

ROSELLI, CLARK & ASSOCIATES
Certified Public Accountants

**MEDFORD CONTRIBUTORY
RETIREMENT SYSTEM**
(a Component Unit of the
City of Medford, Massachusetts)

Basic Financial Statements and
Supplementary Information

Year Ended December 31, 2021



MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)

TABLE OF CONTENTS
DECEMBER 31, 2021

	<u>Page(s)</u>
INDEPENDENT AUDITORS' REPORT	1 – 3
MANAGEMENT'S DISCUSSION AND ANALYSIS	4 – 7
BASIC FINANCIAL STATEMENTS:	
Statement of Fiduciary Net Position	8
Statement of Changes in Fiduciary Net Position	9
Notes to Basic Financial Statements	10 – 18
REQUIRED SUPPLEMENTARY INFORMATION – UNAUDITED:	
Schedule of Changes in Net Pension Liability and Related Ratios	19
Schedule of Contributions	20
Schedule of Investment Returns	20
Notes to Required Supplementary Information	21
OTHER REPORTS:	
Independent Auditors' Report on Audit of Specific Elements, Accounts and Items of Financial Statements	22 – 23
Pension Plan Schedules:	
Schedule of Employer Allocations	24
Schedule of Pension Amounts by Employer	25
Notes to Pension Plan Schedules	26



INDEPENDENT AUDITORS' REPORT

To the Medford Retirement Board
Medford Contributory Retirement System
Medford, Massachusetts

Opinion

We have audited the accompanying financial statements the Medford Contributory Retirement System (the "System") as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System 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 opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements 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 financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements 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 generally accepted auditing standards 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 financial statements.

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In performing an audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, 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 financial statements.
- 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 the System's 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 financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

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.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedules listed under the required supplementary information section in the accompanying table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.



Roselli, Clark & Associates
Certified Public Accountants
Woburn, Massachusetts
May 5, 2022

MANAGEMENT'S DISCUSSION AND ANALYSIS

Our discussion and analysis of the Medford Contributory Retirement System's (the "System") financial performance provides an overview of the System's financial activities for the calendar year ended December 31, 2021. You should read it in conjunction with the basic financial statements, footnotes and required supplementary information that follows this discussion.

Financial Highlights

The System's funding objective is to meet long-term benefit obligations through contributions and investment income. The System's independent actuary estimates that the System is approximately 75% funded at December 31, 2021.

The System's fiduciary net position increased nearly \$34.6 million in 2021 to approximately \$260.2 million. Current year additions of nearly \$58.3 million exceeded deductions of approximately \$23.7 million. The current year increase in fiduciary net position was approximately \$16.0 million greater than the prior year. The System's investment performance for 2021, net of investment management fees, was over 17.4% versus 11.5% in 2020. The System's 2021 net investment return exceeded its long-term expected investment return, which is currently 7.25%.

Overview of the Financial Statements

The basic financial statements are comprised of a Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Notes to Financial Statements and Required Supplementary Information. The basic financial statements are prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP; specifically, GASB Statement No. 67, *Financial Reporting for Pension Plans*.

The Statement of Fiduciary Net Position reports the System's assets, deferred outflows of resources, liabilities, deferred inflows of resources and fiduciary net position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities. Over time, the increase or decrease in fiduciary net position serves as a useful indicator of the System's financial health and condition.

The Statement of Changes in Fiduciary Net Position reports additions to and deductions from the System during the. This statement reflects contributions by members and participating employers along with deductions for retirement benefits, refunds, withdrawals and administrative expenses. Investment income, including realized and unrealized gains, during the year is also presented.

The Notes to the Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

This report also includes Required Supplementary Information following the Notes to the Financial Statements that consist of the schedules of changes in net pension liability and related ratios, investment returns and contributions and the notes to the schedule of contributions.

Financial Analysis

The condensed comparative Statements of Net Position for the two most recent years are as follows:

	December 31,		Dollar	Percent
	2021	2020	Change	Change
Assets:				
Cash and cash equivalents	\$ 1,944,473	\$ 2,583,073	\$ (638,600)	-25%
Investments, at fair value	258,118,088	222,769,631	35,348,457	16%
Receivables and other assets	<u>255,644</u>	<u>322,559</u>	<u>(66,915)</u>	-21%
Total Assets	<u>260,318,205</u>	<u>225,675,263</u>	<u>34,642,942</u>	15%
Liabilities				
	<u>135,639</u>	<u>72,066</u>	<u>63,573</u>	88%
Fiduciary Net Position	<u>\$ 260,182,566</u>	<u>\$ 225,603,197</u>	<u>\$ 34,579,369</u>	15%

Total assets at December 31, 2021 approximated \$260.3 million and principally consisted of investments recorded at fair value. Total asset increased by approximately \$34.6 million in 2021, due primarily to a positive investment portfolio performance of over 17.4%. Fluctuations in receivables and liabilities were due primarily to the timing of investment sales and purchases being completed.

