Item 1 Call to Order, Roll Call

(No backup for this Item)

Item 2 Agenda Adoption

AGENDA REGULAR BOARD MEETING CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM THURSDAY, MAY 21, 2020 at 9:00 AM

Dial-in Number: (352) 448-9762 / Conference ID: 430 030 985#

This meeting will be conducted exclusively using electronic communications media technology in accordance with Executive Order 20-69. Participants, including the public, may join the meeting by telephone using the above Dial-in Number and Conference ID. You may submit a public comment via email (include your name, address, and comment) to the Pension Administrator at castronovol@mydelraybeach.com by no later than 5:00 p.m. Wednesday, May 20, 2020. NOTE: your full email will be reviewable by the Board of Trustees and will be made part of the record. For additional information or if you have difficulty accessing the virtual meeting, please send an email to the Pension Administrator. Backup material for Agenda items are available from the Pension Administrator via email if requested by no later than 5:00 p.m. Wednesday, May 20, 2020.

1. Call to Order, Roll Call

2. Agenda Adoption

May 21, 2020

3. Comments

- a. Public Comments
- b. Board of Trustees of Police Officers' Retirement System
- c. Active and Retired Members of the System

4. Consent Agenda

- a. February 20, 2020 Regular Meeting Minutes
- b. Warrant Ratification (#243)
- c. Warrant Approval (#244)
- d. Ratify/Approve Refunds/Benefit Enhancements/New Retirement/DROP/Vested/Death Annuities
- e. Amendment No. 1 to the Agreement with Caler, Donten, Levine, Cohen, Porter & Veil

5. Reports

- a. Caler, Donten, Levine, Cohen, Porter & Veil, Auditor Scott Porter
 - i. September 30, 2019 Audit Report
- b. 2019 Annual State Report Lisa Castronovo
- c. Gabriel, Roeder, Smith & Company, Actuary Jeffrey Amrose
 - i. October 1, 2019 Actuarial Valuation
 - ii. Experience Study Results Discussion
- d. AndCo Consulting, Investment Consultant Brendon Vavrica
 - i. Portfolio Performance Review Quarter End March 31, 2020
 - ii. Flash Report April 2020
- e. Lewis, Longman & Walker, Legal Counsel Janice Rustin
 - i. Update on Fire members who were in General Employees' Retirement Plan

Adjournment

IN ACCORDANCE WITH THE AMERICAN WITH DISABILITIES ACT OF 1990, PERSONS NEEDING A SPECIAL ACCOMMODATION TO PARTICIPATE IN THIS PROCEEDING SHOULD CONTACT THE PLAN ADMINISTRATOR NO LATER THAN TWO (2) DAYS PRIOR TO THE PROCEEDING, TELEPHONE (561) 243-4707 FOR ASSIS TANCE; IF HEARING IMPAIRED, TELEPHONE THE FLORIDA RELAY SERV IC E NUMBERS (800) 955-8771 (TDD) OR (800) 955-8770 (VOICE) FOR ASSISTANCE. NOTICE IS GIVEN TO ALL INTERESTED PARTIES THAT IF ANY PERSON DECIDES TO APPEAL ANY DECISION MADE AT THE FORTHCOMING MEETING OF THE CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM, SUCH PERSON WILL NEED A RECORD OF THE PROCEEDINGS CONDUCTED AT SUCH MEETING AND FOR SUCH PURPOSE, HE OR SHE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDING IS MADE, WHICH RECORDS INCLUDE THE TESTIMONY AND EVIDENCE UPON WHICH ANY APPEAL MAY BE BASED. FLORIDA STATUTE, SECTION 286.0105.

STATE OF FLORIDA

OFFICE OF THE GOVERNOR EXECUTIVE ORDER NUMBER 20-69

(Emergency Management – COVID-19 – Local Government Public Meetings)

WHEREAS, on March 1, 2020, I issued Executive Order 20-51 directing the Florida Department of Health to issue a Public Health Emergency as a result of COVID-19; and

WHEREAS, on March 1, 2020, the State Surgeon General and State Health Officer declared a Public Health Emergency exists in the State of Florida as a result of COVID-19; and

WHEREAS, on March 9, 2020, I issued Executive Order 20-52 declaring a state of emergency for the entire State of Florida as a result of COVID-19; and

WHEREAS, on March 16, 2020, President Donald J. Trump and the Centers for Disease Control and Prevention ("CDC") issued the "15 Days to Slow the Spread" guidance advising individuals to adopt far-reaching social distancing measures, such as working from home and avoiding gatherings of more than 10 people; and

WHEREAS, on March 17, 2020, I wrote a letter to Attorney General Ashley Moody seeking an advisory opinion regarding concerns raised by local government bodies about their ability to hold meetings through teleconferencing and other technological means in order to protect the public and follow the CDC guidance regarding social distancing; and

WHEREAS, on March 19, 2020, Attorney General Ashley Moody delivered an opinion to me indicating that certain provisions of Florida law require a physical quorum be present for local government bodies to conduct official business, and that local government bodies may only conduct meetings by teleconferencing or other technological means if either a statute permits a quorum to be present by means other than in person, or that the in person requirement for constituting a quorum is lawfully suspended during the state of emergency; and

WHEREAS, it is necessary and appropriate to take action to ensure that COVID-19 remains controlled, and that residents and visitors in Florida remain safe and secure;

NOW, THEREFORE, I, RON DESANTIS, as Governor of Florida, by virtue of the authority vested in me by Article IV, Section (1)(a) of the Florida Constitution, Chapter 252, Florida Statutes, and all other applicable laws, promulgate the following Executive Order to take immediate effect:

Section 1. I hereby suspend any Florida Statute that requires a quorum to be present in person or requires a local government body to meet at a specific public place.

Section 2. Local government bodies may utilize communications media technology, such as telephonic and video conferencing, as provided in section 120.54(5)(b)2., Florida Statutes.

Section 3. This Executive Order does not waive any other requirement under the Florida Constitution and "Florida's Government in the Sunshine Laws," including Chapter 286, Florida Statutes.

Section 4. This Executive Order shall expire at the expiration of Executive Order 20-52, including any extension.



IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Florida to be affixed, at Tallahassee, this 20th day of March, 2020

RON DESANTIS, GOVERNOR

ATTEST:

FAUTUM JUL ECRETARY OF STATE 2020 MAR 20 AM 9: 38

Item 3 Comments

(No backup for this Item)

Item 4 Consent Agenda

Item 4.a.

February 20, 2020 Regular Meeting Minutes

MINUTES REGULAR PENSION BOARD MEETING CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT FUND FEBRUARY 20, 2020

1. CALL TO ORDER, ROLL CALL

Chair Giaccone called the meeting to order at 10:00 a.m.

Board Members present: Chair Gregory Giaccone, Vice-Chair Craig Mahoney, Secretary Jack Warner (arrived at 10:06 a.m.), Thomas Glanfield (arrived at 10:03 a.m.), and Alan Kirschenbaum.

Also present: Board Attorney Janice Rustin (Lewis, Longman & Walker as designated by City Attorney), Investment Consultant Brendon Vavrica (AndCo Consulting), Joseph Mendell (NFP), and Pension Administrator Lisa Castronovo.

Guests: John Mainville

2. AGENDA ADOPTION

Ms. Rustin stated Item 6.a. (Annual Audit Services Agreement) needed to be pulled from the Agenda.

MOTION made by Mr. Mahoney, seconded by Mr. Kirschenbaum, to adopt the February 20, 2020 Agenda as amended to remove Agenda Item 6.a. In a voice vote by the members present, **Motion** passed 4-0.

3. COMMENTS

a. Public

None

b. Board of Trustees of Firefighters' Retirement System

None

c. Active and Retired Members of the Plan

None

4. CONSENT AGENDA

- a. November 21, 2019 Regular Meeting Minutes
- b. January 30, 2020 Workshop Minutes
- c. Warrant Ratification (#240-241)
- d. Warrant Approval (#242)
- e. Ratify/Approve Refunds/Benefit Enhancements/New Retirements/DROPs/Vested/Death Annuities
- f. Ratify/Approve Deposits

MOTION made by Mr. Kirschenbaum, seconded by Mr. Glanfield, to approve Consent Agenda Items 4.a.-f. In a voice vote by the members present, **Motion** passed 4-0.

5. REPORTS

a. NFP Retirement, Inc. December 31, 2019 Quarterly Report – Joseph Mendell Report made part of these Minutes

Mr. Mendell reviewed the December 31, 2019 Quarterly Report noting that most of the selected investment funds at ICMA-RC performed as expected in the quarter with the exception of three: Fidelity Puritan (fourth consecutive quarter of underperformance), LSV Small Cap Value (second consecutive quarter of underperformance), and Fidelity Diversified International (fourth consecutive quarter of underperformance).

Regular Pension Board Meeting February 20, 2020 Page 2 of 5

Regarding the Fidelity Puritan fund, Mr. Mendell explained that while the fixed income portion of the fund continued to be managed by two experienced portfolio managers, the equity portion was managed by a relatively new portfolio manager. Mr. Mendell continued that due to the fact Fidelity Puritan was one of Fidelity's flagship funds, he felt comfortable stating the managers would get it turned around at some point in the future. Mr. Mendell again expressed his opinion that there was not much need for the Puritan fund since investors could select from various target date funds that were very similar in nature. Mr. Kirschenbaum countered that the Puritan fund was considered a more balanced fund than target date funds so thus it should be retained as a viable option to the target date funds. Mr. Glanfield and Mr. Warner stated they were okay with replacing or removing the Puritan fund. Mr. Mendell stated he would keep Fidelity Puritan on the watch list for the next quarter and bring to the next meeting other balanced funds for Board consideration as a replacement for Fidelity Puritan.

Regarding the Fidelity Select Technology fund, Mr. Mendell said that while it experienced significant earnings in quarter end December 31, 2019, it would always be a volatile investment. After discussion about possible replacement funds, the Board agreed they wanted to replace Fidelity Select Technology with a technology indexed fund.

MOTION made by Mr. Kirschenbaum, seconded by Mr. Glanfield, to approve the replacement of Fidelity Select Technology with Vanguard Information Technology Index Adm. In a voice vote by the members present, **Motion** passed 5-0.

Mr. Mendell said he would handle the replacement of Fidelity Select Technology with Vanguard Information Technology Index Adm within a timeframe of about 75 days. Mr. Mendell concluded his presentation by stating he would bring to the next meeting indepth information about the JPMorgan target date funds.

b. AndCo Consulting – Brendon Vavrica

i. Portfolio Performance Review – Quarter End December 31, 2019
 Report made part of these Minutes.

Mr. Vavrica presented the Investment Performance Review Report for quarter end December 31, 2019 by stating that the returns for the quarter were phenomenal. The excellent returns were due in part to decreasing fears about a United States trade war with China. Mr. Vavrica continued that for the first time in 2019 the yield curve did not dip but rather steadily inclined. The Retirement System's rate of return, net of fees, for quarter end December 31, 2019 was 5.98% and for the twelve months ended December 31, 2019 was 20.77%. Mr. Vavrica cautioned that the optimism experienced in the fourth quarter of 2019 could turn to pessimism due to fears over the coronavirus sweeping through China and entering the United States.

ii. January 2020 Flash Report

Report made part of these Minutes

Mr. Vavrica reviewed the January 2020 returns noting that the national markets in general performed poorly and as did the Retirement System. The fund's overall return for January was -0.44% compared to the benchmark of 0.16%. Mr. Vavrica explained that the poor performance for January was not cause for alarm for an entire year since it was only one month.

Regular Pension Board Meeting February 20, 2020 Page 3 of 5

Mr. Vavrica shared a chart showing annual asset class performance over the last 15 years which demonstrated the reason for investment diversification: not one single asset class had consistently performed at the top, middle or bottom. Mr. Vavrica also shared a graph showing how markets historically performed in an election year and in the year immediately following an election year.

Mr. Vavrica explained that approximately \$1.4 million needed to be transferred into the cash account to cover administrative expenses, benefit payments and DROP deposits for the next three months. Mr. Vavrica recommended taking the needed funds from the large cap growth accounts, specifically Polen Capital and/or RhumbLine Advisers, since the fund was slightly overweight in that particular asset group.

MOTION made by Mr. Kirschenbaum, seconded by Mr. Mahoney, to transfer \$1,400,000 from Polen Capital to the Vanguard Total Stock Market Index fund in order to maintain the required cash position to meet monthly benefit payment requirements. In a voice vote by the members present, **Motion** passed 5-0.

iii. Asset Allocation Discussion

Mr. Vavrica started the discussion by asking the Board how they wished to proceed regarding private debt and private equity investments. Mr. Warner said he wanted to see how the General Employees' retirement committee would move forward as he didn't think now was the time to start investing in private equity or private debt. Mr. Kirschenbaum agreed with Mr. Warner and said he wished to stay fully invested in public markets considering the majority of private investments made by the Retirement System in the past had not panned out very well.

Mr. Glanfield agreed that the Board should be prudent with the investments but that he would like to explore private equity or private debt investing in more detail. The Board collectively agreed they were more interested in private debt investments over private equity investments.

Mr. Vavrica explained that AndCo was required to follow approval guidelines before they could offer information to outside parties about various private equity or debt investments. At the moment, AndCo did not have any approved private equity products that he could share. However, since AndCo had approved three private debt companies - Blackrock, Deerpath, and Golub - Mr. Vavrica distributed a handout regarding them. Mr. Vavrica noted specifically the managers' strategies, focus, strengths, and fees and that all three of the managers' products would work well in the Retirement System's portfolio. Mr. Vavrica concluded by stating he would bring to the next meeting another set of asset mixes that would exclude private equity but include private debt with different investment percentages.

c. Lewis, Longman & Walker – Janice Rustin
Ms. Rustin reviewed her memorandum on the "Setting Every Community Up for
Retirement Enhancement" (SECURE) Act. Ms. Rustin explained the most significant
change affecting the City's retirement plans was the increase in the age limit for
required minimum distributions from 70 ½ to 72 which would became effective after
December 31, 2019.

Regular Pension Board Meeting February 20, 2020 Page 4 of 5

Ms. Rustin explained that the Police Officers' Board of Trustees requested that she research securities litigation monitoring law firms. Ms. Rustin asked the Board if they would like to know what her research turned up to which they responded they were more interested in knowing who they had already engaged for the services. Ms. Rustin stated she would look into it and report back at the next meeting.

d. Pension Administrator – Lisa Castronovo

Ms. Castronovo provided two financial items: 1) financial statement of the Retirement System through September 30, 2019, and 2) the 2019-20 administrative expense budget versus actual expenses through February 12, 2020. Ms. Castronovo provided information as shared by Salem Trust regarding their transition to TMI Trust Company. Ms. Castronovo presented the idea of the Board acquiring a Board-specific credit card primarily for her use when registering the trustees for conferences and making their travel arrangements (hotel reservations, flight reservations, etc.). Ms. Castronovo said she wanted to discuss the idea further with the City's Assistant Finance Director and would provide a follow-up report at the Board's next meeting.

6. ADMINISTRATIVE ITEMS

b. NFP Retirement, Inc. Agreement

Ms. Rustin explained that while she was preparing a contract for the General Employees' Retirement Plan and Fiduciary First, it came to her attention that Fiduciary First, LLC had changed their name to NFP Retirement, Inc. As a result, Ms. Rustin requested NFP Retirement to prepare an amendment regarding the name change for Board execution.

MOTION made by Mr. Mahoney, seconded by Mr. Kirschenbaum, to execute Amendment No. 1 to the Investment Monitor/Consultant Agreement between the City of Delray Beach Firefighters' Retirement System and Fiduciary First, LLC in which "NFP Retirement, Inc." is substituted for "Fiduciary First, LLC." In a voice vote by the members present, **Motion** passed 5-0.

ADJOURNMENT

MOTION made by Mr. Mahoney, seconded by Mr. Kirschenbaum, to adjourn the meeting. Meeting adjourned at 12:08 p.m.

	and the second s
ı,, tr	ne undersigned, am the
of the Board of Trustees of the City of Delray E	Beach Firefighters' Retirement System ("Board").
The information provided herein is the Minute	es of the February 20, 2020 regular meeting of
said body. These Minutes were formally	y approved and adopted by the Board on
·	
	<u>—</u>
Board of Trustees, City of Delray Beach	
Firefighters' Retirement System	



FIREFIGHTERS' RETIREMENT SYSTEM Summary of Warrants May 21, 2020 Regular Board Meeting

Warrant #	April 2020	<u> </u>	<u>Amount</u>	<u>Description</u>
243	City of Delray Beach	\$	2,950.21	Pension Administrator - March 2020
243	AndCo Consulting		9,120.00	Investment Consulting
243	Lewis, Longman & Walker		1,633.00	Legal Services - February 2020
243	Lewis, Longman & Walker		715.50	Legal Services - March 2020
244	Gabriel, Roeder, Smith & Co.		6,125.00	Actuarial Services
243	NFP		3,380.57	Adviser Fee - qtr end 12/31/19
243	Garcia, Hamilton & Associates		11,222.82	Investment Fee - qtr end 12/31/2019
243	Polen Capital		20,863.50	Investment Fee - qtr end 12/31/2019
243	Rhumbline		472.00	Investment Fee - qtr end 12/31/2019
		\$	56,482.60	
	May 2020			
244	City of Delray Beach	\$	2,950.21	Pension Administrator - February 2020
244	Great Lakes Advisors		8,519.48	Investment Fee - qtr end 3/31/2020
244	BNY Mellon		15,053.94	Investment Fee - qtr end 3/31/2020
244	Gabriel, Roeder, Smith & Co.		11,090.00	Actuarial Services
244	Lewis, Longman & Walker		368.00	Legal Services - April 2020
		\$	37,981.63	

\$ <u>94,464.23</u> <u>TOTAL</u>

Item 4.b. Warrant Ratification: #243

WARRANT: 0243

MEETING/APPROVAL DATE: April 22, 2020 (no meeting)

To:

Salem Trust Company 1715 N. Westshore Blvd

Suite 750

Administration:

Lisa Castronovo

Tampa, FL 33607

You are hereby authorized by the Board of Trustees of the **City of Delray Beach Firefighters' Retirement System** to pay the amounts listed below for services rendered to said Board of Trustees and to pay the person/company named below hereby certified by the Board of Trustees.

PAYMENT FROM STC ACCOUNT:	740001219		
PAYABLE TO:			AMOUNT:
City of Delray Beach Attn: Lisa Castronovo/Finance - Pensio March 2020	n		\$ 2,950.21
NFP Invoice #09-4804			\$ 3,380.57
Garcia Hamilton & Associates Invoice #31970			\$11,222.82
Polen Capital Acct 740002175; Acct no: DELR0008			\$20,863.50
RhumbLine Invoice #10mdbfrs2020Q1			\$ 472.00
AndCo Invoice #34567			\$ 9,120.00
Gabriel, Roeder, Smith & Co. Invoice #454490			\$ 6,125.00
Lewis, Longman & Walker Invoice #JWL-134693			\$ 1,633.00
Lewis, Longman & Walker Invoice #JWL-135107			\$ 715.50
AUTHORIZED BY:			
Chairman: Gregory Giaccone	Trustee:	Craig Mahoney	
Secretary:	Trustee:		
Thomas Glanfield		Alan Kirschenba	um
Trustee: Jack Warner			

jpm



1825 NW Corporate Blvd., Suite 300 · Boca Raton, FL 33431 · Tel: 561-241-2425 · www.polencapital.com

REMITTANCE COPY

Lisa Castronovo City of Delray Beach, Finance Department 100 NW 1st Ave Delray Beach, FL 33444

April 11, 2020

STATEMENT OF MANAGEMENT FEES

Quarterly Fee calculated for assets under management as of March 31, 2020 For the billing period from January 1, 2020 to March 31, 2020

Custodian Account no: 0740002175 Account no: DELR0008

Account name: DELRAY BEACH FIREFIGHTERS RETIREMENT SYSTEM

Management Fee Calculation Detail

	Breakpoints	Annual Rate	Account Assets	Fee
Total Portfolio:	Balance	0.600%	\$13,985,420	\$20,863.50
Total			\$13,985,420	\$20,863.50

Please remit the total fee amount to Polen Capital at the address indicated below.

Payment for this invoice can be sent via mail or wire:

By Mail: By Wire:

Check payable to: SunTrust Bank

Polen Capital Management 1000 Peachtree St., N.E., Atlanta, GA

Attn: George Devino ABA: 061 000 104

1825 NW Corporate Blvd, #300 Account Name: Polen Capital Management LLC

Boca Raton, FL 33431 Account #: 1000214295577



Investment Advisory Fees for 1st Quarter 2020 April 6, 2020
Client: Delray Beach Firefighters Retirement System Invoice #: 10mdbfrs2020Q1

Billable Assets:	10mdbfrs		
Period Ending:	(RU1000GP)		
01-31-2020	\$5,100,095		
02-29-2020	4,753,417		
03-31-2020	4,287,879		
Average Assets:	\$4,713,797		
Billable Assets:	\$4,713,797		
Fee Calculation:	Asset Tier	Rate (BPs)	Fee
	\$4,713,797	0.00040000	\$1,886
Total:	\$4,713,797		\$1,886
Annual Fee:			\$1,886
Quarterly Calculated Fee:			\$472
Total Quarterly Fee Due:			<u>\$472</u>



515 North Flagler Drive, Suite 1500 West Palm Beach, FL 33401 Tel 561-640-0820 Fax 561-640-8202 Tax ID No. 65-0500793

City of Delray Beach Attn: Lisa Castronovo, Pension Dept. 100 NW 1st Avenue Delray Beach, FL 33444 April 6, 2020 Invoice No. JWL-135107

CLIENT: 1187 - City of Delray Beach

Re: 014 Firefighter Pension Board Matters

Date 03/03/20	JDR	Services Attention to education program for Deferred Retirement Option Plan members; review investme advisor agreement, City Request for Proposal and backup documents; phone conference with J. Mandell regarding same.	Hours 1.20 nt	Amount 276.00
03/09/20	JDR	Attention to Auditor agreement; review and analyze City's Request for Proposal for Auditor services; email correspondence with City Attorney regarding independent agreements.	1.50	345.00
03/09/20	JWL	Attention to February 25, 2020 board meeting - summary and action items for next meeting.	0.30	94.50
		Summary of Services		
		Rate	Hours	Amount
JWL	Linn, Ja	ames W. 315.00	0.30	94.50
JDR	Rustin,	Janice D. 230.00	2.70	621.00
Total for	Services	3	3.00	\$715.50

Client Ref: Invoice No	1187 - 014 JWL-135107				April 6, 2020 Page 2
		Total for Services a	nd Expenses	- =	\$715.50
		Pre	vious Balance		1,633.00
		Payments Sinc	e Last Invoice		-0.00
			Amount Due	-	\$2,348.50
Open Invoice	s for this Matter				
Date 03/10/20 Outstanding A	Invoice No. 134693 Amount Due:	Amount Billed 1,633.00	Amount Paid 0.00		

Current and Outstanding Amount Due:

\$2,348.50



515 North Flagler Drive, Suite 1500 West Palm Beach, FL 33401 Tel 561-640-0820 Fax 561-640-8202 Tax ID No. 65-0500793

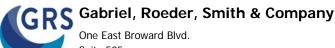
City of Delray Beach Attn: Lisa Castronovo, Pension Dept. 100 NW 1st Avenue Delray Beach, FL 33444

March 10, 2020 Invoice No. JWL-134693

CLIENT: 1187 - City of Delray Beach

Re: 014 Firefighter Pension Board Matters

Date 02/12/20	JDR	Services Telephone conference with L. Castronovo regarding quarterly meeting items; draft legal memorandum regarding SECURE Act impact on plan.	Hours 0.80	Amount 184.00
02/19/20	JDR	Review agenda and backup items for quarterly meeting; telephone conference with L. Castronovo regarding auditor agreement.	2.50	575.00
02/20/20	JDR	Prepare for and attend quarterly meeting.	3.00	690.00
02/26/20	JDR	Follow up on legal questions raised at quarterly meeting.	0.80	184.00
		Summary of Services		
		Rate	Hours	Amount
JDR		Janice D. 230.00	7.10	1,633.00
Total for	Services		7.10	\$1,633.00
		Total for Services and Expenses	_	\$1,633.00
		Previous Balance		810.00
		Payments Since Last Invoice		-810.00
		Amount Due	_	\$1,633.00



Suite 505 Ft. Lauderdale, Florida 33301-1804 (954) 527-1616

Invoice

Date Invoice 4/8/2020 454490

Bill To:

Please Remit To: Dept. # 78009

Attention: Ms. Lisa Castronovo Pension Administrator

City of Delray Beach Firefighters' Retirement System

100 NW 1st Avenue

Delray Beach, Florida 33444

Gabriel, Roeder, Smith & Company PO Box 78000

Detroit, Michigan 48278-0009

Federal Tax ID 38-1691268

Client 3528 **Amount** For services rendered through 3/31/2020 1. Charges since 2/29/2020 for preparation of Experience Study Report; total charges to 1,358.00 date equal \$2,028 2. Charge since 10/31/2019 for preparation of 10/1/2019 Actuarial Valuation Report and 4,167.00 Employee Benefit Statements; total charges to date equal \$4,752 3. Preparation of Actuarial Confirmation os Use of State Moneys form for inclusion in 600.00 Annual State Report \$6,125 **Amount Due**

GARCIA HAMILTON ASSOCIATES, L.P.

INVOICE # 31970

5 HOUSTON CENTER 1401 McKinney, Suite 1600

Houston, TX 77010

TEL: (713) 853-2322 FAX: (713) 853-2308

WWW.GARCIAHAMILTONASSOCIATES.COM

April 2, 2020

DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM (0740001664)

drbf

Via email: Salemops@salemtrust.com

Lisa Castronovo: CastronovoL@mydelraybeach.com

* * *

GARCIA HAMILTON & ASSOCIATES SUMMARY OF MANAGEMENT FEES

For The Period January 1, 2020 the Portfolio Value with Accrued Inter	est as of 01-31-20 est as of 02-29-20		23,074,787.11 23,363,696.56 23,089,871.67
Average of 3 Months		\$	23,176,118.45
Percent of Total Brackets(000's) Rates(%)			31.74
0 - 50,000 0.2000 50,000 -1,000,000 0.1800	50,000,000 pro-rated @ 23,012,705 pro-rated @	0.063 % per annum 0.057 % per annum	7,935.65 3,287.17
Quarterly Management Fee		\$	11,222.82



11,222.82





AndCo PLEASE NOTE OUR TEMPORARY ADDRESS:

Date Invoice # 3/27/2020 34567

201 N. New York Ave. Suite 300 Winter Park, Fl 32789

Bill To:

Delray Beach Firefighters' Retirement System, City of Lisa Castronovo CEBS, CPPT Pension Administrator City of Delray Beach

Description		Amount
Consulting Services and Performance Evaluation, Billed Consulting Services and Performance Evaluation, Billed Consulting Services and Performance Evaluation, Billed	Quarterly (February, 2020)	3,040.00 3,040.00 3,040.00
We look forward to continuing to provide 100% independent investment consulting and putting clients first!	Balance Due	\$9,120.00



BILL TO

City of Delray Beach Firefighters Retirement System Plan #106828

INVOICE #	DATE	TOTAL DUE	DUE DATE	TERMS	ENCLOSED
09-4804	03/31/2020	\$3,380.57	04/30/2020	Due imm; 10 day net 0; 1.5% mth	

QTY	ACTIVITY	RATE	AMOUNT
11,268,550.80	Fee Annual services rendered and invoiced quarterly per agreement- "Prudent Fiduciary Process" Retirement plan consulting and fiduciary advisory services with reporting. Services rendered may include Quarterly Plan Committee Reporting, Retirement Plan Investment Advisory, Vendor Relationship Management, Fee & Cost Oversight, Plan Benchmarking, Bond & Liability Review, Form & Operational Fiduciary Matters, Participant Education or Communication Matters, Safe Harbor and Risk Management Strategies, General Retirement Plan Consulting.	0.0003	3,380.57

Make Check Payable to: BALANCE DUE \$3,380.57

NFP Retirement

Mail Payment to:

NFP

1060 Maitland Center Commons, Suite 360

Maitland, FL 32751

MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION ADMINISTRATORS

DOH

Pension Administrators: LISA CASTRONOVO 5/29/2018

MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION ADMINISTRATOR

Position	Buc	lget:
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ANNUAL MONTHLY

Salary	83,137.00
FICA	5,154.49
Medicare	1,205.49
Pension	7,005.12
Medical Ins	9,253.14
Life Ins	214.50
LTD	171.68
Unemploymen	t 35.62
EAP	31.72
TOTAL	106,208.76
	8,850.73

LISA CASTRONOVO:		ANNUAL	MONTHLY
			Beg. 10/1/19
F	FIRE	\$35,402.57	\$2,950.21
F	POLICE	\$35,402.57	\$2,950.21
	GENERAL	\$35,402,57	\$2.950.21

Item 4.c. Warrant Approval: #244

WARRANT: 0244

MEETING/APPROVAL DATE: May 21, 2020

To: Salem Trust Company

1715 N. Westshore Blvd

Suite 750

Administration:

Lisa Castronovo

Tampa, FL 33607

You are hereby authorized by the Board of Trustees of the **City of Delray Beach Firefighters' Retirement System** to pay the amounts listed below for services rendered to said Board of Trustees and to pay the person/company named below hereby certified by the Board of Trustees.

PAYMENT FROM STC ACCOUNT: 0740001219 **PAYABLE TO: AMOUNT**: City of Delray Beach \$ 2,950.21 Attn: Lisa Castronovo/Finance - Pension April 2020 **Great Lakes Advisors** \$ 8,519.48 Acct 3040003910; Code: CITY3910 **BNY/Mellon** \$15,053.94 Invoice #126702 Gabriel, Roeder, Smith & Co. \$11,090.00 Invoice #455028 Lewis, Longman & Walker \$ 368.00 Invoice #JWL-135498 AUTHORIZED BY: Chairman: ___ Trustee: _____ Gregory Giaccone Craig Mahoney Secretary: ____ Trustee: _____ Thomas Glanfield Alan Kirschenbaum Trustee: _____ Jack Warner

MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION ADMINISTRATORS

DOH

Pension Administrators: LISA CASTRONOVO 5/29/2018

MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION ADMINISTRATOR

Position	Buc	lget:
----------	-----	-------

ANNUAL MONTHLY

Salary	83,137.00
FICA	5,154.49
Medicare	1,205.49
Pension	7,005.12
Medical Ins	9,253.14
Life Ins	214.50
LTD	171.68
Unemploymen	t 35.62
EAP	31.72
TOTAL	106,208.76
	8,850.73

LISA CASTRONOVO:		ANNUAL	MONTHLY
			Beg. 10/1/19
F	FIRE	\$35,402.57	\$2,950.21
F	POLICE	\$35,402.57	\$2,950.21
	GENERAL	\$35,402,57	\$2.950.21



Ms. Lisa Castronovo

Cust: Salem Trust
Email: castronovol@mydelraybeach.com

Acct: 3040003910
Code: CITY3910

MANAGEMENT FEE: CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT

SYSTEM

3/31/2020 Portfolio Value: \$6,230,030.18

Annual Fee Based On: \$34,265.17
\$6,230,030 @ 0.55% per annum \$34,265.17

Quarterly Fee: \$8,519.48

For the Period 1/1/2020 through 3/31/2020

Paid by Debit Direct (\$0.00)
Please Remit \$8,519.48

Please send checks to: Great Lakes Advisors, LLC; 231 S. LaSalle St., 4th Floor; Chicago, IL 60604.

Please send wires to: Great Lakes Advisors, LLC; Wintrust Bank, ABA#071925444; Account#0350017859.

Payable to: Wintrust Bank, 720 12th Street; Wilmette, IL 60091.

Payment is due in 30 days of invoice date.

If you would like to receive invoices via-email please contact operations@greatlakesadvisors.com.

\$ 15,053.94



Lisa Castronovo Pension Administrator City of Delray Beach 100 NW 1st Avenue Delray Beach, FL 33444

CITY OF DELRAY RETIREMENT SYSTEM

This fee is calculated in accordance with terms set forth in the agreement between the Manager and Client.

01/01/2020 - 03/31/2020
Amount due
\$ 15,053.94
\$ 15,053.94

The following is a statement of transactions pertaining to your account(s).

Total Due for Current Period:

For any questions pertaining to this bill, please contact the Billing Department at (617) 382-8210 or email us at Billing@bnymellon.com. Thank you.

Remittance Slip

Mellon Investments Corporation

A/C #: 000010-4388

 Invoice Number:
 126702
 Billing Period:
 01/01/2020 - 03/31/2020

 Invoice Date:
 04/22/2020
 Account Number:
 BOS1640

Account Number. Boston

Amount Due: \$ 15,053.94

Please Wire Transfer To: Make Check Payable To:

BNY Mellon, N.A.

