940%
◆ Prior Proportionate Share		0.093979%
Beginning Net Pension Liability	\$ 842,013,303	\$ 791,312
Ending Net Pension Liability	\$ 1,028,277,936	\$ 976,246
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	65,882
◆ Changes of Assumptions	54,491,085	51,734
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	48,544
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 166,160
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 29,876
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 29,876
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 105,531
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(7,851)
Total Employer Pension Expense	\$ 111,155,119	\$ 97,680
Covered Payroll:	\$ 341,237,099	\$ 225,821
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 976,246
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,191,283
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 794,446
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 23,522
◆ 2024	\$ 20,165,452	\$ 33,050
◆ 2025	\$ 24,228,135	\$ 33,696
◆ 2026	\$ 42,288,641	\$ 47,328
◆ 2027	\$ (2,258,546)	\$ (1,312)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Wachusett Regional
◆ Current Proportionate Share		3.161975%
◆ Prior Proportionate Share		3.178198%
Beginning Net Pension Liability	\$ 842,013,303	\$ 26,760,851
Ending Net Pension Liability	\$ 1,028,277,936	\$ 32,513,894
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	2,194,210
◆ Changes of Assumptions	54,491,085	1,722,995
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	491,986
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 4,409,191
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 995,008
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	646,577
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,641,585
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 3,514,697
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	190,697
Total Employer Pension Expense	\$ 111,155,119	\$ 3,705,394
Covered Payroll:	\$ 341,237,099	\$ 13,881,126
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 32,513,894
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 39,675,711
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 26,459,035
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 57,407
◆ 2024	\$ 20,165,452	\$ 523,600
◆ 2025	\$ 24,228,135	\$ 867,369
◆ 2026	\$ 42,288,641	\$ 1,404,731
◆ 2027	\$ (2,258,546)	\$ (85,501)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Warren
◆ Current Proportionate Share		0.614434%
◆ Prior Proportionate Share		0.625799%
Beginning Net Pension Liability	\$ 842,013,303	\$ 5,269,309
Ending Net Pension Liability	\$ 1,028,277,936	\$ 6,318,084
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	426,378
◆ Changes of Assumptions	54,491,085	334,812
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	159,412
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 920,602
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 193,350
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	220,425
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 413,775
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 682,974
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	15,392
Total Employer Pension Expense	\$ 111,155,119	\$ 698,366
Covered Payroll:	\$ 341,237,099	\$ 1,935,591
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 6,318,084
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 7,709,765
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 5,141,507
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ (1,655)
◆ 2024	\$ 20,165,452	\$ 92,426
◆ 2025	\$ 24,228,135	\$ 168,079
◆ 2026	\$ 42,288,641	\$ 271,723
◆ 2027	\$ (2,258,546)	\$ (23,746)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Warren Water District
◆ Current Proportionate Share		0.029842%
◆ Prior Proportionate Share		0.029993%
Beginning Net Pension Liability	\$ 842,013,303	\$ 252,547
Ending Net Pension Liability	\$ 1,028,277,936	\$ 306,854
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	20,708
◆ Changes of Assumptions	54,491,085	16,261
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	10,025
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 46,994
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 9,391
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	2,237
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 11,628
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 33,170
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	6,985
Total Employer Pension Expense	\$ 111,155,119	\$ 40,155
Covered Payroll:	\$ 341,237,099	\$ 58,588
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 306,854
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 374,445
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 249,711
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 5,377
◆ 2024	\$ 20,165,452	\$ 8,972
◆ 2025	\$ 24,228,135	\$ 8,342
◆ 2026	\$ 42,288,641	\$ 13,483
◆ 2027	\$ (2,258,546)	\$ (808)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Westboro
◆ Current Proportionate Share		6.868468%
◆ Prior Proportionate Share		6.839560%
Beginning Net Pension Liability	\$ 842,013,303	\$ 57,590,002
Ending Net Pension Liability	\$ 1,028,277,936	\$ 70,626,947
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	4,766,282
◆ Changes of Assumptions	54,491,085	3,742,706
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	1,271,890
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 9,780,878
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 2,161,366
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	213,166
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 2,374,532
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 7,634,651
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	256,582
Total Employer Pension Expense	\$ 111,155,119	\$ 7,891,233
Covered Payroll:	\$ 341,237,099	\$ 23,268,371
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 70,626,947
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 86,183,902
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 57,474,530
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 802,947
◆ 2024	\$ 20,165,452	\$ 1,626,511
◆ 2025	\$ 24,228,135	\$ 1,986,978
◆ 2026	\$ 42,288,641	\$ 3,119,919
◆ 2027	\$ (2,258,546)	\$ (130,009)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Westboro Housing Authority
◆ Current Proportionate Share		0.075572%
◆ Prior Proportionate Share		0.076319%
Beginning Net Pension Liability	\$ 842,013,303	\$ 642,613
Ending Net Pension Liability	\$ 1,028,277,936	\$ 777,089
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	52,442
◆ Changes of Assumptions	54,491,085	41,180
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	27,225
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 120,847
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 23,781
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	7,804
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 31,585
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 84,002
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	17,547
Total Employer Pension Expense	\$ 111,155,119	\$ 101,549
Covered Payroll:	\$ 341,237,099	\$ 172,400
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 777,089
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 948,258
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 632,376
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 18,353
◆ 2024	\$ 20,165,452	\$ 25,743
◆ 2025	\$ 24,228,135	\$ 16,724
◆ 2026	\$ 42,288,641	\$ 30,800
◆ 2027	\$ (2,258,546)	\$ (2,358)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	West Boylston
◆ Current Proportionate Share		2.038247%
◆ Prior Proportionate Share		2.048022%
Beginning Net Pension Liability	\$ 842,013,303	\$ 17,244,618
Ending Net Pension Liability	\$ 1,028,277,936	\$ 20,958,848
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,414,414
◆ Changes of Assumptions	54,491,085	1,110,663
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	163,853
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 2,688,930
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 641,394
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	619,668
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,261,062
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,265,616
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(56,829)
Total Employer Pension Expense	\$ 111,155,119	\$ 2,208,787
Covered Payroll:	\$ 341,237,099	\$ 5,533,636
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 20,958,848
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 25,575,442
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 17,055,813
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 74,027
◆ 2024	\$ 20,165,452	\$ 319,553
◆ 2025	\$ 24,228,135	\$ 333,939
◆ 2026	\$ 42,288,641	\$ 754,872
◆ 2027	\$ (2,258,546)	\$ (54,523)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	West Boylston Housing Authority
◆ Current Proportionate Share		0.024797%
◆ Prior Proportionate Share		0.024913%
Beginning Net Pension Liability	\$ 842,013,303	\$ 209,767
Ending Net Pension Liability	\$ 1,028,277,936	\$ 254,979
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	17,207
◆ Changes of Assumptions	54,491,085	13,512
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	93,412
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 124,131
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 7,803
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	25,917
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 33,720
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 27,563
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,829
Total Employer Pension Expense	\$ 111,155,119	\$ 36,392
Covered Payroll:	\$ 341,237,099	\$ 60,375
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 254,979
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 311,142
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 207,495
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 13,854
◆ 2024	\$ 20,165,452	\$ 18,555
◆ 2025	\$ 24,228,135	\$ 30,852
◆ 2026	\$ 42,288,641	\$ 27,810
◆ 2027	\$ (2,258,546)	\$ (660)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	West Boylston Water District
◆ Current Proportionate Share		0.105010%
◆ Prior Proportionate Share		0.103468%
Beginning Net Pension Liability	\$ 842,013,303	\$ 871,213
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,079,795
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	72,870
◆ Changes of Assumptions	54,491,085	57,221
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	61,524
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 191,615
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 33,044
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	33,843
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 66,887
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 116,724
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	19,071
Total Employer Pension Expense	\$ 111,155,119	\$ 135,795
Covered Payroll:	\$ 341,237,099	\$ 433,695
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,079,795
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 1,317,641
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 878,712
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 28,330
◆ 2024	\$ 20,165,452	\$ 36,190
◆ 2025	\$ 24,228,135	\$ 20,783
◆ 2026	\$ 42,288,641	\$ 40,457
◆ 2027	\$ (2,258,546)	\$ (1,032)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	West Brookfield
◆ Current Proportionate Share		0.452402%
◆ Prior Proportionate Share		0.454828%
Beginning Net Pension Liability	\$ 842,013,303	\$ 3,829,713
Ending Net Pension Liability	\$ 1,028,277,936	\$ 4,651,948
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	313,938
◆ Changes of Assumptions	54,491,085	246,519
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	51,792
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 612,249
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 142,361
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	160,584
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 302,945
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 502,868
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(19,999)
Total Employer Pension Expense	\$ 111,155,119	\$ 482,869
Covered Payroll:	\$ 341,237,099	\$ 1,256,660
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 4,651,948
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 5,676,629
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 3,785,644
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 19,217
◆ 2024	\$ 20,165,452	\$ 67,981
◆ 2025	\$ 24,228,135	\$ 74,380
◆ 2026	\$ 42,288,641	\$ 160,054
◆ 2027	\$ (2,258,546)	\$ (12,328)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Westminster
◆ Current Proportionate Share		1.415504%
◆ Prior Proportionate Share		1.405503%
Beginning Net Pension Liability	\$ 842,013,303	\$ 11,834,523
Ending Net Pension Liability	\$ 1,028,277,936	\$ 14,555,312
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	982,270
◆ Changes of Assumptions	54,491,085	771,323
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	117,330
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 1,870,923
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 445,430
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	249,398
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 694,828
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 1,573,405
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(56,529)
Total Employer Pension Expense	\$ 111,155,119	\$ 1,516,876
Covered Payroll:	\$ 341,237,099	\$ 4,687,311
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 14,555,312
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 17,761,402
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 11,844,767
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 57,539
◆ 2024	\$ 20,165,452	\$ 231,513
◆ 2025	\$ 24,228,135	\$ 325,939
◆ 2026	\$ 42,288,641	\$ 584,389
◆ 2027	\$ (2,258,546)	\$ (23,285)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Winchendon
◆ Current Proportionate Share		2.524905%
◆ Prior Proportionate Share		2.522865%
Beginning Net Pension Liability	\$ 842,013,303	\$ 21,242,856
Ending Net Pension Liability	\$ 1,028,277,936	\$ 25,963,039
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	1,752,123
◆ Changes of Assumptions	54,491,085	1,375,848
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	152,790
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 3,280,761
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 794,535
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	249,069
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 1,043,604
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 2,806,561
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(207,622)
Total Employer Pension Expense	\$ 111,155,119	\$ 2,598,939
Covered Payroll:	\$ 341,237,099	\$ 6,821,140
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 25,963,039
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 31,681,902
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 21,128,104
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 201,430
◆ 2024	\$ 20,165,452	\$ 486,645
◆ 2025	\$ 24,228,135	\$ 549,196
◆ 2026	\$ 42,288,641	\$ 1,055,138
◆ 2027	\$ (2,258,546)	\$ (55,252)
◆ Thereafter	\$ -	\$ -

