



HAMPSHIRE COUNTY RETIREMENT SYSTEM

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

**Disclosures as of
December 31, 2023**

KMS Actuarial, LLC
52 Hunt Road
Kingston, NH 03848

February, 2025



February 14, 2025

Mr. Patrick E. Brock
Chairman
Hampshire County Retirement System
99 Industrial Drive, Suite 2
Northampton, MA 01060-2326

Dear Patrick:

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 Hampshire County Retirement System and participating employers as of December 31, 2023. Results are based on liabilities developed in an actuarial valuation performed as of January 1, 2024.

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 Hampshire County 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 rate assumption of 6.8%, 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 System and to reasonable expectations, and represent our best estimate of anticipated long-term experience under the System.

K M S A C T U A R I E S

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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. The potential range of future measurements was not assessed as it was outside the scope of the project.

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 Hampshire County Retirement Board and may only be provided to other parties in its entirety, unless expressly authorized by KMS Actuaries. Further, it 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 Hampshire County 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 Hampshire County Retirement System, other than as consulting actuary for this assignment, that would impair our independence.

The undersigned credentialed actuaries agree that the analysis, assumptions and results are overall reasonable. They 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,



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EXECUTIVE SUMMARY

GASB 67 and GASB 68

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 Hampshire County 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 Hampshire County 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, 2023 (the measurement date) presents information to assist the Hampshire County 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, 2023	December 31, 2022	% Change
Valuation Date	January 1, 2024	January 1, 2022	
Membership Data			
Active Plan Members	2,061	2,079	(0.9%)
Inactive Members Currently in Receipt	1,446	1,444	0.1%
Inactive Members Deferred	993	844	17.7%
Total Plan Members	4,500	4,367	3.0%
Covered Payroll	\$102,054,966	\$96,766,143	5.5%
Net Pension Liability			
Discount Rate	6.80%	6.90%	
Total Pension Liability (TPL)	\$657,299,209	\$628,533,971	4.6%
Fiduciary Net Position (FNP)	474,251,873	428,475,759	10.7%
Net Pension Liability (NPL)	\$183,047,336	\$200,058,212	(8.5%)
FNP as % of TPL	72.2%	68.2%	5.9%
Pension Expense			
Pension Expense (Income)	\$20,776,116	\$24,997,617	
Deferred Outflows	\$42,265,593	\$49,775,358	
Deferred Inflows	\$1,971,210	\$4,114,733	
Recognition Period	7.13	7.08	

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, 2024 and is shown in Section 1, Total Pension Liability.

Benefit Changes

The December 31, 2021 disclosure report reflected the elimination of the Hampshire Council of Governments and associated reduction in liability, offset by a \$1.162 million liability still due to be transferred to the State Retirement System. This \$1.162 million was transferred in 2023 and the associated liability reduction is reflected in this report. All other 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

Some Actuarial Assumptions and Methods used in this valuation have changed since the last valuation, including decreasing the investment return rate from 6.9% to 6.8% and updating the mortality improvement rates. 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 (Income)

The Pension Expense for the fiscal year ending December 31, 2023 is \$20,776,116 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.

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 Retirement Board Advisory Council approved the additional COLA on March 8, 2023, therefore the increased benefits are included in the measurement of the Total Pension Liability reported by the Plan at December 31, 2023. The impact of the additional COLA was an increase in the Total Pension Liability of \$2,865,177.

SECTION 1 - PRINCIPAL VALUATION RESULTS

Fiduciary Net Position

Asset information was provided by the Hampshire County 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

2023

2022

Trust Fund Composition at Fiscal Year-End			
Cash	\$	5,148,535	\$ 3,784,841
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		115,514,412	99,901,537
Pooled International Equity Funds		87,320,187	78,009,957
Pooled Global Equity Funds		0	0
Pooled Domestic Fixed Income Funds		105,783,676	95,820,213
Pooled International Fixed Income Funds		0	0
Pooled Global Fixed Income Funds		0	0
Pooled Alternative/Private Equity		81,042,439	73,099,926
Pooled Real Estate Funds		78,133,846	76,777,125
Pooled Domestic Balanced Funds		0	0
Pooled International Balanced Funds		0	0
Hedge Funds		0	0
PRIT Cash		0	0
PRIT Fund		0	0
Interest Due and Accrued		0	0
Prepaid Expenses		0	0
Accounts Receivable (A)		1,311,610	1,082,194
Land		0	0
Buildings		0	0
Accumulated Depreciation - Buildings		0	0
Accounts Payable (A)		(2,832)	(34)
Auditor or Other Adjustments		0	0
Total Market Value of Assets	\$	474,251,873	\$ 428,475,759

SECTION 1 - PRINCIPAL VALUATION RESULTS

Fiduciary Net Position		
Fiscal Year Ended December 31	2023	2022
Asset Activity		
Market value as of beginning of year	\$ 428,475,759	\$ 476,562,413
Contributions - employer	32,420,750	30,200,925
Contributions - member	10,196,768	9,302,082
Net investment income	42,744,422	(51,386,805)
Benefit payments, including refunds of member contributions	(38,514,082)	(35,418,801)
Administrative expenses	(844,490)	(784,055)
Other	(227,254)	0
Market Value as of end of year	\$ 474,251,873	\$ 428,475,759
Money-Weighted Rate of Return	9.98%	-10.78%

(Gain) / Loss on Pension Plan Investments		
Projected earnings	\$ 29,548,283	\$ 32,872,815
Actual earnings	42,744,422	(51,386,805)
(Gain) / Loss on pension plan investments	\$ (13,196,139)	\$ 84,259,620

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, 2023 measurement date was developed from an actuarial valuation as of January 1, 2024.

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, 2022 to the end of the measurement period, December 31, 2023 is shown below:

Measurement Date

December 31, 2023

1. Total Pension Liability, beginning of year:		
a. Actives	\$	281,286,320
b. Retired and Disabled Members and Beneficiaries		339,327,984
c. Inactive Members		7,919,667
d. Total Pension Liability at 6.9% (a. + b. + c.)	\$	628,533,971
2. Service Cost	\$	16,441,231
3. Benefit Payments		(38,514,082)
4. Interest [6.9% x (1.d. + 2. + .5 x 3)]	\$	43,174,553
5. Changes of benefit terms		(1,162,601)
6. Differences between expected and actual experience		520,990
7. Changes of assumptions or other inputs		8,305,147
8. Total Pension Liability, end of year (1.d. + 2. + 3. + 4. + 5. + 6. + 7.)		
a. Actives	\$	262,138,189
b. Retired and Disabled Members and Beneficiaries		385,391,955
c. Inactive Members		9,769,065
d. Total Pension Liability at 6.8% (a. + b. + c.)	\$	657,299,209

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Plan Description

Plan administration

The Hampshire County Retirement System (the "System") is a cost-sharing, multiple-employer defined benefit pension plan that provides pensions for eligible employees of 37 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, 2023, pension plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefits	1,446
Inactive plan members entitled to but not yet receiving benefits	993
Active plan members	<u>2,061</u>
	4,500

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 \$13,000 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, 2024 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, 2023, were as follows:

Total Pension Liability	\$ 657,299,209
Fiduciary Net Position	(474,251,873)
Net Pension Liability	\$ 183,047,336

Fiduciary Net Position as a percentage of the Total Pension Liability 72.2%

Actuarial assumptions

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2024, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5% per year
Salary increases	Group 1: 6% - 4.25%, based on service Group 4: 7% - 4.75%, based on service
Investment rate of return	6.8%, 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-2021. 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-2021.

