

MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
INDEPENDENT AUDITORS' REPORT ON PENSION PLAN SCHEDULES
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023

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TABLE OF CONTENTS

	Page
Independent Auditors' Report	1
Schedule of Employer and Nonemployer Allocations	3
Schedule of Pension Amounts by Employer and Nonemployer	10
Notes to Schedules	11



INDEPENDENT AUDITORS' REPORT

Mr. William McNamara, Comptroller
Commonwealth of Massachusetts

Report on the Audit of the Schedules

Opinions

We have audited the accompanying schedule of employer and nonemployer allocations of the Massachusetts State Employees' Retirement System (MSERS) as of and for the year ended June 30, 2023, and the related notes. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total employer pension expense (specified column totals), included in the accompanying schedule of pension amounts by employer and nonemployer of MSERS as of and for the fiscal year ended June 30, 2023, and the related notes.

In our opinion, the schedules referred to above present fairly, in all material respects, the employer and nonemployer allocations and ending net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities of MSERS as of and for the year ended June 30, 2023, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Schedules section of our report. We are required to be independent of MSERS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Schedules

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibilities for the Audit of the Schedules

Our objectives are to obtain reasonable assurance about whether the schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer.

Mr. William McNamara, Comptroller
Commonwealth of Massachusetts

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedule of employer and nonemployer allocations and the specified totals included in the schedule of pension amounts by employer and nonemployer, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the schedule of employer and nonemployer allocations and the specified totals included in the schedule of pension amounts by employer and nonemployer.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of MSERS' internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedule of employer and nonemployer allocations and the specified totals included in the schedule of pension amounts by employer and nonemployer.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Commonwealth of Massachusetts as of and for the year ended June 30, 2023, and our report thereon, dated May 28, 2024, expressed an unmodified opinion on those financial statements. MSERS is reported as a pension trust fund in the financial statements of the Commonwealth of Massachusetts.

Restriction on Use

Our report is intended solely for the information and use of MSERS management, the MSERS Board of Trustees, Retirement Board, MSERS employers and their auditors, and the Commonwealth of Massachusetts and is not intended to be, and should not be, used by anyone other than these specified parties.



CliftonLarsonAllen LLP

Boston, Massachusetts
July 15, 2024

**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
Non Special Funding Situations:		
9045 - Commonwealth of Massachusetts:		
Employer contributions.....	\$ 1,340,492,896	
Total Commonwealth of Massachusetts.....	<u>1,340,492,896</u>	90.91423%
6070 - Massachusetts State College Building Authority:		
Employer contributions.....	-	
Nonemployer contributions.....	<u>401,385</u>	
Total Massachusetts State College Building Authority.....	<u>401,385</u>	0.02722%
6090 - Massachusetts Convention Center Authority:		
Employer contributions.....	1,552,603	
Nonemployer contributions.....	<u>2,538,791</u>	
Total Massachusetts Convention Center Authority.....	<u>4,091,394</u>	0.27748%
9045 - Massachusetts Department of Transportation:		
Employer contributions.....	56,379,060	
Nonemployer contributions.....	<u>21,500,935</u>	
Total Massachusetts Department of Transportation.....	<u>77,879,995</u>	5.28194%
8060 - Assabet Valley Regional Vocational School District:		
Employer contributions.....	847,748	
Nonemployer contributions.....	<u>-</u>	
Total Assabet Valley Regional Vocational School District.....	<u>847,748</u>	0.05750%
8100 - Blackstone Valley Regional Vocational School District:		
Employer contributions.....	326,562	
Nonemployer contributions.....	<u>580,252</u>	
Total Blackstone Valley Regional Vocational School District.....	<u>906,814</u>	0.06150%
8080 - Bristol/Plymouth Regional Vocational Technical School District.....		
Employer contributions.....	451,834	
Nonemployer contributions.....	<u>77,386</u>	
Total Bristol/Plymouth Regional Vocational Technical School District.....	<u>529,220</u>	0.03589%
8160 - Central Massachusetts Regional Planning Commission:		
Employer contributions.....	-	
Nonemployer contributions.....	<u>588,878</u>	
Total Central Massachusetts Regional Planning Commission.....	<u>588,878</u>	0.03994%
8020 - Merrimack Valley Planning Commission:		
Employer contributions.....	-	
Nonemployer contributions.....	<u>298,867</u>	
Total Merrimack Valley Planning Commission.....	<u>298,867</u>	0.02027%