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2022	Worcester Regional Retirement System	Winchendon Housing Authority
◆ Current Proportionate Share		0.193357%
◆ Prior Proportionate Share		0.193325%
Beginning Net Pension Liability	\$ 842,013,303	\$ 1,627,819
Ending Net Pension Liability	\$ 1,028,277,936	\$ 1,988,243
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,393,646	134,177
◆ Changes of Assumptions	54,491,085	105,362
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	77,896
Total Deferred Outflows of Resources	\$ 140,758,160	\$ 317,435
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 31,467,935	\$ 60,845
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	16,873,429	-
Total Deferred Inflows of Resources	\$ 48,341,364	\$ 60,845
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 111,155,119	\$ 214,926
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	51,351
Total Employer Pension Expense	\$ 111,155,119	\$ 266,277
Covered Payroll:	\$ 341,237,099	\$ 605,988
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 7.25%	\$ 1,028,277,936	\$ 1,988,243
◆ 1% decrease in the discount rate: 6.25%	\$ 1,254,776,125	\$ 2,426,192
◆ 1% increase in the discount rate: 8.25%	\$ 836,788,149	\$ 1,617,985
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2023	\$ 7,993,114	\$ 53,977
◆ 2024	\$ 20,165,452	\$ 71,629
◆ 2025	\$ 24,228,135	\$ 50,777
◆ 2026	\$ 42,288,641	\$ 84,544
◆ 2027	\$ (2,258,546)	\$ (4,337)
◆ Thereafter	\$ -	\$ -