ABA # 011-00-1234

SWIFT IRVTUS3N

Further Credit to:

Mellon Investments Corporation
Box 81249

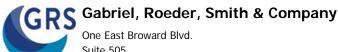
Woburn, MA 01813-1249

Please reference invoice number in wire transmission

				-	
Billing Detail Billing period:					Invoice date
01/01/2020 - 03/31/2020					04/22/2020
Management fee					
CITY OF DELRAY I	BEACH FIREFIGHTERS' Date	RETIREMENT SYSTEM - BOS1	640: Equity Income N	Management SM	Basis in USD
Market value	03/31/2020				15,053,939.64
	5% of total)				\$ 15,053,939.64
Aggregation participa	ants not billed on this Invoic	ee			
					Basis in USD
Bases that are not bille	ed on this Invoice				21,526,003.59
Total:					\$ 21,526,003.59
Total Assets/Basis in	USD - used for fee calculation	ons			\$ 36,579,943.23
Annual Fee Calculati	ion in USD - From: 01/01/20	20 To: 03/31/2020		(adj	justed by: 90 / 360)
Fee Sc	hedule Tiers	Annual (%)	Applied Assets	Annual Fee	Periodic Fee
	up to 50,000,000.00	0.400000	36,579,943.23	146,319.77	36,579.94
	and above	0.300000	0.00	0.00	0.00
Totals:			\$ 36,579,943.23	\$ 146,319.77	\$ 36,579.94
Annual Fee Calculati	ion in USD - From: 01/01/20	20 To: 03/31/2020		(adj	justed by: 90 / 360)
Fee Sc	hedule Tiers	Annual (%)	Applied Assets	Annual Fee	Periodic Fee
0.00	and above	0.000000	36,579,943.23	0.00	0.00
Totals:			\$ 36,579,943.23		
	Quarterly Net Fe	e Calculation in USD			
					Quarterly Net Fee
	RETIREMENT SY Income Manageme	Y BEACH FIREFIGHTERS' YSTEM - BOS1640: Equity ent SM (\$15,053,939.64 *			15,053.94
	0.100000%) Net Fee:				<u>\$ 15,053.94</u>
	Aggregated Partic	cipant Fees in USD			
	Account Number	Account - Product			Allocated fee
	BOS1640	CITY OF DELRAY BEACH FIR SYSTEM - Equity Income Manag		EMENT	15,053.94
					\$ 15,053.94

CITY OF DELRAY RETIREMENT SYSTEM

Billing Detail Billing period: 01/01/2020 - 03/31/2020				Invoice date 04/22/2020
	Aggregated Fee A	llocation in USD		
	Account Number	Account - Product	Allocation	Allocated fee
	BOS1640	CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM - Equity Income Management SM Fees that are not billed on this Invoice	60.73% 39.27%	15,053.94 9,735.30
	-	billed on this invoice		\$ 24,789.24
	Billing Summary Management fee Total Current Ch	arges:		\$ 15,053.94 \$ 15,053.94



Suite 505 Ft. Lauderdale, Florida 33301-1804 (954) 527-1616

Invoice

 Date
 Invoice

 5/13/2020
 455028

Please Remit To:

Bill To:

Dept. # 78009

Pension Administrator City of Delray Beach Firefighters' Retirement System 100 NW 1st Avenue

Delray Beach, Florida 33444

Attention: Ms. Lisa Castronovo

Gabriel, Roeder, Smith & Company PO Box 78000 Detroit, Michigan 48278-0009

Federal Tax ID 38-1691268

Client 3528

For services rendered through 4/30/2020

1. Charges since 3/31/2020 for preparation of Experience Study Report; total charges to date equal \$9,759

2. Charge since 3/31/2020 for preparation of 10/1/2019 Actuarial Valuation Report and Employee Benefit Statements; total charges to date equal \$6,975

3. 4/10/2020 email regarding estimated required City contribution for FYE 2021

1,136.00

Amount Due



515 North Flagler Drive, Suite 1500 West Palm Beach, FL 33401 Tel 561-640-0820 Fax 561-640-8202 Tax ID No. 65-0500793

City of Delray Beach Attn: Lisa Castronovo, Pension Dept. 100 NW 1st Avenue Delray Beach, FL 33444 May 6, 2020 **Invoice No. JWL-135498**

CLIENT: 1187 - City of Delray Beach

Re: 014 Firefighter Pension Board Matters

Date		Services	Hours	Amount
04/23/20	JDR	Telephone conference with L. Castronovo to discuss meeting procedures; follow up with City regarding auditor agreements.	0.60	138.00
04/29/20	JDR	Telephone conference with City Attorney regarding auditor agreement and May meeting; prepare script and checklist for virtual meeting.	1.00	230.00

Summary of Services

		Rate	Hours	Amount
JDR	Rustin, Janice D.	230.00	1.60	368.00
Total f	or Services		1.60	\$368.00

Total for Services and Expenses	\$368.00
---------------------------------	----------

Previous Balance 2,348.50

Payments Since Last Invoice -0.00

Amount Due \$2,716.50

Open Invoices for this Matter

Date	Invoice No.	Amount Billed	Amount Paid	Amount Due
03/10/20	134693	1,633.00	0.00	1,633.00
04/06/20	135107	715.50	0.00	715.50
Outstanding Amount Due:				2,348.50

Current and Outstanding Amount Due:

\$2,716.50

Item 4.d.

Ratify/Approve: Refunds/Benefit Enhancements/ New Retirements/DROPs/ Deferred Vested/Death Annuities

CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM Refunds/New Benefits/Deaths May 21, 2020 Regular Board Meeting

Name	Refund	Monthly Benefit
RAFALKO, Kayela Terminated 2/19/2020	\$2,265.80	\$ N/A
RUBY, Michael Terminated 9/16/2016	\$2,982.04	\$ N/A
YOHN, Jackson Terminated 1/23/2020	\$1,685.19	\$ N/A

CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM BENEFIT PAYMENT REQUEST FORM

Section One Report of Plan Administrator					
Plan Name:	Delray Beach Firefighters' Retirement System	Account Number:	3040002181		
Participant Name:	KAYELA RAFALKO	Soc. Sec. Number:	***_**		
Beneficiary/ Alternate Payee:	N/A	Soc. Sec. Number:	N/A		
Relationship to Participant:	N/A	Date of Birth:	10/25/1994		
Check Address of Payee:					
Will tax form be sent t	o the address of Payee indicated above:	Yes X	No		
If no, enter tax addres	ss:				
Death	n/Resignation Event Partici ime to part time) Date of	pation Date:	2/19/2020 9/23/2019 10/25/1996		
Date benefits will com		soon as administratively practic			
	(0, 50 -				
AMOUNT OF REFUND: Taxable Portion: Non-Taxable Portion: Interest: \$ 38.94 TOTAL: \$ 2,265.80					
Section Two Distribution Request by Payee					
Part A					
I, the payee, make the following distribution election:					
A DIRECT ROLLOVER OF THE ENTIRE TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two, with any non-taxable amount paid to me in a lump sum.					
A DIRECT ROLLOVER OF THE ENTIRE TAXABLE AND NON-TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two.					
A DIRECT ROLLOVER OF THE FOLLOWING PORTION OF THE TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two: (not less than \$500)					
A DIRECT ROLLOVER OF THE FOLLOWING PORTION OF THE NON-TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two: (not less than \$500)					
PORT	ECT ROLLOVER OF \$ or		of this Section Two,		
A DIRECT ROLLOVER OF \$ or % (not less than \$500) OF THE TAXABLE AND NON-TAXABLE PORTION of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two, with the balance paid in a lump sum (less 20% Federal Income Tax withholding, if taxable distribution is in excess of \$200).					
	IP SUM OF MY ENTIRE VESTED ACCOUNT BALANCE (less ution is in excess of \$200).	s 20% Federal Income Tax wi	thholding, if taxable		

Part B (Complete this section if you elect to receive distribution of your refund in other than a lump sum) I represent that the IRA or other tax-qualified plan designated below is a proper recipient plan for a direct rollover. I understand that the check will be payable to the IRA account or tax-qualified plan listed below. Name of IRA/Tax-Qualified Plan: Account Number: Name of Trustee/Custodian: For the Benefit of: Address to Send Direct Rollover: Part C Release and Acknowledgements (Payee should read the statements and sign below) For and in consideration of payment of my vested benefit amount, I hereby release the Plan, the Trust, the Plan Sponsor, the Plan Administrator and the Custodian from any further liability. I understand I should consult my professional tax advisor about this distribution due to the complexity of the tax laws. I certify that my social security number shown on this application for benefits is my correct taxpayer identification number and my full legal name is provided in Section One. I understand this election supersedes any previous election made under this Plan. I understand I will be forfeiting all future monthly benefits should I elect to receive a refund of my contributions. 03/29/2020 Signature of Payee INTERNAL REVENUE SERVICE SPECIAL TAX NOTICE REGARDING PLAN PAYMENTS You should review the provided "Special Tax Notice Regarding Plan Payments" before deciding how to receive benefits from this Plan. In particular, the Special Tax Notice explains that 20% of your Plan distribution is required to be withheld for federal income tax purposes unless you elect a direct roll-over of your Plan benefits to another employer plan or an individual retirement arrangement (IRA). (If you have not received the Special Tax Notice, request it from the Pension Administrator.) I have reviewed and understand the provisions of the Special Tax Notice Regarding Plan Payments. 03/29/2020 Date Signature of Payee (Required) PAYEE'S CERTIFICATION - WAIVER OF 30-DAY WAITING PERIOD I wish to have my distribution from the Plan made as soon as possible. Therefore, I hereby waive the 30-day time period otherwise required between the date the Special Tax Notice Regarding Plan Payments was provided to me and the date my election regarding my disbursement is implemented. In connection with this waiver, I hereby confirm the following: I acknowledge receipt of a written Special Tax Notice Regarding Plan Payments informing me of some of the tax implications associated with the distribution options available to me. I understand that I am entitled to a reasonable period of not less than 30 days from the date the notice was provided to me until the date my distribution is actually implemented to decide whether or not to elect a direct rollover or lump sum. 03/29/2020

Signature of Pave

CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM BENEFIT PAYMENT REQUEST FORM

Section One Report of Plan Administrator					
Plan Name:	Delray Beach Firefighters' Retirement System		Account N	Number:	3040002181
Participant Name:	MICHAEL RUBY		Soc. Sec. Number:		***_**_
Beneficiary/ Alternate Payee:	N/A		Soc. Sec.	Number:	
Relationship to Participant:	N/A		Date of Bi	irth:	
Check Address of Payee:			- -		
Will tax form be sent to	o the address of Payee indicated above:		Yes	X	No
If no, enter tax addres	s:				
Death	n/Resignation ime to part time)	Event Date: Participation Date of Birth	Date:		0/16/2016 2/8/2016 1/26/1990
Date benefits will com	mence:	(or as soon as	administrat	ively practica	l thereafter)
Taxable Non-Taxable Portion: \$ 2,662.52 Portion: \$ Interest: \$ 319.52 TOTAL: \$ 2,982.04					
Section Two Distribution Request by Payee					
Part A I, the payee, make the following distribution election:					
A DIRECT ROLLOVER OF THE ENTIRE TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two, with any non-taxable amount paid to me in a lump sum.					
A DIRECT ROLLOVER OF THE ENTIRE TAXABLE <u>AND</u> NON-TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two.					
A DIRECT ROLLOVER OF THE FOLLOWING PORTION OF THE TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two: \$ (not less than \$500)					
A DIRECT ROLLOVER OF THE FOLLOWING PORTION OF THE NON-TAXABLE AMOUNT of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two: \$ (not less than \$500)					
A DIRECT ROLLOVER OF \$ or % (not less than \$500) OF THE TAXABLE PORTION of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two, with the balance paid in a lump sum (less 20% Federal Income Tax withholding, if taxable distribution is in excess of \$200).					
A DIRECT ROLLOVER OF \$ or % (not less than \$500) OF THE TAXABLE AND NON-TAXABLE PORTION of my vested account balance to an IRA or other tax-qualified Plan designated in Part B of this Section Two, with the balance paid in a lump sum (less 20% Federal Income Tax withholding, if taxable distribution is in excess of \$200).					
A LUMP SUM OF MY ENTIRE VESTED ACCOUNT BALANCE (less 20% Federal Income Tax withholding, if taxal distribution is in excess of \$200).			nholding, if taxable		

Part B(Complete this section if you elect to receive distr	ibution of your refund in other than a lump sum)
I represent that the IRA or other tax-qualified plan designated check will be payable to the IRA account or tax-qualified plan	below is a proper recipient plan for a direct rollover. I understand that the
Name of IRA/Tax-Qualified Plan:	
Account Number:	
Name of Trustee/Custodian:	
For the Benefit of:	
Address to Send Direct Rollover:	
	benefit amount, I hereby release the Plan, the Trust, the Plan Sponsor, the
 I understand I should consult my professional tax at a life certify that my social security number shown on the my full legal name is provided in Section One. 	this application for benefits is my correct taxpayer identification number and selection made under this Plan. enefits should I elect to receive a refund of my contributions.
	3-31-20 Date
Signature of ayee	Date
	ing Plan Payments" before deciding how to receive benefits from this Plan. In Plan distribution is required to be withheld for federal income tax purposes nother employer plan or an individual retirement arrangement (IRA). (If you be Pension Administrator.) al Tax Notice Regarding Plan Payments.
	3-31-26 Date
Signature of Payee (Required)	
PAYEE'S CERTIFICATION - WAIVER OF 30-DAY WAITI	
I wish to have my distribution from the Plan made as soor required between the date the Special Tax Notice Regarding disbursement is implemented.	n as possible. Therefore, I hereby waive the 30-day time period otherwiseing Plan Payments was provided to me and the date my election regarding
In connection with this waiver, I hereby confirm the following	g:
	ding Plan Payments informing me of some of the tax implications associated that I am entitled to a reasonable period of not less than 30 days from the ribution is actually implemented to decide whether or not to elect a direct
Tollovs, or large same	3-31-20

Date

Signature of Payee

CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM

	a to the second of the	Section Report of Plan		tor			
Plan Name:	Delray Beach Firefighte	ers' Retirement System	m		Account	Number:	3040002181
Participant Name:	JACKSON YOHN	- mar H M		production to a con-	Soc. Sec	c. Number:	***-**-3725
Beneficiary/	B				Soc. Sec	c. Number:	
Alternate Payee:	N/A						
Relationship to Participant:	N/A		y = 112	D. "	Date of	Birth:	i a marka ara
Check Address of Payee:	4120 Mango Boulevard West Palm Beach, FL 3			-			
T. E.	at to the address of Payee in	dicated above:		. 8.0	Yes	<u>x</u>	No
If no, enter tax addr		The state of				Smol on	ra war and a
	ion/Resignation	The second second	P	Event Date: Participation D	ate:	Sandal .	1/23/2020 9/23/2019
	Il time to part time)	STATE OF THE STATE		ate of Birth		San San Filmon	3/18/1997
Date benefits will co	ommence:	the table of the second	(o	r as soon as	administr	atively practi	cal thereafter)
		AMOUNT OF	REFUND:				
Taxable Portion: \$ 1,64	Non-Taxable 19.67 Portion:	\$	Interest:	\$ 35.52		TOTAL:	\$ 1,685.19
(Section) of the	Line of while of	Section Distribution Re	n Two	THE C. R. M. C.			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Distribution Re	quest by Fa	second . N	all the late	Mary V	C propriet
Part A		The state of the s		Caran Perso		14.00 /10	erani (KA) (Ca)
0.000 0.000 0.000	the following distribution ele						1000
qua A D	NRECT ROLLOVER OF TH lified Plan designated in Pa	HE ENTIRE TAXABLE It B of this Section Tw	E AMOUNT	of my vested non-taxable a	account mount pa	balance to id to me in a	an IRA or other ta
A D IRA	IRECT ROLLOVER OF TH	E ENTIRE TAXABLE designated in Part B o	AND NON-T of this Section	AXABLE AM n Two.	OUNT of	my vested a	ccount balance to a
A D an I	RECT ROLLOVER OF TH RA or other tax-qualified Pla (not I	E FOLLOWING PORt an designated in Part ess than \$500)	TION OF TH B of this Sec	ction Two: -	AMOUNT		d account balance
A D	DIRECT ROLLOVER OF TO ance to an IRA or other tax-	HE FOLLOWING PO qualified Plan designa ess than \$500)	RTION OF ated in Part E	THE NON-TA	AXABLE on Two:	AMOUNT o	f my vested accou
PO	DIRECT ROLLOVER OF RTION of my vested account In the balance paid in a lump	\$ nt balance to an IRA sum (less 20% Federa	or other tax- al Income Ta	qualified Plan	n designa	ted in Part E	HE TAXABLE of this Section Tw is in excess of \$200
AN of t	DIRECT ROLLOVER OF D NON-TAXABLE PORTION his Section Two, with the bath n excess of \$200).	\$ N of my vested accoulance paid in a lump s	or int balance to sum (less 20	o an IRA or o	ther tax-c	ualified Plan	HE TAXABLE designated in Part if taxable distribution
	UMP SUM OF MY ENTIRI		IT BALANCE	E (less 20% l	Federal l	ncome Tax v	vithholding, if taxab

	1	•		
Part B (Complete this section if you elect	to receive distribution of your refund in other than a l	ump sum))	
I represent that the IRA or other tax-qualified check will be payable to the IRA account or t	d plan designated below is a proper recipient plan for a direct and in a direct and	ect rollove	r. I under	stand that the
Name of IRA/Tax-Qualified Plan:		and the same of	Mary and the second	Commence of the Commence of th
Account Number:	The state of the s	e a spile	ar ad	2000 M MODE
Name of Trustee/Custodian:	and the constant of Arts deposits to the face in the			
For the Benefit of:	The state of the s		1	
Address to Send Direct Rollover:	particular and a security of the security of t	-794		
Address to Send Direct Nonovor.				
			1/4	
Part C Release and Acknowledgements	(Payee should read the statements and sign below)			
Plan Administrator and the Custod I understand I should consult my p I certify that my social security num my full legal name is provided in S	professional tax advisor about this distribution due to the comber shown on this application for benefits is my correct to	omplexity of axpayer ide	f the tax la entification	aws.
11	2-	- 30 -	- 20	20
Jum ym	Date			1000
You should review the provided "Special Ta In particular, the Special Tax Notice explains unless you elect a direct roll-over of your Plant and received the Special Tax Notice of	TAX NOTICE REGARDING PLAN PAYMENTS IX Notice Regarding Plan Payments" before deciding how to see that 20% of your Plan distribution is required to be withheld lan benefits to another employer plan or an individual retire request it from the Pension Administrator.)	101 1000.00		
I have reviewed and understand the provis	ions of the Special Tax Notice Regarding Plan Payments.	3-3	30-	2020
Signature of Payee (Required)	Date			
Signature of Payee (Nequires)				
PAYEE'S CERTIFICATION - WAIVER OF				1 - 11 1
I wish to have my distribution from the Pla required between the date the Special Tax my disbursement is implemented.	an made as soon as possible. Therefore, I hereby waive the Notice Regarding Plan Payments was provided to me and	the date i	ime pend my election	on regarding
In connection with this waiver, I hereby con	firm the following:			
I acknowledge receipt of a written Special T with the distribution options available to m date the notice was provided to me until t	ax Notice Regarding Plan Payments informing me of some of e. I understand that I am entitled to a reasonable period of the date my distribution is actually implemented to decide	whether o	r not to e	elect a direct
rollover or lump sum. A		3-30) - 2(020
Signature Payee	Date			

Item 4.e.

Amendment No. 1 to Agreement with Caler, Donten, Levine, Cohen, Porter & Veil



Reply To: West Palm Beach office

MEMORANDUM

TO: Board of Trustees, Delray Beach Firefighters Retirement System

FROM: Janice Rustin, Esq.

DATE: May 14, 2020

SUBJECT: Approval of Amendment No. 1 to Auditing Services Agreement

This item requests the Board's approval of Amendment No. 1 to the Auditing Services Agreement with Caler, Donten, Levine, Cohen, Porter & Veil, P.A. ("Auditor"), which amends the fee schedule and the contact information for the Pension administrator and Board counsel.

In 2017, the Board of Trustees entered into an Agreement with the Auditor that guaranteed the fee schedule for three years (until October 16, 2020). This Agreement does not have an express term, but can be terminated by the Board at any time with 30 days' notice (or terminated by the Auditor with 90 days' notice).

In 2019, the City issued an RFP for auditing services for the annual audit for the City and all three of its retirement systems, which was awarded to the Auditor. The new fee schedule under the RFP represents an annual savings of \$2,550 over the current fee schedule and is guaranteed until September 30, 2025. The Board has the option to renew this fee schedule for two additional two-year terms.

If Amendment No. 1 is approved, the new fee schedule will be effective as of November 26, 2019, the date of the Engagement letter for the FY 2019-2020 audit.

Legal Review

This Amendment No. 1 is approved as to form and legal sufficiency.

01306641-1

F: 904.353.7619

JACKSONVILLE
245 Riverside Ave., Suite 510
Jacksonville, Florida 32202
T: 904.353.6410

100 Second Ave., South Suite 501-S St. Petersburg, Florida 33701 T: 727.245.0820 F: 727.290.4057

ST. PETERSBURG

TALLAHASSEE
315 South Calhoun St., Suite 830
Tallahassee, Florida 32301
T: 850.222.5702
F: 850.224.9242

TAMPA 301 West Platt St. Suite 364 Tampa, FL 33606 T: 813.775.2331

WEST PALM BEACH
515 North Flagler Dr., Suite 1500
West Palm Beach, Florida 33401
T: 561.640.0820

F: 561.640.8202

AMENDMENT NO. 1 TO THE BOARD OF TRUSTEES OF DELRAY BEACH FIREFIGHTERS RETIREMENT SYSTEM AUDITING SERVICES AGREEMENT

This is the First Amendment to the Auditing Services Agreement between the Board of Trustees of the Delray Beach Firefighters Retirement System ("Trustees") and Caler, Donten, Levine, Cohen, Porter & Veil, P.A. ("Auditor").

WHEREAS, the Parties entered into the Agreement on October 13, 2017; and

WHEREAS, the City issued an RFP for Auditing Services (RFP 2019-043), which was awarded to the Auditor. The RFP Scope of Services included services for the Delray Beach Firefighters Retirement System; and

WHEREAS, the Parities desire to amend this Agreement to reflect the fee schedule contained in the Auditor's response to City of Delray Beach RFP 2019-043.

IN CONSIDERATION of the mutual terms and conditions, promises and covenants hereinafter set forth, the Parties agree as follows:

- 1. The truth and accuracy of each "Whereas" clause set forth above are acknowledged by the Parties and the recitals contained in the "Whereas" clauses are incorporated herein.
 - 2. Section 5 "Fees and Costs" is hereby amended as follows:

5. Fees and Costs.

- 5.1 For services rendered under this Agreement, the Trustees shall pay the Auditor an annual fee. This fee includes attending one meeting per year to present the audit. The fees are set forth in Exhibit A.
- 5.2 Additional services as approved by the Trustees will be performed at the rates detailed in Exhibit A, attached.
- 5.3 These fees will remain in effect for three years until September 30, 2025, with the option to renew for two additional two-year terms, at the Board's sole discretion.
- 5.4 No other fees or costs shall be payable without the express written consent of the Trustees.
- 5.5 The Auditor may invoice the Fund in progress billing based upon the percentage of work completed, however, in no event, shall Auditor be paid more than 70% of the total fee until delivery of the audit report.
- 3. Exhibit A "Fee Schedule" is deleted in its entirety and replaced with Exhibit A "Fee Schedule" attached hereto.
 - 4. Section 16 "Termination" is hereby amended as follows:

<u>16.</u> Termination. This Agreement may be terminated with 30 days notice by the Fund or 90 days notice by the Auditor, upon written notice with proof of delivery to the other party, at the addresses given below:

Fund: Delray Beach Firefighters Retirement System

609 Homewood Boulevard Delray Beach, Florida 33445

Delravp-fcomcast.net

Pension Administrator
100 NW 1st Avenue
Delray Beach, FL 33444

castronovol@mydelraybeach.com

Auditor: Scott L. Porter

Caler, Donten, Levine, Cohen, Porter & Veil, P.A.

505 S. Flagler Drive, Suite 900 West Palm Beach, Florida 33401

Sporter@cdlcpa.com

A copy of the notice should also be sent to Fund legal counsel:

Bonni S. Jensen Klausner, Kaufman, Jensen & Levinson 7080 NW 4th Street Plantation, Florida 33317

Janice D. Rustin Lewis, Longman & Walker 515 North Flagler Drive, Suite 1500 West Palm beach, FL 33401 irustin@llw-law.com

If the Agreement is terminated by either party, the Auditor agrees to cooperate in furnishing information to any successor auditor.

5. The Custodian of Public Records identified in Section 17 "Public Records" is hereby amended as follows:

IF AUDITOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS:

Delray Beach Firefighters Retirement System Attn: Anne Woods 609 Homewood Boulevard Delray Beach, Florida 33445 Delrayp-f@comcast.net 561-243-4707

Attn: Pension Administrator

100 NW 1st Avenue
Delray Beach, FL 33444
castronovol@mydelraybeach.com
(561) 243-7289

- 6. The terms of this Amendment No. 1 are supplemented by the terms set forth in the Engagement letter dated November 26, 2019, which is attached to this Amendment No. 1 as Exhibit B. A new engagement letter will be executed and effective for each annual audit. The original Agreement is attached to this Amendment No. 1 as Exhibit C.
- 7. Except as provided for herein, all other terms and condition of the Agreement shall remain in full force and effect and are hereby ratified and confirmed.

In witness whereof, the Parties hereby cause this Amendment No 1 to the Auditing Services Agreement be executed on thisday of, 20					
City of Delray Beach Firefighters Retirement System, Board of Trustees	Caler, Donten, Levine, Cohen, Porter & Veil, P.A.				
Ву:	By:				
Print name:	Print name:				
Title:	Title:				
Attest:	Attest:				
Approved as to form and legal sufficiency					
Name: Janice Rustin, Esq., Board Counsel					

EXHIBIT A

Fee Schedule - Firefighters Retirement System Audit

The fees for the financial audit and compliance audit of the Firefighters Retirement System is as follows:

1.	Total Fee for Fiscal Year 2019	\$	20,200
2.	Total Fee for Fiscal Year 2020	\$	20,200
3.	Total Fee for Fiscal Year 2021	\$	20,200
4.	Total Fee for Fiscal Year 2022	\$	20,200
5.	Total Fee for Fiscal Year 2023	\$	20.200
6.	Total Fee for Fiscal Year 2024	\$	20,200
	GRAND TOTAL FEES for FY 2019 THRU 2024:	S	121,200

Schedule of Hourly Professional Fees and Expenses

The schedule below summarizes our hourly fee schedule for any additional services provided to the Firefighters Retirement System for the FY 2019 through 2024.

	Hourly Rates
Partners	\$ 200
Managers	\$ 130
Supervisory Staff	\$ 110
Other (Staff)	\$ 90

Other Expenses: None

Exhibit B

Letter of Engagement

WILLIAM K. CALER, JR., CPA LAURA E. CLARK, CPA JOUIS M. COHEN, CPA JOHN C. COURTNEY, CPA, JD DAVID S. DONTEN, CPA JAMES B. HUTCHISON, CPA JOEL H. LEVINE, CPA JAMES F. MULLEN, IV, CPA MICHAEL J. NALEZYTY, CPA THOMAS A. PENCE, JR., CPA SCOTT L. PORTER, CPA MARK D. VEIL, CPA CERTIFIED PUBLIC ACCOUNTANTS

505 SOUTH FLAGLER DRIVE, SUITE 900 WEST PALM BEACH, FL 33401-5948 TELEPHONE: (561) 832-9292

850 NW FEDERAL HIGHWAY, SUITE 121 STUART, FL 34994-1019 TELEPHONE (772) 872-2123

info@cdlcpa.com

MEMBERS

AMERICAN INSTITUTE OF
CERTIFIED PUBLIC ACCOUNTANTS

FLORIDA INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

November 26, 2019

The Board of Trustees
Delray Beach Firefighters' Retirement System
Delray Beach, Florida

We are pleased to confirm our understanding of the services we are to provide for the Delray Beach Firefighters' Retirement System (the "System") for the year ended September 30, 2019 pursuant to our proposal to provide Financial Auditing Services for the City of Delray Beach dated November 19, 2019. We will audit the financial statements of the Delray Beach Firefighters' Retirement System, as of and for the year ended September 30, 2019.

U.S. generally accepted accounting standards provide for certain required supplementary information (RSI), to supplement the System's basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board (GASB) who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the System's RSI in accordance with U.S. generally accepted auditing standards (GAAS). These limited procedures will consist principally of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the System's financial statements, and other knowledge we obtain during our audit of the financial statements. We will 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. The following RSI is required by U.S. generally accepted accounting principles (GAAP) and will be subjected to certain limited procedures, but will not be audited:

- 1. Management's Discussion and Analysis.
- 2. Schedule of Changes in the Net Pension Liability and Related Ratios.
- 3. Schedule of Contributions.
- 4. Schedule of Investment Returns.

We have also been engaged to report on supplementary information other than RSI that accompanies the System's financial statements. A Schedule of Administrative and Investment Expenses will be presented as other supplementary information accompanying the financial statements and we will subject that supplementary information to the auditing procedures applied in our audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards, and we will provide an opinion on it in relation to the financial statements as a whole.

The Board of Trustees Delray Beach Firefighters' Retirement System November 26, 2019 Page Two

Audit Objectives

The objective of our audit is the expression of an opinion as to whether the System's financial statements are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles and to report on the fairness of the supplementary information referred to in the third paragraph of this engagement letter when considered in relation to the financial statements as a whole. Our audit will be conducted in accordance with U.S. generally accepted auditing standards and the standards for financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and will include tests of the accounting records and other procedures we consider necessary to enable us to express such an opinion. We will issue a written report upon completion of our audit of the System's financial statements. Our report will be addressed to the Board of Trustees of the System. We cannot provide assurance that an unmodified opinion will be expressed. Circumstances may arise in which it is necessary for us to modify our opinion or add emphasis-of-matter or other-matter paragraphs. If our opinion is other than unmodified, we will fully discuss the reasons with the Chairman of the Board of Trustees in advance. If, for any reason determined by us, we are unable to complete the audit or are unable to form or have not formed an opinion, we may decline to express an opinion or issue reports, or we may withdraw from this engagement.

We will also provide a report (that does not include an opinion) on internal control related to the financial statements and compliance with the provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a material effect on the financial statements as required by Government Auditing Standards. The report on internal control and on compliance and other matters for the System will include a paragraph that states (1) that the purpose of the report is solely to describe the scope of testing of internal control and compliance, and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control on compliance, and (2) that the report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the entity's internal control and compliance. The paragraph will also state that the report is not suitable for any other purpose.

Audit Procedures - General

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested. An audit also includes evaluating 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 financial statements. We will plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the System or to acts by management or employees acting on behalf of the System. Because the determination of abuse is subjective, *Government Auditing Standards* do not expect auditors to provide reasonable assurance of detecting abuse.

Because of the inherent limitations of an audit, combined with the inherent limitations of internal control, and because we will not perform a detailed examination of all transactions, there is a risk that material misstatements or noncompliance may exist and not be detected by us, even though the audit is properly planned and performed in accordance with U.S. generally accepted auditing standards and *Government Auditing Standards*. In addition, an audit is not designed to detect immaterial misstatements or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, we will inform the appropriate level of System management of material errors, fraudulent financial reporting or misappropriation of assets that come to our attention. We will also inform the appropriate level of System management of laws or governmental regulations

The Board of Trustees Delray Beach Firefighters' Retirement System November 26, 2019 Page Three

that come to our attention, unless clearly inconsequential, and of material abuse that comes to our attention. Our responsibility as auditors is limited to the year covered by our audit and does not extend to any later periods for which we are not engaged as auditors.

Our procedures will include tests of documentary evidence supporting the transactions recorded in the accounts, and may include direct confirmation of cash, investments and certain other assets and liabilities by correspondence with selected individuals, creditors, funding sources and financial institutions. As part of our engagement, we will also request written representations from the System's Attorney and other outside legal counsel engaged by the System and they may bill the System for responding to this inquiry. At the conclusion of our audit, we will require certain written representations from the Chairman of the Board of Trustees and management about management's responsibilities for the financial statements; compliance with laws, regulations, contracts, and grant agreements; and other responsibilities required by U.S. generally accepted auditing standards.

Audit Procedures - Internal Control

Our audit will include obtaining an understanding of the System and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. Tests of controls may be performed to test the effectiveness of certain controls that we consider relevant to preventing and detecting errors and fraud that are material to the financial statements and to preventing and detecting misstatements resulting from illegal acts and other noncompliance matters that have a direct and material effect on the financial statements. Our tests, if performed, will be less in scope than would be necessary to render an opinion on internal control and, accordingly, no opinion will be expressed in our report on internal control issued pursuant to Government Auditing Standards.

An audit is not designed to provide assurance on internal control or to identify significant deficiencies or material weaknesses. Accordingly, we will express no such opinion. However, during the audit, we will communicate to the System's Board of Trustees and management, internal control related matters that are required to be communicated under AICPA professional standards and *Government Auditing Standards*.

Audit Procedures - Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the System's compliance with provisions of applicable laws, regulations, contracts, agreements and grants. However, the objective of our audit will not be to provide an opinion on overall compliance, and we will not express such an opinion in our report on compliance issued pursuant to *Government Auditing Standards*.

Other Services

We will also assist in preparing the financial statements and related notes of the System in conformity with U.S. generally accepted accounting principles based on information provided by management. We will also read and comment on the System's Annual Report to the State of Florida Division of Retirement; however, we will not prepare the Annual Report or be responsible for responding to inquiries from the Division of Retirement regarding the Annual Report. The nonaudit services do not constitute an audit under *Government Auditing Standards* and such services will not be conducted in accordance with *Government Auditing Standards*. We will perform the services in accordance with applicable professional standards. The other services are limited to the preparation of the financial statements and related notes, and reading and commenting on the Annual Report, as previously defined. We, in our sole professional

The Board of Trustees Delray Beach Firefighters' Retirement System November 26, 2019 Page Four

judgment, reserve the right to refuse to perform any procedure or take any action that could be construed as assuming management responsibilities.

Management Responsibilities

Management is responsible for designing, implementing, establishing and maintaining effective internal controls that are relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error, including evaluating and monitoring ongoing activities to help ensure that appropriate goals and objectives are met; following laws and regulations; and ensuring that management and financial information is reliable and properly reported. Management is also responsible for implementing systems designed to achieve compliance with applicable laws, regulations, contracts, and grant agreements. Management is also responsible for the selection and application of accounting principles; for the preparation and fair presentation of the financial statements and all accompanying information in conformity with U.S. generally accepted accounting principles, and for compliance with applicable laws and regulations and the provisions of contracts and grant agreements.