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 geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2023 (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 Return ¹
Cash	3.0%	0.00%
Domestic Equity	26.0%	4.40%
Non-US Developed Equity	11.0%	4.10%
Emerging Equity	6.0%	6.70%
Private Equity	16.0%	7.70%
Core Bonds	12.0%	2.40%
Value Add Fixed Income - Public	12.0%	5.30%
Real Estate	14.0%	4.10%
Total	100%	

¹ Provided by NEPC (inclusive of fees). Inflation of 2.5% 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 6.8%. 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 6.8%, as well as what the Net Pension Liability would be if it were calculated using a discount rate 1-percentage point lower (5.8%) or 1-percentage point higher (7.8%) than the current rate:

	1% Decrease (5.8%)	Current Discount Rate (6.8%)	1% Increase (7.8%)
Total Pension Liability	\$ 732,477,382	\$ 657,299,209	\$ 593,768,097
Fiduciary Net Position	474,251,873	474,251,873	474,251,873
Net Pension Liability	\$ 258,225,509	\$ 183,047,336	\$ 119,516,224

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net Pension Liability and Related Ratios

Fiscal Year Ended December 31	2023	2022	2021	2020	2019
Total Pension Liability					
Service cost	\$ 16,441,231	\$ 15,923,710	\$ 14,760,890	\$ 14,261,729	\$ 13,282,271
Interest	43,174,553	41,712,622	41,320,681	39,817,266	38,884,736
Changes of benefit terms	(1,162,601)	-	(12,399,813)	-	-
Differences between expected and actual experience	520,990	-	5,606,152	-	(6,620,290)
Changes of assumptions	8,305,147	-	11,289,119	-	20,488,858
Benefit payments, including refunds of member contributions	(38,514,082)	(35,418,801)	(34,822,644)	(32,280,113)	(31,865,798)
Net change in Total Pension Liability	\$ 28,765,238	\$ 22,217,531	\$ 25,754,385	\$ 21,798,882	\$ 34,169,777
Total Pension Liability--beginning	\$ 628,533,971	\$ 606,316,440	\$ 580,562,055	\$ 558,763,173	\$ 524,593,396
Total Pension Liability--ending (a)	\$ 657,299,209	\$ 628,533,971	\$ 606,316,440	\$ 580,562,055	\$ 558,763,173
Fiduciary Net Position					
Contributions--employer	\$ 32,420,750	\$ 30,200,925	\$ 28,089,796	\$ 26,114,304	\$ 24,294,506
Contributions--member	10,196,768	9,302,082	8,579,543	8,376,499	8,334,804
Net investment income	42,744,422	(51,386,805)	73,547,508	41,619,584	50,071,334
Benefit payments, including refunds of member contributions	(38,514,082)	(35,418,801)	(34,822,644)	(32,280,113)	(31,865,798)
Administrative expenses	(844,490)	(784,055)	(811,905)	(868,192)	(842,974)
Other	(227,254)	-	-	-	-
Net change in Fiduciary Net Position	\$ 45,776,114	\$ (48,086,654)	\$ 74,582,298	\$ 42,962,082	\$ 49,991,872
Fiduciary Net Position--beginning	\$ 428,475,759	\$ 476,562,413	\$ 401,980,115	\$ 359,018,033	\$ 309,026,161
Fiduciary Net Position--ending (b)	\$ 474,251,873	\$ 428,475,759	\$ 476,562,413	\$ 401,980,115	\$ 359,018,033
Net Pension Liability and Related Ratios					
Net Pension Liability--ending (a) -- (b)	\$ 183,047,336	\$ 200,058,212	\$ 129,754,027	\$ 178,581,940	\$ 199,745,140
Fiduciary Net Position as a percentage of the Total Pension Liability	72.15%	68.17%	78.60%	69.24%	64.25%
Covered Payroll	\$ 102,054,966	\$ 96,766,143	\$ 90,501,248	\$ 87,719,692	\$ 85,426,619
Net Pension Liability as a percentage of Covered Payroll	179.36%	206.74%	143.37%	203.58%	233.82%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Fiscal Year Ended December 31	2018	2017	2016	2015	2014
Total Pension Liability					
Service cost	\$ 12,771,414	\$ 11,029,438	\$ 10,605,229	\$ 10,269,070	\$ 9,850,427
Interest	37,396,643	36,888,260	34,627,268	34,842,587	33,371,689
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	-	(434,874)	(4,348,735)	-	-
Changes of assumptions	-	(9,996,849)	16,610,091	-	-
Benefit payments, including refunds of member contributions	(29,543,223)	(28,662,890)	(26,880,118)	(25,512,793)	(24,412,587)
Net change in Total Pension Liability	\$ 20,624,834	\$ 8,823,085	\$ 30,613,735	\$ 19,598,864	\$ 18,809,529
Total Pension Liability--beginning	\$ 503,968,562	\$ 495,145,477	\$ 464,531,742	\$ 444,932,878	\$ 426,123,349
Total Pension Liability--ending (a)	<u>\$ 524,593,396</u>	<u>\$ 503,968,562</u>	<u>\$ 495,145,477</u>	<u>\$ 464,531,742</u>	<u>\$ 444,932,878</u>
Fiduciary Net Position					
Contributions--employer	\$ 22,597,993	\$ 21,331,218	\$ 19,693,436	\$ 18,620,753	\$ 17,442,179
Contributions--member	8,378,578	7,689,443	7,446,905	7,322,347	7,559,814
Net investment income	(9,664,404)	43,201,653	19,015,995	(1,011,242)	12,015,152
Benefit payments, including refunds of member contributions	(29,543,223)	(28,662,890)	(26,880,118)	(25,512,793)	(24,412,587)
Administrative expenses	(870,363)	(817,067)	(796,827)	(929,899)	(841,318)
Other	-	-	-	-	-
Net change in Fiduciary Net Position	\$ (9,101,419)	\$ 42,742,357	\$ 18,479,391	\$ (1,510,834)	\$ 11,763,240
Fiduciary Net Position--beginning	\$ 318,127,580	\$ 275,385,223	\$ 256,905,832	\$ 258,416,666	\$ 246,653,426
Fiduciary Net Position--ending (b)	<u>\$ 309,026,161</u>	<u>\$ 318,127,580</u>	<u>\$ 275,385,223</u>	<u>\$ 256,905,832</u>	<u>\$ 258,416,666</u>
Net Pension Liability and Related Ratios					
Net Pension Liability--ending (a) - (b)	<u>\$ 215,567,235</u>	<u>\$ 185,840,982</u>	<u>\$ 219,760,254</u>	<u>\$ 207,625,910</u>	<u>\$ 186,516,212</u>
Fiduciary Net Position as a percentage of the Total Pension Liability	58.91%	63.12%	55.62%	55.30%	58.08%
Covered Payroll	\$ 84,192,999	\$ 76,767,518	\$ 78,914,925	\$ 80,914,245	\$ 77,139,934
Net Pension Liability as a percentage of Covered Payroll	256.04%	242.08%	278.48%	256.60%	241.79%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Schedule of Employer Contributions

Fiscal Year Ended December 31	2023	2022	2021	2020	2019
Actuarially Determined Contribution	\$ 32,420,750	\$ 30,200,925	\$ 28,089,796	\$ 26,114,304	\$ 24,294,506
Contributions in relation to the Actuarially Determined Contribution	32,420,750	30,200,925	28,089,796	26,114,304	24,294,506
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 102,054,966	\$ 96,766,143	\$ 90,501,248	\$ 87,719,692	\$ 85,426,619
Contributions as a percentage of Covered Payroll	31.77%	31.21%	31.04%	29.77%	28.44%

The contribution shown above, \$32,420,750, represents the actual contributions made by member units of the Hampshire County Retirement System for the 2024 fiscal year.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Schedule of Employer Contributions (continued)

Fiscal Year Ended December 31	2018	2017	2016	2015	2014
Actuarially Determined Contribution	\$ 22,597,993	\$ 21,331,218	\$ 19,693,436	\$ 18,620,753	\$ 17,349,877
Contributions in relation to the Actuarially Determined Contribution	<u>22,597,993</u>	<u>\$ 21,331,218</u>	<u>\$ 19,693,436</u>	<u>\$ 18,620,753</u>	<u>\$ 17,349,877</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 84,192,999	\$ 76,767,518	\$ 78,914,925	\$ 80,914,245	\$ 77,139,934
Contributions as a percentage of Covered Payroll	26.84%	27.79%	24.96%	23.01%	22.49%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Investment Returns

Fiscal Year Ended December 31	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	9.98%	-10.78%	18.36%	11.64%	16.30%	-3.02%	15.77%	7.43%	-0.68%	4.84%

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.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Notes to the Required Supplementary Information

Changes of benefit terms

The December 31, 2021 disclosure report reflected the elimination of the Hampshire Council of Governments and associated reduction in liability, offset by a \$1.162 million liability still due to be transferred to the State Retirement System. This \$1.162 million was transferred in 2023 and the associated liability reduction is reflected in this report. All other 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