The condensed comparative Statements of Changes in Fiduciary Net Position for the two most recent years are as follows:

	Year Ended December 31,		Dollar	Percent
	2021	2020	Change	Change
Additions:				
Contributions	\$ 19,794,233	\$ 18,193,064	\$ 1,601,169	9%
Investment income, net	<u>38,495,660</u>	<u>23,143,141</u>	<u>15,352,519</u>	66%
Total Additions	<u>58,289,893</u>	<u>41,336,205</u>	<u>16,953,688</u>	41%
Deductions:				
Benefits and refunds to Plan members	23,350,507	22,432,439	918,068	4%
Administrative and other expenses	<u>360,017</u>	<u>359,390</u>	<u>627</u>	0%
Total Deductions	<u>23,710,524</u>	<u>22,791,829</u>	<u>918,695</u>	4%
Change in Fiduciary Net Position	<u>\$ 34,579,369</u>	<u>\$ 18,544,376</u>	<u>\$ 16,034,993</u>	86%

Fiduciary net position increased nearly \$34.6 million in 2021, primarily as a result of net investment income of approximately \$38.5 million.

Contributions to the System's Fiduciary Net Position primarily include employer and employee contributions in addition to transfers from other retirement systems. Contributions for 2021 totaled nearly \$19.8 million versus approximately \$18.2 million in 2020.

Employer contributions represent the largest source of System contributions. In 2021, employer contributions totaled approximately \$14.0 million, or 71%, of total contributions. Employer contributions are actuarially determined. Employee contributions totaled approximately \$4.8 million in

2021, which was approximately \$230,000, or 5%, greater than the prior year. This increase was due primarily to a decrease in the average number of active members within the System coupled by the effect of normal pay raises.

Other contributions increased approximately \$330,000 year-over-year.

Investment income is presented net of associated investment management expenses. In 2021, the System reported nearly \$38.5 million in net investment income versus approximately \$23.1 million in 2020. The System's money-weighted rates of return for 2021 and 2020 were approximately 17.4% and 11.5%, respectively.

Deductions to the System's Fiduciary Net Position primarily include pension benefits to members and beneficiaries, refunds to inactive members, transfers and reimbursements to other Massachusetts public retirement systems and administrative expenses. Total deductions for 2021 increased approximately \$919,000 to over \$23.7 million versus approximately \$22.8 million in 2020.

Pension benefits to members and beneficiaries represents the largest deduction from Fiduciary Net Position for the System. Pension benefits to members and beneficiaries represented approximately 95% and 93% of total 2021 and 2020 deductions, respectively. Pension benefits to members and beneficiaries increased approximately \$1.3 million, or 6%, in 2021. This increase was due to an increase in the average number of beneficiaries paid year-over-year coupled with the normal annual cost-of-living adjustments paid by the System.

In addition to the increase in pension benefits to members and beneficiaries, the System reported an approximate \$355,000 decrease in transfers and reimbursements to other Massachusetts public retirement systems, which is a function of timing and employment trends/movements.

Administrative expenses were consistent year-over-year.

Overall Financial Position

The System's positive investment performance in 2021 enabled it to maintain an approximate 75% funded ratio at December 31, 2021. The System's 30-year investment return as published by PERAC exceeds the discount rate used by the System in its actuarial studies (7.25%). Provided the System continues to garner strong investment performances, it is possible that the System will achieve fully funded status on or before the expected date included in latest actuarial valuation of 2033.

The System maintains a large portion of its investments measured at NAV or using level 2 inputs. Some of these funds invest in private companies or real estate. The determination of the value of these investments is very subjective and the ultimate amounts of gains and losses in some of these funds will not be determined until the underlying assets (i.e., the real estate or equity in the private companies) are sold. Furthermore, these types of investments are not as liquid as investments in savings accounts, money markets, certificates of deposits, government securities or debt and equity securities in publicly-held U.S. corporations. You should refer to Notes 2 and 4 to these financial statements.

Although the System has been successful in generating the yields necessary to achieve fully funded status in the required time frame, the System (like so many other institutional investors) has experienced a great deal of volatility in its investments. Management believes that the volatility in the worldwide markets may continue for the foreseeable future. Accordingly, management intends to actively monitor the System's investment positions to best maximize returns while mitigating risk as best it can.

Contacting the System's Financial Management Personnel

Our discussion and analysis is designed to provide the Medford Retirement Board, our membership, taxpayers, investors and creditors with a general overview of the System's financial results and to demonstrate the System's accountability for the funding it receives. If you have any questions about this report or need additional financial information, contact the Medford Retirement Board at 85 George P. Hassett Drive, Medford, MA 02155.

MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)

STATEMENT OF FIDUCIARY NET POSITION
DECEMBER 31, 2021

Assets:	
Cash and cash equivalents	\$ 1,944,473
Investments:	
Fixed income securities	26,986,319
Equity securities	1,196
Mutual funds	161,028,140
PRIT funds	70,102,433
Receivables:	
Interest receivable	134,952
Contributions and other	<u>120,692</u>
Total Assets	<u>260,318,205</u>
Liabilities:	
Accounts payable and accrued expenses	<u>135,639</u>
Total Liabilities	<u>135,639</u>
Net Position Restricted for Pensions	<u>\$ 260,182,566</u>

See accompanying notes to basic financial statements.

MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
YEAR ENDED DECEMBER 31, 2021

Additions:	
Employer contributions	\$ 14,028,325
Employee contributions	4,783,367
Other contributions	<u>954,829</u>
Total contributions	<u>19,766,521</u>
Investment income:	
Interest and dividends	7,934,437
Net appreciation in fair value of investments	32,047,861
Less investment management fees	<u>(1,486,638)</u>
Total net investment income	<u>38,495,660</u>
Other income	<u>27,712</u>
Total Additions	<u>58,289,893</u>
Deductions:	
Benefits and refunds to Plan members:	
Benefits to retirees and survivors	22,527,561
Member refunds	179,350
Transfers and reimbursements to other systems	643,596
Administrative expenses:	
Operations payroll and related personnel costs	263,090
Other	<u>96,927</u>
Total Deductions	<u>23,710,524</u>
Net Change in Net Position	34,579,369
Net Position Restricted for Pensions:	
Beginning of the year	<u>225,603,197</u>
End of the year	<u>\$ 260,182,566</u>

See accompanying notes to basic financial statements.

**MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)**

**NOTES TO THE FINANCIAL STATEMENTS
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2021**

1. DESCRIPTION OF THE PLAN

General – The Medford Contributory Retirement System (the “System”) is a cost-sharing, multiple employer cost sharing defined benefit pension plan established and administered by the Medford Retirement Board under the provisions of Chapter 32 of the Massachusetts General Laws (“MGL”), as amended, to provide pension benefits for participants. The System is a component unit of the City of Medford, Massachusetts (the “City”). The City and the Medford Housing Authority contribute to the System.

Employees of the City (with the exception of teachers and certain administrative personnel employed by the School Department who participate in a separate plan) and the Medford Housing Authority are covered by the System. Participation in the System is mandatory immediately upon the commencement of employment for all permanent, full-time employees.

At December 31, 2021, membership in the System consisted of:

Retirees and beneficiaries currently receiving benefits	617
Active plan members	926
Inactive plan members	<u>95</u>
Total membership	<u>1,638</u>

Plan Benefits – Massachusetts contributory retirement system benefits are uniform from one public pension system to another. For employees with service dates beginning before April 2, 2012, the System provides for retirement allowance benefits up to a maximum of 80% of a participant’s highest consecutive three-year average annual rate of regular compensation. For those employees who began their service after April 2, 2012, the System provides for retirement allowance benefits up to a maximum of 80% of a participant’s highest consecutive five-year average annual rate of regular compensation. Benefit payments are based upon a participant’s age, length of creditable service, level of compensation and group classification.

The retirement allowance consists of two parts – an annuity and a pension. Participants’ accumulated total deductions and a portion of the interest they generate constitute the annuity. The differential between the total retirement benefit and annuity is the pension.

Participants who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total contributions. In addition, depending upon the number of years of creditable service, such employees may be entitled to receive interest, which has accrued on those contributions. A vested employee who has not reached their eligible retirement age and elects to leave their accumulated total deductions on deposit may apply for benefits upon reaching their eligible retirement age.

Survivor benefits are extended to eligible beneficiaries of participants whose death occurs prior to or following retirement.

Retirement Requirements – In order to receive retirement benefits, participants must meet one of the following two categories:

- 1) Normal Retirement – Generally, normal retirement occurs between ages 65 and 67. However, most participants with a hire date before April 2, 2012, may retire after twenty years of creditable service or at any time after attaining age 55. For most participants hired on or after April 2, 2012, they must attain the age of 60 before they can retire. Participants with hire dates subsequent to January 1, 1978 must have a minimum of ten years' creditable service in order to retire at age 55 or 60, as applicable. Participants become vested after ten years of creditable service. Benefits commencing before age 65 are generally provided at a reduced rate. However, members working in certain occupations may retire with full benefits earlier than age 65.
- 2) Disability Retirements – The System provides for both an ordinary and accidental disability retirement. An ordinary disability retirement is where a participant is permanently incapacitated from a cause unrelated to employment. An accidental disability retirement is where the disability is the result of an injury or illness received or aggravated in the performance of their duty.

The amount of benefits to be received in such cases is dependent upon several factors, including the age at which the disability retirement occurs, the years of creditable service, average regular compensation and veteran status. In addition, certain provisions are in place relative to death benefits for beneficiaries of employees who die in active service.

Public Availability of Financial Statements – The Medford Retirement Board issues a publicly available financial report that includes financial statements and required supplementary information for the System. That report may be obtained by writing to the Medford Retirement Board, 85 George P. Hassett Drive, Medford, MA 02155.

2. SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting – The financial statements of the System have been prepared on the accrual basis of accounting in accordance with generally accepted accounting principles in the United States of America, or GAAP. Employer contributions are recognized when due and the employer is legally required to provide the contributions. Member contributions are recognized in the period in which the contributions are due. Investment income is recognized in the period earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the pension plan.

Use of Estimates – The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents – Cash and cash equivalents include cash on hand, demand deposits and short-term holdings with original maturities of three months or less from the date of acquisition.