APPENDIX D - CALCULATION OF SINGLE DISCOUNT RATE

Under GASB 67, a series of projections and calculations are used to determine the discount rate for the purpose of the measurement of the Total Pension Liability. The discount rate is the single rate that reflects (1) the long-term expected rate of return on pension plan investments that are expected to be used to finance the payment of benefits, to the extent that the pension plan's Fiduciary Net Position is projected to be sufficient to make projected benefit payments and pension plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher, to the extent that the conditions for use of the long-term expected rate of return are not met.

Projected cash flows into and out of the pension plan are assumed to be contributions to the pension plan, benefit payments, pension plan administrative expenses and pension plan investment earnings. These projected cash flows are used to project the pension plan's Fiduciary Net Position at the beginning of each period. The pension plan's projected Fiduciary Net Position at the beginning of each period is compared to the amount of benefit payments projected to occur in that period.

It is assumed that the pension plan's Fiduciary Net Position is expected to always be invested using a strategy to achieve the long-term expected rate of return on pension plan investments.

The benefit payments that are projected to occur in a period are discounted using the long-term expected rate of return on pension plan investments if the amount of the pension plan's beginning Fiduciary Net Position is projected to be sufficient to make the benefit payments in that period. In periods in which benefit payments are projected to be greater than the amount of the pension plan's Fiduciary Net Position, they are discounted using a municipal bond rate as required by GASB 67.

For purposes of this valuation, the long-term expected rate of return on pension plan investments is 7.25%; the municipal bond rate is 3.72%, based on the December 2022 Bond Buyer Index as published by the Federal Reserve. For each period, the pension plan's Fiduciary Net Position is projected to be sufficient to make the benefit payments in that period, therefore, the resulting single discount rate is based solely on the long-term expected rate of return of 7.25%.