(continued)

**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
8010 - Montachusett Regional Planning Commission:		
Employer contributions.....	\$ -	
Nonemployer contributions.....	256,802	
Total Montachusett Regional Planning Commission.....	256,802	0.01742%
8090 - Montachusett Regional Vocational Technical School District:		
Employer contributions.....	472,455	
Nonemployer contributions.....	589,244	
Total Montachusett Regional Vocational Technical School District.....	1,061,699	0.07201%
8070 - Nashoba Associated Boards of Health:		
Employer contributions.....	-	
Nonemployer contributions.....	967,999	
Total Nashoba Associated Boards of Health.....	967,999	0.06565%
8040 - North Middlesex Council of Governments:		
Employer contributions.....	-	
Nonemployer contributions.....	229,789	
Total North Middlesex Council of Governments.....	229,789	0.01558%
8030 - Northeast Metropolitan Regional Vocational School District:		
Employer contributions.....	773,194	
Nonemployer contributions.....	-	
Total Northeast Metropolitan Regional Vocational School District.....	773,194	0.05244%
8170 - Old Colony Planning Council:		
Employer contributions.....	-	
Nonemployer contributions.....	308,228	
Total Old Colony Planning Council.....	308,228	0.02090%
8180 - Old Colony Regional Vocational Technical School District:		
Employer contributions.....	494,430	
Nonemployer contributions.....	(117,637)	
Total Old Colony Regional Vocational Technical School District.....	376,793	0.02555%
8110 - Pioneer Valley Planning Commission:		
Employer contributions.....	-	
Nonemployer contributions.....	772,664	
Total Pioneer Valley Planning Commission.....	772,664	0.05240%
8140 - Southeastern Regional Planning & Economic Development District:		
Employer contributions.....	-	
Nonemployer contributions.....	502,933	
Total Southeastern Regional Planning & Economic Development District.....	502,933	0.03411%

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**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
8120 - Southeastern Regional School District:		
Employer contributions.....	2,386,464	
Nonemployer contributions.....	(981,548)	
Total Southeastern Regional School District.....	1,404,916	0.09528%
8200 - Tri-County Regional Vocational Technical School District:		
Employer contributions.....	-	
Nonemployer contributions.....	603,648	
Total Tri-County Regional Vocational Technical School District.....	603,648	0.04094%
8190 - Upper Blackstone Water Pollution Abatement District:		
Employer contributions.....	501,756	
Nonemployer contributions.....	532,078	
Total Upper Blackstone Water Pollution Abatement District.....	1,033,834	0.07012%
8130 - Upper Cape Cod Regional Vocational Technical School District:		
Employer contributions.....	527,143	
Nonemployer contributions.....	33,196	
Total Upper Cape Cod Regional Vocational Technical School District.....	560,339	0.03800%
<u>Special Funding Situations (Educational Collaboratives):</u>		
6013 - ACCEPT Education Collaborative:		
Employer contributions.....	47,590	
Nonemployer contributions.....	1,653,978	
Total ACCEPT Education Collaborative.....	1,701,568	0.11540%
6022 - Assabet Valley Collaborative:		
Employer contributions.....	91,698	
Nonemployer contributions.....	515,479	
Total Assabet Valley Collaborative.....	607,177	0.04118%
6004 - Bi-County Education Collaborative:		
Employer contributions.....	230,166	
Nonemployer contributions.....	644,679	
Total Bi-County Education Collaborative.....	874,845	0.05933%
6018 - C.A.S.E. Collaborative:		
Employer contributions.....	256,806	
Nonemployer contributions.....	731,871	
Total C.A.S.E. Collaborative.....	988,677	0.06705%
6016 - Cape Cod Collaborative:		
Employer contributions.....	339,127	
Nonemployer contributions.....	957,106	
Total Cape Cod Collaborative.....	1,296,233	0.08791%