Investments – Investments are reported at fair value. When actively quoted observable prices are not available, the System generally uses either implied pricing from similar investments or valuation models based on net present values of estimated future cash flows (adjusted as appropriate for liquidity, credit, market and/or other risk factors).

The System categorizes its fair value measurements within the fair value hierarchy established by GAAP. This hierarchy is based on valuation inputs used to measure the fair value of the asset or liability. The three levels of the hierarchy are as follows:

- *Level 1* – Inputs are quoted prices in active markets for identical investments at the measurement date.
- *Level 2* – Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the investment through correlation with market data at the measurement date and for the duration of the instrument’s anticipated life.
- *Level 3* – Inputs reflect the System’s best estimate of what market participants would use in pricing the investment at the measurement date.

The remaining investments not categorized under the fair value hierarchy are shown at net asset value (“NAV”). These are investments in non-governmental entities for which a readily determinable fair value is not available, such as member units or an ownership interest in partners’ capital to which a proportionate share of net assets is attributed. Investments at NAV are commonly calculated by subtracting the fair value of liabilities from the fair value of assets.

3. SYSTEM ADMINISTRATION

The System is administered by a five-person Board consisting of the City Auditor, two members who are elected by the participants in or retired from the service of the System, one member appointed by the City Mayor and one member appointed by the other members of the Board.

At December 31, 2021, the Board was comprised as follows:

		<u>Term Expires</u>
Ex-Officio Member:	Mr. William Fowler	No specified date
Appointed Member:	Mr. Robert Maiocco	January 23, 2024
Elected Member:	Mr. Patrick Ripley	July 1, 2023
Elected Member:	Mr. Rick Jordan (Chairperson)	December 19, 2023
Board Appointed Member:	Mr. James Vieira	January 27, 2024

The Board is required to meet at least once a month and keep a record of its proceedings. The Board annually submits a financial statement of condition for the System with the Commissioner of the Massachusetts Public Employee Retirement Administration Commission, or PERAC. Retirement allowances are approved by the Board and, in certain circumstances, submitted to a PERAC for verification prior to payments being made. Expenses incurred by the System must be approved by two or more members of the Board.

4. DEPOSITS AND INVESTMENTS

MGL and PERAC regulations require the System to invest funds only in preapproved investment instruments, which include, but are not necessarily limited to, bank deposits, money markets, certificates of deposit, U.S. obligations, repurchase agreements, certain corporate bonds and equities and investment pools.

Investment Policy – The investment of the System’s funds is the responsibility of the Board. The Board manages its investments using an investment policy that was last updated in November 2020. The investment objective is to ensure that the System’s assets are invested to enhance and preserve principal, both in real and nominal terms. The System’s investment policy seeks a long-term investment return of 7.25%.

The System’s investment policy requires diversification within its investment portfolio. The System’s portfolio target weights at the broad asset class level were as follows:

<u>Asset Class</u>	<u>Target Allocation</u>
Equities:	
Domestic - large cap	22.0%
Domestic - small/mid cap	7.0%
International	11.0%
Emerging Markets	8.0%
Fixed Income:	
Core bonds	12.0%
Emerging blended debt	4.0%
Global multi-sector	8.0%
TIPS	6.0%
Real Estate	10.0%
Private Equity	7.0%
Hedge Funds	5.0%

Investment Management – New England Pension Consultants provided investment advisory services to the System throughout all of 2021. At December 31, 2021, the System had contracted with eight investment managers.

Custody of Investments – People’s United Bank is the custodian of the System’s investment portfolio.

Custodial Credit Risk: Deposits – Deposits are subject to the risk of bank failure. The System may be unable to recover the full amount of its deposits in any one bank institution in the event of a bank failure. The System’s policy for custodial credit risk of deposits is to rely on Federal Deposit Insurance Corporation (“FDIC”) insurance coverage for the first \$250,000 of deposits held at each financial institution. At December 31, 2021, \$643,904 of the System’s bank deposits was not covered by FDIC or other depository insurance.

Custodial Credit Risk: Investments – Custodial credit risk for investments is the risk that in the event of a failure of the counterparty the System will not be able to recover the value of its investments or collateral securities that are in the possession of the outside party. The System’s policy for custodial credit risk of investments intends that all investments are either insured and/or registered in the name of the System. At December 31, 2021, the System was not exposed to custodial credit risk on its investments.

Fair Value Measurements: Investments – The following table presents the System’s investments carried at fair value on a recurring basis at December 31, 2021:

Investments by Fair Value Level	December 31, 2021	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Debt securities:				
U.S. government notes and obligations	\$ 18,778,992	\$ 11,322,529	\$ 7,456,463	\$ -
Corporate bonds	8,207,327	8,207,327	-	-
Total debt securities	26,986,319	19,529,856	7,456,463	-
Equity securities	1,196	1,196	-	-
Mutual funds	143,622,552	-	143,622,552	-
Total investments by fair value level	170,610,067	\$ 19,531,052	\$ 151,079,015	\$ -
Investments measured at NAV:				
Mutual funds	17,405,588			
PRIT funds	70,102,433			
Total investments measured at NAV	87,508,021			
Total investments	\$ 258,118,088			
Investments Measured at NAV by Asset Class	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Private equity mutual funds	\$ 17,405,588	\$ -	Varies	30 to 60 days
PRIT funds	70,102,433	11,837,599	Monthly	30 days
	\$ 87,508,021	\$ 11,837,599		

Investments measured at NAV include comingled/pooled funds in a private equity mutual fund and private equity fund and investments in the State Treasurer investment pool, referred to as PRIT funds.