Some Actuarial Assumptions and Methods used in this valuation have changed since the last valuation, including decreasing the investment return rate from 6.9% to 6.8% and updating the mortality improvement rates. 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 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:

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, 2032.
	2002 & 2003 ERI	Level dollar amount 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: <ul style="list-style-type: none">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, andd) 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. Previously, the actuarial valuation of assets corridor was 10%.	
Inflation	2.5% per year	
Salary increases	Group 1: 6% - 4.25%, based on service Group 4: 7% - 4.75%, based on service	
Payroll growth	3.25% per year	
Investment rate of return	6.8%, 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, 2023					
	Experience Losses	Experience Gains	Amounts Recognized in Pension Expense through December 31, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2017	\$ -	\$ 434,874	\$ (434,874)	\$ -	\$ -
2018	-	-	-	-	-
2019	-	6,620,290	(4,649,080)	-	1,971,210
2020	-	-	-	-	-
2021	5,606,152	-	2,375,487	3,230,665	-
2022	-	-	-	-	-
2023	520,990	-	73,070	447,920	-
Total				<u>\$ 3,678,585</u>	<u>\$ 1,971,210</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, 2023					
	Increases in the Total Pension Liability	Decreases in the Total Pension Liability	Amounts Recognized in Pension Expense through December 31, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2017	\$ -	\$ 9,996,849	\$ (9,996,849)	\$ -	\$ -
2018	-	-	-	-	-
2019	20,488,858	-	14,388,245	6,100,613	-
2020	-	-	-	-	-
2021	11,289,119	-	4,783,524	6,505,595	-
2022	-	-	-	-	-
2023	8,305,147	-	1,164,817	7,140,330	-
Total				<u>\$ 19,746,538</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, 2023	
	Investment Earnings Less Than Projected	Investment Earnings Greater Than Projected	Amounts Recognized in Pension Expense through December 31, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2017	\$ -	\$ 22,564,985	\$ (22,564,985)	\$ -	\$ -
2018	33,385,880	-	33,385,880	-	-
2019	-	26,975,353	(26,975,353)	-	-
2020	-	16,005,403	(12,804,323)	-	3,201,080
2021	-	44,893,279	(26,935,968)	-	17,957,311
2022	84,259,620	-	33,703,848	50,555,772	-
2023	-	13,196,139	(2,639,228)	-	10,556,911
Subtotal				\$ 50,555,772	\$ 31,715,302
Net				\$ 18,840,470	\$ -

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, 2023	
	Proportionate Share* Outflows	Proportionate Share* Inflows	Amounts Recognized in Pension Expense through December 31, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) - (c)
2017	\$ 2,338,865	\$ 2,338,865	\$ 2,338,865	\$ -	\$ -
2018	2,185,181	2,185,181	1,930,941	254,240	254,240
2019	3,112,389	3,112,389	2,185,668	926,721	926,721
2020	4,101,135	4,101,135	2,304,008	1,797,127	1,797,127
2021	2,164,088	2,164,088	916,986	1,247,102	1,247,102
2022	2,082,355	2,082,355	588,232	1,494,123	1,494,123
2023	1,917,845	1,917,845	268,983	1,648,862	1,648,862
Total				\$ 7,368,175	\$ 7,368,175

* 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

2024	\$	7,605,017
2025	\$	10,806,098
2026	\$	18,070,657
2027	\$	984,997
2028	\$	1,428,799
Thereafter	\$	1,398,815
Total Deferred Outflows	\$	49,633,768
Total Deferred Inflows	\$	9,339,385

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, 2023 is presented below:

Fiscal Year Ended December 31, 2023

1. Service cost		\$ 16,441,231
2. Interest on the total pension liability		
a. Total Pension Liability, beginning of year	628,533,971	
b. Service cost, beginning of year	16,441,231	
c. Benefit payments, including refunds of employee contributions	(38,514,082)	
d. Interest on Total Pension Liability		43,174,553
3. Differences between expected and actual experience		(115,515)
4. Changes of benefit terms		(1,162,601)
5. Changes of assumptions		4,473,865
6. Employee contributions		(10,196,768)
7. Projected earnings on pension plan investments		
a. Fiduciary Net Position, beginning of year	428,475,759	
b. Employer contributions	32,420,750	
c. Employee contributions	10,196,768	
d. Benefit payments, including refunds of employee contributions	(38,514,082)	
e. Administrative expenses and other	(1,071,744)	
f. Total projected earnings		(29,548,283)
8. Differences between projected and actual earnings on plan investments		(3,362,110)
9. Pension plan administrative expenses		844,490
10. Other changes in Fiduciary Net Position		227,254
11. Total Pension Expense (Income)		\$ 20,776,116

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 2023 and 2022, based on employer contributions made for the 2024 fiscal year and 2023 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2023		2022	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Hampshire County Group Insurance Trust	111,539	0.344036%	106,719	0.353363%
Amherst	8,436,900	26.023149%	7,796,557	25.815623%
Amherst-Pelham Regional School District	1,961,100	6.048904%	1,766,011	5.847539%
Amherst Housing Authority	296,374	0.914149%	272,725	0.903035%
Belchertown	4,227,760	13.040291%	4,100,480	13.577332%
Belchertown Housing Authority	-	0.000000%	-	0.000000%
Belchertown Water District	82,857	0.255568%	77,074	0.255204%
Chesterfield	108,352	0.334206%	112,647	0.372992%
Chesterfield-Goshen Regional School District	123,119	0.379754%	115,612	0.382809%
Cummington	86,044	0.265398%	87,452	0.289567%
Foothills Health District	64,799	0.199869%	51,265	0.169746%
Gateway Regional School District	803,077	2.477046%	696,635	2.306668%
Goshen	66,923	0.206420%	50,395	0.166866%
Granby	1,568,359	4.837516%	1,433,186	4.745504%
Granby Housing Authority	25,920	0.079949%	24,125	0.079882%
Hadley	1,815,720	5.600487%	1,734,867	5.744417%
Hadley Housing Authority	-	0.000000%	-	0.000000%
Hampshire County Regional Housing Authority	-	0.000000%	-	0.000000%
Hampshire Regional School District	639,855	1.973597%	668,725	2.214253%
Hatfield	825,385	2.545854%	764,816	2.532426%
Hatfield Housing Authority	9,561	0.029490%	8,893	0.029446%
Huntington	152,278	0.469693%	162,841	0.539192%
Middlefield	70,110	0.216250%	65,217	0.215944%
Pelham	309,121	0.953467%	290,512	0.961931%
Plainfield	108,352	0.334206%	100,790	0.333731%
Quabbin Health District	105,369	0.325005%	95,432	0.315990%
Southampton	1,041,155	3.211385%	978,288	3.239265%
South Hadley	4,343,569	13.397497%	4,019,387	13.308821%
South Hadley Housing Authority	79,670	0.245738%	75,389	0.249625%
South Hadley-Easthampton Veteran's District	22,308	0.068808%	20,751	0.068710%

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 2023 and 2022, based on employer contributions made for the 2024 fiscal year and 2023 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2023		2022	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
South Hadley Fire District No.1	841,318	2.594999%	782,603	2.591321%
South Hadley Fire District No.2	305,934	0.943636%	299,404	0.991374%
Ware	2,761,548	8.517841%	2,516,037	8.330993%
Ware Housing Authority	86,221	0.265944%	83,425	0.276233%
Westhampton	251,758	0.776534%	257,903	0.853957%
Williamsburg	386,108	1.190929%	344,622	1.141097%
Worthington	302,287	0.932387%	240,140	0.795141%
Total	32,420,750	100.000000%	30,200,925	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, inactive and retirees) as of the beginning of the measurement period

For 2023:

- ◆ 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 2016.
- ◆ Net difference between projected and actual investment earnings (gain on pension plan investments for 2023) 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 2016.