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**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
6010 - CAPS Education Collaborative:		
Employer contributions.....	220,389	
Nonemployer contributions.....	667,204	
Total CAPS Education Collaborative.....	<u>887,593</u>	0.06020%
6035 - Central Massachusetts Special Education Collaborative:		
Employer contributions.....	161,591	
Nonemployer contributions.....	451,084	
Total Central Massachusetts Special Education Collaborative.....	<u>612,675</u>	0.04155%
6017 - Collaborative for Educational Services:		
Employer contributions.....	335,756	
Nonemployer contributions.....	1,534,821	
Total Collaborative for Educational Services.....	<u>1,870,577</u>	0.12687%
6021 - CREST Collaborative:		
Employer contributions.....	121,801	
Nonemployer contributions.....	1,384,921	
Total CREST Collaborative.....	<u>1,506,722</u>	0.10219%
6019 - Keystone Educational Collaborative:		
Employer contributions.....	188,519	
Nonemployer contributions.....	537,002	
Total Keystone Educational Collaborative.....	<u>725,521</u>	0.04921%
6034 - LABBB Collaborative:		
Employer contributions.....	342,456	
Nonemployer contributions.....	1,060,502	
Total LABBB Collaborative.....	<u>1,402,958</u>	0.09515%
6011 - Lower Pioneer Valley Education Collaborative:		
Employer contributions.....	579,908	
Nonemployer contributions.....	1,675,906	
Total Lower Pioneer Valley Education Collaborative.....	<u>2,255,814</u>	0.15299%
6014 - North River Collaborative:		
Employer contributions.....	256,757	
Nonemployer contributions.....	773,073	
Total North River Collaborative.....	<u>1,029,830</u>	0.06984%

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**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
6006 - North Shore Education Consortium:		
Employer contributions.....	385,608	
Nonemployer contributions.....	1,057,769	
Total North Shore Education Consortium.....	1,443,377	0.09789%
6007 - Pilgrim Area Collaborative:		
Employer contributions.....	140,510	
Nonemployer contributions.....	393,957	
Total Pilgrim Area Collaborative.....	534,467	0.03625%
6031 - READS Collaborative:		
Employer contributions.....	183,236	
Nonemployer contributions.....	593,352	
Total READS Collaborative.....	776,588	0.05267%
6033 - SEEM Collaborative:		
Employer contributions.....	203,896	
Nonemployer contributions.....	1,218,667	
Total SEEM Collaborative.....	1,422,563	0.09648%
6009 - Shore Educational Collaborative		
Employer contributions.....	485,743	
Nonemployer contributions.....	1,432,393	
Total Shore Education Consortium.....	1,918,136	0.13009%
6015 - South Coast Education Collaborative:		
Employer contributions.....	217,684	
Nonemployer contributions.....	1,081,568	
Total South Coast Education Collaborative.....	1,299,252	0.08812%
6001 - South Shore Education Collaborative:		
Employer contributions.....	345,375	
Nonemployer contributions.....	1,042,978	
Total South Shore Education Collaborative.....	1,388,353	0.09416%
6003 - Southeastern Massachusetts Education Collaborative:		
Employer contributions.....	257,792	
Nonemployer contributions.....	772,607	
Total Southeastern Massachusetts Education Collaborative.....	1,030,399	0.06988%
6002 - Southern Worcester County Education Collaborative:		
Employer contributions.....	121,499	
Nonemployer contributions.....	375,538	
Total Southern Worcester County Education Collaborative.....	497,037	0.03371%

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**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
6027 - The Education Cooperative		
Employer contributions.....	133,429	
Nonemployer contributions.....	367,888	
Total The Education Cooperative.....	501,317	0.03400%
6020 - Valley Collaborative:		
Employer contributions.....	375,060	
Nonemployer contributions.....	1,067,596	
Total Valley Collaborative.....	1,442,656	0.09784%
<u>Special Funding Situations (Other than Educational Collaboratives):</u>		
8150 - Berkshire Regional Planning Commission:		
Employer contributions.....	-	
Nonemployer contributions.....	572,323	
Total Berkshire Regional Planning Commission.....	572,323	0.03882%
8250 - Devens Enterprise Commission:		
Employer contributions.....	-	
Nonemployer contributions.....	92,795	
Total Devens Enterprise Commission.....	92,795	0.00629%
6037 - Franklin Regional Council of Governments:		
Employer contributions.....	-	
Nonemployer contributions.....	921,806	
Total Franklin Regional Council of Governments.....	921,806	0.06252%
8210 - Massachusetts Development Finance Agency:		
Employer contributions.....	-	
Nonemployer contributions.....	426,519	
Total Massachusetts Development Finance Agency.....	426,519	0.02893%
6200 - Massachusetts Healthcare Connector Authority:		
Employer contributions.....	-	
Nonemployer contributions.....	1,881,308	
Total Massachusetts Healthcare Connector Authority.....	1,881,308	0.12759%
8211 - Massachusetts Life Sciences Center:		
Employer contributions.....	-	
Nonemployer contributions.....	229,446	
Total Massachusetts Life Sciences Center.....	229,446	0.01556%
6100 - Massachusetts PRIM Board:		
Employer contributions.....	-	
Nonemployer contributions.....	2,144,071	
Total Massachusetts PRIM Board.....	2,144,071	0.14541%