Management is responsible for making all financial records and related information available to us and for the accuracy and completeness of that information. Management is also responsible for providing us with (1) access to all information of which they are aware that is relevant to the preparation and fair presentation of the financial statements; (2) additional information that we may request for the purpose of the audit; and, (3) unrestricted access to persons within the System from whom we determine it necessary to obtain audit evidence.

Management's responsibilities include adjusting the financial statements to correct material misstatements and confirming to us in the written representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements as a whole.

Management is responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing us about all known or suspected fraud affecting the System involving (1) management; (2) employees who have significant roles in internal control; and, (3) others where the fraud could have a material effect on the financial statements. Management's responsibilities include informing us of any knowledge of any allegations of fraud or suspected fraud affecting the System received in communications from employees, former employees, grantors, vendors, regulators, or others. In addition, management is responsible for identifying and ensuring that the System complies with applicable laws, regulations, contracts, agreements, and grants and for taking timely and appropriate steps to remedy fraud and noncompliance with provisions of laws, regulations, contracts, or grant agreements, or abuse that we may report.

Management is also responsible for the preparation of the other supplementary information, which we have been engaged to report on, in conformity with U.S. generally accepted accounting principles. Management agrees to include our report on the other supplementary information in any document that contains and indicates that we have reported on the other supplementary information. Management also agrees to include the audited financial statements with any presentation of the other supplementary information that includes our report thereon. Management's responsibilities include acknowledging to us in the written representation letter that (1) management is responsible for presentation of the other supplementary information in accordance with GAAP; (2) management believes the other supplementary information, including its form and content, is fairly presented in accordance with GAAP; (3) the methods of measurement or presentation have not changed from those used in the prior year (or, if they have changed, the reasons for such changes); and, (4) management has disclosed to us any significant assumptions or interpretations underlying the measurement or presentation of the other supplementary information.

The Board of Trustees Delray Beach Firefighters' Retirement System November 26, 2019 Page Five

Management is responsible for establishing and maintaining a process for tracking the status of audit findings and recommendations. Management is also responsible for identifying and providing report copies of previous financial audits, attestation engagements, performance audits, or other studies related to the objectives discussed in the Audit Objectives section of this letter. This responsibility includes relaying to us corrective actions taken to address significant findings and recommendations resulting from those audits, attestation engagements, performance audits, or other studies. Management is also responsible for providing management's views and a written response to our current findings, conclusions, and recommendations, as well as management's planned corrective actions, to be included as part of the final audit report.

Management agrees to assume all management responsibilities relating to the financial statements and related notes, and any other nonaudit services we provide. Management will be required to acknowledge in the management representation letter our assistance with preparation of the System's financial statements and related notes, and that management has reviewed and approved the financial statements and related notes prior to their issuance and have accepted responsibility for them. Further, management agrees to oversee the nonaudit services we provide by designating an individual, preferably from senior management, who possesses suitable skill, knowledge, or experience; evaluate the adequacy and results of those services; and accept responsibility for them. We understand that Laura Thezine, CPA, the City's acting finance director, will accept responsibility for the System's management responsibilities.

Government Auditing Standards require that we communicate, during the planning stage of our audit, certain information to officials of the System, including the System's Board of Trustees. Those required communications are included as part of this engagement letter and your signature below acknowledges that a copy of this letter has been provided to the System's Board of Trustees.

Engagement Administration, Fees and Other Matters

We understand that System employees will prepare all cash or other confirmations requested and will locate any invoices and documentation selected by us for testing. Scott Porter is the engagement partner and is responsible for supervising the engagement and signing the reports or authorizing another individual to sign them. To ensure that the Firm's independence is not impaired under the AICPA Code of Professional Conduct, management agrees to inform the engagement partner before entering into any substantive employment discussions with any of our personnel.

The audit documentation for this engagement is the property of Caler, Donten, Levine, Cohen, Porter & Veil, P.A. ("CDL") and constitutes confidential information. However, we may be requested to make certain audit documentation available to the City of Delray Beach, State of Florida or other agencies pursuant to authority given to it by law or regulation. If requested, access to such audit documentation will be provided under the supervision of CDL personnel. Furthermore, upon request and with the System's authorization, we may provide copies of selected audit documentation to the requesting agency. That agency may intend, or decide, to distribute the copies or information contained therein to others, including other governmental agencies. In the event we are requested or authorized by the System or required by government regulation, subpoena, or other legal process to produce our audit documentation or our personnel as witnesses with respect to our engagement for the System, management agrees, so long as we are not a party to the proceeding in which the information is sought, to reimburse us for our professional time and expenses, as well as the fees and expenses of our legal counsel, incurred in responding to such a request. We may from time to time, and depending on the circumstances, use thirdparty service providers in serving your account. In that regard, we may share confidential information about the System with these service providers but we will remain responsible for the work provided by such third-party service providers. The audit documentation for this engagement will be retained for a minimum of five years after the date of the auditor's report or for any additional period requested in

The Board of Trustees Delray Beach Firefighters' Retirement System November 26, 2019 Page Six

writing by a government agency, after which it will be destroyed. By your signature below, you acknowledge and agree that CDL is free to destroy all records related to this engagement in accordance with this document retention policy.

At the conclusion of the engagement, we will provide an electronic pdf copy and the requested number of printed copies of the audit report to the System; however, management is responsible for distribution of the audit report to outside parties, such as State of Florida Division of Retirement and others. The electronic pdf copy of the reports we provide to you as part of our engagement will not be created or verified by us to be fully compliant with all accessibility requirements under Federal or State statutes, such as the Americans with Disabilities Act (ADA). Unless restricted by law or regulation, or containing privileged and confidential information, copies of the report are to be made available for public inspection.

Our fee for these services for the year ended September 30, 2019 will be at our agreed upon hourly rates and will not exceed \$20,200, all as set forth in our proposal to provide Financial Auditing Services for the City of Delray Beach dated November 19, 2019, subject to the additional considerations enumerated below. Our hourly rates vary according to the degree of responsibility involved and the experience level of the personnel assigned to your audit. The invoices for our fees will be rendered each month as work progresses and are payable on presentation. In accordance with our firm policies, work may be suspended if your account becomes 45 days or more overdue and may not be resumed until your account is paid in full. If we elect to terminate our services for nonpayment, our engagement will be deemed to have been completed upon written notification of termination, even if we have not completed our report. The System will be obligated to compensate us for all time expended and to reimburse us for all out-of-pocket costs through the date of termination. Our fee is based on anticipated cooperation from System personnel and the assumption that there are no unexpected circumstances that require additional accounting assistance or significant auditing procedures or changes, such as new accounting or auditing standards or additional audit procedures resulting from internal control and other deficiencies, or other unexpected circumstances. If additional time is necessary for our assistance to complete audit schedules, the application of new standards, delays caused by the City or the System in the scheduled audit fieldwork dates, or other unexpected circumstances, we will advise the Board and provide an estimate for the additional time at the hourly rates specified in our proposal. Our engagement ends on the date we deliver the audit report to the Board of Trustees, unless circumstances described earlier cause us not to issue a report. You may request that we perform additional services not addressed in this engagement letter. If this occurs, we will communicate with the Chairman of the Board of Trustees regarding the scope of the additional services and the estimated fees. We may also issue a separate engagement letter covering the additional services. In the absence of another written engagement letter from us for such additional services, our services will continue to be governed by the terms of this engagement letter. Our fee for any additional services will be at the hourly rates as set forth in our proposal to provide Financial Auditing Services for the City of Delray Beach dated November 19, 2019.

It is our understanding that the System's books will be closed and all audit schedules, including the final trial balance, will be provided to us by January 10, 2020 and the System will be ready for us to begin the year-end audit fieldwork by January 20, 2020. In the event that our audit start date is delayed or all requested audit schedules are not provided to us prior to the start of our year end fieldwork, the System acknowledges and agrees that we will not be responsible for any subsequent delays or failure to meet government and other filing deadlines, or for penalties or interest that may be assessed against the System resulting from the System's failure to meet such deadlines. Our audit for each fiscal year will be a separate engagement that ends on the date we deliver the audit reports for that fiscal year to the System, unless circumstances described earlier cause us not to issue a report. If the engagement is terminated by the System, the System shall be liable for time charges and expenses incurred by CDL through the date of termination.

The Board of Trustees Delray Beach Firefighters' Retirement System November 26, 2019 Page Seven

Our audit is intended for the benefit of the System. The audit will not be planned or conducted in contemplation of reliance by any third party or with respect to any specific transaction. Therefore, items of possible interest to a third party will not be specifically addressed and matters may exist that would be assessed differently by a third party, possibly in connection with a specific transaction. If you intend to publish or otherwise reproduce the System's financial statements or information together with our report (or otherwise make reference to our Firm) in a document that contains other information, you agree to provide us with a draft of the document to read and comment on before it is printed and distributed. With regard to using our auditor's report, you understand and agree that our prior written consent shall be obtained to reproduce or use our report in other documents. Furthermore, the System agrees that the terms of this engagement do not encompass an undertaking by us (1) to consent, by means of separate letter or otherwise, to the inclusion of our auditor's report on the financial statements referred to above in a filing with a Federal or State regulatory agency or otherwise reissue our report for other purposes, or (2) to acknowledge reliance on our report by others. With regard to the electronic dissemination of the audited financial statements, including financial statements published electronically on a website, you understand that electronic sites are a means to distribute information and, therefore, we are not required to read the information contained in these sites or to consider the consistency of other information in the electronic site with the original document. Government Auditing Standards require that we provide you with a copy of our most recent quality control review report. A copy of our 2018 peer review report is attached.

CDL takes appropriate steps to secure all confidential client information on our computerized systems, however, the System is responsible for the security of all information when you transmit it to us, as well as the information retained by the System. The System is also responsible for the security of information management provides to us electronically using email or transmitted to us over the internet. The internet is an inherently public medium with multiple security concerns. Management understands that email is generally sent unencrypted and may be easily accessible by a party intercepting your communications. Because the nature of communications between the System and CDL may include sensitive and confidential financial information, management should take appropriate steps to utilize reasonable security features for transmitting the System's information to us. CDL will use its best efforts, consistent with our handling of all client accounts, to make the System's communications and files secure from unauthorized access. However, the System recognizes that no completely secure system for email, electronic documents or electronic data transfer has yet been devised. Accordingly, management acknowledges that they understand and agree to accept the limitations and risks associated with regular email and other electronic communications with CDL for the services we will provide. Furthermore, management hereby authorizes CDL to electronically submit to System employees or to others as management may request or as may be necessary to perform our engagement, any financial statements, schedules, and other information related to our services under this agreement. By your signature below, management acknowledges and agrees to hold CDL harmless from any loss or damages that might be caused by the electronic transmission or submission of System information, including any consequential, incidental, direct, indirect or special damages. Management also agrees to immediately contact and advise the CDL engagement partner with overall responsibility of our services, as named in this letter, if you believe either CDL or the System's computer systems, security or email accounts have been hacked or otherwise compromised. Your signature below acknowledges that the System understands and agrees with these responsibilities.

Parties to this engagement agree that any dispute that may arise regarding the meaning, performance, or enforcement of this engagement will be submitted to mediation upon written request of any party to the engagement. The party requesting mediation shall select the mediation provider from the list of mediation training providers approved by the Florida Supreme Court. The mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Association or such other rules as may be agreed upon by the parties. The results of this mediation shall not be binding upon either party. Costs of any mediation proceeding shall be shared equally by both parties. The System agrees that it will not, directly or indirectly, agree to assign or transfer any claim arising out of this engagement to

The Board of Trustees
Delray Beach Firefighters' Retirement System
November 26, 2019
Page Eight

anyone, or agree to share with anyone the proceeds of any such claim. The venue for any legal proceedings shall be Palm Beach County, Florida, and this agreement shall be governed by the laws of the State of Florida.

This engagement letter reflects the entire agreement between us relating to the services covered by this letter and replaces and supersedes any previous proposals, correspondence and understandings, whether written or oral. If any portion of this agreement is held to be void, invalid or otherwise unenforceable, in whole or in part, the remaining portions of this agreement shall remain in effect. The agreements of the System and Caler, Donten, Levine, Cohen, Porter & Veil, P.A. contained in this engagement letter shall survive the completion or termination of this engagement. This agreement may be renewed for two successive two year terms by mutual consent of both parties pursuant to the Financial Auditing Services Agreement with the City of Delray Beach dated November 27, 2019.

We appreciate the opportunity to be of service to the System and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy and return it to us.

Very truly yours,

Cohen, Parter & Veil, P.A. Caler, Donten, Levine,

Cohen, Porter & Veil, P.A.

Calu Donten, Levine

RESPONSE: The services and terms set forth in this letter are agreed to by the Delray Beach Firefighters' Retirement System.

By:

Chairman of the Board of Trustees

BOARD OF TRUSTEES OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM AUDITING SERVICES AGREEMENT

THIS AGREEMENT is entered into effective October 12, 2017 by and between the BOARD OF TRUSTEES OF THE DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM ("Trustees"), and CALER, DONTEN, LEVINE, COHEN, PORTER & VEIL, P.A., ("Auditor"). The terms of this Agreement are supplemented by the terms set forth in the Engagement letter dated, 2017 between the Trustees and the Auditor, which is attached to this Agreement as Exhibit A.

WITNESSETH

WHEREAS, the Board of Trustees of Delray Beach Firefighters' Retirement

System, hereinafter referred to as the "Fund," has been established for the purpose of
providing retirement and related benefits to eligible participants and beneficiaries and
defraying reasonable expenses of administering the Fund; and

WHEREAS, the Auditor represents that it is skilled in the area of public accounting and auditing services; and

WHEREAS, the Trustees are required by Florida Statutes Chapter §175 to retain a certified public accountant to conduct annual independent audits; and

WHEREAS, the Trustees desire that the Auditor serve as the Independent Auditor for the Fund and the Auditor is willing to so serve.

NOW, THEREFORE, in consideration of the mutual agreements herein

contained, it is covenanted and agreed as follows:

- 1. <u>Appointment of Auditor</u>. The Trustees appoint the Auditor to provide the following services to the Fund:
- 1.1 Prepare the financial statements of the Fund based upon records provided by the Fund's service providers;
- 1.2 Audit the financial statements of the Fund in order to express an opinion on the fair presentation of the statements, in accordance with generally accepted accounting principles;
- 1.3 Read and comment on the Annual Report to the Division of Retirement;
- 1.4 At the conclusion of the audit field work, discuss with the Chairman or the Chairman's designee all of the Auditor's comments that will be included in the audit report/management letter;
- 1.5 Make an oral presentation to the Trustees summarizing the results of the audit;
- 1.6 Provide consulting services regarding Fund related tax matters;
- 1.7 Coordinate with other service providers regarding annual reports and other governmental filings;
- 1.8 Provide telephone consultations on plan matters; and
- 1.9 Perform other auditing services as requested by the Trustees.
- 2. Auditing Standards to be Followed. The Auditor shall perform their examinations in accordance with the following standards:
 - 2.1 Generally accepted auditing standards as issued by the American Institute

- of Certified Public Accountants (AICPA);
- 2.2 <u>Government Auditing Standards</u> as issued by the Comptroller General of the United States; and
- 2.3 Other rules as applicable.
- 3. Reports to be Issued. The Auditor shall issue the following reports to the Trustees:
 - 3.1 Report on the fair presentation of the financial statements in conformity with U.S. generally accepted accounting principles;
 - 3.2 Report on the internal control over financial reporting pursuant to Government Auditing Standards;
 - 3.3 Report on compliance with laws, regulations, contracts, grant agreements and other matters pursuant to *Government Auditing Standards*;
 - 3.4 A "management letter;" and
 - 3.5 Any other reports that may be required by the above standards.
- Qualifications. The Auditor certifies that it is professionally qualified as an certified public accountant to provide independent auditing services in the public sector.

5. Fees and Costs.

- 5.1 For services rendered under this Agreement, the Trustees shall pay the Auditor an annual fee. This fee includes attending one meeting per year to present the audit. The fees are set forth in Exhibit A.
- 5.2 Additional services as approved by the Trustees will be performed at the

- rates detailed in Exhibit A, attached.
- 5.3 These fees will remain in effect for three years.
- 5.4 No other fees or costs shall be payable without the express written consent of the Trustees.
- 5.5 The Auditor may invoice the Fund in progress billing based upon the percentage of work completed, however, in no event, shall Auditor be paid more than 70% of the total fee until delivery of the audit report.
- **Timing of Work**. The Auditor and the Fund agree to the following schedule for the performance of the work under this agreement:
 - 6.1 By October 15, the Auditor shall notify the Fund of all information necessary to complete the audit;
 - 6.2 The Fund will provide the auditor with the information and documentation necessary for completion of financial statements by no later than November 15 following each fiscal year end;
 - 6.3 Auditor shall use reasonable efforts, subject to applicable laws, regulations and professional standards, to complete the field work by December 15, and deliver a draft report no later than January 15 of the year following the fiscal year end with the final report delivered by January 31.
 - 6.4 Auditor may choose to perform interim work prior to September 30, fiscal year end.
 - 6.5 Fund agrees to provide all reasonable cooperation as requested by the

Auditor.

- 6.6 In the event that the Auditor believes the work will not be completed in a timely manner, then the Auditor shall provide notification to the Board of Trustees and Legal Counsel of the delay and the reasons for the delay.
- 7. Record Retention. The Auditor shall maintain all records held by it pertaining to the Fund for five years from the date of origination of such records. In addition, before any records maintained by the Auditor are destroyed, the Auditor must contact the Board for permission to do so.
- 8. Confidential Information. The Auditor shall maintain and protect in strictest confidence any and all data, information, and documents of and concerning the finances, business and affairs of the Fund which Auditor acquires in its performance of this Agreement. The Auditor agrees that none of the aforesaid data, information or documents, and none of the reports and analyses prepared by the Auditor as provided in Paragraph 3 hereof, or otherwise, shall be disclosed to anyone except the Auditor's subcontractors, the finance department of the City of Delray Beach, the Trustees, the Fund's actuary, the Fund's administrative manager, or legal counsel to the Trustees, except as otherwise agreed to in writing or as required by law.
- 9. Relation of the Parties. In all of its relations with the Board, the Auditor will utilize the skill, care, prudence and diligence that an expert in a like position would use. The Auditor recognizes that its obligation under this Agreement is to the Board and the members of the Retirement System and that it will place the

interest of the Board and the Retirement System's participants and beneficiaries above all others and will not enter into any agreement or take any action contrary to that responsibility. The Auditor shall not accept or perform an engagement involving the Retirement Plan's members for any organization other than the Pension Board without the prior written consent of the Board.

- 10. Insurance. During the term of this agreement and for at least two years after completion, the Auditor will maintain professional liability insurance in an amount of at least \$1,000,000 per occurrence and provide certification thereof annually to the Board. Attached as Exhibit B is a copy of the binder. Auditor also agrees to maintain Comprehensive General Liability Insurance, Comprehensive Automobile Liability Insurance and Workers' Compensation coverage.
- 11. <u>Assignability</u>. This Agreement shall not be assigned without the prior written consent of the Trustees.
- 12. <u>Entire Agreement</u>. This Agreement constitutes the entire agreement between the parties hereto.
- 13. <u>Modification</u>. This Agreement may be modified or revised only by written amendment signed by the Trustees, and incorporated as written amendments to this Agreement.
- 14. <u>Prior Agreements</u>. This Agreement supersedes all prior agreements with the Auditor, oral or written.
- 15. Applicable Law and Venue. Insofar as they do not conflict with any applicable

federal law, the laws of the State of Florida shall govern this Agreement and any dispute involving the enforcement or interpretation of this Agreement shall have venue in Palm Beach County, Florida.

Termination. This Agreement may be terminated with 30 days notice by the Fund or 90 days notice by the Auditor, upon written notice with proof of delivery to the other party, at the addresses given below:

Fund:

Delray Beach Firefighters' Retirement System

609 Homewood Boulevard Delray Beach, Florida 33445

Delrayp-f@comcast.net

Auditor:

Scott L. Porter

Caler, Donten, Levine, Cohen, Porter & Veil, P.A.

505 S. Flagler Drive, Suite 900 West Palm Beach, Florida 33401

Sporter@cdlcpa.com

A copy of the notice should also be sent to Fund legal counsel:

Bonni S. Jensen Klausner, Kaufman, Jensen & Levinson 7080 NW 4th Street Plantation, Florida 33317

If the Agreement is terminated by either party, the Auditor agrees to cooperate in furnishing information to any successor auditor.

- 17. <u>Public Records</u>. Auditor shall comply with all public records laws in accordance with Chapter 119, Fla. Stat. in accordance with state law, Auditor agrees to:
 - 17.1 Keep and maintain all records that ordinarily and necessarily would be

- required by the Trustees.
- 17.2 Provide the public with access to public records on the same terms and conditions that the Trustees would provide for the records and at a cost that does not exceed the costs provided in Chapter 119, Fla. Stat. or as otherwise provided by law.
- 17.3 Ensure that public records that are exempt or confidential and exempt from public records disclosure are not disclosed except as authorized by law.
- 17.4 Meet all requirements for retaining public records and transfer, at no cost, to the Trustees all records in possession of the Auditor at the termination of the contract and destroy any public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the Trustees in a format that is compatible with the information technology systems of the Trustees. All records shall be transferred to the Trustees prior to final payment being made to the Auditor.
- 17.5 If Auditor does not comply with this section, the Trustees shall enforce the contract provisions in accordance with the contract and may unilaterally cancel this contract in accordance with state law.

Notwithstanding the foregoing, the confidentiality provision of Florida Statutes Sections 473.316 and 473.318, shall apply and all documents referred to in Chapter 473 are recognized as exempt from Chapter 119, Fla. Stat. and this

paragraph 17. Auditor shall be under no obligation to provide its audit workpapers and such other Auditor records determined to be exempt from Chapter 119, Fla. Stat.

IF AUDITOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS:

Delray Beach Firefighters' Retirement System
Attn: Anne Woods
609 Homewood Boulevard
Delray Beach, Florida 33445
Delrayp-f@comcast.net
561-243-4707

IN WITNESS WHEREOF, the parties hereto have executed this Agreement by their respective authorized representatives on the dates indicated below.

BOARD OF TRUSTEES OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM PENSION FUND As Chair	CALER, DONTEN, LEVINE, COHEN PORTER & VEIL, P.A. By: Scott L. Porter
As Secretary	Title: Shareholder
Date: 11/5/2017	Date: 10-12-2017
As to Trustees	WITNESS: Marh D. Veil As to Auditor

BSJ September 18, 2017 September 28, 2017

EXHIBIT A

CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM AND CALER, DONTEN, LEVINE, COHEN, PORTER & VEIL, P.A.

FEE SCHEDULE

ANNUAL AUDIT SERVICES

Year ending September 30, 2017 \$24,450 22,750

Year ending September 30, 2018 \$25,180 22,750

Year ending September 30, 2019 \$25,900 22,750

Fees for annual audit are based on actual time which is not to exceed stated fee. Additionally for the 2017 audit of the split of the legacy fund, the fee is hourly and expected to be about \$4,975. is included in the above fee for 2017.

Additional services as approved by the Board of Trustees are based on the following hourly rates:

Partners	\$210
Senior Manager	\$130
Supervisor	\$115
Senior	\$ 90

00094731.WPD;1

WILLIAM K CALER, IR, CPA
LOUISM COHEN, CPA
JOHN C COURTINEY, CPA, JID
DAVIDS DONTEN, CPA
JAMES B HUTCHISON, CPA
JOEL H LEVINE, CPA
JAMES F MULLEN, IV, CPA
MBCHAEL J NALEZYTY, CPA
THOMAS A PENCE, JR, CPA
SCOTT L PORTER CPA
MARK D VEIL, CPA

CERTIFIED PUBLIC ACCOUNTANTS

505 SOUTH FLAGLER DRIVE, SUITE 900 WEST PALM BEACH, FL 33407-5948

> TELEPHONE (561) 832-9292 FAX (561) 832-9455

> > unfo@cdicps com

MEMBERS
AMERICAN INSTITUTE OF
CERTIFIED PUBLIC ACCOUNTANTS

FLORIDA INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

October 12, 2017

The Board of Trustees
Delray Beach Firefighters' Retirement System
Delray Beach, Florida

We are pleased to confirm our understanding of the services we are to provide for the Delray Beach Firefighters' Retirement System (the "System") for the year ended September 30, 2017 pursuant to the System's "Auditing Services Agreement" dated October 12, 2017. We will audit the financial statements of the Delray Beach Firefighters' Retirement System, as of and for the year ended September 30, 2017.

U.S. generally accepted accounting standards provide for certain required supplementary information (RSI), to supplement the System's basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board (GASB) who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the System's RSI in accordance with U.S. generally accepted auditing standards (GAAS). These limited procedures will consist principally of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the System's financial statements, and other knowledge we obtain during our audit of the financial statements. We will 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. The following RSI is required by U.S. generally accepted accounting principles (GAAP) and will be subjected to certain limited procedures, but will not be audited:

- 1. Schedule of Changes in the Net Pension Liability and Related Ratios.
- 2. Schedule of Contributions.
- 3. Schedule of Investment Returns.

The System has elected not to present Management's Discussion and Analysis which is required to be presented as RSI under GAAS. Our opinion on the financial statements will be modified to include an emphasis-of-matter paragraph regarding the omission of Management's Discussion and Analysis.

A Schedule of Administrative and Investment Expenses will be presented as other information accompanying the financial statements and will not be subjected to the auditing procedures applied in our audit of the financial statements, and our auditor's report will not provide an opinion or any assurance on that other information.

Audit Objectives

The objective of our audit is the expression of opinions as to whether the System's financial statements are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles and to report on the fairness of the supplementary information referred to in the second

The Board of Trustees
Delray Beach Firefighters' Retirement System
October 12, 2017
Page Two

paragraph of this engagement letter when considered in relation to the financial statements as a whole. Our audit will be conducted in accordance with U.S. generally accepted auditing standards; the standards for financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and will include tests of the accounting records and other procedures we consider necessary to enable us to express such opinions. We will issue a written report upon completion of our audit of the System's financial statements. Our report will be addressed to the Board of Trustees of the System. We cannot provide assurance that an unmodified opinion will be expressed. Circumstances may arise in which it is necessary for us to modify our opinion or add emphasis-of-matter or other-matter paragraphs. If our opinion is other than unmodified, we will fully discuss the reasons with the Chairman of the Board of Trustees in advance. If, for any reason determined by us, we are unable to complete the audit or are unable to form or have not formed an opinion, we may decline to express an opinion or issue reports, or we may withdraw from this engagement.

We will also provide a report (that does not include an opinion) on internal control related to the financial statements and compliance with the provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a material effect on the financial statements as required by Government Auditing Standards. The report on internal control and on compliance and other matters for the System will include a paragraph that states (1) that the purpose of the report is solely to describe the scope of testing of internal control and compliance, and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control on compliance, and (2) that the report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the entity's internal control and compliance. The paragraph will also state that the report is not suitable for any other purpose.

Audit Procedures - General

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested. An audit also includes evaluating 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 financial statements. We will plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the System or to acts by management or employees acting on behalf of the System. Because the determination of abuse is subjective, Government Auditing Standards do not expect auditors to provide reasonable assurance of detecting abuse.

Because of the inherent limitations of an audit, combined with the inherent limitations of internal control, and because we will not perform a detailed examination of all transactions, there is a risk that material misstatements or noncompliance may exist and not be detected by us, even though the audit is properly planned and performed in accordance with U.S. generally accepted auditing standards and Government Auditing Standards. In addition, an audit is not designed to detect immaterial misstatements or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, we will inform the appropriate level of System management of material errors, fraudulent financial reporting or misappropriation of assets that come to our attention. We will also inform the appropriate level of System management of any violations of laws or governmental regulations that come to our attention, unless clearly inconsequential, and of material abuse that comes to our attention. Our responsibility as auditors is limited to the year covered by our audit and does not extend to any later periods for which we are not engaged as auditors.

The Board of Trustees
Delray Beach Firefighters' Retirement System
October 12, 2017
Page Three

Our procedures will include tests of documentary evidence supporting the transactions recorded in the accounts, and may include direct confirmation of cash, investments and certain other assets and liabilities by correspondence with selected individuals, creditors, funding sources and financial institutions. As part of our engagement, we will also request written representations from the System's Attorney and other outside legal counsel engaged by the System and they may bill the System for responding to this inquiry. At the conclusion of our audit, we will require certain written representations from the Chairman of the Board of Trustees and management about management's responsibilities for the financial statements; compliance with laws, regulations, contracts, and grant agreements; and other responsibilities required by U.S. generally accepted auditing standards.

Audit Procedures - Internal Control

Our audit will include obtaining an understanding of the System and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. Tests of controls may be performed to test the effectiveness of certain controls that we consider relevant to preventing and detecting errors and fraud that are material to the financial statements and to preventing and detecting misstatements resulting from illegal acts and other noncompliance matters that have a direct and material effect on the financial statements. Our tests, if performed, will be less in scope than would be necessary to render an opinion on internal control and, accordingly, no opinion will be expressed in our report on internal control issued pursuant to Government Auditing Standards.

An audit is not designed to provide assurance on internal control or to identify significant deficiencies or material weaknesses. However, during the audit, we will communicate to the System's Board of Trustees and management, internal control related matters that are required to be communicated under AICPA professional standards and *Government Auditing Standards*.

Audit Procedures - Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the System's compliance with provisions of applicable laws, regulations, contracts and agreements, including grant agreements. However, the objective of those procedures will not be to provide an opinion on overall compliance, and we will not express such an opinion in our report on compliance issued pursuant to Government Auditing Standards.

Other Services

We will also assist in preparing the financial statements and related notes of the System in conformity with U.S. generally accepted accounting principles based on information provided by management. We will also read and comment on the System's Annual Report to the State of Florida Division of Retirement; however, we will not prepare the Annual Report or be responsible for responding to inquiries from Division of Retirement regarding the Annual Report. These nonaudit services do not constitute an audit under Government Auditing Standards and such services will not be conducted in accordance with Government Auditing Standards. We will perform the services in accordance with applicable professional standards. The other services are limited to the preparation of the financial statements and related notes, and reading and commenting on the Annual Report, as previously defined. We, in our sole professional judgment, reserve the right to refuse to perform any procedure or take any action that could be construed as assuming management responsibilities.

The Board of Trustees
Delray Beach Firefighters' Retirement System
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Management Responsibilities

Management is responsible for designing, implementing and maintaining effective internal controls, including evaluating and monitoring ongoing activities to help ensure that appropriate goals and objectives are met; following laws and regulations; and ensuring that management and financial information is reliable and properly reported. Management is also responsible for implementing systems designed to achieve compliance with applicable laws, regulations, contracts, and grant agreements. Management is also responsible for the selection and application of accounting principles; for the preparation and fair presentation of the financial statements and all accompanying information in conformity with U.S. generally accepted accounting principles and for compliance with applicable laws and regulations and the provisions of contracts and grant agreements.

Management is responsible for making all financial records and related information available to us and for the accuracy and completeness of that information. Management is also responsible for providing us with (1) access to all information of which they are aware that is relevant to the preparation and fair presentation of the financial statements; (2) additional information that we may request for the purpose of the audit; and, (3) unrestricted access to persons within the System from whom we determine it necessary to obtain audit evidence.

Management's responsibilities include adjusting the financial statements to correct material misstatements and confirming to us in the written representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements as a whole.

Management is responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing us about all known or suspected fraud affecting the System involving (1) management; (2) employees who have significant roles in internal control; and, (3) others where the fraud could have a material effect on the financial statements. Management's responsibilities include informing us of any knowledge of any allegations of fraud or suspected fraud affecting the System received in communications from employees, former employees, grantors, vendors, regulators, or others. In addition, management is responsible for identifying and ensuring that the System complies with applicable laws, regulations, contracts, agreements, and grants. Management is also responsible for taking timely and appropriate steps to remedy fraud and noncompliance with provisions of laws, regulations, contracts, and grant agreements, or abuse that we may report.

Management is responsible for establishing and maintaining a process for tracking the status of audit findings and recommendations. Management is also responsible for identifying and providing report copies of previous financial audits, attestation engagements, performance audits, or other studies related to the objectives discussed in the Audit Objectives section of this letter. This responsibility includes relaying to us corrective actions taken to address significant findings and recommendations resulting from those audits, attestation engagements, performance audits, or studies. Management is also responsible for providing management's views and a written response to our current findings, conclusions, and recommendations, as well as management's planned corrective actions, to be included as part of the final audit report.

Management agrees to assume all management responsibilities relating to the financial statements and related notes, and any other nonaudit services we provide. Management will be required to acknowledge in the management representation letter our assistance with preparation of the System's financial statements and related notes, and that management has reviewed and approved the financial statements and related notes prior to their issuance and have accepted responsibility for them. Further, management agrees to oversee the nonaudit services by designating an individual, preferably from senior management,

The Board of Trustees
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Page Five

who possesses suitable skill, knowledge, or experience; evaluate the adequacy and results of those services; and accept responsibility for them.

Government Auditing Standards require that we communicate, during the planning stage of our audit, certain information to officials of the System, including the System's Board of Trustees. Those required communications are included as part of this engagement letter and your signature below acknowledges that a copy of this letter has been provided to the System's Board of Trustees.

Engagement Administration, Fees and Other Matters

We understand that System employees will prepare all cash or other confirmations requested and will locate any invoices and documentation selected by us for testing. Scott Porter is the engagement partner and is responsible for supervising the engagement and signing the reports or authorizing another individual to sign them. To ensure that the Firm's independence is not impaired under the AICPA Code of Professional Conduct, management agrees to inform the engagement partner before entering into any substantive employment discussions with any of our personnel.