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

Exhibit 4.4 - Pension Amounts by Employer

For 2023 (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, 2023	\$ 428,475,759	12	1.00	\$ 471,249,198
Monthly net external cash flows:				
January	(2,693,695)	11	0.92	(2,939,200)
February	(2,541,967)	10	0.83	(2,751,736)
March	(2,101,768)	9	0.75	(2,257,242)
April	(2,378,187)	8	0.67	(2,533,936)
May	(3,212,616)	7	0.58	(3,395,977)
June	6,644,614	6	0.50	6,968,382
July	19,820,030	5	0.42	20,621,620
August	(3,067,824)	4	0.33	(3,166,688)
September	(2,201,733)	3	0.25	(2,254,736)
October	(2,016,605)	2	0.17	(2,048,841)
November	(2,395,629)	1	0.08	(2,414,700)
December	(824,271)	0	0.00	(824,271)
Ending value - December 31, 2023				\$ 474,251,873
Money-weighted rate of return				9.98%

Note: Beginning and ending values are based on amounts reported in the System's 2023 Annual Statement, 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)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2017	(434,874)	6.79	(50,598)	-	-	-	-	-	-	-	-	-
2018	-	6.79	-	-	-	-	-	-	-	-	-	-
2019	(6,620,290)	7.12	(929,816)	(929,816)	(929,816)	(111,578)	-	-	-	-	-	-
2020	-	7.12	-	-	-	-	-	-	-	-	-	-
2021	5,606,152	7.08	791,829	791,829	791,829	791,829	791,829	63,349	-	-	-	-
2022	-	7.08	-	-	-	-	-	-	-	-	-	-
2023	520,990	7.13	73,070	73,070	73,070	73,070	73,070	73,070	73,070	9,500	-	-
Net Increase (Decrease) in Pension Expense			(115,515)	(64,917)	(64,917)	753,321	864,899	136,419	73,070	9,500	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2017	(9,996,849)	6.79	(1,163,109)	-	-	-	-	-	-	-	-	-
2018	-	6.79	-	-	-	-	-	-	-	-	-	-
2019	20,488,858	7.12	2,877,649	2,877,649	2,877,649	345,315	-	-	-	-	-	-
2020	-	7.12	-	-	-	-	-	-	-	-	-	-
2021	11,289,119	7.08	1,594,508	1,594,508	1,594,508	1,594,508	1,594,508	127,563	-	-	-	-
2022	-	7.08	-	-	-	-	-	-	-	-	-	-
2023	8,305,147	7.13	1,164,817	1,164,817	1,164,817	1,164,817	1,164,817	1,164,817	1,164,817	151,428	-	-
Net Increase (Decrease) in Pension Expense			4,473,865	5,636,974	5,636,974	3,104,640	2,759,325	1,292,380	1,164,817	151,428	-	-

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)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2017	(22,564,985)	5	-	-	-	-	-	-	-	-	-	-
2018	33,385,880	5	-	-	-	-	-	-	-	-	-	-
2019	(26,975,353)	5	(5,395,070)	-	-	-	-	-	-	-	-	-
2020	(16,005,403)	5	(3,201,080)	(3,201,080)	-	-	-	-	-	-	-	-
2021	(44,893,279)	5	(8,978,656)	(8,978,656)	(8,978,655)	-	-	-	-	-	-	-
2022	84,259,620	5	16,851,924	16,851,924	16,851,924	16,851,924	-	-	-	-	-	-
2023	(13,196,139)	5	(2,639,228)	(2,639,228)	(2,639,228)	(2,639,228)	(2,639,227)	-	-	-	-	-
Net Increase (Decrease) in Pension Expense			(3,362,110)	2,032,960	5,234,041	14,212,696	(2,639,227)	-	-	-	-	-

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hampshire County Group Insurance Trust
◆ Current Proportionate Share		0.344036%
◆ Prior Proportionate Share		0.353363%
Beginning Net Pension Liability	\$ 200,058,212	\$ 706,932
Ending Net Pension Liability	\$ 183,047,336	\$ 629,748
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 12,656
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	64,818
◆ Changes of Assumptions	19,746,538	67,935
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	30,526
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 175,935
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 6,782
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	850,664
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 857,446
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 71,477
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(228,518)
Total Employer Pension Expense	\$ 20,776,116	\$ (157,041)
Covered Payroll:	\$ 102,054,966	\$ 391,000
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 629,748
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 888,388
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 411,179
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (226,179)
◆ 2025	\$ 10,806,098	\$ (217,845)
◆ 2026	\$ 18,070,657	\$ (204,097)
◆ 2027	\$ 984,997	\$ (34,165)
◆ 2028	\$ 1,428,799	\$ (1,411)
◆ Thereafter	\$ 1,398,815	\$ 2,186

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Amherst
◆ Current Proportionate Share		26.023149%
◆ Prior Proportionate Share		25.815623%
Beginning Net Pension Liability	\$ 200,058,212	\$ 51,646,273
Ending Net Pension Liability	\$ 183,047,336	\$ 47,634,682
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 957,285
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	4,902,883
◆ Changes of Assumptions	19,746,538	5,138,672
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	384,051
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 11,382,891
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 512,967
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	1,530,000
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 2,042,967
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 5,406,598
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(193,369)
Total Employer Pension Expense	\$ 20,776,116	\$ 5,213,229
Covered Payroll:	\$ 102,054,966	\$ 25,104,759
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 47,634,682
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 67,198,408
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 31,101,885
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 1,697,165
◆ 2025	\$ 10,806,098	\$ 2,421,606
◆ 2026	\$ 18,070,657	\$ 4,428,646
◆ 2027	\$ 984,997	\$ 112,685
◆ 2028	\$ 1,428,799	\$ 276,060
◆ Thereafter	\$ 1,398,815	\$ 403,762

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Amherst-Pelham Regional School District
◆ Current Proportionate Share		6.048904%
◆ Prior Proportionate Share		5.847539%
Beginning Net Pension Liability	\$ 200,058,212	\$ 11,698,483
Ending Net Pension Liability	\$ 183,047,336	\$ 11,072,357
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 222,514
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	1,139,642
◆ Changes of Assumptions	19,746,538	1,194,449
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	349,212
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 2,905,817
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 119,237
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	274,265
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 393,502
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 1,256,727
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	32,293
Total Employer Pension Expense	\$ 20,776,116	\$ 1,289,020
Covered Payroll:	\$ 102,054,966	\$ 6,207,195
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 11,072,357
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 15,619,813
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 7,229,421
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 486,730
◆ 2025	\$ 10,806,098	\$ 657,062
◆ 2026	\$ 18,070,657	\$ 1,085,199
◆ 2027	\$ 984,997	\$ 41,303
◆ 2028	\$ 1,428,799	\$ 109,489
◆ Thereafter	\$ 1,398,815	\$ 132,532

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Amherst Housing Authority
◆ Current Proportionate Share		0.914149%
◆ Prior Proportionate Share		0.903035%
Beginning Net Pension Liability	\$ 200,058,212	\$ 1,806,596
Ending Net Pension Liability	\$ 183,047,336	\$ 1,673,326
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 33,628
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	172,230
◆ Changes of Assumptions	19,746,538	180,513
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	209,605
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 595,976
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 18,020
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	63,175
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 81,195
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 189,925
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	41,441
Total Employer Pension Expense	\$ 20,776,116	\$ 231,366
Covered Payroll:	\$ 102,054,966	\$ 833,138
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 1,673,326
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 2,360,566
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 1,092,557
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 119,145
◆ 2025	\$ 10,806,098	\$ 117,169
◆ 2026	\$ 18,070,657	\$ 209,801
◆ 2027	\$ 984,997	\$ 27,624
◆ 2028	\$ 1,428,799	\$ 24,807
◆ Thereafter	\$ 1,398,815	\$ 16,235

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Belchertown
◆ Current Proportionate Share		13.040291%
◆ Prior Proportionate Share		13.577332%
Beginning Net Pension Liability	\$ 200,058,212	\$ 27,162,569
Ending Net Pension Liability	\$ 183,047,336	\$ 23,869,904
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 479,698
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	2,456,852
◆ Changes of Assumptions	19,746,538	2,575,006
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	720,147
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 6,231,703
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 257,052
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	835,241
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 1,092,293
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 2,709,266
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	97,300
Total Employer Pension Expense	\$ 20,776,116	\$ 2,806,566
Covered Payroll:	\$ 102,054,966	\$ 13,573,005
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 23,869,904
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 33,673,357
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 15,585,263
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 1,088,768
◆ 2025	\$ 10,806,098	\$ 1,497,023
◆ 2026	\$ 18,070,657	\$ 2,388,664
◆ 2027	\$ 984,997	\$ 64,773
◆ 2028	\$ 1,428,799	\$ 51,113
◆ Thereafter	\$ 1,398,815	\$ 49,069