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**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
6060 - Massachusetts School Building Authority:		
Employer contributions.....	-	
Nonemployer contributions.....	<u>1,719,323</u>	
Total Massachusetts School Building Authority.....	<u>1,719,323</u>	0.11661%
1080 - Massachusetts Water Resources Authority:		
Employer contributions.....	-	
Nonemployer contributions.....	<u>483,578</u>	
Total Massachusetts Water Resources Authority.....	<u>483,578</u>	0.03280%
8050 - Metropolitan Area Planning Commission:		
Employer contributions.....	-	
Nonemployer contributions.....	<u>3,083,237</u>	
Total Metropolitan Area Planning Commission.....	<u>3,083,237</u>	0.20911%
Total for all entities.....	<u>\$ 1,474,458,776</u>	100.00000%

See accompanying notes to schedules.

MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER AND NONEMPLOYER
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023

Employer/Nonemployee	Net Pension Liability	Deferred Outflows of Resources				Deferred Inflows of Resources			Pension Expense			
		Differences Between Expected and Actual Experience	Net Differences Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes in Proportion	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion	Total Pension Expense
Non Special Funding Situations:												
Employer:												
9045 - Commonwealth of Massachusetts.....	\$ 13,316,653,277	\$ 473,046,951	\$ 358,391,001	\$ 223,808,698	\$ 109,642	\$ 1,055,356,292	\$ 329,053,159	\$ 101,732,741	\$ 430,785,900	\$ 1,386,643,349	\$ (33,209,207)	\$ 1,353,434,142
6070 - Massachusetts State College Building Authority.....	3,987,418	141,645	107,313	67,015	590,028	96,529	344,570	443,099	415,204	(77,738)	337,466	
6090 - Massachusetts Convention Center Authority.....	40,644,509	1,443,813	1,093,865	683,099	2,081,825	5,302,602	1,004,322	2,598,879	3,603,201	4,232,252	3,782,147	
9045 - Massachusetts Department of Transportation.....	773,671,307	27,483,095	20,821,811	13,002,844	75,732,442	137,040,192	19,117,340	254,430	19,371,770	80,561,245	26,126,103	106,687,348
8060 - Assabet Valley Regional Vocational School District.....	8,421,653	299,162	226,652	141,540	574,083	1,241,437	208,098	217,118	876,934	76,501	953,435	
8100 - Blackstone Valley Regional Vocational School District.....	9,008,423	320,006	242,444	151,402	259,893	973,745	222,597	6,718	938,034	90,499	1,028,533	
8080 - Bristol/Plymouth Regional Vocational Technical School District.....	5,257,349	186,757	141,491	88,359	518,687	935,294	129,909	366,920	496,829	547,440	(23,874)	523,566
8160 - Central Massachusetts Regional Planning Commission.....	5,850,001	207,809	157,441	98,319	789,244	1,252,813	144,553	-	144,553	609,152	367,317	976,469
8020 - Merrimack Valley Planning Commission.....	2,968,989	105,467	79,904	49,899	246,825	482,095	73,363	11,338	84,701	309,156	47,683	356,839
8010 - Montachusett Regional Planning Commission.....	2,551,109	90,623	68,658	42,876	224,880	427,037	63,038	104,154	167,192	265,643	(18,723)	246,920
8090 - Montachusett Regional Vocational Technical School District.....	10,547,074	374,663	283,853	177,261	989,738	1,825,515	260,617	276,141	536,758	1,098,251	336,811	1,435,062
8070 - Nashoba Associated Boards of Health.....	9,616,244	341,597	258,802	161,617	186,987	949,003	237,616	166,528	404,144	1,001,325	45,466	1,046,791
8040 - North Middlesex Council of Governments.....	2,282,758	81,090	61,436	38,366	271,210	452,102	56,407	150,013	206,420	237,700	18,781	256,481
8030 - Northeast Metro Regional Vocational Technical School District.....	7,681,018	272,853	206,719	129,092	739,272	1,347,936	189,797	137,655	327,452	799,813	104,854	904,667
8170 - Old Colony Planning Council.....	3,061,982	108,771	82,407	51,462	169,336	411,976	75,661	94,231	318,840	42,681	361,521	
8180 - Old Colony Regional Vocational Technical School District.....	3,743,117	132,967	100,738	62,909	470,489	767,103	92,492	213,837	389,765	306,329	467,966	
8110 - Pioneer Valley Planning Commission.....	7,675,758	272,666	206,578	129,004	318,661	926,909	189,667	5,651	195,318	799,265	137,197	936,462
8140 - Southeastern Regional Planning & Economic Development District.....	4,996,210	177,480	134,463	83,970	1,068,846	1,837,578	123,456	3,596	520,248	1,453,284	(52,105)	1,401,179