Private equity funds generally include investments in which the System is a general partner in a private equity, venture capital fund or similar investment vehicle. The value of these investments are recorded at values determined in good faith by the general partners of the private equity and venture capital firms after consideration of pertinent information, including current financial position and operative results, price-earnings multiples and available market prices of similar companies’ securities, the nature of the securities, marketability, restrictions on disposition and other appropriation and do not necessarily represent amounts which might ultimately be realized, since such amounts depend on future circumstances and cannot reasonably be determined until individual securities are liquidated. In addition, fair values of real estate funds are generally based on independent, third-party appraisals. By their very nature, these investments are illiquid and typically cannot be resold or redeemed. Distributions from each fund will be received as the underlying investments are liquidated. It is expected that the underlying assets for the funds will be liquidated over an average of ten years.

The State Treasurer investment pool is administered by the Commonwealth of Massachusetts’ Pension Reserve Investment Management Board, or PRIM. The System maintains several Massachusetts Pension Reserve Investment Trust, or PRIT funds, each of which consists of a diverse set of investments that includes private equity, venture and real estate investments. The determination of the fair value of these investments is very subjective and the period-end values are

reported to the System as NAV. Investments in the PRIT funds are more liquid than investments in private equity and real estate holdings, but generally cannot be resold to third parties. The System may liquidate its investment in the PRIT funds at any time with less than thirty days' notice. Distributions from the PRIT funds may be received regularly and, upon receipt, are deposited into an accompanying short-term cash investment account.

Because of the inherent uncertainty of valuations used in many of the System's investments measured at NAV, estimated values may differ significantly from the values that would have been used had a readily available market for positions in privately held companies or the real estate existed at December 31, 2021. These differences could have a material adverse effect on the System's financial statements.

Concentration of Credit Risk: Investments – The following investments held by the System at December 31, 2021 represent approximately 75.4% of the System's total investments:

Rhumblin Advisers S&P 500 Pooled Index Fund	22.1%
PRIM Alternative Investments Fund	12.9%
Lazard International Strategic Equity Portfolio	10.4%
PRIM Core Real Estate Fund	9.6%
Loomis Salyes MSFD Fund	7.7%
City of London Emerging Markets Country Fund	6.8%
Rhumblin U.S. TIPS Pooled Fund	5.9%

Interest Rate Risk: Investments – Debt securities are subject to interest rate risk. Debt securities may be adversely affected by changes in interest rates, which may negatively affect the fair value of individual debt instruments. The System does not have a formal investment policy that limits investments maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. In practice, the System mitigates this risk by managing the duration of its maturities.

At December 31, 2021, the System has the following investments and maturities:

Investment Type	Fair Value	Investment Maturities (in years)			
		Less than 1	1 to 5	6 to 10	More than 10
U.S. Treasury notes	\$ 11,322,529	\$ 6,664,706	\$ -	\$ -	\$ 4,657,823
U.S. Agencies obligations	7,456,463	-	-	-	7,456,463
Corporate bonds	<u>8,207,327</u>	<u>445,685</u>	<u>993,737</u>	<u>6,767,905</u>	-
Investments with maturities	<u>26,986,319</u>	<u>\$ 7,110,391</u>	<u>\$ 993,737</u>	<u>\$ 6,767,905</u>	<u>\$ 12,114,286</u>
Equity securities	1,196				
Mutual funds	161,028,140				
PRIT funds	<u>70,102,433</u>				
Investments without maturities	<u>231,131,769</u>				
Total investments	<u>\$ 258,118,088</u>				

Credit Risk: Investments – This is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. As previously noted, MGL and PERAC have enacted regulations to reduce this risk. In evaluating its credit risk, the System relies on credit ratings assigned by nationally recognized credit rating agencies such as Moody’s Investor Services, Inc. and Standard and Poor’s Financial Services, LLC. The System does voluntarily self-impose certain investment restrictions; however, those can be changed at the Board’s discretion.

None of the System’s equities, mutual funds or other pooled investments were subject to credit quality ratings from credit rating agencies. The following table summarizes the credit ratings for the System’s fixed income securities:

Quality Rating (Moody's)	U.S.		Total
	Government Treasuries & Agencies	Corporate Bonds	
Aaa	\$ 18,099,112	\$ 1,323,913	\$ 19,423,025
Aa3	-	446,405	446,405
A1	-	1,556,904	1,556,904
A2	679,880	1,107,992	1,787,872
Baa2	-	414,614	414,614
Ba2	-	1,336,678	1,336,678
Not Rated	-	2,020,821	2,020,821
	<u>\$ 18,778,992</u>	<u>\$ 8,207,327</u>	<u>\$ 26,986,319</u>

At December 31, 2021, uninsured short-term investments with fair values of \$1,269,616 were reported as cash equivalents. These funds represent temporary holdings of excess cash resources. The System intends to reinvest these amounts in less than one year. Accordingly, the fair value of these short-term investments has been classified as cash equivalents in these financial statements.