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Belchertown Housing Authority
◆ Current Proportionate Share		0.000000%
◆ Prior Proportionate Share		0.000000%
Beginning Net Pension Liability	\$ 200,058,212	\$ -
Ending Net Pension Liability	\$ 183,047,336	\$ -
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	-
◆ Changes of Assumptions	19,746,538	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	199
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 199
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ -
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	140,964
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 140,964
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ -
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(32,508)
Total Employer Pension Expense	\$ 20,776,116	\$ (32,508)
Covered Payroll:	\$ 102,054,966	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ -
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ -
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ -
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (34,534)
◆ 2025	\$ 10,806,098	\$ (34,581)
◆ 2026	\$ 18,070,657	\$ (34,644)
◆ 2027	\$ 984,997	\$ (20,087)
◆ 2028	\$ 1,428,799	\$ (15,680)
◆ Thereafter	\$ 1,398,815	\$ (1,239)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Belchertown Water District
◆ Current Proportionate Share		0.255568%
◆ Prior Proportionate Share		0.255204%
Beginning Net Pension Liability	\$ 200,058,212	\$ 510,557
Ending Net Pension Liability	\$ 183,047,336	\$ 467,810
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 9,401
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	48,150
◆ Changes of Assumptions	19,746,538	50,466
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	101,376
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 209,393
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 5,038
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	34,225
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 39,263
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 53,097
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	7,349
Total Employer Pension Expense	\$ 20,776,116	\$ 60,446
Covered Payroll:	\$ 102,054,966	\$ 230,986
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 467,810
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 659,941
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 305,445
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 38,090
◆ 2025	\$ 10,806,098	\$ 46,208
◆ 2026	\$ 18,070,657	\$ 55,013
◆ 2027	\$ 984,997	\$ 19,670
◆ 2028	\$ 1,428,799	\$ 7,301
◆ Thereafter	\$ 1,398,815	\$ 3,848

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Chesterfield
◆ Current Proportionate Share		0.334206%
◆ Prior Proportionate Share		0.372992%
Beginning Net Pension Liability	\$ 200,058,212	\$ 746,201
Ending Net Pension Liability	\$ 183,047,336	\$ 611,755
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 12,294
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	62,966
◆ Changes of Assumptions	19,746,538	65,994
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	18,357
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 159,611
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 6,588
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	71,317
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 77,905
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 69,435
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(6,980)
Total Employer Pension Expense	\$ 20,776,116	\$ 62,455
Covered Payroll:	\$ 102,054,966	\$ 387,919
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 611,755
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 863,004
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 399,430
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 13,506
◆ 2025	\$ 10,806,098	\$ 28,500
◆ 2026	\$ 18,070,657	\$ 55,026
◆ 2027	\$ 984,997	\$ (6,798)
◆ 2028	\$ 1,428,799	\$ (3,719)
◆ Thereafter	\$ 1,398,815	\$ (4,809)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Chesterfield-Goshen Regional School District
◆ Current Proportionate Share		0.379754%
◆ Prior Proportionate Share		0.382809%
Beginning Net Pension Liability	\$ 200,058,212	\$ 765,842
Ending Net Pension Liability	\$ 183,047,336	\$ 695,129
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 13,970
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	71,547
◆ Changes of Assumptions	19,746,538	74,988
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	74,558
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 235,063
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 7,486
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	70,095
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 77,581
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 78,898
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,258
Total Employer Pension Expense	\$ 20,776,116	\$ 87,156
Covered Payroll:	\$ 102,054,966	\$ 287,254
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 695,129
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 980,621
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 453,867
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 27,772
◆ 2025	\$ 10,806,098	\$ 44,227
◆ 2026	\$ 18,070,657	\$ 64,391
◆ 2027	\$ 984,997	\$ 766
◆ 2028	\$ 1,428,799	\$ 14,868
◆ Thereafter	\$ 1,398,815	\$ 5,458

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Cummington
◆ Current Proportionate Share		0.265398%
◆ Prior Proportionate Share		0.289567%
Beginning Net Pension Liability	\$ 200,058,212	\$ 579,303
Ending Net Pension Liability	\$ 183,047,336	\$ 485,804
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 9,763
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	50,002
◆ Changes of Assumptions	19,746,538	52,407
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	95,915
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 208,087
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 5,232
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	74,875
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 80,107
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 55,139
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	16,426
Total Employer Pension Expense	\$ 20,776,116	\$ 71,565
Covered Payroll:	\$ 102,054,966	\$ 290,920
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 485,804
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 685,325
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 317,194
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 33,942
◆ 2025	\$ 10,806,098	\$ 31,296
◆ 2026	\$ 18,070,657	\$ 45,622
◆ 2027	\$ 984,997	\$ 11,671
◆ 2028	\$ 1,428,799	\$ 7,025
◆ Thereafter	\$ 1,398,815	\$ (1,576)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Foothills Health District
◆ Current Proportionate Share		0.199869%
◆ Prior Proportionate Share		0.169746%
Beginning Net Pension Liability	\$ 200,058,212	\$ 339,592
Ending Net Pension Liability	\$ 183,047,336	\$ 365,855
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 7,352
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	37,656
◆ Changes of Assumptions	19,746,538	39,467
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	167,304
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 251,779
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 3,940
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	-
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 3,940
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 41,525
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	33,770
Total Employer Pension Expense	\$ 20,776,116	\$ 75,295
Covered Payroll:	\$ 102,054,966	\$ 213,187
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 365,855
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 516,113
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 238,876
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 46,837
◆ 2025	\$ 10,806,098	\$ 53,215
◆ 2026	\$ 18,070,657	\$ 67,708
◆ 2027	\$ 984,997	\$ 33,529
◆ 2028	\$ 1,428,799	\$ 34,386
◆ Thereafter	\$ 1,398,815	\$ 12,164

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Gateway Regional School District
◆ Current Proportionate Share		2.477046%
◆ Prior Proportionate Share		2.306668%
Beginning Net Pension Liability	\$ 200,058,212	\$ 4,614,678
Ending Net Pension Liability	\$ 183,047,336	\$ 4,534,167
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 91,120
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	466,687
◆ Changes of Assumptions	19,746,538	489,131
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	319,256
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 1,366,194
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 48,828
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	260,205
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 309,033
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 514,634
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(74,397)
Total Employer Pension Expense	\$ 20,776,116	\$ 440,237
Covered Payroll:	\$ 102,054,966	\$ 2,376,792
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 4,534,167
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 6,396,366
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 2,960,472
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 149,727
◆ 2025	\$ 10,806,098	\$ 241,422
◆ 2026	\$ 18,070,657	\$ 439,566
◆ 2027	\$ 984,997	\$ 59,220
◆ 2028	\$ 1,428,799	\$ 89,421
◆ Thereafter	\$ 1,398,815	\$ 77,805

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Goshen
◆ Current Proportionate Share		0.206420%
◆ Prior Proportionate Share		0.166866%
Beginning Net Pension Liability	\$ 200,058,212	\$ 333,829
Ending Net Pension Liability	\$ 183,047,336	\$ 377,847
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 7,593
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	38,891
◆ Changes of Assumptions	19,746,538	40,761
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	59,700
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 146,945
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 4,069
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	135,679
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 139,748
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 42,886
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(25,400)
Total Employer Pension Expense	\$ 20,776,116	\$ 17,486
Covered Payroll:	\$ 102,054,966	\$ 284,627
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 377,847
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 533,030
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 246,706
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (6,664)
◆ 2025	\$ 10,806,098	\$ (6,795)
◆ 2026	\$ 18,070,657	\$ 15,313
◆ 2027	\$ 984,997	\$ (4,482)
◆ 2028	\$ 1,428,799	\$ (1,690)
◆ Thereafter	\$ 1,398,815	\$ 11,515