8120 - Southeastern Regional School District.....	13,956,642	495,781	375,615	234,565	1,837,578	2,943,539	344,867	982,561	1,327,428	624,430	83,959	708,389
8200 - Tri-County Regional Vocational Technical School District.....	5,996,728	213,022	161,390	100,785	147,542	622,739	148,179	8,327	156,506	1,060,427	314,374	1,259,836
8190 - Upper Blackstone Water Pollution Abatement District.....	10,270,259	364,830	276,403	172,609	441,233	1,255,075	253,777	60,597	314,374	1,060,427	314,374	1,259,836
8130 - Upper Cape Cod Regional Vocational Technical School District.....	5,566,490	197,738	149,811	93,554	265,500	706,603	137,547	291,163	428,710	579,650	120,395	700,025
Special Funding Situations:												
Nonemployer (Commonwealth) attributable to:												
6013 - ACCEPT Education Collaborative.....	16,903,626								1,760,150	246,835		2,006,985
6022 - Assabet Valley Collaborative.....	6,031,785								628,081	88,079		716,160
6004 - Bi-County Education Collaborative.....	8,690,839								904,964	126,908		1,031,872
6018 - C.A.S.E. Collaborative.....	9,821,663								1,022,715	143,421		1,166,136
6016 - Cape Cod Collaborative.....	12,876,969								1,340,860	188,036		1,528,896
6010 - CAPS Education Collaborative.....	8,817,479								918,151	128,757		1,046,908
6035 - Central Massachusetts Special Education Collaborative.....	6,086,403								633,768	88,877		722,645
6012 - CHARMS Collaborative.....												
6017 - Collaborative for Educational Services.....	18,582,587								1,934,977	271,352		2,206,329
6021 - CREST Collaborative.....	14,967,998								1,558,595	218,570		1,777,165
6030 - EDCC Collaborative.....	-								-	-		-
6019 - Keystone Educational Collaborative.....	7,207,432								750,499	105,247		855,746
6034 - LABBB Collaborative.....	13,937,191								1,451,259	203,518		1,654,777
6011 - Lower Pioneer Valley Education Collaborative.....	22,409,588								2,333,477	327,236		2,660,713
6014 - North River Collaborative.....	10,230,482								1,065,285	149,391		1,214,676
6006 - North Shore Education Consortium.....	14,338,719								1,493,070	209,381		1,702,451
6007 - Pilgrim Area Collaborative.....	5,309,474								552,868	77,532		630,400
6031 - REALPS Collaborative.....	7,714,739								803,324	112,654		915,978
6033 - SEEM Collaborative.....	14,131,950								1,471,539	206,362		1,677,901
6009 - Shore Educational Collaborative.....	19,055,045								1,984,174	278,251		2,262,425
6015 - South Coast Education Collaborative.....	12,906,960								1,343,983	188,474		1,532,457
6001 - South Shore Education Collaborative.....	13,792,103								1,436,151	201,399		1,637,550
6003 - Southeastern Massachusetts Education Collaborative.....	10,236,135								1,065,874	149,473		1,215,347
6002 - Southern Worcester County Education Collaborative.....	4,937,639								314,149	72,102		386,251
6027 - The Education Cooperative.....	4,980,157								518,576	72,723		591,299
6020 - Valley Collaborative.....	14,331,557								1,492,324	209,277		1,701,601
8150 - Berkshire Regional Planning Commission.....	5,685,541								592,027	83,023		675,050
8250 - Devens Enterprise Commission.....	921,839								95,990	13,461		109,451
6037 - Franklin Regional Council of Governments.....	9,157,356								953,542	133,720		1,087,262
8210 - Massachusetts Development Finance Agency.....	4,237,102								61,872	61,872		303,075
6200 - Massachusetts Healthcare Connector Authority.....	18,689,190								1,946,078	272,909		2,218,987
8211 - Massachusetts Life Sciences Center.....	2,279,350								237,345	33,284		270,629
6100 - Massachusetts PRIM Board.....	21,299,516								2,217,887	311,026		2,528,913
6060 - Massachusetts School Building Authority.....	17,080,007								1,778,516	249,411		2,027,927
1080 - Massachusetts Water Resources Authority.....	4,803,935								500,227	70,150		570,377
8050 - Metropolitan Area Planning Commission.....	30,629,329								3,189,387	447,265		3,636,652
Total nonemployer (Commonwealth of Massachusetts).....	393,081,685	13,963,422	10,579,005	6,606,396	43,022,397	74,171,220	9,713,009	22,633,257	32,346,266	40,931,015	5,739,978	46,670,993
Totals.....	\$ 14,647,490,000	\$ 520,322,208	\$ 394,207,800	\$ 246,175,641	\$ 130,660,425	\$ 1,291,366,074	\$ 361,938,000	\$ 130,660,425	\$ 492,598,425	\$ 1,525,221,402	\$ -	\$ 1,525,221,402