The audit documentation for this engagement is the property of Caler, Donten, Levine, Cohen, Porter & Veil, P.A. ("CDL") and constitutes confidential information. However, we may be requested to make certain audit documentation available to the City of Delray Beach, State of Florida or other agency pursuant to authority given to it by law or regulation. If requested, access to such audit documentation will be provided under the supervision of CDL personnel. Furthermore, upon request and with the System's authorization, we may provide copies of selected audit documentation to the requesting agency. That agency may intend, or decide, to distribute the copies or information contained therein to others, including other governmental agencies. In the event we are requested or authorized by the System or required by government regulation, subpoena, or other legal process to produce our audit documentation or our personnel as witnesses with respect to our engagement for the System, management agrees, so long as we are not a party to the proceeding in which the information is sought, to reimburse us for our professional time and expenses, as well as the fees and expenses of our legal counsel, incurred in responding to such a request. We may from time to time, and depending on the circumstances, use thirdparty service providers in serving your account. In that regard, we may share confidential information about the System with these service providers but we will remain responsible for the work provided by such third-party service providers. The audit documentation for this engagement will be retained for a minimum of five years after the date of the auditor's report or for any additional period requested in writing by a government agency, after which it will be destroyed. By your signature below, you acknowledge and agree that CDL is free to destroy all records related to this engagement in accordance with this document retention policy.

At the conclusion of the engagement, we will provide an electronic pdf copy and the requested number of printed copies of the audit report to the System; however, management is responsible for distribution of the audit report to outside parties, such as State of Florida Division of Retirement and others. Unless restricted by law or regulation, or containing privileged and confidential information, copies of the report are to be made available for public inspection.

Our fee for these services for the year ended September 30, 2017 will be at our agreed upon hourly rates and will not exceed the annual amount, all as set forth in the System's "Auditing Services Agreement" dated October 12, 2017, subject to the additional considerations enumerated below. Our hourly rates vary according to the degree of responsibility involved and the experience level of the personnel assigned to your audit. The invoices for our fees will be rendered each month as work progresses and are payable on presentation. In accordance with our firm policies, work may be suspended if your account becomes 45 days or more overdue and may not be resumed until your account is paid in full. If we elect to terminate

The Board of Trustees
Delray Beach Firefighters' Retirement System
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our services for nonpayment, our engagement will be deemed to have been completed upon written notification of termination, even if we have not completed our report. The System will be obligated to compensate us for all time expended and to reimburse us for all out-of-pocket costs through the date of termination. Our fee is based on anticipated cooperation from System personnel and the assumption that there are no unexpected circumstances that require additional accounting assistance or significant auditing procedures or changes, such as new accounting or auditing standards or additional audit procedures resulting from internal control and other deficiencies, or other unexpected circumstances. If additional time is necessary for our assistance to complete audit schedules, the application of new standards, delays caused by the City or the System in the scheduled audit fieldwork dates, or other unexpected circumstances, we will advise the Board and provide an estimate for the additional time at the hourly rates specified in our proposal. Our engagement ends on the date we deliver the audit report to the Board of Trustees, unless circumstances described earlier cause us not to issue a report. You may request that we perform additional services not addressed in this engagement letter. If this occurs, we will communicate with the Chairman of the Board of Trustees regarding the scope of the additional services and the estimated fees. We may also issue a separate engagement letter covering the additional services. In the absence of another written engagement letter from us for such additional services, our services will continue to be governed by the terms of this engagement letter. Our fee for any additional services will be at the hourly rates as set forth in the System's "Auditing Services Agreement" dated October 12, 2017.

It is our understanding that the System's books will be closed and all audit schedules, including the final trial balance, will be provided to us by November 15 and the System will be ready for us to begin the year-end audit fieldwork by November 15 following the fiscal year end. In the event that our audit start date is delayed or all requested audit schedules are not provided to us prior to the start of our year end fieldwork, the System acknowledges and agrees that we will not be responsible for any subsequent delays or failure to meet government and other filing deadlines, or for penalties or interest that may be assessed against the System resulting from the System's failure to meet such deadlines. Our audit for each fiscal year will be a separate engagement that ends on the date we deliver the audit reports for that fiscal year to the System, unless circumstances described earlier cause us not to issue a report. If the engagement is terminated by the System, the System shall be liable for time charges and expenses incurred by CDL through the date of termination.

Our audit is intended for the benefit of the System. The audit will not be planned or conducted in contemplation of reliance by any third party or with respect to any specific transaction. Therefore, items of possible interest to a third party will not be specifically addressed and matters may exist that would be assessed differently by a third party, possibly in connection with a specific transaction. If you intend to publish or otherwise reproduce the System's financial statements or information together with our report (or otherwise make reference to our Firm) in a document that contains other information, you agree to provide us with a draft of the document to read and comment on before it is printed and distributed. With regard to using our auditor's report, you understand and agree that our prior written consent shall be obtained to reproduce or use our report in other documents. Furthermore, the System agrees that the terms of this engagement do not encompass an undertaking by us (1) to consent, by means of separate letter or otherwise, to the inclusion of our auditor's report on the financial statements referred to above in a filing with a Federal or State regulatory agency or otherwise reissue our report for other purposes, or (2) to acknowledge reliance on our report by others. With regard to the electronic dissemination of the audited financial statements, including financial statements published electronically on a website, you understand that electronic sites are a means to distribute information and, therefore, we are not required to read the information contained in these sites or to consider the consistency of other information in the electronic site with the original document. Government Auditing Standards require that we provide you with a copy of our most recent quality control review report. A copy of our 2015 peer review report was included in our proposal.

The Board of Trustees
Delray Beach Firefighters' Retirement System
October 12, 2017
Page Seven

CDL takes appropriate steps to secure all confidential client information on our computerized systems, however, the System is responsible for the security of all information when you transmit it to us, as well as the information retained by the System. The System is also responsible for the security of information management provides to us electronically using email or transmitted to us over the internet. The internet is an inherently public medium with multiple security concerns. Management understands that email is generally sent unencrypted and may be easily accessible by a party intercepting your communications. Because the nature of communications between the System and CDL may include sensitive and confidential financial information, management should take appropriate steps to utilize reasonable security features for transmitting the System's information to us. CDL will use its best efforts, consistent with our handling of all client accounts, to make the System's communications and files secure from unauthorized access. However, the System recognizes that no completely secure system for email, electronic documents or electronic data transfer has yet been devised. Accordingly, management acknowledges that they understand and agree to accept the limitations and risks associated with regular email and other electronic communications with CDL for the services we will provide. Furthermore, management hereby authorizes CDL to electronically submit to System employees or to others as management may request or as may be necessary to perform our engagement, any financial statements, schedules, and other information related to our services under this agreement. By your signature below, management acknowledges and agrees to hold CDL harmless from any damages that might be caused by the electronic transmission or submission of System information. Management also agrees to immediately contact and advise the CDL engagement partner with overall responsibility of our services, as named in this letter, if you believe either CDL or the System's computer systems, security or email accounts have been hacked or otherwise compromised. Your signature below acknowledges that the System understands and agrees with these responsibilities.

Parties to this engagement agree that any dispute that may arise regarding the meaning, performance, or enforcement of this engagement will be submitted to mediation upon written request of any party to the engagement. The party requesting mediation shall select the mediation provider from the list of mediation training providers approved by the Florida Supreme Court. The mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Association or such other rules as may be agreed upon by the parties. The results of this mediation shall not be binding upon either party. Costs of any mediation proceeding shall be shared equally by both parties. The System agrees that it will not, directly or indirectly, agree to assign or transfer any claim arising out of this engagement to anyone, or agree to share with anyone the proceeds of any such claim. The venue for any legal proceedings shall be Palm Beach County, Florida, and this agreement shall be governed by the laws of the State of Florida.

This engagement letter and the System's "Auditing Services Agreement" dated October 12, 2017, reflect the entire agreement between us relating to the services covered by this letter and replace and supersede any previous proposals, correspondence and understandings, whether written or oral. If any portion of this agreement is held to be void, invalid or otherwise unenforceable, in whole or in part, the remaining portions of this agreement shall remain in effect. The agreements of the System and Caler, Donten, Levine, Cohen, Porter & Veil, P.A. contained in this engagement letter shall survive the completion or termination of this engagement. This agreement may be renewed for a successive term by mutual consent of both parties.

The Board of Trustees
Delray Beach Firefighters' Retirement System
October 12, 2017
Page Eight

We appreciate the opportunity to be of service to the System and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy and return it to us.

Very truly yours, Caler, Donton, Levine,

Caler, Donten, Levine,

Cohen, Porter & Veil, P.A.

RESPONSE: The services and terms set forth in this letter are agreed to by the Delray Beach Firefighters' Retirement System.

By:

Chairman of the Board of Trustees

Item 5 Reports

Item 5.a. Caler, Donten, Levine, Cohen, Porter, & Veil

Item 5.a.i.

September 30, 2019 Audit Report



Communication with Those Charged with Governance

To the Board of Trustees Delray Beach Firefighters' Retirement System Delray Beach, Florida

We have audited the financial statements of the Delray Beach Firefighters' Retirement System (the "Plan") for the year ended September 30, 2019. Professional standards require that we provide you with information about our responsibilities under U.S. generally accepted auditing standards and certain information related to the planned scope and timing of our audit. We have communicated such information to you in our engagement letter dated November 26, 2019. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Plan are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year ended September 30, 2019. We noted no transactions entered into by the Plan during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- Management's estimate of the fair value of investments at September 30, 2019 and the related investment earnings based on reliance on outside experts. We evaluated the key factors and assumptions used to estimate the fair value of investments in determining that the amounts are reasonable in relation to the financial statements as a whole.
- Management's estimate of the Plan's net pension liability at September 30, 2019 based on reliance on outside experts. We evaluated the key factors and assumptions used to estimate the amount of the Plan's net pension liability. We read and compared these estimates to the actuarial reports by the Plan's actuaries in determining that the amounts are reasonable in relation to the financial statements as whole.



The disclosures in the financial statements are neutral, consistent, and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- The disclosures related to investments in Note 3 to the financial statements.
- The disclosures related to the Plan's net pension liability in Note 4 to the financial statements.

Difficulties Encountered in Performing the Audit

We encountered no difficulties in performing and completing the audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Audit adjustments were made to pooled cash, prepaid expenses, accounts payable and fund equity. There were no unadjusted audit differences for the year ended September 30, 2019.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated February 22, 2020.

Management Consultations with other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Plan's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Internal Control Related Matters

In planning and performing our audit, we considered the internal control over financial reporting (internal control) of the Plan as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Plan. Accordingly, we did not express an opinion on the effectiveness of the internal control of the Plan.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and would not necessarily identify all deficiencies in internal control over financial

To the Board of Trustees
Delray Beach Firefighters' Retirement System
February 22, 2020

reporting that might be significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control that we consider to be material weaknesses.

Compliance Related Matters

As part of obtaining reasonable assurance about whether the financial statements of the Plan are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we did not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Plan's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

Other Information in the Audited Financial Statements

We applied certain limited procedures to management's discussion and analysis and pension information, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding 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 did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the Schedule of Investment and Administrative Expenses, which accompanies the financial statements but is not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with U.S. generally accepted accounting principles, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

Restrictions on Use

This report is intended solely for the information and use of the Plan's Board of Trustees, the City Commission, management and others within the City of Delray Beach, Florida, and is not intended to be, and should not be, used by anyone other than these specified parties.

West Palm Beach, Florida March 22, 2020



Audited Financial Statements and **Supplementary Information**

Delray Beach Firefighters' Retirement System

September 30, 2019



AUDITED FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION

SEPTEMBER 30, 2019

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Independent Auditor's Report

To the Board of Trustees Delray Beach Firefighters' Retirement System Delray Beach, Florida

Report on the Financial Statements

We were engaged to audit the accompanying financial statements of the Delray Beach Firefighters' Retirement System (the "Plan"), which comprise the statement of fiduciary net position as of September 30, 2019 and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes 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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with U.S. generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating 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 financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Delray Beach Firefighters' Retirement System as of September 30, 2019, and the respective changes in fiduciary net position for the year then ended in conformity with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3 to 7 and the pension information on pages 23 to 29 be presented to supplement the basic financial statements. Such information, 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 U.S. generally accepted auditing standards, 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.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The Schedule of Investment and Administrative Expenses is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The Schedule of Investment and Administrative Expenses is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards. In our opinion, the other supplementary information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated February 22, 2020 on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Plan's internal control over financial reporting and compliance.

West Palm Beach, Florida February 22, 2020



Delray Beach Firefighters' Retirement System

Management's Discussion and Analysis

As management of the Delray Beach Firefighters' Retirement System (the "Plan"), we offer readers of the Plan's financial statements this narrative overview of the financial activities of the Plan for the year ended September 30, 2019. This narrative is intended to supplement the Plan's financial statements, and we encourage readers to consider the information presented here in conjunction with these statements, which begin on page 8.

Overview of the Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements. The financial statements include:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to the Financial Statements

This report also contains the following Required Supplementary Information to the financial statements:

- Schedule of Changes in the Net Pension Liability and Related Ratios
- Schedule of City Contributions
- Schedule of Investment Returns
- Notes to Required Supplementary Information

The financial statements contained in the report are described below:

- The Statement of Fiduciary Net Position is a point-in-time snapshot of account balances at fiscal year-end. It reports the assets available for future payments to retirees and any current liabilities that are owed as of the statement date. The resulting Net Position (Assets Liabilities = Net Position) represents the value of assets held in trust for pension benefits.
- The Statement of Changes in Fiduciary Net Position displays the effect of pension fund transactions that occurred during the fiscal year, where Additions Deductions = Net Increase (Decrease) in Net Position. This Net Increase (Decrease) in Net Position reflects the change in the net asset value of the Statement of Fiduciary Net Position from the prior year to the current year. Both statements are in compliance with Governmental Accounting Standards Board (GASB) Pronouncements.
- The Notes to the Financial Statements are an integral part of the financial statements and provide additional information that is essential to the comprehensive understanding of the data provided in the financial statements. These notes describe the accounting and administrative policies under which the Plan operates and provide additional levels of detail for select financial statement items (See Notes to Financial Statements on pages 10 to 22 of this report).

Because of the long-term nature of a defined benefit pension plan, financial statements alone cannot provide sufficient information to properly reflect the ongoing plan perspective. Therefore, in addition to the financial statements explained above, this financial report includes three additional *Required Supplementary Information* schedules with historical trend information.



- The Schedule of Changes in the Net Pension Liability and Related Ratios (pages 23 to 24) includes information about the sources of changes to the net pension liability and to the changes in Plan fiduciary net position. It also provides information regarding the fiduciary net position as a percentage of covered payroll and the net pension liability as a percentage of covered payroll.
- The Schedule of City Contributions (page 25) presents information regarding the value of total annual contributions required to be paid by the City and the actual performance of the City in meeting this requirement.
- The Schedule of Investment Returns (page 26) provides information regarding the Plan rate of return.
- The Notes to the Required Supplementary Information (pages 27 to 29) provide background information and explanatory detail to aid in understanding the required supplementary schedules.

Financial Highlights

For fiscal years ended September 30, 2016 and prior, firefighters participated in the City of Delray Beach Police and Firefighters Retirement System (the "Legacy Plan") that provided pension benefits to both City police officers and firefighters. Effective October 1, 2016, the City Commission adopted City Ordinance No. 17-16, which provided for the establishment of separate retirement systems for the City's firefighters and police officers, a new board of trustees for each system, changes in the allocation and use of Chapter 175 and 185 premium tax revenues, and changes to the retirement benefits of firefighters and police officers. Ordinance No. 17-16 specified that the determination of the assets and liabilities of the Legacy Plan allocable to the Plan should be made by the Plan's actuary. The actuarial allocation was based on the census data, plan provisions, assumptions and methods used for the October 1, 2015 actuarial valuation of the Legacy Plan. The allocation method resulted in an allocation of 52.569% of the Legacy Plan assets to the new Delray Beach Firefighters' Retirement System. The financial position and operating results of the Plan as of and for the years ended September 30, 2019 and 2018 present only the stand-alone, segregated Plan, although investments in a timber fund and real estate funds held by the Legacy Plan and the related income are allocated to the Delray Beach Firefighters' Retirement System based on the actuarial percentage.

- The net position of the Plan restricted for pension benefits at the close of the fiscal years ended September 30, 2019 and 2018 was \$120,485,851 and \$115,584,069, respectively.
- Net position increased by \$4,901,782 or 4.2% during 2019, primarily due to the current year's contributions and investment income.
- For the year ended September 30, 2019 Plan net position was 66.1% of the total pension liability of \$182,412,751. The net pension liability was \$61,926,900 at September 30, 2019, which was 562.8% of covered payroll.
- Additions to fiduciary net position for the year ended September 30, 2019 were \$15,063,551, which includes City, Firefighter and State contributions totaling \$10,101,716 and net income from investment activities totaling \$4,961,835.
- Deductions from fiduciary net position increased to \$10,161,769 in 2019. Most of the increase relates to increased participant benefit payments made in 2019.



Analysis of Financial Activities

The Plan's funding objective is to meet long-term benefit obligations through investment income and contributions. Accordingly, the collection of employer and member contributions, and the income from investments provide the reserves needed to finance future retirement benefits.

Contributions from the City of Delray Beach are made at levels determined by the Plan's actuary. Because expected investment returns and expected payroll growth has remained stable compared to previous years, the City's contribution requirement has increased slightly. Net position restricted for pension benefits increased by \$4,901,782 in 2019.

Fiduciary Net Position Table 1

			Increase
			(Decrease)
	2019	2018	2019 - 2018
Assets			_
Current and other assets	\$ 613,813	\$ 2,341,581	\$ (1,727,768)
Investments	120,242,539	114,007,993	6,234,546
Total Assets	120,856,352	116,349,574	4,506,778
Liabilities	370,501	765,505	(395,004)
Fiduciary Net Position	<u>\$ 120,485,851</u>	<u>\$ 115,584,069</u>	<u>\$ 4,901,782</u>

As the years roll forward and total assets and liabilities grow, investment income will continue to play an important role in funding future retirement benefits. Therefore, investment return over the long term is critical to the funding status of the retirement Plan.

During 2019, the Plan's investment portfolio returned income of 4.39% as compared to 8.01% for the prior year. It is important to remember that a retirement Plan's funding is based on a long time horizon, where temporary ups and downs in the market are expected. The more critical factor is that the Plan be able to meet an expected annual earnings yield of 7.0% on investments (lowered from 7.25% in the prior year).

Based on the latest actuarial analysis for the year ended September 30, 2019, the Plan's total pension liability exceeds its Plan net position by \$61.9 million (an increase of \$9.0 million from 2018), producing a plan net position as a percent of total pension liability of 66.1% (a decrease of 2.5% from 2018).

Financial Analysis Summary

As previously noted, net position viewed over time may serve as a useful indication of the Plan's financial position (see Table 1 above). At the close of fiscal year 2019, the assets of the Plan exceeded its current liabilities by \$120,485,851, shown as net position restricted for pensions. The net position is available to meet the Plan's ongoing obligation to Plan members and their beneficiaries.

Fiduciary Net Position

The Plan's fiduciary net position is established from employer and member contributions, and the accumulation of investment income, net of investment and administrative expenses and benefit payments.

Additions to Fiduciary Net Position

As noted above, fiduciary net position needed to finance retirement benefits are accumulated through collecting employer and member contributions and through investment earnings (net of investment expenses.) The



additions totaled \$15,063,551 for the year ended September 30, 2019. This was \$1,258,106 less than the prior year, due to decreased investment returns.

Additions to Fiduciary Net Position Table 2

						Increase
					(I	Decrease)
		2019		2018	20	19 - 2018
Contributions						
City	\$	7,926,963	\$	5,653,320	\$	2,273,643
Firefighters		1,044,994		991,333		53,661
State of Florida	_	1,129,759	_	1,074,825	_	54,934
Total Contributions	_	10,101,716		7,719,478		2,382,238
Net Investment Income	_	4,961,835		8,602,179		(3,640,344)
Total Additions	\$	15,063,551	\$	16,321,657	\$	(1,258,106)

Deductions from Fiduciary Net Position

The Plan was created to provide retirement, survivor and disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments, refunds of contributions to employees who terminate employment, and the cost of administering the Plan.

Deductions from Fiduciary Net Position Table 3

					Iı	ncrease
					(D	ecrease)
		2019		2018	201	19 - 2018
Benefit Payments						
Retirement and disability payments	\$	7,008,877	\$	6,707,239	\$	301,638
DROP withdrawals		2,982,195		2,995,727		(13,532)
Refunds of participant contributions		10,566		10,449		117
Total Benefit Payments		10,001,638		9,713,415		288,223
			-	. ,, ,		
Administrative Expenses	_	160,131		111,297		48,834
Total Deductions	\$	10,161,769	\$	9,824,712	\$	337,057

Total deductions for the year ended September 30, 2019 totaled \$10,161,769, an increase of 3.4% from 2018. The increase was primarily due to increased benefit payments in 2019. Deductions for the year ended September 30, 2018 totaled \$9,824,712.

The additions to plan net position of \$15,063,551 and deductions from Plan fiduciary net position of \$10,161,769 resulted in an overall increase of \$4,901,782 resulting from operations for the year ended September 30, 2019. The additions to plan net position of \$16,321,657 and deductions from Plan fiduciary net position of \$9,824,712 resulted in an overall increase of \$6,496,945 in net position restricted for pension benefits for the year ended September 30, 2018.

Fiduciary Responsibilities

The Board of Trustees is the fiduciary of the pension trust fund. Fiduciaries are charged with the responsibility of assuring that the assets of the Plan are used exclusively for the benefit of Plan members and their beneficiaries and defraying reasonable expenses of administering the Plan.



Requests for Information

This financial report is designed to provide the Board of Trustees, Plan members, taxpayers and investment managers with an overview of the Plan's finances and accountability for the money received. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Pension Administrator
Delray Beach Firefighters' Retirement System
City of Delray Beach Finance - Pension Office
100 NW 1st Avenue
Delray Beach, FL 33444



STATEMENT OF FIDUCIARY NET POSITION

September 30, 2019

	Defined Benefit Pension Plan	Deferred Retirement Option (DROP) Pension Plan	Total Pension Trust Funds
ASSETS			_
Cash	\$ 126,738	\$ -	\$ 126,738
Receivables:			
Firefighters' contributions	36,629	-	36,629
Interest and dividends	171,986	-	171,986
Pending trades receivable	278,460	-	278,460
Total Receivables	487,075	-	487,075
Investments:			
Money market mutual funds	1,896,992	-	1,896,992
U.S. Government securities	4,942,156	-	4,942,156
U.S. Government Agency securities	4,103,879	-	4,103,879
Domestic corporate bonds	13,481,011	-	13,481,011
Global fixed income investment fund	4,057,331	-	4,057,331
Domestic equity securities	39,286,639	-	39,286,639
Domestic equity index funds	10,247,283	-	10,247,283
International equity mutual funds	16,086,255	-	16,086,255
Foreign stocks	1,153,883	-	1,153,883
Timber investment funds	1,325,625	-	1,325,625
Real estate investment trusts	274,422	-	274,422
Real estate investment funds	8,986,733	-	8,986,733
Fixed income alternative investment fund	2,817,878	-	2,817,878
Participant directed pooled investment funds		11,582,452	11,582,452
Total Investments	108,660,087	11,582,452	120,242,539
Total Assets	109,273,900	11,582,452	120,856,352
LIABILITIES			
Accounts payable	94,834	_	94,834
Pending trades payable	275,667	_	275,667
Total Liabilities	370,501	-	370,501
NET POOLETON			
NET POSITION Restricted for pension benefits	\$ 108,903,399	\$ 11,582,452	\$ 120,485,851



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year Ended September 30, 2019

	Defined Benefit Pension Plan		Deferred Retirement Option (DROP) Pension Plan		Total Pension Trust Funds
ADDITIONS					
Contributions:					
City of Delray Beach	\$ 6,452,812	\$	1,447,552	\$	7,900,364
Firefighters	1,044,994		-		1,044,994
State of Florida	1,129,759		-		1,129,759
Total Contributions	8,627,565		1,447,552		10,075,117
Investment earnings:					
Net appreciation in fair value of investments	2,419,035		200,547		2,619,582
Interest, dividends and investment fund income	3,064,435		-		3,064,435
Other investment income	1,379		26,599		27,978
	5,484,849		227,146		5,711,995
Less investment expenses	(723,561)		-		(723,561)
Net Investment Earnings	4,761,288		227,146		4,988,434
Total Additions	13,388,853		1,674,698		15,063,551
DEDUCTIONS					
Firefighters benefits	7,035,476		-		7,035,476
Deferred retirement option (DROP) benefits	1,447,552		1,508,044		2,955,596
Refunds of participant contributions	10,566		-		10,566
Administrative expenses	 160,131		-		160,131
Total Deductions	8,653,725		1,508,044		10,161,769
Increase In Plan Net Position	4,735,128		166,654		4,901,782
NET POSITION RESTRICTED FOR PENSIONS					
Beginning of year	 104,168,271		11,415,798		115,584,069
End of year	\$ 108,903,399	\$	11,582,452	\$	120,485,851



Notes to Financial Statements

September 30, 2019

1. Summary of Significant Accounting Policies

Reporting Entity: The Delray Beach Firefighters' Retirement System (the "Plan") was established by the City of Delray Beach, Florida, to account for the financial activity of the defined benefit pension plan and deferred retirement option plan (DROP) that accumulate funds for the retirement pensions of City firefighters. The Plan uses separate fiduciary funds to report resources that are held in trust for the members and beneficiaries of the defined benefit pension plan and DROP plan (a defined contribution plan). The Plan is reported as a fiduciary fund (pension trust) in the City's basic financial statements.

Measurement Focus and Basis of Accounting: The Plan's financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). The financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded when the liabilities are incurred. Contributions from the Plan's members are recognized as revenue in the period in which the contributions are due. Contributions from the City, as calculated by the Plan's actuary, are recognized as revenue when due and when the City is legally required to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

<u>Cash</u>: Cash includes temporary cash balances held by the Plan's investment managers and are uninsured and uncollateralized.

<u>Investments</u>: The Plan's investment functions for the defined benefit plan are performed by independent investment managers under the direction of the Board of Trustees. The defined benefit plan investments are held in safekeeping by a custodian independent of the investment managers. The DROP investments are self-directed participant accounts investing in pooled investments in mutual funds available through an affiliate of ICMA. Investments are reported at fair value or net asset value, except for money market mutual funds that are reported at amortized cost, which approximates fair value. Securities traded on national or international exchanges are valued at the last reported sales price. Net asset values of the timber and real estate funds are determined by the fund managers using fair market values of the underlying investments of the fund. Net appreciation (depreciation) in fair value of investments includes the difference between cost and fair value of investments held as well as the net realized gains and losses for securities which are sold. Interest and dividend income are recognized on the accrual basis when earned. Purchases and sales of investments are recorded on a trade date basis.

<u>Net Position</u>: The net position of the Plan is restricted for pension benefits pursuant to legal restrictions of the enabling City ordinance that requires all Plan assets be utilized for pension benefits.

<u>Investment and Administrative Expenses</u>: Investment management fees are typically paid based on individually negotiated investment management agreements. The investment management fees are usually paid quarterly based on the investment portfolio's net asset value at the end of the quarter or may be performance related based on exceeding a market benchmark. Fees are paid from the appropriate investment manager's portfolio and are recognized as investment expenses in the Statement of Changes in Fiduciary Net Position over the time period to which the fees apply. Investment expenses also include custody fees paid to the Plan's investment custodian and performance monitoring fees paid to outside investment consultants engaged by the Plan.



Notes to Financial Statements

September 30, 2019

1. Summary of Significant Accounting Policies (Continued)

Administrative expenses include the various costs of administering the operations of the Plan, including fees for actuarial, audit, insurance and legal services, allocable costs for services provided by the City and office related expenses for supplies, postage and telephone.

<u>Risk Management</u>: The Plan is exposed to various risks of loss related to torts; theft of assets; fiduciary duty: and, errors and omissions. The Plan is also subject to risk of loss arising in the ordinary course of business, including, but not limited to, claims for damages for personal injuries and breach of contract. The Plan purchases commercial insurance for these risks. There were no significant reductions in insurance coverage from the prior year and no settlements in excess of coverage for the prior three years.

As a political subdivision of the State of Florida, the Plan has sovereign immunity under the Florida Constitution for tort actions. Therefore, in accordance with Chapter 768.28 Laws of Florida, the Plan is not liable to pay a claim or judgment, or any portions thereof, which when totaled with all other claims or judgments paid by the State or its agencies or subdivisions arising out of the same incident or occurrence, exceeds the aggregate sum of \$300,000. Chapter 768.28 also provides that judgments may be claimed or rendered in excess of these limits; however, these amounts must be reported to and approved by the Florida Legislature.

New Accounting Pronouncements: GASB Statement No. 84, Fiduciary Activities, establishes guidance regarding what constitutes fiduciary activities for accounting and financial reporting purposes, the recognition of liabilities to beneficiaries, and how fiduciary activities should be reported. GASB Statement No. 84 will be effective for the Plan's fiscal year ending September 30, 2020. The Plan has not determined the effect, if any, of the new GASB Statement on the Plan's financial statements.

<u>Use of Estimates</u>: Management uses estimates and assumptions in preparing financial statements in accordance with U.S. generally accepted accounting principles (GAAP). Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of revenues and expenses. Actual results could vary from the estimates that were used.

2. Plan Description

The following brief description of the Plan is provided for general information purposes only. Members should refer to the enabling City ordinance for more complete information.

The Plan was originally established in 1974 by the City of Delray Beach as the City of Delray Beach Police and Firefighters Retirement System (the "Legacy Plan") to provide pension benefits to all full-time City police officers and firefighters. Effective October 1, 2016, the City Commission adopted City Ordinance No. 17-16, which provided for the establishment of separate retirement systems for the City's police officers and firefighters, a new board of trustees for each system, changes in the allocation and use of Chapter 175 and 185 premium tax revenues, and changes to the retirement benefits of firefighters and police officers. The changes in Ordinance No. 17-16 were ratified by the



Notes to Financial Statements

September 30, 2019

2. Plan Description (Continued)

City's collective bargaining agreements with the Professional Fire Fighters/Paramedics of Palm Beach County, Local 2928, IAFF and the Palm Beach County Police Benevolent Association. Unless otherwise noted, these financial statements present only the financial activity of the Delray Beach Firefighters' Retirement System established on October 1, 2016 pursuant to Ordinance No. 17-16.

<u>Plan Administration</u>: The Plan is governed by Florida Statutes Chapter 175, as revised by ordinances passed by the City of Delray Beach City Commission. Additionally, the Fund is governed by Chapter 112, Part VII, of the Florida Statues. All full time firefighters of the City are required to participate in the Plan as a condition of employment. Civilian members of the City Fire Department and the Fire Chief, upon the Fire Chief's written election not to participate, are excluded from the Plan.

The Plan is managed by a five member Board of Trustees consisting of the following members: two legal residents of the City who are appointed by the City Commission; two full-time City firefighters elected by the active members of the Plan; and a fifth member chosen by a majority of the other four members. Each trustee serves for a term of four years, except for the fifth member who serves for a two year term. Each trustee may serve successive terms.

<u>Plan Membership</u>: The Plan membership as of October 1, 2018, the date of the most recent actuarial valuation, is summarized as follows:

Retirees and Beneficiaries		
Retirees and beneficiaries receiving bene	efits	122
DROP retirees		12
Terminated employees entitled to benefit	ts but not	
receiving them		0
-	Total Retirees and Beneficiaries	134
Active Members		
Vested		62
Nonvested		77
	Total Active Members	139

<u>Pension Benefits</u>: The Plan provides retirement, death and disability benefits for firefighters. Benefit provisions are established and may be amended by City Ordinance.

Eligibility for Normal Retirement - For firefighters hired on or before October 4, 2016, eligibility for normal retirement is the earlier of age 55 and 10 years of service or 20 years of service regardless of age. For firefighters hired after October 4, 2016, eligibility for normal retirement is the earlier of age 55 and 10 years of service or 25 years of service regardless of age.

Annual Retirement Benefit - The annual retirement benefit for firefighters is based on the date of hire as follows:



Notes to Financial Statements

September 30, 2019

2. Plan Description (Continued)

- A) Firefighters hired on or before October 4, 2016 with 20 or more years of service on October 4, 2016, receive 3.5% (if the enhanced multiplier is elected or 3.0% if it is not elected) times the Firefighter's average final compensation for all credited service (subject to a maximum benefit equal to 87.5% of average final compensation).
- B) Firefighters hired on or before October 4, 2016 with less than 20 years of service on October 4, 2016, and retiring with:
 - 1) more than 20 years of service receive at retirement receive 3.5% (if the enhanced multiplier is elected or 3.0% if it is not elected) times the firefighter's average final compensation for all credited service prior to October 4, 2016 plus 3.0% times the firefighter's average final compensation times all years of credited service after October 4, 2016 (subject to a maximum annual benefit of \$100,000, but not less than 2.0% times average final compensation for each year of credited service).
 - 2) less than 20 years of service at retirement receive 2.5% times the firefighter's average final compensation times all years of credited service prior to October 4, 2016 <u>plus</u> 3.0% times the firefighter's average final compensation times all years of credited service after October 4, 2016 (subject to a maximum annual benefit of \$100,000, but not less than 2.0% times average final compensation for each year of credited service).
- C) Firefighters hired after October 4, 2016 receive 2.75% times the firefighter's average final compensation times all years of credited service (subject to a maximum annual benefit of \$100,000, but not less than 2.0% times average final compensation for each year of credited service).

Firefighters hired after April 9, 2013 may not elect the enhanced multiplier.

Early Retirement - A participant age 50 with 10 or more years of credited service is eligible for early retirement. Early retirement benefits are computed in the same manner as normal retirement, based upon the participant's final average salary and credited service at the date of termination, reduced by 3.0% for each year prior to the normal retirement date. Firefighters hired after October 4, 2016, are not eligible for early retirement benefits.