Rate of Return – The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. The 2021 money-weighted rate of return was approximately 17.4%

5. FUNDING

Employer Contributions – Under MGL, participating employers are assessed their share of the total retirement cost based on an independent actuarial study. Employer contributions totaled \$14,028,325 in 2021.

Employee Contributions – Employee contribution rates vary based on when an employee commenced their creditable service. Active members contribute 5%, 7%, 8% or 9% of their gross regular compensation depending on when their creditable service commenced. Employees hired after January 1, 1979 contribute an additional 2% of their gross regular compensation over \$30,000.

Cost-of-Living Adjustments – Cost-of-living adjustments granted between 1981 and 1997 and any increase in other pension benefits imposed by the Commonwealth of Massachusetts during those years are the financial responsibility of the Commonwealth. The Commonwealth is expected to continue funding the cost-of-living amounts granted over this period for the duration of their selected retirement option. Cost-of-living adjustments granted after 1997 must be approved and funded by the System. Cost-of-living adjustments cannot exceed the greater of CPI or 3%. The System approved a 3% cost-of-living adjustment on the first \$16,000 of pension benefits.

6. NET PENSION LIABILITY

The System is statutorily required to adopt the funding schedule that will fully amortize the unfunded actuarial accrued liability by June 30, 2040. As of the latest actuarial valuation, the System has selected a funding schedule that fully amortizes the unfunded actuarial accrued liability by June 30, 2033.

The components of the System’s net pension liability at December 31, 2021 were as follows (dollar amounts in thousands):

Total pension liability	\$ 348,170
Plan fiduciary net position	<u>260,183</u>
Net pension liability	<u>\$ 87,987</u>
Plan fiduciary net position as a percentage of total pension liability	74.7%

The total pension liability was determined by an actuarial valuation as of January 1, 2022, which was rolled back to December 31, 2021. The significant actuarial assumptions used in the actuarial valuation report were as follows:

Actuarial cost method:	Individual entry age normal
Asset valuation method:	Market value
Investment rate of return:	7.25% per year
Projected salary increases:	3.50% per year
Cost of living adjustments:	3% on the first \$16,000 of benefits
Mortality rates:	Represented by the various SOA Pub-2010 Public Retirement Plans Mortality Tables specific to group, pre-retirement versus post-retirement, disabled and beneficiaries, with Scale MP-2019 improvements until 2025

Discount Rate – The discount rate used to measure the total pension liability at December 31, 2021 actuarial valuation was 7.25%. The projection of cash flows used to determine the discount rate assumed plan member contributions were made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially-determined contribution rates and the member rate. Based on those assumptions, the System’s fiduciary 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.

Expected Rate of Return – The System’s investment policy targets a nominal rate of return of 7.25%. This long-term expected rate of return is presented neither in arithmetic nor geometric means.

Sensitivity Analysis – The following illustrates the net position liability at December 31, 2021 calculated using the current discount rate of 7.25%, as well as the projection of what the net position liability would be if it were calculated using a discount rate that is 1% lower or higher than the current rate (dollar amounts in thousands):

Current Discount Rate	Net Pension Liability At		
	1% Decrease	Current Rate	1% Increase
7.25%	\$ 123,400	\$ 87,987	\$ 57,683

7. LEGALLY REQUIRED RESERVE ACCOUNTS

Net position restricted for pensions at December 31, 2021 was comprised of the following legally required reserves:

Description	Amount	Purpose
Annuity Savings Fund	\$ 49,677,464	Active members' contribution balance
Annuity Reserve Fund	17,514,896	Retired members' contribution balance
Pension Fund	755,857	Amounts appropriated to fund future retirement
Military Service Fund	8,622	Members' contributions while on military leave
Pension Reserve Fund	<u>192,225,727</u>	Remaining net position
	<u>\$ 260,182,566</u>	

8. COMMITMENTS AND CONTINGENCIES

The System is subject to a variety of claims that arise from time to time in the ordinary course of business. Although management of the System currently believes that resolving claims against the System, individually or in aggregate, will not have a material adverse impact on the System’s financial position or its results of operations, these matters are subject to inherent uncertainties and management’s views of these matters may change in the future.