See accompanying notes to schedules.

**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
 NOTES TO SCHEDULES
 AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

NOTE 1 - PLAN DESCRIPTION

The Massachusetts State Employees' Retirement System (MSERS) is a public employee retirement system (PERS), that administers a cost-sharing, multiple employers defined benefit pension plan as defined by Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, covering substantially all employees of the Commonwealth and certain employees of independent authorities and agencies. The former Massachusetts Turnpike Authority (MTA) employees and retirees became members of MSERS upon the creation of the Massachusetts Department of Transportation (MassDOT). Other employees who transferred to MassDOT have been, and remain, members of MSERS. The assets and liabilities of the former MTA have been transferred to MSERS. MSERS is reported as a pension trust fund in the Commonwealth's Annual Comprehensive Financial Report and does not issue a stand-alone audited financial report.

Management of MSERS is vested in the Massachusetts State Retirement Board (the MSRB) which consists of five members—two elected by current and active MSERS members, one who is appointed by the State Treasurer, the State Treasurer, who serves as ex-officio and is the Chair of the MSRB, and one by the remaining members of the MSRB.

Benefits provided. MSERS provides retirement, disability, survivor, and death benefits to members and their beneficiaries. Massachusetts General Laws (MGL) establishes uniform benefit and contribution requirements for all contributory PERS. These requirements provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. Benefit payments are based upon a member's age, length of creditable service, group creditable service, and group classification. The authority for amending these provisions rests with the Legislature.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of creditable service or upon reaching the age of 55 with ten years of service. Normal retirement for most employees occurs at age 65; for certain hazardous duty and public safety positions, normal retirement is at age 55. Most employees who joined the system after April 1, 2012 cannot retire and receive benefits prior to age 60.

The MSERS' funding policies have been established by Chapter 32 of the MGL. The Legislature has the authority to amend these policies. The annuity portion of the MSERS retirement allowance is funded by employees, who contribute a percentage of their regular compensation. Costs of administering the plan are funded out of plan assets.

Member contributions for MSERS vary depending on the most recent date of membership:

Hire Date	% of Compensation
Prior to 1975.....	5% of regular compensation
1975 - 1983.....	7% of regular compensation
1984 to 6/30/1996.....	8% of regular compensation
7/1/1996 to present.....	9% of regular compensation except for State Police, which is 12% of regular compensation
7/1/2001 to present	11% of regular compensation (for teacher hired after 7/1/01 and those accepting provisions of Chapter 114 of the Acts of 2000)
1979 to present.....	An additional 2% of regular compensation in excess of \$30,000 except for teachers subject to Chapter 114 of the Acts of 2000

MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
NOTES TO SCHEDULES
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023

In addition, members of Group 1 who join the system on or after April 2, 2012 will have their withholding rate reduced to 6% after achieving 30 years of creditable service.

NOTE 2 - BASIS OF PRESENTATION

The schedule of employer and nonemployer allocations and schedule of pension amounts by employer and nonemployer (the Schedules) present amounts that are elements of the financial statements of the MSERS or of its participating employers and nonemployers. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of the MSERS or its participating employers and nonemployers. The amounts presented in the Schedules were prepared in accordance with U.S. generally accepted accounting principles. Such preparation requires management of the MSERS to make a number of estimates and assumptions related to the reported amounts. Actual results could differ from those estimates.