Disability Benefits - Disability benefits for service related disabilities are based on a determination of total and permanent disability by the Board of Trustees. Ten years of service are required for non-service related disability benefits. The disability benefit is the participant's accrued pension benefit, but not less than 60% of the participant's average final compensation for service related disabilities. For non-service related disabilities, the benefit is 2.0% of average final compensation times the years of credited service with a minimum of 25% of the participant's average final compensation.

Death Benefits - For any firefighter who dies in the line of duty, the surviving spouse shall receive until death or remarriage 50% of the firefighter's final average compensation. Each surviving child under age 18 shall receive 5% of the firefighter's final average compensation until age 18 (or 22 if a full-time student). The maximum service-incurred survivor benefit is 60% of the firefighter's final average compensation. For any firefighter with more than five years of service whose death is not in the line of



Notes to Financial Statements

September 30, 2019

2. Plan Description (Continued)

duty, the surviving spouse shall receive until death or remarriage 65% of the firefighter's accrued benefit at the time of death, subject to a minimum benefit of 20% of the firefighter's final average earnings. Each surviving child under age 18 shall receive 5% of the firefighter's final average earnings until age 18 (or 22 if a full-time student) with the total death benefit limited to 50% of the firefighter's final average compensation.

Cost of Living Adjustments - Post retirement cost of living adjustments are provided for pension recipients. An annual increase equal to a 1% base benefit plus what can be funded from State revenues applies for those who retired after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date.

Deferred Retirement Option Plan (DROP) - Firefighters are eligible to enter the Deferred Retirement Option Plan (DROP) at the normal retirement date, while continuing active employment as a firefighter. Upon entering into the DROP, the participant becomes a retiree for all Plan purposes and the accrued benefit is frozen. The maximum duration of DROP participation is 5 years. Normal retirement payments that would have been payable to the participant as a result of retirement are paid to and invested in the DROP to be distributed to the participant upon his or her request or as required by law.

The Board of Trustees contracts with the International City Management Association Retirement Corporation (ICMA-RC) to administer the DROP through a separate 401(a) plan. Firefighters who elect to participate in DROP are required to use a self-directed investment program through the ICMA 401(a) plan. The DROP participants self-direct their account in investment options offered by ICMA and approved by the Plan's Board of Trustees. The assets of the DROP cannot be legally accessed by the Plan to pay retirement benefits to other Plan participants because the DROP assets are held in the participants' name in a separate trust under the 401(a) plan. Accordingly, the DROP plan has been reported as a separate defined contribution plan in the accompanying financial statements.

Contributions: Contribution requirements are established and may be amended by City Ordinance. Contribution requirements are based on the benefit structure established by the City. Members are required to contribute 9.0% of salary until the member reaches 25 years of continuous service. Pursuant to Chapter 175, Florida Statutes, a premium tax on certain fire insurance contracts written on properties within the corporate boundaries of the City is collected by the State and remitted to the Plan for the State's annual contribution amount. The City is required to contribute the remaining amounts necessary to finance the Plan's benefits through periodic contributions at actuarially determined rates sufficient to pay the normal cost plus an amount sufficient to amortize the unfunded accrued past service liability over a period not greater than 30 years. By mutual agreement of the City and the firefighters' union, all annual premium tax moneys received pursuant to Chapter 175, up to \$1,206,994, the amount received during the 2013 calendar year, shall be used to offset the cost of current benefits by reducing the City's annual required contribution to the Plan.

A rehired member may buy back one or more years of continuous past service by paying into the Plan the full actuarial cost of such service, as determined by the Plan's actuary, including the cost of the required actuarial calculations. The buy-back of past service must be paid to the Plan prior to entering DROP and over a period not to exceed 5 years.



Notes to Financial Statements

September 30, 2019

3. Investments

Vesting and Refunds of Member Contributions: Firefighters who terminate employment with less than 10 years of continuous service, upon the election to receive a refund of member contributions, receive a noncompounded, simple interest rate of three percent per year applied to the principal balance of the participant's contributions as accrued on December 31st of each year. Employees who terminate employment with 10 years or more of continuous service, upon the election to receive a refund of member contributions, receive a noncompounded, simple interest rate of five percent per year applied to the principal balance of the participant's contribution as accrued on December 31st of each year. Each member is guaranteed the payment of benefits at least equal in total to his accumulated contributions plus interest as provided herein. Any forfeitures that may arise upon the termination of a member's employment are used to offset the City's contribution.

Authorized Investments - Florida Statutes and the Plan's investment policy authorize the Plan to invest in Florida Prime (a State administered investment pool); negotiable direct obligations of or obligations unconditionally guaranteed by the U.S. Government; interest-bearing time deposits or savings accounts in financial institutions located in Florida and organized under Federal or Florida laws; money market mutual funds limited to U.S. Government securities; obligations of the Federal Farm Credit Banks, Fannie Mae, Freddie Mac, the Federal Home Loan Bank or its district banks; obligations guaranteed by the Government National Mortgage Association; and any additional investments authorized by the Plan's investment policy.

The Plan's investment policy further authorizes the Plan to invest, with certain limitations, in tax sale certificates of the State of Florida or any of its political subdivisions, preferred and common stocks of certain domestic and international corporations, debt securities of certain domestic and international corporations, mutual funds (including exchange traded funds), and alternative investments, including private investment funds consisting of equity and fixed income investments, timber, real estate, and similar investments that are not publicly traded.

Investment Allocation - The policy in regard to the allocation of invested assets is established and may be amended by a majority vote of the Board of Trustees. It is the Board of Trustees' policy to pursue an investment strategy that reduces risk through the prudent diversification of the investment portfolio across a broad selection of distinct asset classes. The investment policy of the Plan discourages the use of cash equivalents, except for liquidity purposes, and aims to refrain from dramatically shifting asset class allocations over short time spans. The investment strategy and allocations are reviewed quarterly with the assistance of the Plan's investment consultant and are rebalanced to the target asset allocations based on market conditions.

The long-term expected net rate of return on investments was determined using a building-block method. Best-estimate ranges of expected future rates of return (expected returns net of investment expense and inflation) are developed for each major asset class. The long-term expected net rate of return on investments is the best-estimate ranges weighted by asset allocation plus expected inflation. Best estimates of arithmetic real rates of return for each major asset class as provided by the investment managers, together with the Board of Trustees' adopted asset allocation policy as of September 30, 2019, are as follows:



Notes to Financial Statements

September 30, 2019

3. Investments (Continued)

	Target Allocation	Long-Term Expected Real Rate Of Return
Asset Class		
Domestic equity	42.5%	7.5%
International equity	15.0	8.5
Fixed income	27.5	2.5
Real estate	10.0	4.5
Alternatives	5.0	6.2
Total	100.0%	_

Rate of Return: The annual money-weighted rate of return on Plan investments, net of pension investment expense, was 4.39% for the year ended September 30, 2019. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts invested.

<u>Fair Value of Investments</u>: The Plan follows the provisions of GASB Statement No. 72, *Fair Value Measurement and Application*, which establishes a framework for measuring the fair value of investments in a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under GASB Statement No. 72 are described below:

<u>Level 1</u>: Inputs to the valuation methodology are unadjusted quoted prices for identical assets in active markets that the Plan has the ability to access at the measurement date.

<u>Level 2</u>: Inputs to the valuation methodology include the following:

- Quoted prices for similar assets in active markets.
- Quoted prices for identical or similar assets in inactive markets.
- Inputs other than quoted prices that are observable for the assets.
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

<u>Level 3</u>: Inputs to the valuation methodology are unobservable and significant to the fair value measurement. These unobservable inputs reflect the entity's own estimates for assumptions that market participants would use in pricing the asset or liability. Valuation techniques would typically include discounted cash flow models and similar techniques, but may also include the use of market prices of assets that are not directly comparable to the subject asset.



Notes to Financial Statements

September 30, 2019

3. Investments (Continued)

The fair value measurement of an asset within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. The categorization of an investment within the fair value hierarchy is based upon the pricing transparency of the investment and does not necessarily correspond to the Plan's perceived risk of that investment.

Valuation Methodologies: The following valuation methods and assumptions were used by the Plan to estimate the fair value of financial instruments measured at fair value on a recurring basis under GASB Statement No. 72:

U.S. Government and Agency securities, corporate bonds and global fixed income investment fund: Valued at the closing price reported on the active exchange on which the individual securities are actively traded. Securities that are not actively traded are valued using a matrix pricing technique based on the securities' relationship to quoted benchmark prices.

Domestic equity securities, international equity mutual funds and foreign stocks: Valued at the closing price reported on the active exchange on which the individual securities are actively traded.

Domestic equity index fund and real estate investment trust: Valued at the closing net asset value reported on the active exchange on which the individual investment fund is actively traded.

Investments measured at net asset value (NAV): Pooled equity index funds, timber and real estate investment funds and the fixed income alternative investment fund, are valued at the unadjusted NAV per share at September 30, 2019, calculated in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies based on the fair value of the underlying fund investments, as determined by the fund manager or by valuations of a fund's underlying assets as provided by the general partner or investment manager, since the assets are not publicly traded. Timber and real estate values are based upon periodic independent appraisals performed for assets held by the funds. The fair value of timber and real estate is the price that would be received if the asset was sold to a market participant assuming the highest and best use of each asset at the measurement date. The pooled investment funds in fixed income and equity investments are not publicly traded and invest in various types of equity and fixed income securities.

DROP participant directed accounts: Price/unit values for DROP investment options are calculated daily by the DROP provider based on the quoted price on a national exchange for the underlying mutual funds held in comingled pooled investment accounts through a group trust, adjusted for certain expense factors disclosed in the DROP provider contract.

The methods and assumptions described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. While the Plan believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. There were no changes in the methods and assumptions used for the year ended September 30, 2019.



Notes to Financial Statements

September 30, 2019

3. Investments (Continued)

Fair Value of Investments: The financial assets measured at fair value on a recurring basis include the Plan's investments. There were no liabilities measured at fair value on a recurring basis at September 30, 2019.

The fair value of the Plan's investments at September 30, 2019 is summarized as follows:

		Fai	ir Values at Se	ptember	30, 2019		
	Level 1		Level 2	Le	vel 3		Total
Fixed income investments				·	<u> </u>	-	_
U.S. Government	\$ -	\$	4,942,156	\$	-	\$	4,942,156
U.S. Government Agency	-		4,103,879		-		4,103,879
Domestic corporate bonds	-		13,481,011		-		13,481,011
Global fixed income							
investment fund	 4,057,331		<u>-</u>				4,057,331
Total fixed income investments	4,057,331		22,527,046		-		26,584,377
Equity investments							
Domestic equity securities	39,286,639		-		-		39,286,639
Domestic equity index fund	5,737,342		-		-		5,737,342
International equity mutual funds	16,086,255		-		-		16,086,255
Foreign stocks	1,153,883		-		-		1,153,883
Real estate investment trusts	 274,422		<u>-</u>		<u>-</u>		274,422
Total equity investments	 62,538,541		<u>-</u>		<u>-</u>		62,538,541
Total investments at fair value	\$ 66,595,872	\$	22,527,046	\$			89,122,918
Investments measured at NAV Alternative investment funds							
Pooled equity index fund							4,509,941
Timber investment funds							1,325,625
Real estate investment funds							8,986,733
Fixed income investment fund							2,817,878
Total investments at NAV							17,640,177
Investments at amortized cost Money market mutual fund							1,896,992
Woney market mutual fund							1,070,772
Total Investments						\$	108,660,087

The ICMA 401(a) DROP plan investments consist of participant directed investments in comingled pooled investment accounts that invest in various mutual fund products through a group trust sponsored by Vantage Trust Company, an affiliate of ICMA.



Notes to Financial Statements

September 30, 2019

3. Investments (Continued)

The fair value of the DROP investments at September 30, 2019 is summarized as follows:

DROP investments

Domestic fixed income funds \$ 33	29,219
Asset allocation funds 3,70	08,295
Domestic equity funds 1,43	55,998
International equity funds	58,891
Real estate funds	23,107
Guaranteed income fund 5,80	06,942

Total DROP Investments \$ 11,582,452

All DROP investments are considered to be Level 2 fair value investments.

Alternative Investment Funds: The alternative investment funds may hold certain investments which may be valued by a single market maker. While the fund managers use their best judgment in estimating the fair values of underlying funds, there are inherent limitations in any estimation technique. Accordingly, the fair values of alternative investment funds have been estimated by the management of the pension funds and their investment advisors in the absence of readily ascertainable market values.

The reported fair values for the alternative investment funds may differ significantly from the values that would have been used had a ready market for the underlying funds existed and the differences could be material. Future confirming events will affect the estimates of fair value, and the effect of such events on the estimates of fair value could be material. The alternative investment funds also expose the Plan to additional investment risks, including liquidity risks; counterparty and custody risks; foreign political, economic and governmental risks; and, market risk. At September 30, 2019, the Plan's alternative investments had future funding commitments of approximately \$890,000, no lock-up periods and were generally redeemable monthly, quarterly or annually with 5 to 90 days' notice.

<u>Custodial Credit Risk</u>: Custodial credit risk is defined as the risk that the Plan may not recover cash and investments held by another party in the event of financial failure. The Plan's investment policy requires cash and investments to be fully insured or collateralized, or held in independent custodial safekeeping accounts in the name of the Plan. At September 30, 2019 all direct investments in securities were held in an independent custodial safekeeping account. Money market mutual funds, mutual funds, index funds and alternative investments, were considered *unclassified* investments pursuant to GASB Standards.

Concentration of Credit Risk: Concentration of credit risk is defined as the risk of loss attributed to the magnitude of an investment in a single issuer. The Plan's investment policy requires diversification of investments to minimize potential losses on individual securities. Securities of a single issuer are limited to no more than 5% of the Plan's net position invested in common stocks and debt securities. Investments in mutual funds, index funds and alternative investments are excluded from the concentration of credit risk disclosure requirement.



Notes to Financial Statements

September 30, 2019

3. Investments (Continued)

<u>Credit Risk</u>: Credit risk is the risk that a debt issuer will not fulfill its obligations. The Plan's investment policy addresses credit risk by limiting investments to the safest types of securities, which are generally those with investment grade credit ratings (BBB or better) from a Nationally Recognized Statistical Rating Organization (NRSRO) at the date of purchase. The Plan utilizes ratings from Standard & Poor's and Moody's Investor Services for its investments.

<u>Interest Rate Risk</u>: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment in debt securities. Generally, the longer the time to maturity, the greater the exposure to interest rate risk. The Plan's investment policy has no specific limits on investment maturities.

The table below summarizes the NRSRO ratings and the average effective duration in years for the fixed income investments of the Plan at September 30, 2019.

	NRSRO Rating	Weighted Average Maturity	I	Fair Value
Money market mutual funds	AAAm	Under 90 days	\$	1,896,992
U.S. Government securities	AA	22.4 years		4,942,156
U.S. Government Agency securities	AA	1.4 years		4,103,879
Domestic corporate bonds	AA	0.2 years		986,018
Domestic corporate bonds	A	3.3 years		9,374,445
Domestic corporate bonds	BBB	3.3 years		3,120,548
Global fixed income investment fund	Unrated	1.1 years		4,057,331
Fixed income alternative investment fund	Unrated	Not Available		2,817,878
Participant directed pooled investment funds (DROP)				
Domestic fixed income and guaranteed income funds	Unrated	Not Available		6,136,161

<u>Foreign Currency Risk</u>: Foreign currency risk includes the risk of revaluation of currencies, high rates of inflation, repatriation restrictions on income and capital, and future adverse political, social, and economic developments. Moreover, securities of foreign governments may be less liquid, subject to delayed settlements, taxation on realized and unrealized gains, and their price may be more volatile than those of comparable securities in U.S. companies.

<u>Risks and Uncertainties</u>: Due to the various risks associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the accompanying financial statements. The value, liquidity, and related income of certain securities with contractual cash flows, such as asset backed securities, collateralized mortgage obligations, commercial mortgage backed securities and real estate funds or pooled funds investing in these securities or entities, are particularly sensitive to changes in economic conditions, including real estate value, delinquencies or defaults, or both, and may be adversely affected by shifts in the market's perception of the issuers and changes in interest rates.



Notes to Financial Statements

September 30, 2019

4. Net Pension Liability

Mortality

The components of the net pension liability of the Plan at September 30, 2019, the measurement date for the Plan, were as follows:

Total pension liability	\$ 182,412,751
Plan fiduciary net position	120,485,851
Net pension liability	\$ 61,926,900
Plan fiduciary net position as a percentage	
of the total pension liability	66.1%

<u>Actuarial Assumptions</u>: The total pension liability was determined by an actuarial valuation as of October 1, 2018, based on the following actuarial assumptions:

Actuarial cost method	Entry Age Normal		
Amortization method	Level Dollar, Closed		
Remaining amortization period	20 years		
Asset valuation method	4 year smoothed		
Cost of living adjustments	1.0% per year		
Inflation	2.5%		
Salary increases	5.0% - 6.25% including inflation		
Investment rate of return	7.0% net of investment expense, including inflation		

RP-2000 Combined Healthy Participant Mortality Table for males and females, as appropriate, with adjustments for mortality improvements based on Scale BB. For males the base mortality rate includes a 90% blue collar and 10% white collar adjustment. For females, the base mortality rate is a 100% white collar adjustment.

The actuarial assumptions used in the October 1, 2018 valuation were based on an experience study issued October 28, 2013.

The following actuarial assumptions were updated effective October 1, 2018:

- Effective October 1, 2018, the discount rate was lowered from 7.25% to 7.0%.
- The mortality assumption for active members prior to retirement was revised in accordance with a revision to the active member pre-retirement mortality assumption used by the Florida Retirement System in their July 1, 2016 actuarial valuation.

Notes to Financial Statements

September 30, 2019

4. Net Pension Liability (Continued)

Discount Rate: The discount rate used to measure the total pension liability was 7.0%. This is the single rate that reflects the long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits. The projection of cash flows used to determine the discount rate assumed that plan member contributions are made at the current contribution rate and that City contributions will be made for the actuarially determined contribution. Based on those assumptions, the pension plan's fiduciary net position is 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 is applied to all periods of projected benefit payments to determine the total pension liability. For purposes of this determination it is understood that pension plan assets are expected to be invested using a strategy to achieve the net discount rate.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate: The following table presents the net pension liability calculated using the current discount rate of 7.0%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.0%) or one percentage point higher (8.0%) than the current rate:

		Current		
	1%	Discount	1%	
	Decrease (6.0%)	Rate (7.0%)	Increase (8.0%)	
City's net pension liability	\$ 82,641,305	\$ 61,926,900	\$ 44,987,390	



REQUIRED SUPPLEMENTARY INFORMATION



Required Supplementary Information - Schedule of Changes in the Net Pension Liability and Related Ratios

Last Six Fiscal Years

	Fiscal Year	
	2019	2018
Total Pension Liability		-
Service cost	\$ 2,996,276	\$ 2,325,806
Interest	12,125,368	12,106,606
Changes in excess State contributions	-	-
Changes of benefit terms	-	-
Differences between expected and actual experience	2,766,907	(2,577,793)
Contributions - buyback	-	-
Changes of assumptions	4,551,070	11,883,072
Benefit payments, including refunds	(8,554,086)	(8,434,482)
Net change in total pension liability	13,885,535	15,303,209
Total pension liability, beginning of fiscal year	168,527,216	153,224,007
Total pension liability, end of fiscal year (a)	\$ 182,412,751	\$ 168,527,216
Dien Fiducieus Net Decition		
Plan Fiduciary Net Position Contributions		
	\$ 6.452.812	¢ 4274207
Employer Plan members	+ -) -)-	\$ 4,374,387
	1,044,994	991,333
State	1,129,759	1,074,825
Net investment income	4,988,434	8,602,179
Other income	-	-
Equity allocation from Legacy Pension Fund	(0.554.006)	(0.424.402)
Benefit payments, including refunds	(8,554,086)	(8,434,482)
Administration expense	(160,131)	(111,297)
Net change in plan fiduciary net position	4,901,782	6,496,945
Plan fiduciary net position, beginning of fiscal year	115,584,069	109,087,124
Plan fiduciary net position, end of fiscal year (b)	\$ 120,485,851	\$ 115,584,069
Net Pension Liability, end of fiscal year [(a)-(b)]	\$ 61,926,900	\$ 52,943,147
Plan Fiduciary Net Position as a Percentage		
of Total Pension Liability	66.1%	68.6%
of Total Pension Liability	00.170	08.070
Covered Payroll	\$ 11,003,736	\$ 10,494,232
Net Pension Liability as a Percentage		
of Covered Payroll	562.8%	504.5%
•	2 2 2 2 3 7 5	

Notes to Schedule:

Information prior to fiscal year 2014 is not available.

Prior to 2017 the Firefighters' and Police Officers' Retirement Systems were operated as a single plan covering both employee groups. The City adopted Ordinance No. 17-16 effective October 1, 2016, that established a separate pension plan for firefighters and a separate pension plan for police officers. Information for 2016 and prior years is for the combined pension plan.

Draft

2017	2016	2015	2014
\$ 2,278,992	\$ 4,161,533	\$ 4,116,670	\$ 4,215,639
11,308,126	16,394,667	19,332,804	16,854,289
-	(1,741,230)	659,168	1,406,983
-	(1,121,765)	(347,798)	-
4,638,688	1,568,118	(2,020,566)	-
-	32,218	34,696	128,140
-	7,407,717	-	-
(8,148,762)	(13,532,591)	(13,282,705)	(12,180,870
10,077,044	13,168,667	8,492,269	10,424,181
143,146,963	238,707,736	230,215,467	219,791,286
\$ 153,224,007	\$ 251,876,403	\$ 238,707,736	\$ 230,215,467
\$ 5,721,499 903,846	\$ 10,789,457 1,806,021	\$ 10,837,369 1,634,828	\$ 9,057,075 1,594,712
1,134,704	1,909,358	1,896,237	1,951,084
10,685,983	13,455,717	(1,922,565)	14,082,413
-	150,647	22,903	-
88,447,892	(12.522.501)	(12 202 705)	(12 100 070
(8,148,762)	(13,532,591)	(13,282,705)	(12,180,870
98,598,771	(245,221) 14,333,388	(1,045,367)	(232,362 14,272,052
10,488,353	153,260,618	154,305,985	140,033,933
\$ 109,087,124	\$ 167,594,006	\$ 153,260,618	\$ 154,305,985
\$ 44,136,883	\$ 84,282,397	\$ 85,447,118	\$ 75,909,482
71.2%	66.5%	64.2%	67.09
\$ 8,954,177	\$ 19,643,308	\$ 18,107,436	\$ 16,474,658
492.9%	429.1%	471.9%	460.89

Required Supplementary Information - Schedule of City Contributions Last Six Fiscal Years

Fiscal Year Ended September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a Percentage of Covered Payroll
2019	\$ 7,582,571	\$ 7,582,571	\$ -	\$ 11,003,736	68.9%
2018	6,538,017	5,449,212	1,088,805	10,494,232	51.9%
2017	5,332,347	6,856,203	(1,523,856)	8,954,177	76.6%
2016	11,294,379	11,294,379	-	19,643,308	57.5%
2015	11,293,235	11,342,291	(49,056)	18,107,436	62.6%
2014	9,209,334	9,561,997	(352,663)	16,474,658	58.0%

Notes to Schedule:

Information prior to fiscal year 2014 is not available.

Prior to 2017 the Police Officers' and Firefighters' Retirement Systems were operated as a single plan covering both employee groups. The City adopted Ordinance No. 17-16 effective October 1, 2016, that established a separate pension plan for police officers and a separate pension plan for firefighters. Information for 2016 and prior years is for the combined pension plan.

Actual contribution for 2017 and later years is based on City contribution plus \$1,206,994 of the State contribution per the City's pension ordinance.



Required Supplementary Information - Schedule of Investment Returns

Last Six Fiscal Years

Fiscal Year Ended September 30,	Annual money- weighted rate of return, net of investment expenses
2019	4.39%
2018	8.01%
2017	10.78%
2016	8.86 %
2015	(1.23)%
2014	9.32 %

Notes to Schedule:

Information prior to fiscal year 2014 is not available.

Prior to 2017 the Police Officers' and Firefighters' Retirement Systems were operated as a single plan covering both employee groups. The City adopted Ordinance No. 17-16 effective October 1, 2016, that established a separate pension plan for police officers and a separate pension plan for firefighters. Information for 2016 and prior years is for the combined pension plan.



Notes to Required Supplementary Information

September 30, 2019

Actuarial valuation date October 1, 2018

Measurement date September 30, 2019

Note: Actuarially determined contribution rates are calculated at October 1, one year prior to the

end of the fiscal year in which the contributions are reported.

Actuarial methods and assumptions used to determine contribution rates:

Actuarial cost method Entry Age Normal
Amortization method Level Dollar, Closed

Remaining amortization period 20 years

Asset valuation method 4 year smoothed Inflation 2.5% per year

Salary increases (with inflation)
6.25% per year for first 10 years and 5.0% per year thereafter
7.0% per year compounded annually, net of expenses, with inflation

Cost of living adjustments 1.0% per year for those that retire after 10/1/1993

Retirement age 25% retire on normal retirement date; 10% retire each of the next two years; 25% retire in

each of the third and fourth years following normal retirement date; and 100% retire the fifth year following normal retirement date. This assumption is based on the results of an

experience study issued on October 28, 2013. No early retirement is assumed.

Mortality *Healthy Lives:*

Female: RP2000 Generational, 100% Annuitant, White Collar, Scale BB

Male: RP2000 Generational, 10% Annuitant White Collar /

90% Annuitant Blue Collar, Scale BB

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

Male: 60% RP2000 Disabled Male setback four years /

40% Annuitant White Collar with no setback, no projection scale

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2015 FRS actuarial valuation report. 75% of active deaths are assumed to happen in the

line of duty.

Payroll Growth 1.17% (limited in compliance with Part VII of Chapter 112, Florida Statutes, to the actual

ten-year payroll growth average as determined in 2014 and maintained for future

valuations).

Married 85% are assumed married with the husband 3 years older than the wife, based on the results

of an experience study issued on October 28, 2013.

Termination and Disability Rate

	Percentage Terminating	Percentage Disabled
Age	During the Year	During the Year
20	12.0%	0.07%
30	10.0%	0.09%
40	2.0%	0.15%
50	0.0%	0.50%



Notes to Required Supplementary Information (Continued)

September 30, 2019

Changes of benefit terms

- 1. For the 2017 fiscal year, amounts reported as changes of benefit terms resulted from adoption of Ordinance 17-16 on October 4, 2017, which provided that:
 - A. Member contributions will be 9.0% of earnings until the member has reached 25 years of continuous service.
 - B. For firefighters who are employed on September 8, 2016 and have less than 20 years of continuous service as of that date, the following shall apply:
 - 1. For service earned on and after September 8, 2016, the benefit multiplier shall be 3.0% per year of continuous service.
 - 2. The benefit accrued prior to September 8, 2016 shall be based on whether or not the member elected the enhanced multiplier and the number of years of continuous service at retirement.
 - a. For those electing the enhanced multiplier and retiring with 20 or more years of continuous service, the benefit multiplier for service accrued prior to September 8, 2016 will be 3.5%, subject to a maximum benefit of 87.5% of average final compensation.
 - b. For those electing the enhanced multiplier and retiring with less than 20 years of continuous service, the benefit multiplier for service accrued prior to September 8, 2016 will be 2.5%.
 - c. For those not electing the enhanced multiplier (or hired on or after April 9, 2013) and retiring with 20 years or more of continuous service, the benefit multiplier shall be 3.0% for service prior to September 8, 2016.
 - d. For those not electing the enhanced multiplier (or hired on or after April 9, 2013) and retiring with less than 20 years of continuous service, the benefit multiplier shall be 2.5% for service prior to September 8, 2016.
 - 3. The maximum annual starting benefit shall be \$100,000, increased annually by 2.0%, beginning October 1, 2016.
 - C. For firefighters who are employed on September 8, 2016 and have less than 10 years of service as of the effective date, earnings shall mean base wages paid to the member including state education compensation, fire career education compensation per fiscal year earned through effective date, but excluding overtime earned after the effective date, bonuses and other payments.
 - D. For firefighters hired on and after September 8, 2016:
 - 1. Average monthly earnings shall mean one sixtieth of the arithmetical average for the highest 5 years of the last 10 years preceding the actual retirement or termination date.
 - 2. Earnings shall mean basic wages paid to the member including state education compensation, firefighters career education compensation, but excluding overtime compensation, bonuses and other payments.
 - 3. The normal retirement date shall be the earlier of:
 - a. 25 years of continuous service regardless of age.
 - b. Age 55 and the completion of 10 years of continuous service.
 - 4. The normal retirement benefit shall be 2.75% of average monthly earnings for each year of continuous service, subject to a maximum annual starting benefit of \$100,000 and further subject to a maximum benefit of 75.0% of average monthly earnings, provided that the benefit must be at least 2.0% of average monthly earnings for each year of continuous service.
 - E. As of the effective date, no further benefit enhancement or benefit adjustment shall be paid to firefighters, other than the 2.0% per year benefit increase.
- 2. Upon adoption of Ordinance No. 17-16, effective for the September 30, 2016 measurement date, the following changes were effective for the Firefighters' Pension Plan:
 - A. The multiplier for Firefighters without an enhanced multiplier increased from 2.5% to 3% and the maximum benefit was limited to \$100,000, increased 2% per year.
 - B. Firefighters will contribute 9.0% of earnings to the Plan.

Changes of actuarial assumptions and methods

- 1. In addition to the changes related to the adoption of Ordinance No. 17-16, effective for the September 30, 2016 measurement date, the following actuarial change was effective for the Firefighters' Retirement System:
 - A. As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed from the RP-2000 Combined Healthy Tables to the mortality tables for special risk employees used by the Florida Retirement System actuary in the July 1, 2015 actuarial valuation.



Notes to Required Supplementary Information (Continued)

September 30, 2019

Changes of actuarial assumptions and methods (Continued)

- 1. Effective October 1, 2017, the discount rate was lowered from 8.0% to 7.25%. The mortality assumption for active members prior to retirement was revised in accordance with a revision to the active member pre-retirement mortality assumption used by the Florida Retirement System in their July 1, 2016 actuarial valuation.
- 2. Effective October 1, 2018, the discount rate was lowered from 7.25% to 7.0%.



OTHER SUPPLEMENTARY INFORMATION



SCHEDULE OF INVESTMENT AND ADMINISTRATIVE EXPENSES

Year Ended September 30, 2019

Investment Expenses	
Custody fees	\$ 39,008
Investment manager fees	649,221
Performance monitor fees	 35,332
Total investment expenses	\$ 723,561
Administrative Expenses	
Actuarial fees	\$ 34,535
Audit fees	25,500
City administrator	65,507
Fiduciary liability insurance	16,079
Legal fees	17,023
Office expenses	127
Telephone	155
Travel	 1,205
Total administrative expenses	\$ 160,131



COMPLIANCE REPORT



Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards

To the Board of Trustees Delray Beach Firefighters' Retirement System Delray Beach, Florida

We have audited, in accordance with U.S. generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Delray Beach Firefighters' Retirement System (the "Plan"), as of and for the year ended September 30, 2019, and the related notes to the financial statements, which collectively comprise the basic financial statements of the Plan, and have issued our report thereon dated February 22, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the internal control over financial reporting (internal control) of the Plan, to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Plan. Accordingly, we do not express an opinion on the effectiveness of the internal control of the Plan.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the financial statements of the Plan are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

West Palm Beach, Florida February 22, 2020

Item 5.b. 2019 Annual State Report

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Florida Retirement System Police and Fire Annual Report

Plan And Contacts

Plan

Name of Fund City of Delray Beach Firefighters' Retirement System

City Delray Beach

For Plan Year Ending 9/30/2019

Plan Contacts

Chairman

Name Greg Giaccone

Address Line 1 501 W. Atlantic Avenue

Address Line 2

City Delray Beach

Zip 33444

Telephone 561-243-7481

Email giaccone@mydelraybeach.com

Secretary

Name Thomas Glanfield

Address Line 1 1101 Beach Drive

Address Line 2

City Delray Beach

Zip 33483

Telephone 954-832-3556

Email thomas.glanfield@gmail.com

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Plan Contact Person

Name Lisa Castronovo

Address Line 1 100 NW 1st Avenue

Address Line 2

City Delray Beach

Zip 33444

Telephone 561-243-7289

Email castronovol@mydelraybeach.com

Plan Name: City of Delray Beach Firefighters' Retirement System

Board, Ordinances, and Details

Board of Trustees

Makeup of board specified in:

Ordinance Number 17.16

Section 33.79

Dated 10/4/2016

Board Members

Name of Trustee	Elected/Appointed By
Greg Giaccone	Firefighter
Craig Mahoney	Firefighter
Thomas Glanfield	City/District Appointee
Alan Kirschenbaum	Elected Fifth Member
Jack Warner	City/District Appointee

Quarterly Meetings

Quarter 1 Meeting Date 11/8/2018

Quarter 2 Meeting Date 2/21/2019

Quarter 3 Meeting Date 5/16/2019

Quarter 4 Meeting Date 9/12/2019

Additional Meetings

Additional Meeting Date

Plan Name: City of Delray Beach Firefighters' Retirement System

Ordinances

Ordinance Number Date Passed	Ordinance Number	Date Passed
------------------------------	------------------	-------------

Miscellaneous Plan Details

Chapter Minimum Benefits

Does the plan meet all the chapter minimum benefits and standards as of July 1, 2015? Y

Collective Bargaining Agreement

Is service in the plan subject to a collective bargaining agreement? Y

Effective Date 10/1/2017

Period Covered Begin Date 10/1/2017

Period Covered End Date 9/30/2020

Next Scheduled Date 10/1/2020

Mutual Consent

Υ

Defined Contribution Plan

Does the plan have a defined contribution plan? Y

Date Established 9/6/2018

Explain

Detailed Accounting Report

Has the plan submitted a detailed accounting report for this filing?