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Granby
◆ Current Proportionate Share		4.837516%
◆ Prior Proportionate Share		4.745504%
Beginning Net Pension Liability	\$ 200,058,212	\$ 9,493,770
Ending Net Pension Liability	\$ 183,047,336	\$ 8,854,944
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 177,952
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	911,411
◆ Changes of Assumptions	19,746,538	955,242
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	620,434
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 2,665,039
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 95,358
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	46,179
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 141,537
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 1,005,048
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	119,058
Total Employer Pension Expense	\$ 20,776,116	\$ 1,124,106
Covered Payroll:	\$ 102,054,966	\$ 4,716,771
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 8,854,944
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 12,491,701
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 5,781,617
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 515,233
◆ 2025	\$ 10,806,098	\$ 651,909
◆ 2026	\$ 18,070,657	\$ 1,022,502
◆ 2027	\$ 984,997	\$ 129,915
◆ 2028	\$ 1,428,799	\$ 112,119
◆ Thereafter	\$ 1,398,815	\$ 91,824

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Granby Housing Authority
◆ Current Proportionate Share		0.079949%
◆ Prior Proportionate Share		0.079882%
Beginning Net Pension Liability	\$ 200,058,212	\$ 159,810
Ending Net Pension Liability	\$ 183,047,336	\$ 146,344
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 2,941
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	15,063
◆ Changes of Assumptions	19,746,538	15,787
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	1,973
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 35,764
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 1,576
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	49,017
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 50,593
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 16,610
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(13,032)
Total Employer Pension Expense	\$ 20,776,116	\$ 3,578
Covered Payroll:	\$ 102,054,966	\$ 78,874
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 146,344
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 206,448
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 95,552
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (6,781)
◆ 2025	\$ 10,806,098	\$ (4,265)
◆ 2026	\$ 18,070,657	\$ 3,903
◆ 2027	\$ 984,997	\$ (9,484)
◆ 2028	\$ 1,428,799	\$ 634
◆ Thereafter	\$ 1,398,815	\$ 1,164

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hadley
◆ Current Proportionate Share		5.600487%
◆ Prior Proportionate Share		5.744417%
Beginning Net Pension Liability	\$ 200,058,212	\$ 11,492,177
Ending Net Pension Liability	\$ 183,047,336	\$ 10,251,543
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 206,019
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	1,055,158
◆ Changes of Assumptions	19,746,538	1,105,902
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	725,400
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 3,092,479
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 110,397
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	206,002
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 316,399
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 1,163,564
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	236,989
Total Employer Pension Expense	\$ 20,776,116	\$ 1,400,553
Covered Payroll:	\$ 102,054,966	\$ 6,556,940
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 10,251,543
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 14,461,887
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 6,693,491
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 616,378
◆ 2025	\$ 10,806,098	\$ 810,600
◆ 2026	\$ 18,070,657	\$ 1,132,049
◆ 2027	\$ 984,997	\$ 111,466
◆ 2028	\$ 1,428,799	\$ 61,893
◆ Thereafter	\$ 1,398,815	\$ 43,694

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hadley Housing Authority
◆ Current Proportionate Share		0.000000%
◆ Prior Proportionate Share		0.000000%
Beginning Net Pension Liability	\$ 200,058,212	\$ -
Ending Net Pension Liability	\$ 183,047,336	\$ -
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	-
◆ Changes of Assumptions	19,746,538	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	115
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 115
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ -
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	43,491
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 43,491
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ -
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(10,658)
Total Employer Pension Expense	\$ 20,776,116	\$ (10,658)
Covered Payroll:	\$ 102,054,966	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ -
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ -
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ -
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (10,606)
◆ 2025	\$ 10,806,098	\$ (10,621)
◆ 2026	\$ 18,070,657	\$ (10,638)
◆ 2027	\$ 984,997	\$ (10,657)
◆ 2028	\$ 1,428,799	\$ (853)
◆ Thereafter	\$ 1,398,815	\$ (1)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hampshire County Regional Housing Authority
◆ Current Proportionate Share		0.000000%
◆ Prior Proportionate Share		0.000000%
Beginning Net Pension Liability	\$ 200,058,212	\$ -
Ending Net Pension Liability	\$ 183,047,336	\$ -
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	-
◆ Changes of Assumptions	19,746,538	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	6,751
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 6,751
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ -
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	47,882
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 47,882
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ -
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(6,637)
Total Employer Pension Expense	\$ 20,776,116	\$ (6,637)
Covered Payroll:	\$ 102,054,966	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ -
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ -
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ -
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (8,207)
◆ 2025	\$ 10,806,098	\$ (6,006)
◆ 2026	\$ 18,070,657	\$ (8,438)
◆ 2027	\$ 984,997	\$ (8,787)
◆ 2028	\$ 1,428,799	\$ (8,976)
◆ Thereafter	\$ 1,398,815	\$ (717)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hampshire Regional School District
◆ Current Proportionate Share		1.973597%
◆ Prior Proportionate Share		2.214253%
Beginning Net Pension Liability	\$ 200,058,212	\$ 4,429,796
Ending Net Pension Liability	\$ 183,047,336	\$ 3,612,617
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 72,600
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	371,835
◆ Changes of Assumptions	19,746,538	389,717
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	207,232
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 1,041,384
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 38,904
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	462,015
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 500,919
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 410,037
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(65,670)
Total Employer Pension Expense	\$ 20,776,116	\$ 344,367
Covered Payroll:	\$ 102,054,966	\$ 1,745,783
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 3,612,617
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 5,096,331
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 2,358,769
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 93,134
◆ 2025	\$ 10,806,098	\$ 172,995
◆ 2026	\$ 18,070,657	\$ 303,428
◆ 2027	\$ 984,997	\$ (34)
◆ 2028	\$ 1,428,799	\$ 373
◆ Thereafter	\$ 1,398,815	\$ (29,431)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hatfield
◆ Current Proportionate Share		2.545854%
◆ Prior Proportionate Share		2.532426%
Beginning Net Pension Liability	\$ 200,058,212	\$ 5,066,326
Ending Net Pension Liability	\$ 183,047,336	\$ 4,660,118
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 93,651
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	479,651
◆ Changes of Assumptions	19,746,538	502,718
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	269,379
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 1,345,399
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 50,184
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	190,160
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 240,344
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 528,930
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	23,592
Total Employer Pension Expense	\$ 20,776,116	\$ 552,522
Covered Payroll:	\$ 102,054,966	\$ 2,849,516
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 4,660,118
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 6,574,045
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 3,042,709
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 174,855
◆ 2025	\$ 10,806,098	\$ 257,675
◆ 2026	\$ 18,070,657	\$ 514,004
◆ 2027	\$ 984,997	\$ 53,656
◆ 2028	\$ 1,428,799	\$ 63,970
◆ Thereafter	\$ 1,398,815	\$ 40,895

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Hatfield Housing Authority
◆ Current Proportionate Share		0.029490%
◆ Prior Proportionate Share		0.029446%
Beginning Net Pension Liability	\$ 200,058,212	\$ 58,909
Ending Net Pension Liability	\$ 183,047,336	\$ 53,981
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 1,085
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	5,556
◆ Changes of Assumptions	19,746,538	5,823
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	246
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 12,710
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 581
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	25,839
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 26,420
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 6,127
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(8,276)
Total Employer Pension Expense	\$ 20,776,116	\$ (2,149)
Covered Payroll:	\$ 102,054,966	\$ 27,393
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 53,981
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 76,152
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 35,246
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ (5,955)
◆ 2025	\$ 10,806,098	\$ (5,031)
◆ 2026	\$ 18,070,657	\$ (2,916)
◆ 2027	\$ 984,997	\$ (671)
◆ 2028	\$ 1,428,799	\$ 440
◆ Thereafter	\$ 1,398,815	\$ 423