The schedule of employer and nonemployer allocations are based on actual contributions adjusted for any nonemployer contributions.

The MGLs governing employer contribution requirements to MSERS are varied and vary among employers to such an extent that there is no uniform contribution method. Consequently, MSERS developed an effective contribution methodology which allocates total actual contributions amongst the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. According to MGL, certain nonemployer contributions are the legal responsibility of the Commonwealth and have accordingly been reflected on the schedule of employer and nonemployer allocations as special funding situations.

The schedule of pension amounts presents each employer in sufficient detail to permit each contributing employer as well as each employer considered to be in a special funding situation to derive the necessary information for the preparation of their individual financial statements.

For entities considered to be in a 100% special funding situation, there is no net pension liability, deferred outflows, and deferred inflows recognized. However, the notes to the financial statements for these entities must disclose the portion of the nonemployer contributing entity's total proportionate share of the net pension liability as well its portion of pension expense as both revenue and pension expense.

The special funding situations created by MGL are described below.

Educational Collaboratives

Collaboratives contribute amounts equal to the normal cost of employees' benefits at a rate established by the Public Employees' Retirement Administration Commission (PERAC), currently 6.1% of covered payroll. Legally, the collaboratives are only responsible for contributing the annual normal cost of their employees' benefits (i.e., the present value of the benefits earned by those employees in any given year) and are not legally responsible for the past service cost attributable to those employees or previously retired employees of the collaboratives. The Commonwealth as a nonemployer is legally responsible for the entire past service cost related to the collaboratives and therefore has a 100% special funding situation.

**MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
 NOTES TO SCHEDULES
 AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

Other Special Funding Situations

MGLs established certain entities whose employees are members of MSERS. However, MGL does not provide an employer funding mechanism for these entities. Consequently, the Commonwealth is considered the nonemployer contributor and is considered legally responsible to make all actuarially determined employer contributions on behalf of these entities. Therefore, these entities are also considered to be in a 100% special funding situation as defined by GASB.

NOTE 3 - COLLECTIVE NET PENSION LIABILITY

Components of the collective net pension liability at June 30, 2023 are as follows (amounts in thousands):

Total pension liability.....	\$ 50,005,000
Less:	
Plan fiduciary net position.....	35,357,510
Employers/nonemployers' net pension liability....	\$ 14,647,490
Plan fiduciary net position as a percentage of total pension liability.....	70.71%

Actuarial Assumptions

The total pension liability for the June 30, 2023, measurement date was determined by an actuarial valuation as of January 1, 2023 rolled forward to June 30, 2023, using the following actuarial assumptions:

1. (a) 2.5% inflation rate; (b) 7.00% investment rate of return; (c) 3.50% interest rate credited to the annuity savings fund; and (d) 3.00% cost of living increase on the first \$13,000 of allowance each year.
2. Salary increases are based on analyses of past experience but range from 4.00% to 9.00% depending on group and length of service.
3. Mortality rates were as follows:
 - Pre-retirement mortality reflects RP-2014 Blue Collar Employees table projected generationally with Scale MP-2021, set forward 1 year for females.
 - Post-retirement mortality reflects RP-2014 Blue Collar Healthy Annuitant table projected generationally with Scale MP-2021, set forward 1 year for females.
 - For disabled retirees, mortality rate reflects the post-retirement mortality described above, set forward 1 year.
4. Experience studies were performed as follows:
 - Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011, updated to reflect actual experience from 2012 through 2020 for post-retirement mortality.

MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
NOTES TO SCHEDULES
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023

Investment assets of MSERS are with the Pension Reserves Investment Trust (PRIT) Fund. 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 rates of return 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 rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2023 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity.....	37.0%	4.9%
Core Fixed Income.....	15.0%	1.9%
Private Equity.....	16.0%	7.4%
Portfolio Completion Strategies.....	10.0%	3.8%
Real Estate.....	10.0%	3.0%
Value Added Fixed Income.....	8.0%	5.1%
Timberland/Natural Resources....	4.0%	4.3%
Total.....	<u>100.0%</u>	

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and the Commonwealth's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the net position was projected to be available to make all projected future 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 Analysis