Date Provided to Plan Sponsor 2/3/2020

Explain

Administrative Expense Budget

Did the plan operate under an administrative expense budget? Y

Date Provided to Plan Sponsor 11/8/2018

LR002 Report Status: in progress 5/8/2020 6:09:53 PM

Plan Name: City of Delray Beach Firefighters' Retirement System

Explain

Notes

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Third Party Contacts

Third Party Contacts

Actuarial Valuation

Firm Name Gabriel, Roeder, Smith & Company

Contact Person Jeffrey Amrose

Address Line 1 One East Broward Blvd

Address Line 2 Suite 505

City Fort Lauderdale

Zip 33301

Telephone 954-527-1616

Email jeffrey.amrose@grsconsulting.com

Date Of Valuation 10/1/2018

Period Covered Begin Date 10/1/2019

Period Covered End Date 9/30/2020

Certified Public Accountant

Firm Name Caler, Donten, Levine, Cohen, Porter & Veil,

P.A.

Contact Person Scott Porter, CPA

Address Line 1 505 S. Flagler Drive

Address Line 2 Ste 900

City West Palm Beach

Zip 33401

Telephone 561-832-9292

Email sporter@cdlcpa.com

Plan Name: City of Delray Beach Firefighters' Retirement System

Money Manager

Firm Name	Contact Name	Address Line 1	Address Line 2	City	Zip	Phone	Email
Amsouth Timber Fund	Frank Walburn	PO Box 10463		Birmingham	35202	205-264- 4748	frank.walbur n@regions. com
Westwoo d Holdings Group	Kim Calhoun	200 Crescent Court	Suite 1200	Dallas	75201	214-756- 6989	kcalhoun@ westwoodgr oup.com
Harding Loevner	John Parsons	400 Crossing Blvd	4th Floor	Bridgewater	08807	908-218- 7900	jparsons@h imnet.com
Lazard Asset Mgmt	Brian McGuire	30 Rockfeller Plaza		New York	10112	212-632- 6635	brian.mcguir e@lazard.c om
RhumbLin e Advisors	Julie Carman Lind	265 Franklin Street	21st Floor	Boston	02110	617-345- 0434	jcl@indexm ngr.com
The Boston Company	Meghan Timbas	One Boston Place	Suite 024- 0146	Boston	02108	617-722- 3819	timbas.m@t bcam.com
Garcia Hamilton Associate s	Janna Hamilton	1401 McKinney	Suite 1600	Houston	77010	713-853- 2324	janna.hamilt on@garciah amiltonasso ciates.com
American Core Realty	Richelle Hayes	801 N. Brand Boulevard	Suite 800	Glendale	91203	818-545- 1152	rhayes@am ericanreal.c om
Angelo Gordon	Noreen Feldman	25 Park Avenue	26th Floor	New York	10022	212-692- 0259	nfeldman@ angelogord on.com
Sawgrass Asset Mgmt	Gregg Gosch	1579 The Greens Way	Suite 20	Jacksonville	32250	904-493- 5500	goschg@sa w- grass.com
Franklin Templeto n Institution al	Brian Schweitze r	100 Fountain Parkway N.		St. Petersburg	33716	610-577- 5018	brian.schwe itzer@frankl intempleton. com
Vanguard	Michael Dominick	PO Box 1110		Valley Forge	19482	610-503- 5480	michael_do minick@van guard.com
Molpus Woodland s Timber	David Scott	119 S. President Street		Jackson	39201	601-949- 3144	dscott@mol pus.com
Dune Real Estate	Cara Petrucelli	623 5th Avenue	26th Floor	New York	10022	212-301- 8341	cara@drep. com

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Crescent Direct Lending	Kim Bartholom ew	11100 Santa Monica Blvd	Suite 200	Los Angeles	90025	310-235- 5913	kimberly.bar tholomew@ crescentcap .com
Great Lakes Advisors	Laurie Watson	231 S. LaSalle Street	4th Floor	Chicago	60604	813-515- 7571	lwatson@gr eatlakesadv isors.com

Performance Evaluation

Firm Name AndCo Consulting

Contact Person Brendon Vavrica

Address Line 1 4901 Vineland Road

Address Line 2 Ste 600

City Orlando

Zip 32811

Telephone 904-386-3013

Email brendonv@andcoconsulting.com

Date Of Valuation 9/30/2019

Period Covered Begin Date 10/1/2018

Period Covered End Date 9/30/2019

Legal Advisor

Firm Name Lewis, Longman & Walker

Contact Person Janice Rustin

Address Line 1 515 N. Flagler Drive

Address Line 2 Suite 1500

City West Palm Beach

Zip 33401

Telephone 561-640-0820

Email jrustin@llw-law.com

Plan Administrator

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Firm Name City of Delray Beach

Contact Person Lisa Castronovo

Address Line 1 100 NW 1st Avenue

Address Line 2

City Delray Beach

Zip 33444

Telephone 561-243-7289

Email castronovol@mydelraybeach.com

Notes

Plan Name: City of Delray Beach Firefighters' Retirement System

Assets

Assets - Market Value

Cash, Checking and Savings

Institution Holding Deposit	Amount	Interest Rate
	\$126,738.00	

Total Cash, Check and Savings \$126,738.00

Certificates of Deposit

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Certificates of Deposit \$0.00

Short Term Investments

Institution Holding Deposit	Amount	Interest Rate
	\$1,896,992.00	

Total Short Term Investments \$1,896,992.00

Other Cash and Equivalents

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Other Cash and Equivalents \$0.00

U.S. Bonds and Bills

Institution Holding Deposit	Amount	Interest Rate
	\$9,046,035.00	

Total U.S. Bonds and Bills \$9,046,035.00

Federal Agency Guaranteed Securities

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Federal Agency Guaranteed Securities \$0.00

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Corporate Bonds

Institution Holding Deposit	Amount	Interest Rate
	\$17,538,342.00	

Total Corporate Bonds \$17,538,342.00

Stocks

Institution Holding Deposit	Amount	Interest Rate
	\$66,774,060.00	

Total Stocks \$66,774,060.00

Other Securities

Institution Holding Deposit	Amount	Interest Rate
	\$0.00	
	\$4,143,503.00	

Total Other Securities \$4,143,503.00

Real Estate

Institution Holding Deposit	Amount	Interest Rate
	\$9,261,155.00	

Total Real Estate \$9,261,155.00

Investments Held By Insurance Company

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Investments Held By Insurance Company \$0.00

Other Investments

Institution Holding Deposit Amount Interest Rate
--

Total Other Investments \$0.00

Account Receivable

Plan Name: City of Delray Beach Firefighters' Retirement System

Due From	Date of Payment	Amount
Participants	10/4/2019	\$36,629.00
Broker-Dealers	10/1/2019	\$278,460.00

Total Accounts Receivable \$315,089.00

Other Assets

Asset Name	Asset Amount
DROP Self-Directed	\$11,582,452.00

Total Other Assets \$11,582,452.00

Accrued Interest \$171,986.00

Total Assets for the year 9/30/2019 \$120,856,352.00

Notes

Plan Name: City of Delray Beach Firefighters' Retirement System

Liabilities

Liabilities

Refunds Payable	\$0.00
Pensions Payable	\$0.00
Unpaid Expenses	\$94,834.00
DROP Plan Payable	\$0.00
Prepaid Contributions	\$0.00

Other Liabilities

Liability Name	Liability Amount
Broker-Dealer	\$275,667.00

Total Other Liabilities \$275,667.00

Total Liabilities for the year ended 9/30/2019 \$370,501.00

Notes

Use the following text box to add any notes about the above.

Plan Name: City of Delray Beach Firefighters' Retirement System

Revenues

Revenues

Contributions From Active Members

\$1,044,994.00

State of Florida Premium Tax Monies

Date of Deposit	Amount	Notes
9/20/2019	\$1,129,759.00	

Total State of Florida Premium Tax Monies \$1,129,759.00

City Contributions

Date of Deposit	Amount	Notes
10/19/2018	\$6,447,539.00	
8/23/2019	\$5,273.00	

Total City Contributions \$6,452,812.00

Contributions From City on Behalf of Active \$0.00

Members

Buybacks/Repayment of Contributions \$0.00

Unrealized Gains/Losses \$2,646,181.00

Interests and Dividends \$3,064,435.00

Gains From Sale of Investments \$0.00

Other Revenues

Name	Amount
Other Income	\$1,379.00

Total Other Revenues: \$1,379.00

Total Revenues for the year ended 9/30/2019 \$14,339,560.00

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Payroll

Total Calendar Year Payroll (Police) \$0.00

Total Calendar Year Payroll (Fire) \$28,299,953.00

If lower than last year, or significantly higher, please explain.

Notes

Use the following text box to add any notes about the above.

Plan Name: City of Delray Beach Firefighters' Retirement System

Expenditures

Expenditures

Retirement Pension Payments	\$6,727,376.00
Disability Pension Payments	\$137,164.00
Terminated Vested Pension Payments	\$0.00
Beneficiary Pension Payments	\$170,936.00
Total Pension Payments	\$7,035,476.00
Termination Payments	\$10,566.00
DROP Plan Payments	\$1,508,044.00
Insurance Premium Payments	\$0.00

Detail of Expenses - Must include expenses required in section 185.05(8)(a)1. and 175.061(8)(a)1. at a minimum.

Name	Amount
Legal Fees	\$17,023.00
Administrator's Fees	\$65,507.00
Educational Training	\$1,205.00
Actuarial Fees	\$34,535.00
Audit Fees	\$25,500.00
Office Expenses	\$282.00
Fiduciary Liability Insurance	\$16,079.00

Total Detail of Expenses \$160,131.00

Investment Expenses

Name	Amount
Investment Manager Fees	\$649,221.00
Performance Monitor Fees	\$35,332.00
Custody Fees	\$39,008.00

Total Deposits \$723,561.00

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Loss From Sale of Investments \$0.00

Other Expenditures

Name Amount

Total for Other Expenditures: \$0.00

Total Expenditures for 9/30/2019 \$9,437,778.00

Notes

Plan Name: City of Delray Beach Firefighters' Retirement System

Fund Totals

Verify Totals

Total Assets	\$120,856,352.00
Less: Total Liabilities	\$370,501.00
Fund Balance *	\$120,485,851.00
Fund Balance Beginning of Year	\$115,584,069.00
Add: Total Revenues	\$14,339,560.00
Less: Total Expenditures	\$9,437,778.00
Fund Balance as of 9/30/2019	\$120,485,851.00

*Fund Balances must agree

Notes

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Investments

Investment Compliance

Investment Provisions

Ordinance Number 17-16

Section 33.67

Date 10/4/2016

Written Investment Policy

Has the board adopted a written investment policy in accordance with the requirements of section 112.661, F.S., and submitted a copy of this policy to the Bureau of Local Retirement Systems?Y

Date Established 11/12/2018

Expected Annual Rate of Return

Has the board determined the total expected annual rate of return for the current year, for each of the next several years, and for the long term hereafter pursuant to s. 112.661(9), Florida Statues, and submitted to the Bureau of Local Retirement Systems?Y

Date Established 5/16/2019

Summary Plan Description

Has the board prepared a summary plan description (SPD) in accordance with the requirements of the section 112.66 Florida Statues? The SPD shall be furnished to a member upon employment and thereafter with each new biennial publication. Y

Date Established

Divestiture Provisions

Has the board complied with the divestiture provisions found in S. 175.071(8) and 185.06(7) Florida Statutes?

Date Established

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

For valuations dated on or after 1/1/16 all plans must use the mortality tables used in either of the two most recently published actuarial valuation reports of the Florida Retirement System.

Note: State premium tax moneys may not be released until the plan has complied with the statutory provisions.

Notes

Report Status: in progress

Plan Name: City of Delray Beach Firefighters' Retirement System

Insured Plans

Insured plans must have the following document forwarded to the insurance company for completion and returned to the municipality as soon as possible, but prior to filling date of the report.

Notes

Plan Name: City of Delray Beach Firefighters' Retirement System

Chapter 175/185, Florida Statutes Police and Fire Annual Report Member Data

Member Data

Pension Data

Data Summary

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
0648	RUSSELL ACCARDI	12/1/1963	Retirement		9/1/2012	\$8,347.00	KATHRYN	3A	\$98,802.00		fire
0818	RICHARD ACKERMAN	8/1/1954	Retirement		8/1/2004	\$8,423.00	SUSAN	1	\$99,835.00		fire
0553	WILLIAM ADAMS	2/1/1948	Retirement		11/1/2005	\$9,323.00	CHARLOTTE	3B	\$111,733.00		fire
5235	STEVEN ANDERSON	11/1/1960	Retirement		8/1/2014	\$7,127.00	MAUREEN	3A	\$84,468.00		fire
5307	JOHN ANDREWS	9/1/1945	Beneficiary		11/1/1989	\$445.00	TIFFANY	2	\$5,337.00		fire
1413	RANDY R BAHE	8/1/1968	Retirement		3/1/2014	\$5,098.00		2	\$60,796.00		fire
5444	ROBERT BAKER	2/1/1968	Retirement		1/1/2016	\$6,216.00	JEANNA	3B	\$74,317.00		fire
7186	SUSAN L BATEMAN	4/1/1962	Disability	LOD	6/1/1998	\$3,317.00	DAVID	1	\$39,416.00		fire
6783	DAVID BONELLI	4/1/1957	Retirement		6/1/2000	\$4,330.00	LAURA	3A	\$51,453.00		fire
8664	WAYNE M BRADBURY	7/1/1937	Beneficiary		2/27/1987	\$1,145.00	RAQUEL	3C	\$13,738.00	-	fire

Plan Name: City of Delray Beach Firefighters' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
1216	DAVID G BRASSARD	7/1/1961	Retirement		10/1/2008	\$8,346.00		2	\$100,151.00		fire
5647	WILLIAM BRIARD	12/1/1959	Retirement		7/1/2011	\$7,577.00		2	\$89,918.00		fire
7492	ROBERT BROWN II	1/1/1943	Retirement		8/1/1996	\$3,245.00	A JEAN	3A	\$38,457.00		fire
7861	THOMAS E BUCE	7/1/1946	Retirement		6/1/1994	\$3,328.00	BEVERLY	3A	\$39,547.00		fire
3791	RICHARD A BUSH	9/1/1954	Retirement		12/1/2007	\$9,057.00		2	\$108,413.00		fire
2355	PETER CARAFANO	3/1/1961	Retirement		6/1/2000	\$4,109.00	DENISE	3A	\$48,825.00		fire
5790	CLINTON CASON Jr.	6/1/1959	Retirement		2/1/2011	\$5,712.00	CAROLYN	3D	\$68,211.00		fire
9944	MICHAEL D CATO	9/1/1946	Retirement		6/1/1995	\$4,160.00		2	\$49,434.00		fire
2856	DANIELLE E CONNOR	2/1/1968	Retirement		6/1/2016	\$9,023.00	WERNER ERIN	3D	\$107,214.00		fire
9752	GEOFFREY COOPER	8/1/1956	Retirement		10/1/2005	\$7,250.00	CATHERINE	3A	\$87,004.00		fire
2389	ROBERT CREASMAN	6/1/1964	Retirement		3/1/2012	\$5,459.00	DENISE	3B	\$65,107.00		fire
6383	TERRY E CREASMAN	9/1/1944	Retirement		11/1/1989	\$1,230.00		2	\$14,759.00		fire
8703	EDWARD CRELIN	7/1/1964	Retirement		7/1/2011	\$8,718.00	JUDY	3D	\$103,457.00		fire
9392	ALFRED T D'AMATO	2/1/1948	Retirement		8/1/1994	\$3,337.00		2	\$39,552.00		fire
2667	RICHARD D'ATRIO	7/1/1948	Retirement		6/1/1996	\$4,522.00	BETTYANN	3A	\$53,730.00		fire
4339	MARK DAGNAN	9/1/1970	Retirement		2/1/2015	\$7,569.00		2	\$37,846.00		fire

Plan Name: Ci	ty of Delray Reach	Firefighters' Retiremen	at Systam
rian Name. Ci	ity of Deliay Beach	rhenghers kememer	ii System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
5521	JAMES DALTON	7/1/1959	Retirement		10/1/2004	\$6,515.00	CAROLYN	1	\$78,184.00		fire
8513	JAMES DE CARIE	2/1/1957	Retirement		8/1/2001	\$3,344.00	LANITA	1	\$39,636.00		fire
6649	JOHN DECKERS	4/1/1962	Retirement		6/1/2005	\$4,363.00	LAURA	3D	\$51,836.00		fire
8939	LAURA A DECKERS	4/1/1964	Retirement		6/1/2010	\$5,269.00	JOHN	3C	\$62,611.00		fire
4063	MICHELLE DORCAS	8/1/1963	Retirement		5/1/2011	\$6,488.00		2	\$77,186.00		fire
7739	WAYNE DORCAS	9/1/1954	Retirement		11/1/2005	\$6,405.00	MICHELLE	3A	\$76,761.00		fire
6454	RUTH DOUTHITT	1/1/1966	Retirement		6/1/2005	\$4,709.00	MICHAEL	1	\$55,957.00		fire
8992	PATRICIA DUNKELMAN N	1/1/1967	Retirement		2/1/2012	\$5,609.00	WILLIAM	3A	\$66,976.00		fire
9101	CYNTHIA ELDRED	9/1/1958	Disability	LOD	1/1/1999	\$3,344.00		2	\$39,981.00		fire
3588	DALE FAGAN	2/1/1963	Retirement		7/1/2011	\$6,231.00		2	\$73,938.00		fire
3696	DONALD C FARROW JR	9/1/1960	Retirement		6/1/2004	\$5,772.00	DONNA	1	\$68,579.00		fire
1625	RAYMOND FITZER	10/1/1964	Retirement		10/1/2003	\$5,227.00	RAYMOND	3A	\$62,728.00		fire
4486	JOHN FLETCHER JR	10/1/1953	Retirement		3/1/2001	\$5,282.00	JASON/EMER Y	1	\$62,989.00		fire
6521	MARTIN S GAINER	7/1/1963	Retirement		2/1/2012	\$8,528.00		2	\$101,838.00		fire
5962	PAMELA GARCIA	4/1/1956	Retirement		2/1/2006	\$7,124.00		2	\$85,062.00		fire

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Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
7320	ELARIO GARITO	11/1/1941	Retirement		7/1/1995	\$3,428.00	BARBARA	3A	\$40,683.00		fire
8241	ADAM C GRANATH	1/1/1971	Retirement		1/1/2016	\$5,176.00	ERIKA	3C	\$62,111.00		fire
8538	MAURICE R HAAS	10/1/1948	Retirement		2/1/1998	\$5,143.00		2	\$61,407.00		fire
1260	JOHN K HANSEN	2/1/1960	Retirement		7/1/2006	\$5,974.00	BONNIE	3A	\$70,893.00		fire
0778	CHARLES HARDIN	8/1/1951	Retirement		11/1/2002	\$6,450.00	MARCIA	3A	\$76,546.00		fire
5839	ANDREW HEITHAUS	10/1/1957	Retirement		7/1/2004	\$2,802.00	INGRID	1	\$33,250.00		fire
1473	JAMES HELVENSTO N	3/1/1929	Retirement		5/1/1981	\$929.00	BARBARA	3B	\$11,153.00		fire
6732	MICHAEL J HENDRICKS	9/1/1942	Retirement		5/1/1997	\$4,960.00	PHYLLIS	3C	\$59,013.00		fire
4797	PAUL HENSLEY	10/1/1952	Retirement		5/1/2004	\$6,071.00	HELEN	1	\$72,222.00		fire
8745	EARKIS HILL	12/1/1944	Beneficiary		11/1/1992	\$1,373.00	SMITH GLORIA	2	\$16,472.00		fire
4622	WILLIAM HILL	4/1/1928	Beneficiary		6/1/1980	\$0.00	JOANNE	3C	\$1,967.00	Died Dec. 2018	fire
2871	KATHERINE HOECHERL	8/1/1963	Retirement		6/1/2006	\$5,122.00	ROBERT	1	\$60,856.00		fire
7640	JAN HOLMSTED	6/1/1960	Retirement		9/1/2009	\$4,798.00	LAURA	3C	\$56,798.00		fire
3269	ROBERT HORN	10/1/1938	Retirement		1/1/1990	\$1,739.00		2	\$20,868.00		fire
9769	STEVEN HULL	10/1/1953	Retirement		5/1/1998	\$3,130.00	EWEN ELIZABETH	3A	\$37,237.00		fire

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
6609	MICHAEL JACKSON	10/1/1942	Beneficiary		11/16/1984	\$2,271.00	JUDITH	2	\$27,253.00		fire
0952	MICHAEL KENOPKE	7/1/1953	Retirement		5/1/2005	\$4,841.00	WILLIAM	1	\$57,596.00		fire
8901	BENJAMIN KNABB	10/1/1950	Retirement		7/1/2009	\$8,046.00	LYNN	3A	\$95,481.00		fire
4382	DAVID KOBRIN	9/1/1960	Retirement		11/1/2005	\$7,454.00	SONJA	3A	\$89,338.00		fire
9432	JOSEPH R KOPEL	12/1/1951	Retirement		7/1/1994	\$4,018.00	SANDRA	3A	\$47,677.00		fire
2338	ERIC S KOVACS	3/1/1970	Retirement		6/1/2010	\$5,033.00	KELLY	3A	\$59,796.00		fire
3536	JOSEPH LANG	6/1/1962	Retirement		3/1/2015	\$6,090.00		2	\$72,627.00		fire
7128	JENNIFER A LASKO	11/1/1964	Retirement		7/1/2016	\$4,787.00	NANCY	3A	\$57,446.00		fire
6471	SELWYN R LEE	6/1/1945	Retirement		12/1/1993	\$3,426.00	CAROL	3A	\$41,016.00		fire
7374	ODELL LEWIS	9/1/1956	Retirement		9/1/2014	\$5,474.00	DAWN	3A	\$5,474.00		fire
2234	JOSEPH LIGUORI	8/1/1955	Retirement		7/1/2009	\$8,863.00	SUSAN	3B	\$105,179.00		fire
2721	DAVID MARCHSTEI NER	10/1/1963	Retirement		12/1/2010	\$4,996.00	CANDACE	3A	\$59,805.00		fire
0424	DANIEL MARULLO	12/1/1959	Retirement		12/1/2010	\$4,654.00	LORI	3A	\$55,712.00		fire
9100	EDWARD MEISSNER	6/1/1957	Retirement		7/1/2005	\$6,166.00	MICHELLE	1	\$73,078.00		fire
2965	CRAIG F MERRILL	11/1/1965	Retirement		4/1/2012	\$6,231.00	TAMMY	3C	\$74,222.00		fire

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
9090	THOMAS M MOOK	1/1/1942	Retirement		6/1/1994	\$3,657.00	CONSTANCE	3A	\$43,457.00		fire
0793	ROBERT MORELAND	11/1/1954	Retirement		6/1/2002	\$6,856.00	DEBORAH	1	\$81,463.00		fire
0577	DENNIS H MORLEY	4/1/1947	Retirement		9/1/1996	\$3,249.00	DEBORAH	3A	\$38,461.00		fire
7131	RICHARD MURPHY	8/1/1965	Retirement		8/1/2009	\$7,440.00	CONNER SARAH	3C	\$88,183.00		fire
9128	FREDERICK McALLEY	1/1/1953	Retirement		7/1/2011	\$7,520.00		2	\$89,241.00		fire
1686	MICHAEL McCLEARY	6/1/1961	Retirement		6/1/2010	\$6,710.00		2	\$79,732.00		fire
3552	JOHN McKESSY	4/1/1961	Retirement		8/1/2011	\$5,076.00	ANN	3B	\$60,156.00		fire
4292	THOMAS NABORS	3/1/1952	Beneficiary		9/1/2004	\$2,974.00	JOYCE	2	\$37,720.00		fire
0511	ARTHUR F NEDDO	1/1/1956	Retirement		10/1/1998	\$4,780.00	MARGARET	3A	\$57,359.00		fire
8033	GAYL NYE	5/1/1959	Retirement		6/1/2010	\$1,292.00	CODICK GARRY	1	\$15,352.00		fire
6638	ANTONIO OJEA	11/1/1966	Retirement		6/1/2011	\$6,614.00	MICHELLE	3B	\$78,586.00		fire
1546	RONALD PANGBURN	6/1/1958	Disability	LOD	1/1/2001	\$2,727.00	LAVERN	3A	\$32,727.00		fire
1519	ERIC PATRIE	1/1/2008	Beneficiary		12/1/2012	\$328.00	MORGAN	1	\$3,942.00		fire
1519	ERIC PATRIE	6/1/1975	Beneficiary		12/1/2012	\$1,423.00	KIMBERLY	2	\$17,081.00		fire
1519	ERIC PATRIE	10/1/2011	Beneficiary		12/1/2012	\$328.00	RILEY	1	\$3,942.00		fire
6620	BERNARD PITTMAN	9/1/1947	Beneficiary		1/1/1990	\$1,590.00	CAROLYN	2	\$19,082.00		fire
0878	STEVE S PRESS	10/1/1970	Retirement		12/1/2012	\$6,015.00	DIANNA	3B	\$72,000.00		fire

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
3041	DAVID PRIEST	9/1/1947	Retirement		6/1/2004	\$5,081.00	CAROL	1	\$60,372.00		fire
8709	JOHN REECK	3/1/1963	Retirement		8/1/2007	\$5,185.00	TERRI	3A	\$61,459.00		fire
9092	WILLIAM J REGO	7/1/1947	Retirement		5/1/1998	\$3,843.00	JUDITH	3A	\$45,718.00		fire
1185	MARK REYNOLDS	1/1/1959	Retirement		5/1/2014	\$5,735.00	APRIL	3D	\$68,221.00		fire
8344	WAYNE ROSEKE	10/1/1941	Retirement		8/1/1987	\$1,386.00	ALEATHA	3A	\$16,635.00		fire
6129	PETE M SCHOFIELD	5/1/1952	Retirement		6/1/1997	\$2,809.00	DON	3D	\$33,381.00		fire
3944	BARRY A SEARLES	6/1/1955	Retirement		5/1/1997	\$3,098.00	NANCY	3A	\$36,858.00		fire
8440	ROBERT SLAGER	9/1/1922	Beneficiary		3/1/1979	\$1,020.00	RUTH	3B	\$12,245.00		fire
2583	HOWARD E SPAIN	5/1/1950	Retirement		2/1/2012	\$4,473.00	JANET	3B	\$53,411.00		fire
0371	JOHN STAAB	9/1/1963	Retirement		9/1/2013	\$7,241.00	JUDI	3B	\$85,819.00		fire
9849	RANDY D STRAGHN	3/1/1952	Retirement		10/1/1995	\$3,594.00		1	\$43,129.00		fire
4379	CHARLES STRAVINO	10/1/1957	Retirement		11/1/2004	\$9,364.00	DEBRA	1	\$112,226.00		fire
8530	JAMES H TABEEK	6/1/1961	Retirement		3/1/2008	\$7,602.00		2	\$90,668.00		fire
4369	MICHAEL THORNTON	11/1/1960	Retirement		12/1/2011	\$4,873.00	JACQUELINE	3A	\$58,327.00		fire
2785	BERNARD TILLSON	6/1/1962	Retirement		12/1/2000	\$3,805.00	DELORES	3A	\$45,544.00		fire
3204	JOHN W TOMASZEW SKI	6/1/1952	Retirement		4/1/2006	\$10,018.00	LORRAINE	3C	\$119,326.00		fire

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
2508	DOUGLAS R TRAWICK	2/1/1947	Retirement		6/1/1994	\$0.00		3A	\$36,552.00	Died 6/2019	fire
4125	EILEEN R TUCKMAN	11/1/1950	Retirement		12/1/2009	\$4,272.00	MICHAEL	3D	\$51,136.00		fire
2930	MICHAEL E TWIGGER	8/1/1965	Retirement		3/1/2013	\$8,050.00	IBARRA ESTHER	3D	\$96,009.00		fire
1847	DOUGLAS VAUGHN	9/1/1956	Retirement		12/1/2000	\$6,026.00	ROSEMARY	1	\$72,133.00		fire
7252	HARRY VELARDE	7/1/1965	Retirement		7/1/2005	\$3,626.00	CYNTHIA	1	\$43,028.00		fire
6812	JOHN D WAY	12/1/1949	Disability	LOD	1/1/1990	\$2,087.00	ELIZABETH	3A	\$25,040.00		fire
4261	JEROME WEATHERSP OON	9/1/1955	Retirement		1/1/2012	\$4,897.00		2	\$58,552.00		fire
5155	JOSEPH WEITMAN	2/1/1953	Retirement		8/1/2004	\$4,995.00	NANCYE	1	\$59,206.00		fire
7967	DAVID WETZEL	2/1/1962	Retirement		5/1/2016	\$8,454.00	MARY GAY	3D	\$75,582.00		fire
4746	FRANCES WICKERT	7/1/1931	Beneficiary		4/30/1981	\$1,013.00	FRANCES	2	\$12,157.00		fire
0598	MICHAEL B WIGDERSON	3/1/1948	Retirement		2/1/1997	\$5,737.00	SUSAN	3A	\$68,500.00		fire
6164	VICTOR B WILLIAMS	12/1/1963	Retirement		2/1/2012	\$6,449.00	JOYCE	3C	\$77,002.00		fire
2717	MICHAEL J WISE	5/1/1959	Retirement		6/1/2012	\$9,279.00	CHRISTY	2	\$110,252.00		fire
0801	DONNA WOLFER	3/1/1951	Retirement		7/1/2005	\$4,759.00	SEAN	1	\$56,473.00		fire
1891	MARK WOOD	11/1/1964	Retirement		4/1/2011	\$6,457.00	LEAH	3B	\$76,909.00		fire
5109	WAYNE YODER	5/1/1953	Retirement		7/1/2003	\$4,733.00	MARY	3A	\$56,164.00		fire

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Plan Name: City of Delray Beach Firefighters' Retirement System

Total Number of rows: 120

Member Type	Number of rows
fire	120

Disability Categories

For members listed as disabled please enter the counts below of members with the given disability type.