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Huntington
◆ Current Proportionate Share		0.469693%
◆ Prior Proportionate Share		0.539192%
Beginning Net Pension Liability	\$ 200,058,212	\$ 1,078,698
Ending Net Pension Liability	\$ 183,047,336	\$ 859,761
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 17,278
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	88,492
◆ Changes of Assumptions	19,746,538	92,748
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	109,012
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 307,530
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 9,259
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	167,091
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 176,350
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 97,584
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(21,539)
Total Employer Pension Expense	\$ 20,776,116	\$ 76,045
Covered Payroll:	\$ 102,054,966	\$ 478,146
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 859,761
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 1,212,867
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 561,359
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 18,084
◆ 2025	\$ 10,806,098	\$ 53,218
◆ 2026	\$ 18,070,657	\$ 74,826
◆ 2027	\$ 984,997	\$ (9,833)
◆ 2028	\$ 1,428,799	\$ 4,227
◆ Thereafter	\$ 1,398,815	\$ (9,342)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Middlefield
◆ Current Proportionate Share		0.216250%
◆ Prior Proportionate Share		0.215944%
Beginning Net Pension Liability	\$ 200,058,212	\$ 432,013
Ending Net Pension Liability	\$ 183,047,336	\$ 395,841
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 7,955
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	40,743
◆ Changes of Assumptions	19,746,538	42,702
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	32,675
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 124,075
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 4,263
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	16,815
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 21,078
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 44,928
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,340
Total Employer Pension Expense	\$ 20,776,116	\$ 47,268
Covered Payroll:	\$ 102,054,966	\$ 256,008
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 395,841
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 558,414
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 258,454
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 18,473
◆ 2025	\$ 10,806,098	\$ 23,111
◆ 2026	\$ 18,070,657	\$ 43,561
◆ 2027	\$ 984,997	\$ 8,780
◆ 2028	\$ 1,428,799	\$ 5,789
◆ Thereafter	\$ 1,398,815	\$ 3,283

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Pelham
◆ Current Proportionate Share		0.953467%
◆ Prior Proportionate Share		0.961931%
Beginning Net Pension Liability	\$ 200,058,212	\$ 1,924,422
Ending Net Pension Liability	\$ 183,047,336	\$ 1,745,295
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 35,074
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	179,638
◆ Changes of Assumptions	19,746,538	188,277
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	150,179
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 553,168
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 18,795
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	37,486
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 56,281
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 198,093
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(2,202)
Total Employer Pension Expense	\$ 20,776,116	\$ 195,891
Covered Payroll:	\$ 102,054,966	\$ 1,023,695
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 1,745,295
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 2,462,094
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 1,139,547
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 80,844
◆ 2025	\$ 10,806,098	\$ 137,617
◆ 2026	\$ 18,070,657	\$ 204,086
◆ 2027	\$ 984,997	\$ 35,570
◆ 2028	\$ 1,428,799	\$ 26,421
◆ Thereafter	\$ 1,398,815	\$ 12,349

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Plainfield
◆ Current Proportionate Share		0.334206%
◆ Prior Proportionate Share		0.333731%
Beginning Net Pension Liability	\$ 200,058,212	\$ 667,657
Ending Net Pension Liability	\$ 183,047,336	\$ 611,755
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 12,294
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	62,966
◆ Changes of Assumptions	19,746,538	65,994
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	80,062
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 221,316
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 6,588
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	28,792
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 35,380
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 69,435
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,949
Total Employer Pension Expense	\$ 20,776,116	\$ 72,384
Covered Payroll:	\$ 102,054,966	\$ 367,908
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 611,755
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 863,004
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 399,430
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 28,785
◆ 2025	\$ 10,806,098	\$ 39,378
◆ 2026	\$ 18,070,657	\$ 75,607
◆ 2027	\$ 984,997	\$ 20,023
◆ 2028	\$ 1,428,799	\$ 16,460
◆ Thereafter	\$ 1,398,815	\$ 5,683

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Quabbin Health District
◆ Current Proportionate Share		0.325005%
◆ Prior Proportionate Share		0.315990%
Beginning Net Pension Liability	\$ 200,058,212	\$ 632,165
Ending Net Pension Liability	\$ 183,047,336	\$ 594,913
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 11,956
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	61,232
◆ Changes of Assumptions	19,746,538	64,177
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	81,267
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 218,632
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 6,407
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	11,081
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 17,488
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 67,523
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	19,249
Total Employer Pension Expense	\$ 20,776,116	\$ 86,772
Covered Payroll:	\$ 102,054,966	\$ 323,026
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 594,913
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 839,245
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 388,433
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 41,564
◆ 2025	\$ 10,806,098	\$ 49,935
◆ 2026	\$ 18,070,657	\$ 68,915
◆ 2027	\$ 984,997	\$ 15,483
◆ 2028	\$ 1,428,799	\$ 17,614
◆ Thereafter	\$ 1,398,815	\$ 7,633

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Southampton
◆ Current Proportionate Share		3.211385%
◆ Prior Proportionate Share		3.239265%
Beginning Net Pension Liability	\$ 200,058,212	\$ 6,480,416
Ending Net Pension Liability	\$ 183,047,336	\$ 5,878,354
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 118,134
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	605,040
◆ Changes of Assumptions	19,746,538	634,137
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	140,939
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 1,498,250
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 63,303
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	249,149
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 312,452
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 667,201
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	33,658
Total Employer Pension Expense	\$ 20,776,116	\$ 700,859
Covered Payroll:	\$ 102,054,966	\$ 3,042,761
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 5,878,354
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 8,292,614
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 3,838,126
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 262,318
◆ 2025	\$ 10,806,098	\$ 333,770
◆ 2026	\$ 18,070,657	\$ 556,843
◆ 2027	\$ 984,997	\$ (1,099)
◆ 2028	\$ 1,428,799	\$ (793)
◆ Thereafter	\$ 1,398,815	\$ 34,759

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	South Hadley
◆ Current Proportionate Share		13.397497%
◆ Prior Proportionate Share		13.308821%
Beginning Net Pension Liability	\$ 200,058,212	\$ 26,625,389
Ending Net Pension Liability	\$ 183,047,336	\$ 24,523,761
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 492,838
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	2,524,151
◆ Changes of Assumptions	19,746,538	2,645,542
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	648,522
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 6,311,053
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 264,093
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	232,497
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 496,590
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 2,783,480
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(40,419)
Total Employer Pension Expense	\$ 20,776,116	\$ 2,743,061
Covered Payroll:	\$ 102,054,966	\$ 14,609,162
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 24,523,761
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 34,595,755
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 16,012,182
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 1,132,517
◆ 2025	\$ 10,806,098	\$ 1,645,441
◆ 2026	\$ 18,070,657	\$ 2,489,969
◆ 2027	\$ 984,997	\$ 155,943
◆ 2028	\$ 1,428,799	\$ 183,827
◆ Thereafter	\$ 1,398,815	\$ 206,766

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	South Hadley Housing Authority
◆ Current Proportionate Share		0.245738%
◆ Prior Proportionate Share		0.249625%
Beginning Net Pension Liability	\$ 200,058,212	\$ 499,395
Ending Net Pension Liability	\$ 183,047,336	\$ 449,816
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 9,040
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	46,298
◆ Changes of Assumptions	19,746,538	48,525
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	5,565
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 109,428
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 4,844
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	13,925
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 18,769
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 51,055
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(209)
Total Employer Pension Expense	\$ 20,776,116	\$ 50,846
Covered Payroll:	\$ 102,054,966	\$ 250,334
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 449,816
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 634,557
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 293,696
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 16,609
◆ 2025	\$ 10,806,098	\$ 24,389
◆ 2026	\$ 18,070,657	\$ 42,124
◆ 2027	\$ 984,997	\$ 1,359
◆ 2028	\$ 1,428,799	\$ 3,606
◆ Thereafter	\$ 1,398,815	\$ 2,572

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	South Hadley-Easthampton Veteran's District
◆ Current Proportionate Share		0.068808%
◆ Prior Proportionate Share		0.068710%
Beginning Net Pension Liability	\$ 200,058,212	\$ 137,460
Ending Net Pension Liability	\$ 183,047,336	\$ 125,951
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 2,531
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	12,964
◆ Changes of Assumptions	19,746,538	13,587
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	11,685
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 40,767
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 1,356
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	5,751
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 7,107
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 14,296
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(474)
Total Employer Pension Expense	\$ 20,776,116	\$ 13,822
Covered Payroll:	\$ 102,054,966	\$ -
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 125,951
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 177,679
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 82,236
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 4,851
◆ 2025	\$ 10,806,098	\$ 7,030
◆ 2026	\$ 18,070,657	\$ 14,416
◆ 2027	\$ 984,997	\$ 2,960
◆ 2028	\$ 1,428,799	\$ 3,235
◆ Thereafter	\$ 1,398,815	\$ 1,168