The following illustrates the sensitivity of the collective net pension liability to changes in the discount rate as of June 30, 2023. In particular, the table presents the MSERS collective net pension liability assuming it was calculated using a single discount rate that is one-percentage-point lower or one-percentage-point higher than the current discount rate (amounts in thousands):

1% Decrease to 6.00%	Current Discount Rate 7.00%	1% Increase to 8.00%
<u>\$ 20,131,000</u>	<u>\$ 14,647,490</u>	<u>\$ 10,007,000</u>

MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
NOTES TO SCHEDULES
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023

NOTE 4 - DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The following table summarizes the changes in both deferred outflows and deferred inflows of resources excluding employer specific amounts (change in proportion) (amounts in thousands):

	Year of Deferral	Amortization Period	Balance July 1, 2022	Additions	Deletions	Balance June 30, 2023
Deferred Outflows of Resources:						
Difference between expected and actual experience.....	2018	5.3 years	\$ 5,774	\$ -	\$ (5,774)	\$ -
	2019	5.2 years	69,939	-	(58,282)	11,657
	2020	5.2 years	142,231	-	(64,651)	77,580
	2022	4.9 years	128,070	-	(32,839)	95,231
	2023	4.8 years	-	424,236	(88,382)	335,853
Subtotal.....			<u>346,014</u>	<u>424,236</u>	<u>(249,928)</u>	<u>520,322</u>
Net difference between projected and actual earnings on plan investments.....	2019	5.0 years	88,092	-	(88,091)	1
	2020	5.0 years	578,201	-	(289,101)	289,100
	2021	5.0 years	(3,764,826)	-	1,254,942	(2,509,884)
	2022	5.0 years	3,024,378	-	(756,095)	2,268,283
	2023	5.0 years	-	433,384	(86,677)	346,707
Subtotal.....			<u>(74,155)</u>	<u>433,384</u>	<u>34,979</u>	<u>394,208</u>
Change of assumptions.....	2018	5.3 years	35,208	-	(35,208)	-
	2019	5.2 years	100,153	-	(83,461)	16,692
	2020	5.2 years	187,000	-	(85,000)	102,000
	2021	5.0 years	60,600	-	(20,200)	40,400
	2023	4.8 years	-	110,000	(22,917)	87,083
Subtotal.....			<u>382,961</u>	<u>110,000</u>	<u>(246,785)</u>	<u>246,176</u>
Total deferred outflows of resources.....			<u>\$ 654,820</u>	<u>\$ 967,620</u>	<u>\$ (461,734)</u>	<u>\$ 1,160,706</u>
Deferred Inflows of Resources:						
Difference between expected and actual experience.....	2021	5.0 years	(542,907)	-	180,969	(361,938)
Subtotal.....			<u>(542,907)</u>	<u>-</u>	<u>180,969</u>	<u>\$ (361,938)</u>
Total deferred inflows of resources.....			<u>\$ (542,907)</u>	<u>\$ -</u>	<u>\$ 180,969</u>	<u>\$ (361,938)</u>

MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM
NOTES TO SCHEDULES
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2023

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the collective pension expense as follows (amounts in thousands):

Fiscal Year Ending June 30	
2024.....	\$ 38,298
2025.....	(398,872)
2026.....	983,625
2027.....	<u>175,717</u>
Total.....	<u>\$ 798,768</u>

NOTE 5 - COLLECTIVE PENSION EXPENSE

The following table shows the components of pension expense, excluding employer specific pension expense for changes in proportion, as of June 30, 2023 (amounts in thousands):

Service cost.....	\$ 1,043,783
Interest on the total pension liability.....	3,332,796
Employee contributions.....	(722,382)
Projected earnings on plan investments.....	(2,349,560)
Transfers and reimbursements from other systems.....	(83,087)
Member make up, redeposits and payments from rollovers.....	(11,054)
Cost of living adjustment reimbursements.....	54,678
Other reimbursements.....	(22,841)
Administrative expense.....	16,120
Other expenses that do not reduce the total pension liability.....	(14,000)
Recognition (amortization) of deferred outflows and inflows of resources:	
Differences between expected and actual experience.....	68,959
Differences between projected and actual earnings on plan investments.....	(34,979)
Changes of assumptions.....	<u>246,787</u>
Pension expense.....	<u>\$ 1,525,221</u>

The employer/nonemployer proportionate share of the collective pension expense is equal to the collective pension expense multiplied by the employer/nonemployer proportionate share percentage for the fiscal year ending June 30, 2023 as shown in the schedule of employer and nonemployer allocations.