	Fire	Police	General
Heart Disease	0		
Hypertension	0		
Emphysema	0		
Injury	0		
Cancer	0		
Other	0		
Total	0		
Subtotals	Fire	Police	General
		1 01100	J J J J J J J J J J
Retirement	\$6,727,376.00	\$0.00	\$0.00
Retirement Disability	\$6,727,376.00 \$137,164.00		
		\$0.00	\$0.00
Disability	\$137,164.00	\$0.00 \$0.00	\$0.00 \$0.00

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Plan Name: City of Delray Beach Firefighters' Retirement System

Notes

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Plan Name: City of Delray Beach Firefighters' Retirement System

Terminations

LR003

Social Security Number	Name	Date of Birth	Date of Employment	Date of Termination	Amount Refunded At Termination	Note	Member Type
6758	MATTHEW DI CERBO	8/1/1990	9/19/2016	11/19/2016	\$0.00	UNCLAIMED REFUND	fire
6126	MICHAEL FERNANDEZ	7/1/1996	11/6/2017	12/5/2017	\$0.00	UNCLAIMED REFUND	fire
5597	JACOB GOMBOCZ	12/1/1988	7/23/2018	8/21/2018	\$400.00		fire
3789	CALEB HORNSBY	12/1/1988	11/6/2017	1/10/2018	\$0.00	UNCLAIMED REFUND	fire
7785	ANTHONY MACIAS	10/1/1994	9/1/2017	8/25/2019	\$0.00	UNCLAIMED REFUND	fire
2123	MICHAEL MADEJ	11/1/1987	9/19/2016	9/28/2018	\$10,166.00		fire
2852	JESSE MILLER	12/1/1994	7/23/2018	8/21/2018	\$0.00	UNCLAIMED REFUND	fire
8092	ROBERT MORGAN	8/1/1988	11/6/2017	11/20/2017	\$0.00	UNCLAIMED REFUND	fire
6266	DANIEL PEREZ	9/1/1994	9/5/2017	10/17/2017	\$0.00	UNCLAIMED REFUND	fire
0238	ERIC PERRERA	1/1/1990	11/6/2017	11/28/2017	\$0.00	UNCLAIMED REFUND	fire
4538	DANIEL PRIETO	11/1/1983	7/23/2018	2/11/2019	\$0.00	UNCLAIMED REFUND	fire
1812	MICHAEL RUBY	7/1/1990	2/8/2016	9/16/2016	\$0.00	UNCLAIMED REFUND	fire
9776	STEVEN TADDEO	2/1/1991	7/23/2018	7/3/2019	\$0.00	UNCLAIMED REFUND	fire
0083	JESSE TAVAI	1/1/1992	11/6/2017	11/28/2017	\$0.00	UNCLAIMED REFUND	fire

Total Number of rows: 14

Member Type	Number of rows	
fire		14

Subtotals \$10,566.00

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Plan Name: City of Delray Beach Firefighters' Retirement System

Member Type	Subtotal
fire	\$10,566.00

Notes

Statistical Exhibit

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
3371	CHRISTOPH ER ABALDO	4/1/1987	М	32	2/8/2016	3	2/8/2016	\$0.00	\$63,959.00	\$5,756.32		fire
9356	TYLER C ADAMS	8/1/1980	М	39	4/5/2010	9	4/5/2010	\$0.00	\$86,885.00	\$7,819.69		fire
3339	JESUS AGUERO	1/1/1996	М	23	11/6/2017	1	11/6/2017	\$0.00	\$58,215.00	\$5,239.37		fire
7193	CHELSEA S ALLISON	12/1/1991	F	28	2/8/2016	3	2/8/2016	\$0.00	\$64,679.00	\$5,821.11		fire
2976	DANIEL A ALVAREZ	1/1/1980	М	39	2/8/2016	3	2/8/2016	\$0.00	\$63,359.00	\$5,702.31		fire
2010	MATTHEW R ANDERSON	1/1/1984	М	35	9/5/2017	2	9/5/2017	\$0.00	\$58,761.00	\$5,288.47		fire
0909	JAMES H BAST	9/1/1975	М	44	3/19/2007	12	3/19/2007	\$0.00	\$105,918.00	\$9,532.61		fire
3896	EDMUND BEARDSLEY	4/1/1981	М	38	1/6/2003	16	1/6/2003	\$0.00	\$119,497.00	\$10,754.76		fire
6113	SHAWN R BECKOWITZ	5/1/1965	М	54	2/28/1994	25	2/28/1994	\$0.00	\$42,703.00	\$3,843.24	DROP	fire
4356	MARK T BEYER	8/1/1976	М	43	6/19/2006	13	6/19/2006	\$0.00	\$92,531.00	\$8,327.82		fire
5429	DEREK BOSANAC	2/1/1990	М	29	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
1662	MICHAEL T BOYD	6/1/1973	М	46	9/9/2002	17	9/9/2002	\$0.00	\$109,388.00	\$9,844.90		fire
9616	JAMES R BRADFORD	7/1/1985	М	34	1/22/2007	12	1/22/2007	\$0.00	\$104,799.00	\$9,431.93		fire
6996	JOHN H BRASWELL	8/1/1983	М	36	9/8/2014	5	9/8/2014	\$0.00	\$68,562.00	\$6,170.62		fire

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
4224	BRANDON BRENTANO	3/1/1993	М	26	11/17/2014	5	11/17/2014	\$0.00	\$67,290.00	\$6,056.12		fire
6314	PAUL R BRITT	1/1/1982	М	37	9/8/2014	5	9/8/2014	\$0.00	\$72,526.00	\$46,061.91	39534.50 for prior svc	fire
1053	GIDEON BROWN	3/1/1991	М	28	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
4912	JAMES C BUNNELL	2/1/1980	М	39	5/12/2003	16	5/12/2003	\$0.00	\$99,854.00	\$8,986.82		fire
2493	JOSEPH A CAFONE	1/1/1985	М	34	3/19/2007	12	3/19/2007	\$0.00	\$100,700.00	\$9,062.99		fire
6041	JOSEPH A CALOGERO	11/1/1990	М	29	2/8/2016	3	2/8/2016	\$0.00	\$63,732.00	\$5,735.89		fire
6816	JEFFREY CANO	1/1/1998	М	21	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
8080	JUSTIN C CARUSO	2/1/1977	М	42	5/12/2003	16	5/12/2003	\$0.00	\$100,574.00	\$9,051.62		fire
5534	MICHAEL CASCIATO	4/1/1994	М	25	7/23/2018	1	7/23/2018	\$0.00	\$56,227.00	\$5,060.44		fire
5495	MATTHEW E CHOTINER	6/1/1990	М	29	9/5/2017	2	9/5/2017	\$0.00	\$59,791.00	\$5,381.20		fire
2386	ANDREW R CLOSE	3/1/1983	М	36	3/3/2003	16	3/3/2003	\$0.00	\$110,036.00	\$9,903.24		fire
8394	ANDRES E COLON	4/1/1988	М	31	2/8/2016	3	2/8/2016	\$0.00	\$63,359.00	\$5,702.31		fire
8377	JOHN H CONNOLLY	10/1/1961	М	58	6/14/1999	20	6/14/1999	\$0.00	\$94,527.00	\$8,507.40		fire
5908	BRETT A CORRENTE	6/1/1981	М	38	2/8/2016	3	2/8/2016	\$0.00	\$63,558.00	\$5,720.21		fire
7855	STEPHANIE L CRANEY	8/1/1976	F	43	1/31/2005	14	1/31/2005	\$0.00	\$92,848.00	\$8,356.34		fire

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
1145	DANIEL A DE FRANESCHI	8/1/1987	M	32	2/8/2016	3	2/8/2016	\$0.00	\$64,441.00	\$5,799.65		fire
0996	JONATHAN DE LA RIONDA	2/1/1988	M	31	11/7/2011	8	11/7/2011	\$0.00	\$80,443.00	\$7,239.87		fire
8995	RONALD J DELONG	6/1/1972	М	47	6/12/2000	19	6/12/2000	\$0.00	\$94,454.00	\$8,500.85		fire
0958	CONOR P DEVERY	9/1/1967	М	52	5/31/2005	14	5/31/2005	\$0.00	\$95,127.00	\$8,561.40		fire
6820	STACEY DIAZ	3/1/1969	F	50	11/6/2017	1	11/6/2017	\$0.00	\$59,425.00	\$5,348.26		fire
4404	LAMONT DUBOIS	4/1/1980	М	39	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
7494	JESUS DURANTE	12/1/1975	М	44	3/3/2003	19	3/3/2000	\$0.00	\$107,803.00	\$9,702.26		fire
1194	BRADLEY M ESSARY	5/1/1987	М	32	2/8/2016	3	2/8/2016	\$0.00	\$63,737.00	\$5,736.35		fire
4464	MATTHEW ESTEP	5/1/1999	М	20	9/23/2019	0	9/23/2019	\$0.00	\$939.00	\$84.54	New Hire	fire
9280	JOSEPH D FALCONE	10/1/1976	М	43	5/20/2002	17	5/20/2002	\$0.00	\$110,559.00	\$9,950.30		fire
4087	FERNANDO E FAUBLA	9/1/1989	М	30	9/5/2017	2	9/5/2017	\$0.00	\$58,687.00	\$5,281.86		fire
0611	ANDREW FAZEKAS	7/1/1987	M	32	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
8643	MATTHEW FICK	4/1/1982	М	37	3/3/2003	16	3/3/2003	\$0.00	\$108,415.00	\$9,757.38		fire
1489	ARRON FINKELSTE N	5/1/1988	M	31	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire

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7558	BRIAN M FIOREY	2/1/1984	М	35	9/19/2005	14	9/19/2005	\$0.00	\$109,815.00	\$9,883.39		fire
2803	TRAVIS J FRANCO	8/1/1982	М	37	10/2/2006	16	10/2/2003	\$0.00	\$103,792.00	\$9,780.77	439.47 toward prior svc	fire
7195	DAVID GARCIA	1/1/1989	М	30	4/5/2010	9	4/5/2010	\$0.00	\$86,577.00	\$7,791.95		fire
0220	DANIEL GEANEY	2/1/1993	М	26	9/5/2017	2	9/5/2017	\$0.00	\$58,444.00	\$5,259.96		fire
6422	SEAN E GIBSON	1/1/1968	М	51	5/12/2003	16	5/12/2003	\$0.00	\$111,340.00	\$10,020.56		fire
5872	EDWARD D GRACEY	7/1/1987	М	32	10/31/2016	2	10/31/2016	\$0.00	\$61,163.00	\$5,504.63		fire
1808	ERIK C GRAU	11/1/1993	М	26	9/8/2014	5	9/8/2014	\$0.00	\$67,906.00	\$6,111.52		fire
0045	JOE GUILLAUME	2/1/1981	М	38	6/10/2013	6	6/10/2013	\$0.00	\$72,573.00	\$6,531.58		fire
8684	JAY K GUNSTEN	4/1/1980	М	39	9/19/2005	14	9/19/2005	\$0.00	\$96,301.00	\$8,667.11		fire
2222	DARREN M GURLEY	9/1/1974	М	45	6/12/2000	19	6/12/2000	\$0.00	\$99,254.00	\$8,932.82		fire
6786	BRANDON HAGANS	7/1/1993	М	26	9/5/2017	2	9/5/2017	\$0.00	\$58,883.00	\$5,299.49		fire
4281	MELISSA HALL	5/1/1984	F	35	11/6/2017	1	11/6/2017	\$0.00	\$58,215.00	\$5,239.36		fire
6046	KENNETH M HANSLEY	10/1/1980	М	39	3/19/2007	12	3/19/2007	\$0.00	\$96,858.00	\$8,717.25		fire
6880	JEFFREY F HARKCOM	3/1/1964	М	55	6/12/2000	19	6/12/2000	\$0.00	\$95,847.00	\$8,626.20		fire
7396	GIOVANNI T HART	7/1/1995	М	24	9/5/2017	2	9/5/2017	\$0.00	\$58,511.00	\$5,266.02		fire

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0249	WALTER A HIRST	11/1/1964	М	55	6/14/1999	20	6/14/1999	\$0.00	\$109,436.00	\$9,849.24		fire
5722	BRITTNEY M HOAG	5/1/1990	F	29	2/8/2016	3	2/8/2016	\$0.00	\$64,679.00	\$5,821.09		fire
6117	SEAN HUMANN	10/1/1988	М	31	9/5/2017	2	9/5/2017	\$0.00	\$57,721.00	\$5,194.90		fire
8531	CHRISTOPH ER HUTCHINSO N	10/1/1972	M	47	6/12/2000	19	6/12/2000	\$0.00	\$94,870.00	\$8,538.31		fire
2395	JAMES C JACOBS	7/1/1977	М	42	3/14/2005	17	3/14/2002	\$0.00	\$85,841.00	\$7,725.72		fire
8586	ALEC B JARZABKO WSKI	9/1/1994	М	25	9/5/2017	2	9/5/2017	\$0.00	\$58,687.00	\$5,281.86		fire
7106	CURTIS M JEPSEN	9/1/1977	М	42	6/21/2004	15	6/21/2004	\$0.00	\$111,410.00	\$10,026.90		fire
1385	EDWIN JIMENEZ	2/1/1997	М	22	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
3800	MICHELLE JONAITIS	4/1/1989	F	30	9/5/2017	2	9/5/2017	\$0.00	\$58,687.00	\$5,281.86		fire
1102	JOHN T KAVANAGH	9/1/1981	М	38	1/22/2007	12	1/22/2007	\$0.00	\$95,457.00	\$8,591.14		fire
3092	RAY J KEITH	11/1/1991	М	28	10/31/2016	2	10/31/2016	\$0.00	\$60,963.00	\$5,486.67		fire
8068	MICHAEL KELLY	10/1/1981	M	38	9/19/2016	3	9/19/2016	\$0.00	\$51,663.00	\$4,649.66		fire
2462	KYLE C KENNEY	6/1/1986	M	33	6/10/2013	6	6/10/2013	\$0.00	\$76,254.00	\$6,862.86		fire
0720	TRAVIS J KLEMANN	6/1/1980	М	39	5/20/2002	17	5/20/2002	\$0.00	\$99,253.00	\$8,932.81		fire

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9377	TIA KYOTIKKI	10/1/1990	F	29	9/8/2014	5	9/8/2014	\$0.00	\$68,424.00	\$6,158.15		fire
0340	JOSEPH R LAMARCO	4/1/1976	М	43	6/21/2004	15	6/21/2004	\$0.00	\$100,573.00	\$9,051.61		fire
3682	CHARLES A LAWSON	4/1/1965	М	54	6/14/1999	20	6/14/1999	\$0.00	\$69,824.00	\$6,284.15	DROP	fire
6017	JENNIFER B LEVINE	3/1/1977	F	42	2/8/2016	3	2/8/2016	\$0.00	\$64,680.00	\$5,821.21		fire
0436	GREGORY LEWIN	3/1/1986	М	33	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
6573	MARK LOCIGNO	10/1/1987	F	32	11/7/2011	8	11/7/2011	\$0.00	\$81,009.00	\$7,290.80		fire
1803	CHRISTIAN M LOPEZ	11/1/1983	М	36	2/8/2016	3	2/8/2016	\$0.00	\$63,387.00	\$5,704.84		fire
5915	TODD D LYNCH	6/1/1971	М	48	6/14/1999	23	6/14/1996	\$0.00	\$126,033.00	\$11,342.98		fire
7785	ANTHONY MACIAS	10/1/1994	М	25	9/5/2017	2	9/5/2017	\$0.00	\$53,489.00	\$4,814.03	Terminated	fire
2123	MICHAEL D MADEJ	11/1/1987	М	32	9/19/2016	3	9/19/2016	\$0.00	\$0.00	\$6.93	Terminated	fire
4389	CRAIG E MAHONEY	5/1/1984	М	35	6/21/2004	15	6/21/2004	\$0.00	\$105,394.00	\$9,485.47		fire
6487	MATTHEW F MAHONEY	10/1/1986	М	33	10/2/2006	13	10/2/2006	\$0.00	\$106,830.00	\$9,614.74		fire
2167	ANDREW MANGINI	4/1/1993	М	26	11/6/2017	1	11/6/2017	\$0.00	\$59,535.00	\$5,358.16		fire
8636	STEPHANY MARCOS	7/1/1995	F	24	7/23/2018	1	7/23/2018	\$0.00	\$56,527.00	\$5,087.44		fire
6065	ANTHONY J MARIANO	5/1/1992	М	27	9/5/2017	2	9/5/2017	\$0.00	\$58,660.00	\$5,279.42		fire

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4892	WILLIAM A MARINO	4/1/1972	М	47	11/8/1993	26	11/8/1993	\$0.00	\$16,178.00	\$1,456.00	DROP	fire
2118	JOSEPH MAZZEO	2/1/1982	М	37	3/3/2003	16	3/3/2003	\$0.00	\$109,279.00	\$9,835.12		fire
1010	CHRISTINE MCCRADY	3/1/1973	F	46	10/22/2002	17	10/22/2002	\$0.00	\$109,388.00	\$9,844.90		fire
6352	KEVIN MCKESSY	6/1/1992	М	27	11/17/2014	5	11/17/2014	\$0.00	\$67,040.00	\$6,033.58		fire
5598	KEVIN A MEAD	10/1/1986	М	33	7/14/2008	11	7/14/2008	\$0.00	\$100,013.00	\$9,001.15		fire
5210	MATTHEW F MEJEUR	11/1/1983	М	36	3/12/2007	9	3/12/2007	\$0.00	\$82,872.00	\$7,458.50		fire
3044	RICHARD MERRILL	11/1/1995	М	23	9/23/2019	0	9/23/2019	\$0.00	\$939.00	\$84.54	New Hire	fire
4183	KEITH MEYERSON	9/1/1986	М	33	11/7/2011	8	11/7/2011	\$0.00	\$81,043.00	\$7,293.87		fire
7303	CARLOS MILA	5/1/1991	М	28	11/6/2017	1	11/6/2017	\$0.00	\$59,425.00	\$5,348.26		fire
6572	IDANIA D MILLER- ANGEL	2/1/1980	F	39	3/19/2007	12	3/19/2007	\$0.00	\$91,097.00	\$8,198.70		fire
9954	CRISTA A MOCKENHA UPT	11/1/1974	F	45	3/4/2002	17	3/4/2002	\$0.00	\$110,574.00	\$9,951.70		fire
5014	STEVEN MOEWS	3/1/1972	М	47	1/16/2001	18	1/16/2001	\$0.00	\$126,383.00	\$11,374.51		fire
6340	JASON L MORAN	12/1/1983	М	36	10/31/2016	2	10/31/2016	\$0.00	\$61,190.00	\$5,507.08		fire
7645	CHRISTOPH ER MULLER	12/1/1969	М	50	3/19/2007	12	3/19/2007	\$0.00	\$91,817.00	\$8,263.50		fire
9747	EDWARD MUNIZ	5/1/1992	М	27	9/5/2017	2	9/5/2017	\$0.00	\$58,687.00	\$5,281.86		fire

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5389	SARAH M MURPHY	1/1/1976	F	43	6/21/2004	15	6/21/2004	\$0.00	\$95,847.00	\$8,626.20		fire
6364	ANTHONY PARLAMEN TO	4/1/1987	М	32	6/10/2013	6	6/10/2013	\$0.00	\$76,160.00	\$6,854.37		fire
3175	ROBERT A PASTOR	10/1/1984	М	35	10/31/2016	2	10/31/2016	\$0.00	\$61,790.00	\$5,561.08		fire
5068	MICHAEL PEREZ	12/1/1989	М	30	9/19/2016	3	9/19/2016	\$0.00	\$62,811.00	\$5,652.95		fire
6779	JACOB D PETERSON	12/1/1988	М	31	9/8/2014	5	9/8/2014	\$0.00	\$71,331.00	\$6,419.81		fire
6052	BRIAN POLLACK	1/1/1985	М	34	6/21/2004	15	6/21/2004	\$0.00	\$111,303.00	\$10,017.23		fire
1890	NICHOLAS T POPE	12/1/1995	М	24	9/5/2017	2	9/5/2017	\$0.00	\$58,679.00	\$5,281.15		fire
4538	DANIEL PRIETO	11/1/1983	М	35	7/23/2018	1	7/23/2018	\$0.00	\$21,615.00	\$1,945.37	Terminated	fire
9180	GARY PUTTI	11/1/1986	М	32	7/23/2018	1	7/23/2018	\$0.00	\$55,712.00	\$5,014.11		fire
7760	CECILIA RABAZA	5/1/1988	F	31	2/8/2016	3	2/8/2016	\$0.00	\$63,959.00	\$5,756.32		fire
2591	KAYELA RAFALKO	10/1/1996	F	22	9/23/2019	0	9/23/2019	\$0.00	\$1,030.00	\$92.66	New Hire	fire
3029	GARRETT RAWISZER	9/1/1996	М	23	7/23/2018	1	7/23/2018	\$0.00	\$56,227.00	\$5,060.44		fire
3863	CHRISTOPH ER REICH	9/1/1994	М	25	9/23/2019	0	9/23/2019	\$0.00	\$939.00	\$84.54	New Hire	fire
9762	LINDSEY M REYNOLDS	8/1/1983	F	36	4/5/2010	9	4/5/2010	\$0.00	\$82,824.00	\$7,454.14		fire
3625	MICHAEL M RODRIGUEZ	7/1/1973	М	46	9/9/2002	17	9/9/2002	\$0.00	\$111,109.00	\$9,999.82		fire

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9998	WILLIAM R ROULETTE	2/1/1985	М	34	1/22/2007	12	1/22/2007	\$0.00	\$92,832.00	\$8,354.89	Deferred	fire
1739	CARL J RUBINO	12/1/1989	М	30	10/31/2016	2	10/31/2016	\$0.00	\$62,483.00	\$5,623.43		fire
9679	CESAR A SANCHEZ	3/1/1995	М	24	2/8/2016	3	2/8/2016	\$0.00	\$63,359.00	\$5,702.31		fire
0290	DANIEL SANCHEZ	11/1/1996	М	23	11/6/2017	1	11/6/2017	\$0.00	\$58,215.00	\$5,239.36		fire
9746	JACQUELIN E R SANDOVAL	12/1/1988	F	31	11/17/2014	5	11/17/2014	\$0.00	\$67,320.00	\$6,058.79		fire
5986	KEVIN SAXTON	5/1/1982	М	37	1/6/2003	16	1/6/2003	\$0.00	\$121,879.00	\$10,969.15		fire
1685	KRISTOPHE R J SCHEID	7/1/1974	М	45	6/21/2004	15	6/21/2004	\$0.00	\$101,491.00	\$9,134.15		fire
2283	KYLE SHAW	8/1/1991	М	28	6/10/2013	6	6/10/2013	\$0.00	\$72,542.00	\$6,528.77		fire
6539	WILLIAM SHOCK	3/1/1983	М	36	11/17/2014	5	11/17/2014	\$0.00	\$67,890.00	\$6,110.12		fire
7341	MARK D SICILIANO	9/1/1970	М	49	11/8/1993	26	11/8/1993	\$0.00	\$16,987.00	\$1,528.80	DROP	fire
1171	JOSHUA A SIMMONDS	5/1/1988	М	31	6/10/2013	6	6/10/2013	\$0.00	\$65,486.00	\$5,408.99		fire
6486	SEAN M SKEEN	4/1/1986	М	33	9/5/2017	2	9/5/2017	\$0.00	\$58,859.00	\$5,297.29		fire
7125	CALVIN M SMITH	2/1/1990	М	29	9/5/2017	2	9/5/2017	\$0.00	\$60,007.00	\$5,400.66		fire
3173	JEFFREY F SMITH	6/1/1979	М	40	1/16/2001	18	1/16/2001	\$0.00	\$94,527.00	\$8,507.40		fire
2410	RYAN SPINELLI	3/1/1988	M	31	11/6/2017	1	11/6/2017	\$0.00	\$59,535.00	\$5,358.16		fire

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4216	JERRY W SPIVEY	12/1/1968	М	51	3/3/2003	16	3/3/2003	\$0.00	\$83,848.00	\$7,546.32		fire
3138	DARREN N STEWART	11/1/1987	М	32	11/17/2014	5	11/17/2014	\$0.00	\$68,510.00	\$6,165.86		fire
2038	MATTHEW L STRAHLE	7/1/1982	М	37	9/8/2014	5	9/8/2014	\$0.00	\$69,666.00	\$6,269.92		fire
8907	CHARLES N STRAVINO	12/1/1990	М	29	2/8/2016	3	2/8/2016	\$0.00	\$63,359.00	\$5,702.32		fire
2320	MARK E SZREJTER	8/1/1977	М	42	3/3/2003	16	3/3/2003	\$0.00	\$99,365.00	\$8,942.81		fire
9776	STEVEN TADDEO	2/1/1991	М	28	7/23/2018	1	7/23/2018	\$0.00	\$42,952.00	\$3,865.65	Terminated	fire
2354	RICHARD M TARANTINO	11/1/1984	М	35	1/22/2007	12	1/22/2007	\$0.00	\$95,457.00	\$8,591.14		fire
3472	OMAR TORRES	12/1/1977	М	42	9/9/2002	17	9/9/2002	\$0.00	\$99,210.00	\$8,928.89		fire
5289	MATTHEW TURNBACH	11/1/1985	М	34	1/22/2007	12	1/22/2007	\$0.00	\$107,306.00	\$9,657.51		fire
6088	ERIC L VARANO	2/1/1989	М	30	6/10/2013	6	6/10/2013	\$0.00	\$71,973.00	\$6,477.58		fire
4415	JUAN VELILLA	1/1/1994	М	25	11/6/2017	1	11/6/2017	\$0.00	\$58,215.00	\$5,239.36		fire
7648	JOHN A WAGNER	3/1/1977	М	42	5/12/2003	16	5/12/2003	\$0.00	\$92,150.00	\$8,293.46		fire
3608	DANIEL WALDREP	9/1/1981	М	38	5/20/2002	17	5/20/2002	\$0.00	\$109,183.00	\$9,826.49		fire
3023	RYAN P WALKER	12/1/1973	M	46	5/12/2003	16	5/12/2003	\$0.00	\$111,279.00	\$10,015.15		fire
7660	TYLER R WALKER	1/1/1992	М	27	2/8/2016	3	2/8/2016	\$0.00	\$63,959.00	\$5,756.31		fire

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Plan Name: City of Delray Beach Firefighters' Retirement System

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
8028	CRYSTAL C WHITE	9/1/1983	F	36	6/10/2013	6	6/10/2013	\$0.00	\$76,880.00	\$22,081.17	15162.00 for prior svc	fire
0347	JON J WOERTZ	11/1/1978	М	41	3/19/2007	12	3/19/2007	\$0.00	\$102,034.00	\$9,183.08		fire
8883	JEFFREY V WUNSCH	5/1/1984	М	35	6/10/2013	6	6/10/2013	\$0.00	\$72,547.00	\$6,529.20		fire
0042	DAVID M WYATT	5/1/1978	М	41	6/21/2004	15	6/21/2004	\$0.00	\$100,217.00	\$9,019.50		fire
3725	JACKSON YOHN	3/1/1997	М	22	9/23/2019	0	9/23/2019	\$0.00	\$939.00	\$84.54	New Hire	fire
2161	CHRISTOPH ER M ZIDAR	11/1/1972	М	47	2/28/1994	25	2/28/1994	\$0.00	\$42,703.00	\$3,843.24	DROP	fire

Total Number of rows: 153

Member Type	Number of rows	
fire	153	

Subtotals

Member Type	Subtotal
fire	\$1,044,994.43

Total \$1,044,994.43

Employee Contribution Percentage

Fire	0	

Notes

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Plan Name: City of Delray Beach Firefighters' Retirement System	

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DROP Plan Participant Roll Forward

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
0648	RUSSELL ACCARDI	12/1/1963	2/21/1989	11/1/2012	\$57,738.48		\$0.00	\$1,132.31	\$58,870.79					fire
0000	ADMINISTR ATIVE ACCOUNT	1/1/0001	1/1/0001		\$0.00		\$0.00	\$27,988.06				\$27,988.06		fire
0818	RICHARD ACKERMAN	8/1/1954	7/14/1979	8/1/2004	\$118,381.46		\$0.00	\$943.55	\$53,000.00			\$66,325.01		fire
9998	JOSEPH ALBANO	4/1/1965	11/8/1993	1/1/2018	\$70,457.36		\$83,221.88	\$6,010.35				\$159,689.59		fire
5235	STEVEN ANDERSON	11/1/1960	4/1/1992	8/1/2014	\$338,068.88		\$0.00	\$6,856.04	\$40,000.00			\$304,924.92		fire
6113	SHAWN BECKOWITZ	5/1/1965	2/28/1994	3/1/2019	\$0.00		\$57,212.32	\$1,252.89				\$58,465.21		fire
1340	CHRISTOPH ER BITZER	3/1/1971	12/2/1991	1/5/2016	\$131,563.68		\$48,742.28	(\$237.58)				\$180,068.38		fire
1216	DAVID BRASSARD	7/1/1961	3/24/1984	10/1/2008	\$654,762.36		\$0.00	\$25,114.34				\$679,876.70		fire
5647	WILLIAM BRIARD	12/1/1959	1/28/1987	7/1/2011	\$556,163.53		\$0.00	(\$2,943.15)	\$40,000.00			\$513,220.38		fire
7492	ROBERT BROWN II	1/1/1943	5/17/1976	8/1/1996	\$81,425.24		\$0.00	\$927.69	\$12,000.00			\$70,352.93		fire
3791	RICHARD BUSH	9/1/1954	11/21/1986	12/1/2007	\$537,311.77		\$0.00	\$11,721.85				\$549,033.62		fire
3650	MICHAEL CAMERA	10/1/1969	12/2/1991	6/24/2016	\$202,021.53		\$83,347.88	\$6,405.01				\$291,774.42		fire
5790	CLINTON CASON Jr.	6/1/1959	2/21/1989	2/1/2011	\$56.34		\$0.00	\$1.23				\$57.57		fire
2389	ROBERT CREASMAN	6/1/1964	10/1/1990	3/1/2012	\$23,202.83		\$0.00	\$384.41	\$13,500.00			\$10,087.24		fire
4339	MARK DAGNAN	9/1/1970	7/29/1991	1/31/2015	\$358,627.81		\$45,079.80	\$40,047.28				\$443,754.89		fire
8939	LAURA DECKERS	4/1/1964	5/14/1990	6/1/2010	\$188,953.60		\$0.00	\$7,424.41	\$63,468.00			\$132,910.01		fire
9410	MARK DORSETT	12/1/1966	12/2/1991	7/9/2016	\$177,529.25		\$67,881.76	\$3,018.93				\$248,429.94		fire

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
6742	JOSEPH DRAYSON	9/1/1962	11/15/1993	12/1/2017	\$74,729.75		\$80,184.97	(\$37.84)				\$154,876.88		fire
8992	PATRICIA DUNKELMA NN	1/1/1967	12/2/1991	2/1/2012	\$338,175.59		\$0.00	\$7,048.90				\$345,224.49		fire
3588	DALE FAGAN	2/1/1963	6/10/1987	7/1/2011	\$408,755.49		\$0.00	(\$5,135.42)				\$403,620.07		fire
4486	JOHN FLETCHER JR	10/1/1953	2/9/1976	3/1/2001	\$285,452.52		\$0.00	\$6,227.36				\$291,679.88		fire
6521	MARTIN GAINER	7/1/1963	11/23/1987	2/1/2012	\$554,687.68		\$0.00	(\$41,308.2 9)				\$513,379.39		fire
4594	TIMOTHY GARITO	12/1/1963	12/2/1991	10/1/2016	\$181,229.15		\$80,600.10	\$8,699.27				\$270,528.52		fire
8807	GREGORY GIACCONE	8/1/1972	12/2/1991	1/1/2017	\$211,329.44		\$112,026.1 2	\$14,471.26				\$337,826.82		fire
8241	ADAM GRANATH	1/1/1971	8/15/1994	1/1/2016	\$102,854.18		\$0.00	\$3,104.41				\$105,958.59		fire
8901	BENJAMIN KNABB	10/1/1950	6/26/1984	7/1/2009	\$327,541.69		\$0.00	\$7,145.56				\$334,687.25		fire
2338	ERIC KOVACS	3/1/1970	5/14/1990	11/1/2014	\$3,518.74		\$0.00	(\$94.09)	\$3,424.65					fire
7438	SPENCER LANGLEY	6/1/1965	12/2/1991	6/1/2018	\$30,299.36		\$72,549.84	\$1,392.72				\$104,241.92		fire
3682	CHARLES LAWSON	4/1/1965	6/14/1999	7/1/2019	\$0.00		\$21,715.60	(\$70.81)				\$21,644.79		fire
7374	ODELL LEWIS	9/1/1956	12/21/1991	9/1/2014	\$300,380.08		\$53,932.60	\$7,170.20	\$70,000.00			\$291,482.88		fire
4892	WILLIAM MARINO	4/1/1972	11/8/1993	12/1/2018	\$0.00		\$87,339.67	\$3,782.25				\$91,121.92		fire
0424	DANIEL MARULLO	12/1/1959	5/14/1990	12/1/2010	\$307,152.49		\$0.00	\$7,133.64	\$24,000.00			\$290,286.13		fire
9100	EDWARD MEISSNER	6/1/1957	12/2/1981	7/1/2005	\$804.80		\$0.00	\$17.56				\$822.36		fire
2965	CRAIG MERRILL	11/1/1965	3/25/1987	4/1/2012	\$469,917.50		\$0.00	\$18,139.24				\$488,056.74		fire
0793	ROBERT MORELAND	11/1/1954	5/1/1977	6/1/2002	\$160,289.25		\$0.00	\$967.49				\$161,256.74		fire

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
1686	MICHAEL McCLEARY	6/1/1961	2/22/1988	10/1/2010	\$300,684.21		\$0.00	\$2,465.89	\$237,000.00			\$66,150.10		fire
2409	TOMMIE OSBORN	4/1/1964	1/10/1994	5/1/2018	\$33,254.80		\$66,787.32	\$1,396.35				\$101,438.47		fire
5749	MATTHEW PEARCE	6/1/1968	8/15/1994	12/1/2017	\$73,968.79		\$79,213.20	\$5,672.90				\$158,854.89		fire
9092	WILLIAM REGO	7/1/1947	10/2/1972	5/1/1998	\$17,243.61		\$0.00	\$91.79	\$17,335.40					fire
1185	MARK REYNOLDS	1/1/1959	11/8/1993	5/1/2014	\$313,315.67		\$0.00	\$4,381.08				\$317,696.75		fire
9612	ILENE ROSE	5/1/1968	11/8/1993	5/31/2015	\$256,521.90		\$70,042.13	\$9,352.54				\$335,916.57		fire
6619	RYLAN ROSE	7/1/1967	11/8/1993	12/1/2016	\$121,046.70		\$58,614.57	\$6,702.40				\$186,363.67		fire
3944	BARRY SEARLES	6/1/1955	4/25/1977	5/1/1997	\$117,292.04		\$0.00	\$6,918.01	\$4,438.71			\$119,771.34		fire
7341	MARK SICILIANO	9/1/1970	11/8/1993	12/1/2018	\$0.00		\$80,342.35	\$3,427.99				\$83,770.34		fire
0371	JOHN STAAB	9/1/1963	5/14/1990	9/1/2013	\$453,409.30		\$0.00	(\$11,623.6 0)	\$441,785.70					fire
8530	JAMES TABEEK	6/1/1961	2/17/1983	3/1/2008	\$78,540.34		\$0.00	\$1,284.11	\$25,000.00			\$54,824.45		fire
1714	KENNETH THOMPSON	3/1/1961	1/8/1996	4/1/2016	\$155,833.52		\$56,639.40	\$3,972.94				\$216,445.86		fire
4369	MICHAEL THORNTON	11/1/1960	11/8/1991	12/1/2011	\$346,446.61		\$0.00	(\$5,158.14)	\$14,000.00			\$327,288.47		fire
3204	JOHN TOMASZEW SKI	6/1/1952	12/9/1981	4/1/2006	\$616,420.01		\$0.00	\$13,447.65				\$629,867.66		fire
2930	MICHAEL TWIGGER	8/1/1965	12/2/1991	3/1/2013	\$355,632.38		\$0.00	\$7,758.38				\$363,390.76		fire
7967	DAVID WETZEL	2/1/1962	12/21/1991	5/20/2016	\$287,827.26	_	\$16,657.26	\$4,736.23	\$309,220.75				-	fire
2717	MICHAEL WISE	5/1/1959	5/8/1987	6/1/2012	\$81,705.46		\$0.00	(\$2,293.21)	\$71,000.00			\$8,412.25		fire
1891	MARK WOOD	11/1/1964	1/4/1988	4/1/2011	\$378,803.86		\$0.00	(\$5,734.83)	\$10,000.00			\$363,069.03		fire
2161	CHRISTOPH ER ZIDAR	11/1/1972	2/28/1994	3/1/2019	\$0.00		\$60,942.72	\$1,192.74				\$62,135.46		fire

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Plan Name: City of Delray Beach Firefighters' Retirement System

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
0879	ANDREW ZIMMER	10/1/1963	11/8/1993	3/7/2016	\$174,469.49		\$64,478.04	\$4,454.18				\$243,401.71		fire

Total Number of rows: 55

Member Type	Number of rows	
fire		55

Subtotals	Fire	Police	General
Total Beginning Balance	\$11,415,797.78	\$0.00	\$0.00
Total Fiscal Year Additions	\$1,447,551.81	\$0.00	\$0.00
Total Interest Earned	\$227,146.43	\$0.00	\$0.00
Total Distributions	\$1,508,044.00	\$0.00	\$0.00
Flex Column 1	\$0.00	\$0.00	\$0.00
Flex Column 2	\$0.00	\$0.00	\$0.00
Total Ending Balance	\$11,582,452.02	\$0.00	\$0.00

Notes

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Plan Name: City of Delray Beach Firefighters' Retirement System

Share Plan Participant Roll Forward

Social Security Number	Name	Share Plan Entry Date	Beginning Balance	Premium Tax Shares Allocated In Period	Income	Administrative Fees	Forfeiture Reduction	Distributions	Ending Balance	Note	Member Type
				1 01100							

Total Number of rows: 0

Subtotals	Fire	Police	General
Expected Total Beginning Balance	\$0.00	\$0.00	\$0.00
Expected Premium Tax Share Allocated In Period	\$0.00	\$0.00	\$0.00
Expected Total Interest Income	\$0.00	\$0.00	\$0.00
Expected Total Administrative Fees	\$0.00	\$0.00	\$0.00
Expected Total Forfeiture Reduction	\$0.00	\$0.00	\$0.00
Expected Total Forfeiture Re-allocation	\$0.00	\$0.00	\$0.00
Flex Column 1	\$0.00	\$0.00	\$0.00
Flex Column 2	\$0.00	\$0.00	\$0.00
Expected Total Distributions	\$0.00	\$0.00	\$0.00
Expected Total Ending Balance	\$0.00	\$0.00	\$0.00
Notes			

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Item 5.c. Gabriel, Roeder, Smith & Company

Item 5.c.i. October 1, 2019 Actuarial Valuation Report

(Will be provided via email when received)

City of Delray Beach Firefighters' Retirement System

ACTUARIAL VALUATION REPORT AS OF OCTOBER 1, 2019

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2021







May 19, 2020

Board of Trustees City of Delray Beach Firefighters' Retirement System Delray Beach, Florida

Re: City of Delray Beach Firefighters' Retirement System Actuarial Valuation as of October 1, 2019

Dear Board Members:

The results of the October 1, 2019 Annual Actuarial Valuation of the City of Delray Beach Firefighters' Retirement System are presented in this report. This report does not reflect the recent and still developing impact of COVID-19, which may significantly impact demographic and economic experience.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2021, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 67. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report includes risk metrics on page 4 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through October 1, 2019. The valuation was based upon information furnished by the Plan Administrator concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

This report was prepared using certain assumptions approved by the Board as authorized under Florida Statutes and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Cost Method. The assumed mortality rates detailed in the Actuarial Assumptions and Cost Method section were prescribed by Chapter 112.63, Florida Statutes. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of Delray Beach Firefighters' Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

leffred/Amrose, MAAA

Enrolled Actuary No. 20-6599 Senior Consultant and Actuary Trisha Amrose, MAAA

Enrolled Actuary No. 20-8010

Consultant and Actuary



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SECTION A

DISCUSSION OF VALUATION RESULTS

DISCUSSION OF VALUATION RESULTS

Comparison of Required Employer Contributions

The required employer contribution this year compared with the preceding year is as follows:

	For FYE 9/30/2021 Based on 10/1/2019 Valuation		Based on 10/1/2019 Based on 10/1/2018		(Increase Decrease)
Required Contribution As % of Contr. Year Payroll	\$	9,051,813 72.97 %	\$	8,748,165 74.33 %	\$	303,648 (1.36) %
Estimated State Contribution As % of Contr. Year Payroll		1,129,759 9.11 %		1,129,759 * 9.60 %		0 (0.49) %
Net Employer Contribution** As % of Contr. Year Payroll		7,922,054 63.86 %		7,618,406 64.73 %		303,648 (0.87) %

^{*} Updated from the prior year's valuation report to reflect the State contribution received for the fiscal year ending September 30, 2019.