* * * * *

MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)

REQUIRED SUPPLEMENTARY INFORMATION - UNAUDITED

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

(dollar amounts in thousands)

	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability:								
Service cost	\$ 7,196	\$ 6,952	\$ 6,330	\$ 6,116	\$ 6,116	\$ 5,909	\$ 5,709	\$ 5,976
Interest	24,591	23,989	21,662	21,204	20,285	19,767	21,229	20,588
Experience differences	(3,738)	-	11,095	-	6,081	-	(5,236)	-
Changes in assumptions	-	-	24,449	-	-	-	(13,742)	-
Benefit payments, including refunds	(23,350)	(22,432)	(21,760)	(21,088)	(19,415)	(18,536)	(18,556)	(17,749)
Net change in total pension liability	4,699	8,509	41,776	6,232	13,067	7,140	(10,596)	8,815
Total pension liability - beginning of year	343,471	334,962	293,186	286,954	273,887	266,747	277,343	268,528
Total pension liability - end of year (a)	<u>\$ 348,170</u>	<u>\$ 343,471</u>	<u>\$ 334,962</u>	<u>\$ 293,186</u>	<u>\$ 286,954</u>	<u>\$ 273,887</u>	<u>\$ 266,747</u>	<u>\$ 277,343</u>
Plan fiduciary net position:								
Contributions - employer	\$ 14,028	\$ 12,989	\$ 12,254	\$ 11,560	\$ 11,175	\$ 11,000	\$ 10,500	\$ 10,011
Contributions - employee	4,783	4,552	4,857	4,200	3,960	3,928	3,723	3,660
Contributions - nonemployer contributing entities	955	625	835	1,231	998	1,208	269	638
Net investment income	38,496	23,144	27,244	(5,307)	21,508	8,196	465	8,741
Benefit payments, including refunds	(23,350)	(22,432)	(21,760)	(21,088)	(19,415)	(18,536)	(18,010)	(17,118)
Administrative expenses	(360)	(359)	(391)	(489)	(321)	(310)	(256)	(272)
Other	28	25	8	43	17	44	33	71
Net change in plan fiduciary net position	34,580	18,544	23,047	(9,850)	17,922	5,530	(3,276)	5,731
Plan fiduciary net position - beginning of year	225,603	207,059	184,012	193,862	175,940	170,410	173,686	167,955
Plan fiduciary net position - end of year (b)	<u>\$ 260,183</u>	<u>\$ 225,603</u>	<u>\$ 207,059</u>	<u>\$ 184,012</u>	<u>\$ 193,862</u>	<u>\$ 175,940</u>	<u>\$ 170,410</u>	<u>\$ 173,686</u>
Net pension liability - end of year (a) - (b)	<u>\$ 87,987</u>	<u>\$ 117,868</u>	<u>\$ 127,903</u>	<u>\$ 109,174</u>	<u>\$ 93,092</u>	<u>\$ 97,947</u>	<u>\$ 96,337</u>	<u>\$ 103,657</u>
Plan fiduciary net position as a percentage of the total pension liability	74.7%	65.7%	61.8%	62.8%	67.6%	64.2%	63.9%	62.6%
Covered payroll	\$ 47,593	\$ 47,613	\$ 46,003	\$ 42,469	\$ 41,033	\$ 40,703	\$ 39,326	\$ 37,864
Net pension liability as a percentage of covered payroll	184.9%	247.6%	278.0%	257.1%	226.9%	240.6%	245.0%	273.8%

These schedules are presented to illustrate the requirement to show information for ten years. However, until a full ten-year trend is completed, information is presented for those years in which information is available.

See accompanying independent auditors' report.

**MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)**

REQUIRED SUPPLEMENTARY INFORMATION - UNAUDITED

SCHEDULE OF CONTRIBUTIONS

For Fiscal Year Ended June 30,	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2021	\$ 14,028,325	\$ 14,028,325	\$ -	\$ 47,592,904	29.5%
2020	12,989,190	12,989,190	-	47,613,178	27.3%
2019	12,253,953	12,253,953	-	46,003,071	26.6%
2018	11,560,340	11,560,340	-	42,469,301	27.2%
2017	11,174,776	11,174,776	-	41,033,141	27.2%
2016	11,000,000	11,000,000	-	40,702,740	27.0%
2015	10,500,000	10,500,000	-	39,326,319	26.7%
2014	10,011,299	10,011,299	-	37,863,532	26.4%

SCHEDULE OF INVESTMENT RETURNS

For Fiscal Year Ended June 30,	Annual Money- Weighted Rate of Return *
2021	17.42%
2020	11.54%
2019	15.90%
2018	-2.14%
2017	12.44%
2016	5.13%
2015	0.28%
2014	5.54%

* Net of investment expenses.

These schedules are presented to illustrate the requirement to show information for ten years. However, until a full ten-year trend is completed, information is presented for those years in which information is available.

See accompanying independent auditors' report.

**MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)**

**NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2021**

A. CHANGES OF BENEFIT TERMS

The System may be amended or terminated in whole or in part at any time by the Massachusetts Legislature, provided that no such modification, amendment or termination shall be made that would deprive a current member of superannuation pension rights or benefits provided under applicable laws of Massachusetts, if such member has paid the stipulated contributions specified in sections or provisions of such laws. There were no significant changes to the System's benefit terms in 2021.