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	South Hadley Fire District No.1
◆ Current Proportionate Share		2.594999%
◆ Prior Proportionate Share		2.591321%
Beginning Net Pension Liability	\$ 200,058,212	\$ 5,184,151
Ending Net Pension Liability	\$ 183,047,336	\$ 4,750,076
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 95,459
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	488,910
◆ Changes of Assumptions	19,746,538	512,422
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	258,656
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 1,355,447
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 51,153
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	82,373
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 133,526
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 539,140
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(11,830)
Total Employer Pension Expense	\$ 20,776,116	\$ 527,310
Covered Payroll:	\$ 102,054,966	\$ 2,570,555
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 4,750,076
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 6,700,948
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 3,101,444
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 217,770
◆ 2025	\$ 10,806,098	\$ 308,839
◆ 2026	\$ 18,070,657	\$ 501,064
◆ 2027	\$ 984,997	\$ 76,654
◆ 2028	\$ 1,428,799	\$ 77,329
◆ Thereafter	\$ 1,398,815	\$ 40,265

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	South Hadley Fire District No.2
◆ Current Proportionate Share		0.943636%
◆ Prior Proportionate Share		0.991374%
Beginning Net Pension Liability	\$ 200,058,212	\$ 1,983,324
Ending Net Pension Liability	\$ 183,047,336	\$ 1,727,301
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 34,712
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	177,786
◆ Changes of Assumptions	19,746,538	186,336
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	44,479
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 443,313
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 18,601
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	183,383
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 201,984
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 196,051
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(59,844)
Total Employer Pension Expense	\$ 20,776,116	\$ 136,207
Covered Payroll:	\$ 102,054,966	\$ 966,946
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 1,727,301
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 2,436,710
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 1,127,799
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 20,702
◆ 2025	\$ 10,806,098	\$ 85,937
◆ 2026	\$ 18,070,657	\$ 151,602
◆ 2027	\$ 984,997	\$ (20,206)
◆ 2028	\$ 1,428,799	\$ 1,757
◆ Thereafter	\$ 1,398,815	\$ 1,537

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Ware
◆ Current Proportionate Share		8.517841%
◆ Prior Proportionate Share		8.330993%
Beginning Net Pension Liability	\$ 200,058,212	\$ 16,666,836
Ending Net Pension Liability	\$ 183,047,336	\$ 15,591,681
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 313,336
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	1,604,801
◆ Changes of Assumptions	19,746,538	1,681,979
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	751,028
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 4,351,144
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 167,905
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	554,540
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 722,445
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 1,769,677
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,549
Total Employer Pension Expense	\$ 20,776,116	\$ 1,778,226
Covered Payroll:	\$ 102,054,966	\$ 8,812,813
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 15,591,681
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 21,995,239
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 10,180,202
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 650,046
◆ 2025	\$ 10,806,098	\$ 938,196
◆ 2026	\$ 18,070,657	\$ 1,631,918
◆ 2027	\$ 984,997	\$ 69,795
◆ 2028	\$ 1,428,799	\$ 172,484
◆ Thereafter	\$ 1,398,815	\$ 166,260

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Ware Housing Authority
◆ Current Proportionate Share		0.265944%
◆ Prior Proportionate Share		0.276233%
Beginning Net Pension Liability	\$ 200,058,212	\$ 552,627
Ending Net Pension Liability	\$ 183,047,336	\$ 486,803
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 9,783
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	50,105
◆ Changes of Assumptions	19,746,538	52,515
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	27,412
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 139,815
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 5,242
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	14,816
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 20,058
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 55,253
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	7,432
Total Employer Pension Expense	\$ 20,776,116	\$ 62,685
Covered Payroll:	\$ 102,054,966	\$ 177,709
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 486,803
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 686,735
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 317,846
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 25,000
◆ 2025	\$ 10,806,098	\$ 33,637
◆ 2026	\$ 18,070,657	\$ 53,121
◆ 2027	\$ 984,997	\$ 2,974
◆ 2028	\$ 1,428,799	\$ 3,653
◆ Thereafter	\$ 1,398,815	\$ 1,372

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Westhampton
◆ Current Proportionate Share		0.776534%
◆ Prior Proportionate Share		0.853957%
Beginning Net Pension Liability	\$ 200,058,212	\$ 1,708,412
Ending Net Pension Liability	\$ 183,047,336	\$ 1,421,424
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 28,565
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	146,303
◆ Changes of Assumptions	19,746,538	153,338
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	59,862
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 388,068
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 15,307
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	169,300
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 184,607
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 161,334
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(15,740)
Total Employer Pension Expense	\$ 20,776,116	\$ 145,594
Covered Payroll:	\$ 102,054,966	\$ 772,952
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 1,421,424
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 2,005,208
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 928,084
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 32,854
◆ 2025	\$ 10,806,098	\$ 55,196
◆ 2026	\$ 18,070,657	\$ 123,295
◆ 2027	\$ 984,997	\$ (5,708)
◆ 2028	\$ 1,428,799	\$ 5,010
◆ Thereafter	\$ 1,398,815	\$ (7,186)

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Williamsburg
◆ Current Proportionate Share		1.190929%
◆ Prior Proportionate Share		1.141097%
Beginning Net Pension Liability	\$ 200,058,212	\$ 2,282,859
Ending Net Pension Liability	\$ 183,047,336	\$ 2,179,963
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 43,809
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	224,377
◆ Changes of Assumptions	19,746,538	235,167
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	173,161
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 676,514
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 23,476
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	169,035
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 192,511
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 247,429
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,080
Total Employer Pension Expense	\$ 20,776,116	\$ 255,509
Covered Payroll:	\$ 102,054,966	\$ 1,264,126
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 2,179,963
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 3,075,282
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 1,423,353
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 78,342
◆ 2025	\$ 10,806,098	\$ 111,852
◆ 2026	\$ 18,070,657	\$ 210,202
◆ 2027	\$ 984,997	\$ 8,109
◆ 2028	\$ 1,428,799	\$ 45,050
◆ Thereafter	\$ 1,398,815	\$ 30,448

APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2023	Hampshire County Retirement System	Worthington
◆ Current Proportionate Share		0.932387%
◆ Prior Proportionate Share		0.795141%
Beginning Net Pension Liability	\$ 200,058,212	\$ 1,590,745
Ending Net Pension Liability	\$ 183,047,336	\$ 1,706,710
Total Deferred Outflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 3,678,585	\$ 34,299
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	18,840,470	175,666
◆ Changes of Assumptions	19,746,538	184,114
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	431,935
Total Deferred Outflows of Resources	\$ 49,633,768	\$ 826,014
Total Deferred Inflows of Resources:		
◆ Differences Between Expected and Actual Experience	\$ 1,971,210	\$ 18,379
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,368,175	20,857
Total Deferred Inflows of Resources	\$ 9,339,385	\$ 39,236
Employer Pension Expense:		
◆ Proportionate Share of Plan Pension Expense	\$ 20,776,116	\$ 193,714
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	118,969
Total Employer Pension Expense	\$ 20,776,116	\$ 312,683
Covered Payroll:	\$ 102,054,966	\$ 982,766
Sensitivity of the Net Pension Liability to Changes in the Discount Rate:		
◆ Current discount rate: 6.8%	\$ 183,047,336	\$ 1,706,710
◆ 1% decrease in the discount rate: 5.8%	\$ 258,225,509	\$ 2,407,662
◆ 1% increase in the discount rate: 7.8%	\$ 119,516,224	\$ 1,114,354
Deferred Outflows of Resources and Deferred Inflows of Resources Recognized in Future Pension Expense:		
◆ 2024	\$ 7,605,017	\$ 173,902
◆ 2025	\$ 10,806,098	\$ 212,789
◆ 2026	\$ 18,070,657	\$ 259,006
◆ 2027	\$ 984,997	\$ 53,080
◆ 2028	\$ 1,428,799	\$ 41,560
◆ Thereafter	\$ 1,398,815	\$ 46,441

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 6.8%; the municipal bond rate is 3.26%, based on the December 2023 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 6.8%.