B. SIGNIFICANT ACTUARIAL ASSUMPTIONS AND METHODS

The significant actuarial assumptions used in the most current actuarial valuation report included:

Actuarial cost method:	Individual entry age normal
Asset valuation method:	Market value
Investment rate of return:	7.25% per annum
Projected salary increases:	3.50% per year
Cost of living adjustments:	3% on the first \$16,000 of benefits
Mortality rates:	Represented by the various SOA Pub-2010 Public Retirement Plans Mortality Tables specific to group, pre-retirement versus post-retirement, disabled and beneficiaries, with Scale MP-2019 improvements until 2025



**INDEPENDENT AUDITORS' REPORT ON AUDIT OF SPECIFIC ELEMENTS,
ACCOUNTS AND ITEMS OF FINANCIAL STATEMENTS**

To the Medford Retirement Board
Medford Contributory Retirement System
Medford, Massachusetts

Opinion

We have audited the accompanying schedule of employer allocations of the Medford Contributory Retirement System (the "System"), a component unit of the City of Medford, Massachusetts, as of and for the year ended December 31, 2021 and the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources and total pension expense (the specified column totals) included in the accompanying schedule of pension amounts by employer of the System, and related notes thereto. Collectively, these are referred to as the Schedules.

In our opinion, the Schedules referred to above present fairly, in all material respects, the employer allocations and 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 the System as of and for the year ended December 31, 2021, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

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 Schedule section of our report. We are required to be independent of the System 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 opinion.

Responsibilities of Management for the Schedules

Management is responsible for the preparation and fair presentation of the 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.

Auditors' Responsibilities for the Audit of the Schedules

Our objectives are to obtain reasonable assurance about whether the Schedules 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 Schedules.

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 Schedules, 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 Schedules.
- 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 System's 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 evaluating the overall presentation of the Schedules.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

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 GAAS, the financial statements of the System as of and for the year ended December 31, 2021, and our report thereon, dated May 5, 2022, expressed an unmodified opinion on those financial statements.



Roselli, Clark & Associates
Certified Public Accountants
Woburn, Massachusetts
May 5, 2022

MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)

SCHEDULE OF EMPLOYER ALLOCATIONS
YEAR ENDED DECEMBER 31, 2021

Employer	Actual Employer Contributions	Employer Allocation Percentage
City of Medford	\$ 13,251,414	94.46%
Medford Housing Authority	776,911	5.54%
Total	\$ 14,028,325	100.00%

See notes to schedule of employer allocation and schedule of pension amounts by employer.

MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2021

	City of Medford	Medford Housing Authority	Total
Net pension liability	\$ 83,114,824	\$ 4,872,938	\$ 87,987,762
Deferred outflows of resources:			
Differences between actual and expected experience	\$ 4,375,340	\$ 256,521	\$ 4,631,861
Changes of assumptions	9,640,994	565,241	10,206,235
Changes in proportion and differences between employer contributions and proportionate share of contributions	118,650	388,685	507,335
Total deferred outflows of resources	\$ 14,134,984	\$ 1,210,447	\$ 15,345,431
Deferred inflows of resources:			
Net difference between projected and actual investment earnings on pension plan investments	\$ 23,034,690	\$ 1,350,500	\$ 24,385,190
Differences between actual and expected experience	2,824,708	165,610	2,990,318
Changes in proportion and differences between employer contributions and proportionate share of contributions	388,685	118,650	507,335
Total deferred inflows of resources	\$ 26,248,083	\$ 1,634,760	\$ 27,882,843
Pension expense (income):			
Proportionate share of plan pension expense	\$ 10,486,408	\$ 614,809	\$ 11,101,217
Proportionate share of plan pension revenue	8,590	(8,590)	-
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	(388,838)	(22,798)	(411,636)
Total employer pension expense (income)	\$ 10,106,160	\$ 583,421	\$ 10,689,581

See notes to schedule of employer allocation and schedule of pension amounts by employer.

**MEDFORD CONTRIBUTORY RETIREMENT SYSTEM
(A Component Unit of the City of Medford, Massachusetts)**

**NOTES TO PENSION SCHEDULES
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2021**

A. INTRODUCTION

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, establishes financial reporting requirements for governments that provide employees with pension benefits. GASB 68 requires employers to recognize a net pension liability or net pension asset as employees earn pension benefits. Employers participating in the Medford Contributory Retirement System (the “System”) will recognize their proportionate share of the collective pension amounts for all benefits provided by the Retirement System.

B. METHOD OF PROPORTIONATE SHARE ALLOCATION

The basis for the proportionate share allocation by employer as found in the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer is consistent with the manner in which employer contributions to the System are determined. The net pension liability, deferred outflows of resources, deferred inflows of resources and pension expense is based upon actual historical employer contributions to the System from the census data submitted by the System for pay periods ending December 31, 2021.

C. EXPECTED FUTURE AMORTIZATION OF DEFERRED BALANCES

The following table summarizes the expected amortization of the deferred outflows of resources and inflows of resources into pension expense.

Measurement Period Ended December 31,	City of Medford	Medford Housing Authority	Total
2022	\$ 1,104,626	\$ 133,093	\$ 1,237,719
2023	(2,605,440)	(105,783)	(2,711,223)
2024	(5,616,842)	(232,684)	(5,849,526)
2025	(4,995,443)	(218,939)	(5,214,382)
	<u>\$ (12,113,099)</u>	<u>\$ (424,313)</u>	<u>\$ (12,537,412)</u>