Payment of Required Contribution

The contribution developed in this valuation has been calculated as though payments are made at the end of each biweekly pay period. If the full contribution for the fiscal year ending September 30, 2021 is paid on October 1, 2020, the net required employer contribution is \$7,614,414 or 61.38% of covered payroll.

Further, the required Employer contribution has been computed with the assumption that the amount to be received from the State in 2020 and 2021 will be equal to the amount received in 2019 of \$1,129,759. If the actual payment from the State falls below this amount, then the Employer must increase its contribution by the difference.

Actual contributions for the fiscal year ending September 30, 2019 were \$6,452,812 from the City plus \$1,129,759 of annual State revenue, for a total of \$7,582,571. The total annual required contribution was \$7,582,571.

Revisions in Benefits

In compliance with newly adopted Florida Statutes Chapter 112.1816, the following additional provisions are reflected:

As provided and subject to the limitations in Section 112.1816, Florida Statutes, effective July 1, 2019, a firefighter who is diagnosed with certain specified cancers is presumed to have contracted those cancers while in the line of duty for purposes of determining the disability or death benefit payable from the Plan.



^{**} Contribution may be offset by the \$435,051 prepaid City contribution.

In conjunction with the benefit changes, the proportion of firefighter disabilities and pre-retirement deaths that are assumed to be service-connected (versus non-service connected) was increased from 75% to 85%.

The impact of this change was an increase in the contribution requirement of 0.11% of covered payroll.

Revisions in Actuarial Assumptions and Methods

There were no revisions in actuarial assumptions or methods since the previous valuation.

Actuarial Experience

There was a net actuarial loss of \$318,669 since the last valuation which means that actual experience was less favorable than expected. The loss was primarily due to higher than expected average salary increases (8.1% compared to 5.6% expected) and more than expected retirements (7 actual compared to 4 expected). The liability loss was partially offset by gains due to a recognized investment return above the assumed rate of 7.00%. The investment rate of return was 4.6% based on market value of assets and 7.3% based on actuarial value of assets. The net loss caused the required employer contribution to increase by 0.23% of covered payroll.

Funded Ratio

This year's funded ratio is 63.5% compared to 61.6% last year. The funded ratio was 63.5% before the benefit change described above. The ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

Analysis of Change in Employer Contribution

The components of change in the required Employer contribution are as follows:

Contribution Rate Last Year	64.73 %
Experience (Gains) or Losses	0.23
Revision in Assumptions/Methods	0.00
Amortization Payment on UAAL	(1.50)
Normal Cost Rate	(0.58)
Administrative Expense	0.38
Benefit Changes	0.11
Change in State Contribution Rate	0.49
Contribution Rate This Year	63.86 %

Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the required contribution is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year. Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level, but this does not always happen.



The Actuarial Value of Assets exceeds the Market Value of Assets by \$43,840 as of the valuation date (see Section C). This difference will be gradually recognized in the absence of offsetting gains and losses. In turn, the computed employer contribution rate will increase by approximately 0.03% of covered payroll.

Relationship to Market Value

If Market Value had been the basis for the valuation, the City contribution rate would have been 63.89% and the funded ratio would have been 63.5%. In the absence of other gains and losses or changes, the City contribution rate should increase to that level over the next several years.

Conclusion

It is important to note that system assets are not sufficient to cover the liabilities for current retirees. As of October 1, 2019, the assets are \$98.4 million (after reflecting the \$10.1 million reserve which is earmarked for future COLAs) and the liability for current retirees is \$116.3 million. Some steps have been taken to address these issues, such as shortening the amortization period and lowering the investment return assumption. Given the low funded ratio, it is advisable to consider further steps, such as making contributions in excess of the minimum required amount. For each additional \$5 million contributed, the funded ratio will increase by 2.9%.

The remainder of this Report includes detailed actuarial valuation results, information relating to the pension fund, financial accounting information, miscellaneous employee data and a summary of plan provisions.



RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- 1. Investment risk actual investment returns may differ from the expected returns;
- Contribution risk actual contributions may differ from expected future contributions. For
 example, actual contributions may not be made in accordance with the plan's funding policy or
 material changes may occur in the anticipated number of covered employees, covered payroll,
 or other relevant contribution base;
- 3. Salary and Payroll risk actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- 4. Longevity risk members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
- 5. Other demographic risks members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.



PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u> 2019</u>	<u>2018</u>
Ratio of the market value of assets to total payroll*	8.4	8.4
Ratio of the actuarial accrued liability to payroll*	13.7	13.8
Ratio of actives to retirees and beneficiares	1.0	1.0
Ratio of net cash flow to market value of assets	0.0%	-0.4%

^{*} Net of the COLA reserve

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.



ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.



CHAPTER REVENUE

Actuarial Confirmation of the Use of State Chapter Money				
Base Amount Previous Plan Year	\$	1,074,825		
2. Amount Received for Previous Plan Year		1,129,759		
3. Benefit Improvements		0		
4. Excess Funds for Previous Plan Year		0		
5. Accumulated Excess at Beginning of Previous Year		0		
6. Prior Excess Used in Previous Plan Year		0		
7. Accumulated Excess as of Valuation Date (Available for Benefit Improvements): (4) + (5) - (6)		0 *		
8. Base Amount This Plan Year	\$	1,129,759		

^{*} Not including the COLA Account, which is shown on the following page.

The Accumulated Excess shown in line 7 is being held in reserve and is subtracted from Plan assets (see Section C of this Report). The Base Amount in line 8 is the amount the employer may take as a credit against its required contribution; however, in no event may the employer take credit for more than the actual amount of Chapter revenue received.

Under the mutual agreement between the City and the Union, the City may use up to \$1,206,994 to offset the required contribution. Any excess Chapter 175 revenue above this amount will be applied to the COLA Account. Please see the following page for the development of the COLA Account.



COLA ACCOUNT

ANALYSIS OF EXCESS STATE CONTRIBUTIONS

A. COLA Account at Beginning of Year	October 1, 2019 \$10,138,685	October 1, 2018 \$9,784,311
B. Investment Return	4.59%	8.16%
C. Investment Earnings	465,366	798,400
D. Chapter 175 Regular Revenue	1,129,759	1,074,825
E. Chapter 175 Supplemental Revenue	0	0
F. Total Chapter 175 Revenue	1,129,759	1,074,825
G. Chapter Revenue in Excess of \$1,206,994	0	0
H. Benefit Enhancement Percentage	0.50%	0.50%
I. Total Present Value of Benefit Enhancement	505,352	444,026
J. COLA Account at End of Year (A. + C. + G I.)	\$10,098,699	\$10,138,685



SECTION B

VALUATION RESULTS

PARTICIPANT DATA					
October 1, 2019 October 1, 201					
ACTIVE MEMBERS					
Number		141		139	
Covered Annual Payroll	\$	11,752,574	\$	11,150,507	
Average Annual Payroll	\$	83,352	\$	80,219	
Average Age	'	34.9	"	35.4	
Average Past Service		8.1		8.5	
Average Age at Hire		26.8		26.9	
RETIREES, BENEFICIARIES & DROP					
Number		135		130	
Annual Benefits	\$	8,632,500	\$	8,030,319	
Average Annual Benefit	\$	63,944	\$	61,772	
Average Age		60.7		60.4	
DISABILITY RETIREES					
Number		4		4	
Annual Benefits	\$	137,705	\$	136,524	
Average Annual Benefit	\$	34,426	\$	34,131	
Average Age		62.4		61.4	
TERMINATED VESTED MEMBERS (EXCLUDING N	NON-VES	TED REFUNDS PA	YABLE)		
Number		1		0	
Annual Benefits	\$	28,716		0	
Average Annual Benefit	\$	28,716		0	
Average Age		34.6		0.0	



ACTUARIALLY DETERMINED CONTRIBUTION (ADC)					
A. Valuation Date	October 1, 2019 After Plan Change	October 1, 2019 Before Change	October 1, 2018		
B. ADC to Be Paid During Fiscal Year Ending C. Assumed Dates of Employer Contributions	9/30/2021 Biweekly	9/30/2021 Biweekly	9/30/2020 Biweekly		
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 5,889,711	\$ 5,889,209	\$ 5,724,692		
E. Employer Normal Cost F. ADC if Paid on the Valuation Date: D+E	2,394,687 8,284,398	2,382,857 8,272,066	2,282,165 8,006,857		
G. ADC Adjusted for Frequency of Payments H. ADC as % of Covered Payroll	8,575,677 72.97 %	8,562,912 72.86 %	8,288,378 74.33 %		
Assumed Rate of Increase in Covered Payroll to Contribution Year	5.55 %	5.55 %	5.55 %		
J. Covered Payroll for Contribution Year K. ADC for Contribution Year: H x J	12,404,842 9,051,813	9,038,168	11,769,360 8,748,165		
L. Estimated Credit for State Revenue in Contribution Year	1,129,759	1,129,759	1,129,759		
M. Required Employer Contribution (REC) in Contribution Year	7,922,054	7,908,409	7,618,406		
N. REC as % of Covered Payroll in Contribution Year: M/J	63.86 %	63.75 %	64.73 %		



ACTUARIAL VALUE OF BENEFITS AND ASSETS						
A. Valuation Date	October 1, 2019 After Plan Change	October 1, 2019 Before Change	October 1, 2018			
B. Actuarial Present Value of All Projected Benefits for 1. Active Members a. Service Retirement Benefits	\$ 73,729,516	\$ 73,729,512	\$ 72,731,896			
b. Vesting Benefitsc. Disability Benefitsd. Preretirement Death Benefits	1,100,362 1,838,722 1,054,294	1,100,362 1,742,728 1,015,360	1,121,487 1,609,170 940,676			
e. Return of Member Contributions f. Total	444,376 78,167,270	446,107 78,034,069	391,371 76,794,600			
 Inactive Members a. Service Retirees & Beneficiaries b. Disability Retirees c. Terminated Vested Members* d. COLA Account e. Total 	114,776,313 1,477,098 114,284 10,098,699 126,466,394	114,776,313 1,477,098 114,284 10,098,699 126,466,394	107,023,528 1,489,171 16,284 			
3. Total for All Members	204,633,664	204,500,463	195,462,268			
C. Actuarial Accrued (Past Service) Liability under Entry Age Normal	170,919,931	170,913,717	164,163,274			
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	147,288,757	147,175,823	142,479,073			
E. Plan Assets 1. Market Value 2. Actuarial Value	108,468,348 108,512,188	108,468,348 108,512,188	103,733,220 101,123,590			
F. Unfunded Actuarial Accrued Liability	62,407,743	62,401,529	63,039,684			
G. Actuarial Present Value of Projected Covered Payroll	123,438,438	123,438,426	112,974,649			
H. Actuarial Present Value of Projected Member Contributions	10,913,712	10,913,711	10,017,420			
Accumulated Contributions of Active Members	6,338,976	6,338,976	6,179,116			

^{*} Terminated Vested liability includes refunds payable for terminated non-vested members.



CALCULATION OF EMPLOYER NORMAL COST						
A. Valuation Date	October 1, 2019 After Plan Change	October 1, 2019 Before Change	October 1, 2018			
B. Normal Cost for						
 Service Retirement Benefits Vesting Benefits Disability Benefits Preretirement Death Benefits Return of Member Contributions Total for Future Benefits Assumed Amount for Administrative Expenses Total Normal Cost 	\$ 2,923,009 95,247 121,352 70,482 82,198 3,292,288 160,131 3,452,419	\$ 2,923,008 95,247 113,087 66,679 82,437 3,280,458 160,131 3,440,589	\$ 2,830,652 93,161 108,687 64,222 77,692 3,174,414 111,297 3,285,711			
C. Expected Member Contribution	1,057,732	1,057,732	1,003,546			
D. Employer Normal Cost: B8-C	2,394,687	2,382,857	2,282,165			
E. Employer Normal Cost as a % of Covered Payroll	20.38%	20.28%	20.47%			



A. UAAL AMORTIZATION PERIOD AND PAYMENTS						
	Original UAAL		Current UAAL			
Date Established	Base Established	Amortizatoin Period (Years)	Years Remaining	Amount	After Plan Change	Before Change
10/1/2015 10/1/2016 10/1/2016 10/1/2017 10/1/2017 10/1/2017 10/1/2018 10/1/2018 10/1/2019	Initial Unfunded Liability Benefit Change Assumption Change Actuarial Loss Actuarial Gain Assumption Change Method Change Actuarial Loss Assumption Change Actuarial Loss	18 20 20 20 20 20 20 20 20 20	14 16 17 17 18 18 18 19 19	\$ 36,614,954 (1,070,831) 3,883,725 6,705,344 (1,575,285) 11,603,901 (11,747) 1,486,915 4,445,884 318,669	344,524 594,829 (135,119) 995,314 (1,008) 123,669 369,772 25,765	(98,560) 344,524 594,829 (135,119) 995,314 (1,008) 123,669 369,772 25,765
10/1/2019	Benefit Change	20	20	6,214 \$ 62,407,743	\$ 5,889,711	N/A \$ 5,889,209

B. Amortization Schedule

The UAAL is being amortized as a level percentage of covered annual payroll over the number of years remaining in the amortization period. The following schedule illustrates the expected amortization of the UAAL:

Amortization Schedule					
Year	Expected UAAL				
2019	\$ 62,407,743				
2020	60,474,270				
2021	58,331,745				
2022	55,964,647				
2023	53,356,384				
2024	50,489,190				
2029	31,554,642				
2034	7,268,366				
2039	-				



ACTUARIAL GAINS AND LOSSES

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year is computed as follows:

1. Last Year's UAAL	63,039,684
2. Last Year's Employer Normal Cost	2,282,165
3. Last Year's Contributions a. Employer Contribution b. State Contribution Used to Offset Required Contribution c. Total Contributions	6,452,812 1,129,759 7,582,571
 4. Interest at the Assumed Rate on: a. 1 and 2 for one year b. 3 from dates paid c. a - b 	4,572,529 228,947 4,343,582
5. This Year's Expected UAAL Prior to Revision: 1+2-3c+4c	62,082,860
6. Change in UAAL Due to Plan Amendments and/or Changes in Actuarial Assumptions and Methods	6,214
7. This Year's Expected UAAL (after changes): 5+6	62,089,074
8. This Year's Actual UAAL (after changes)	62,407,743
9. Net Actuarial Gain/(Loss): 7 - 8	(318,669)
10. Gain/(Loss) Due to Investment	337,022
11. Gain/(Loss) Due to Other Sources	(655,691)



Net actuarial gains/(losses) since October 1, 2016 have been as follows:

Year Ending	Actuarial Gain / (Loss)
9/16	\$ (6,763,388)
9/17	1,589,255
9/18	(1,495,646)
9/19	(318,669)



The fund earnings and salary increase assumptions have considerable impact on the cost of the plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

	Investment	Return	Salary Increases		
Year Ending	Actual*	Assumed	Actual**	Assumed	
9/30/2014	9.4 %	8.0 %	0.8 %	5.7 %	
9/30/2015	8.8	8.0	9.8	5.6	
9/30/2016	7.1	8.0	28.1	5.6	
9/30/2017	7.1 ***	8.0	(4.5)	5.3	
9/30/2018	8.1	7.25	10.7	5.5	
9/30/2019	7.3	7.00	8.1	5.6	
Average	8.0 %		8.4 %		

^{*} Prior to 9/30/2017, the investment return was based on the combined Police and Fire Retirement System.

The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and end of each period.



^{**} Prior to 9/30/2016, the salary increase was based on the combined Police and Fire Retirement System.

^{***} Before reflecting fresh start of assets as of 10/1/2016 and new asset smoothing method.

Number Added To and Removed from Active Participation

Actual (A) Versus Expected (E) Decrements

Year	Nun Add Dur Ye	led ing	& D	vice ROP ement	Disab Retire	-		d In vice	T Vested	erminat Other	ions Tota	als	Active Members End of
Ended	A	E	A	E	A	E	A	E	A	A	A	E	Year
9/30/2017	25	4	2	4	0	0	0	0	0	2	2	3	133
9/30/2018	14	8	5	2	0	0	0	0	0	3	3	4	139
9/30/2019	13	11	7	4	0	0	0	0	1	3	4	5	141
9/30/2020				1		0		0				5	



	RECENT HISTORY OF VALUATION RESULTS									
	Num	ber of		Actuarial		Unfunded		Employer N	lormal Cost	
Valuation	Active	Inactive	Covered	Value of	Accrued	Accrued	Funded			
Date	Members	Members	Annual Payroll	Assets	Liability	Liability	Ratio	Amount	% of Payroll	
10/1/2015	110	116	\$8,019,724	\$83,276,890	\$121,406,576	\$38,129,686	68.6 %	\$1,366,029	17.03 %	
10/1/2016	112	127	9,536,432	89,529,663	136,953,691	47,424,028	65.4	1,563,454	16.39	
10/1/2017	133	128	9,960,429	93,945,622	151,453,131	57,507,509	62.0	1,990,286	19.98	
10/1/2018	139	134	11,150,507	101,123,590	164,163,274	63,039,684	61.6	2,282,165	20.47	
10/1/2019	141	140	11,752,574	108,512,188	170,919,931	62,407,743	63.5	2,394,687	20.38	

Results before October 1, 2017 were determined by the Retirement System's prior actuary, Foster & Foster.



RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS											
	End of Required Contributions										
	Year To Which		Employer & State		Estimated State		Net Employer		Actual Contributions		
Valuation Date	Valuation	Amount	% of Payroll	Amount	% of	Amount	% of Payroll	Employer	State	Total	
Valuation Date	Applies	Amount	Payroll	Aillouit	Payroll	Aillouit	Payroll	Lilipioyei	Jiaie	iotai	
10/1/2015	9/30/2017	\$5,332,347	62.99 %	\$1,193,140	14.09 %	\$4,139,207	48.90 %	\$4,197,643	\$1,134,704	\$5,332,347	
10/1/2016	9/30/2018	6,538,017	64.95	1,134,704	11.27	5,403,313	53.68	\$5,463,192	\$1,074,825	\$6,538,017	
10/1/2017	9/30/2019	7,582,571	72.12	1,074,825	10.22	6,507,746	61.90	\$6,452,812	\$1,129,759	\$7,582,571	
10/1/2018	9/30/2020	8,748,165	74.33	1,129,759	9.60	7,618,406	64.73				
10/1/2019	9/30/2021	9,051,813	72.97	1,129,759	9.11	7,922,054	63.86				

Results before October 1, 2017 were determined by the Retirement System's prior actuary, Foster & Foster.



ACTUARIAL ASSUMPTIONS AND COST METHOD

Valuation Methods

Actuarial Cost Method - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) percent-of-payroll contributions over a reasonable period of future years.

Actuarial Value of Assets – The Actuarial Value of Assets phase in the difference between the expected return on actuarial value and actual return on market value of assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

Valuation Assumptions

The actuarial assumptions used in the valuation are shown in this Section. Both the economic and decrement assumptions were established following an Experience Study, as prepared by Foster & Foster, dated October 28, 2013. The investment return assumption was updated in 2017 and 2018. The covered group is too small to provide statistically significant experience on which to base the mortality assumption. Mortality is based on a commonly used mortality table and projection scale.

Economic Assumptions

The investment return rate assumed in the valuation is 7.00% per year, compounded annually (net after investment expenses).

The **Inflation Rate** assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the expected long-term rate of increases in the prices of goods and services.



The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 7.0% investment return rate translates to an assumed real rate of return over inflation of 4.50%.

The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at 1.17% per year (the average growth over the last ten years as determined in 2014).

The rates of salary increase used are 6.25% per year for the first 10 years of service, 5.00% thereafter. This assumption is used to project a member's current salary to the salaries upon which benefits will be based. Part of the assumption for each age is for merit and/or seniority increase, and the other 2.5% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

Demographic Assumptions

The mortality table is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Valuation, as mandated by Florida Statutes, Chapter 112.63.

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample	Probability of		Future	e Life
Attained	Dying Nex	kt Year	Expectan	cy (years)
Ages (in 2019)	Men Women		Men	Women
50	0.53 %	0.23 %	34.12	38.50
55	0.66	0.32	29.49	33.48
60	0.89	0.46	24.92	28.58
65	1.28	0.72	20.51	23.83
70	1.95	1.21	16.36	19.36
75	3.17	2.04	12.61	15.26
80	5.21	3.42	9.37	11.62

This assumption is used to measure the probabilities of each benefit payment being made after retirement



FRS Healthy Pre-Retirement Mortality for Special Risk Class Members

Sample Attained	Probability of Dying Next Year		Future Expectane	
Ages (in 2019)	Men Women		Men	Women
50	0.22 %	0.15 %	35.11	38.85
55	0.39	0.24	30.00	33.70
60	0.70	0.39	25.12	28.68
65	1.20	0.69	20.55	23.86
70	1.95	1.21	16.36	19.36
75	3.17	2.04	12.61	15.26
80	5.21	3.42	9.37	11.62

This assumption is used to measure the probabilities of active members dying prior to retirement (85% of preretirement deaths are assumed to be service-connected).

For disabled retirees, the mortality table used was 60% of the RP-2000 for Disabled Annuitants with ages set back 4 years for males and set forward 2 years for females, and 40% of the RP2000 Annuitant Mortality Table with a White Collar adjustment with no age setback, both with no provision being made for future mortality improvements. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Valuation, as mandated by Florida Statutes, Chapter 112.63.

FRS Disabled Mortality for Special Risk Class Members

Sample	Probabil	Probability of		e Life
Attained	Dying Ne	Dying Next Year		cy (years)
Ages (in 2019)	Men	Men Women		Women
50	1.67 %	0.91 %	23.74	27.06
55	2.03	1.26	20.77	23.37
60	2.47	1.67	17.91	19.90
65	3.07	2.24	15.15	16.62
70	3.90	3.18	12.52	13.58
75	5.30	4.60	10.02	10.86
80	7.59	6.66	7.80	8.48



The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Number of Years Eligible	Probability of
for Normal Retirement	Normal Retirement*
0	25%
1	10%
2	10%
3	25%
4	25%
5	100%

^{* 100%} at first eligibility for those hired on or after October 4, 2016 with 25 years of service at retirement.

No early retirement rates were assumed.

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample	% of Active Members			
Ages	Separating Within Next Year			
20	8.0 %			
25	7.0			
30	6.0			
35	3.0			
40+	0.0			

Rates of disability among active members (85% of disabilities are assumed to be service-connected).

Sample	% Becoming Disabled
Ages	Within Next Year
20	0.07 %
25	0.08
30	0.09
35	0.12
40	0.15
45	0.26
50	0.50
55	0.78



Miscellaneous and Technical Assumptions

Administrative & Investment

Expenses

The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the prior year's expenses. Assumed administrative expenses are added to the Normal Cost.

Benefit Service

Service calculated based on completed months is used to determine the amount of benefit payable.

Cost of Living Adjustment

The cost of living adjustment for members who receive future normal retirement benefits is 1.0% starting on the 25th anniversary of the retirees' hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. Effective October 4, 2016, the adjustment will begin one year after separating from employment.

Decrement Operation

Disability and mortality decrements operate during retirement eligibility.

Decrement Timing

Decrements of all types are assumed to occur at the beginning of the

Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Forfeitures

For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.

Incidence of Contributions

Employer contributions are assumed to be made at the end of each biweekly pay period. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

Marriage Assumption

100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.



Normal Form of Benefit For married participants, a monthly income payable for life of the

member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For members who were not eligible for normal retirement on October 4, 2016, the normal form for the benefit based on service

after October 4, 2016 is a 10-Year Certain and Life annuity.

Pay Increase Timing Beginning of fiscal year. This is equivalent to assuming that reported

pays represent amounts paid to members during the year ended on

the valuation date.

Service Credit Accruals It is assumed that members accrue one year of service credit per

year.



GLOSSARY

Actuarial Accrued Liability (AAL)

The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.

Actuarial Assumptions

Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.

Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.

Actuarial Equivalent

Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV)

The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.

Actuarial Present Value of Future Benefits (APVFB)

The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67, such as the Funded Ratio and the Actuarially Determined Contribution (ADC).

Actuarial Value of Assets

The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution (ADC).



Amortization Method

A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.

Amortization Payment

That portion of the plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Amortization Period

The period used in calculating the Amortization Payment.

Actuarially Determined Contribution (ADC)

The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB No. 67. The ADC consists of the Employer Normal Cost and Amortization Payment.

Closed Amortization Period

A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.

Employer Normal Cost

The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.

Equivalent Single
Amortization Period

For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.

Experience Gain/Loss

A measure of the difference between the normal cost rate from last year and the normal cost rate from this year.

Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

GASB

Governmental Accounting Standards Board.

GASB No. 67 and GASB No. 68

These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.



Normal Cost The annual cost assigned, under the Actuarial Cost Method, to the

current plan year.

Open Amortization Period An open amortization period is one which is used to determine the

Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to

covered payroll.

Unfunded Actuarial Accrued

Liability

The difference between the Actuarial Accrued Liability and Actuarial

Value of Assets.

Valuation Date The date as of which the Actuarial Present Value of Future Benefits are

determined. The benefits expected to be paid in the future are

discounted to this date.





PENSION FUND INFORMATION

Statement of Plan Assets at Market Value

September 30

Item		2018
A. Cash and Cash Equivalents (Operating Cash)	\$ 126,738	\$ 2,599
B. Receivables		
Member Contributions	\$ 36,629	\$ 36,014
2. Interest and Dividends	171,986	122,033
3. Due from Broker	278,460	1,106,110
4. Prepaid Expenses and Other	-	-
5. State Contribution	-	1,074,825
6. Total Receivables	\$ 487,075	\$ 2,338,982
C. Investments		
 Short Term Investments 	\$ 1,896,992	\$ 2,278,465
2. Domestic Equities	49,533,922	47,651,509
3. International Equities	17,240,138	17,404,123
4. Domestic Fixed Income	22,527,046	16,946,808
5. International Fixed Income	4,057,331	3,840,576
6. Real Estate	9,261,155	8,954,689
7. Other	4,143,503	5,516,025
8. Total Investments	\$ 108,660,087	\$102,592,195
D. Liabilities		
1. Prepaid City Contribution	\$ (435,051)	\$ (435,051)
2. Accounts Payable	(94,834)	(77,623)
3. Due to Broker	(275,667)	(600,024)
4. Due to Police Officers Retirement System		(87,858)
5. Total Liabilities	\$ (805,552)	\$ (1,200,556)
E. Total Market Value of Assets Available for Benefits	\$ 108,468,348	\$103,733,220
F. Allocation of Investments		
1. Short Term Investments	1.7%	2.2%
2. Domestic Equities	45.7%	46.5%
3. International Equities	15.9%	17.0%
4. Domestic Fixed Income	20.7%	16.5%
5. International Fixed Income	3.7%	3.7%
6. Real Estate	8.5%	8.7%
7. Other	3.8%	5.4%
8. Total Investments	100.0%	100.0%

Note: The asset amounts do not include DROP account balances.



Reconciliation of Plan Assets

September 30 2019 Item 2018 \$ A. Market Value of Assets at Beginning of Year 103,733,220 96,312,093 1. Adjustment for Final Settlement of Legacy Fund Split 160,328 2. Market Value of Assets After Adjustment 96,472,421 103,733,220 B. Revenues and Expenditures 1. Contributions \$ 1,044,994 a. Member Contributions 991,333 b. Employer Contributions 6,452,812 5,463,192 c. State Contributions 1,129,759 1,074,825 d. Total 8,627,565 7,529,350 2. Investment Income a. Interest, Dividends, and Other Income \$ 3,065,814 2,654,297 b. Net Realized/Unrealized Gains/(Losses)* 2,419,035 5,927,177 c. Investment Expenses (723,561)(742,107)\$ d. Net Investment Income 4,761,288 7,839,367 3. Benefits and Refunds a. Regular Monthly Benefits \$ (8,483,028) (7,986,172)b. Refunds (10,566)(10,449)c. Lump Sum Benefits Paid \$ (7,996,621)d. Total (8,493,594) 4. Administrative and Miscellaneous Expenses \$ (160, 131)(111,297)C. Market Value of Assets at End of Year \$ 108,468,348 \$ 103,733,220

Note: The asset amounts do not include DROP account balances.



^{*} The breakdown between realized and unrealized gain/losses was not provided.

Reconciliation of DROP Accounts

Year Ended 9/30	Balance at Beginning of Year	Credits	Credits Interest		Balance at End of Year	
2017	\$ 10,488,353	\$ 1,541,096	\$ 741,658	\$ (1,680,260)	\$ 11,090,847	
2018	11,090,847	1,278,933	762,812	(1,716,794)	11,415,798	
2019	11,415,798	1,447,552	227,146	(1,508,044)	11,582,452	



ACTUARIAL VALUE OF ASSETS

	Valuation Date – September 30	2018	2019	2020	2021	2022	2023
A.	Actuarial Value of Assets Beginning of Year	\$ 93,945,622	\$ 101,123,590				_
В.	Market Value End of Year	103,733,220	108,468,348				
C.	Market Value Beginning of Year	96,312,093	103,733,220				
D.	Non-Investment/Administrative Net Cash Flow	(418,240)	(26,160)				
E.	Investment Income						
	E1. Actual Market Total: B-C-D	7,839,367	4,761,288				
	E2. Assumed Rate of Return	7.25%	7.00%	7.00%	7.00%	7.00%	7.00%
	E3. Assumed Amount of Return	6,795,896	7,077,736				
	E4. Amount Subject to Phase-In: E1–E3	1,043,471	(2,316,448)				
F.	Phased-In Recognition of Investment Income						
	F1. Current Year: 0.2 x E4	208,694	(463,290)				
	F2. First Prior Year	591,618	208,694	(463,290)			
	F3. Second Prior Year	-	591,618	208,694	(463,290)		
	F4. Third Prior Year	-	-	591,618	208,694	(463,290)	
	F5. Fourth Prior Year		-	-	591,617	208,695	(463,288)
	F6. Total Phase-Ins	800,312	337,022	337,022	337,021	(254,595)	(463,288)
G.	Actuarial Value of Assets End of Year						
	G1. Preliminary Actuarial Value of Assets End of Year:						
	A+D+E3+F6	101,123,590	108,512,188				
	G2. Upper Corridor Limit: 120%*B	124,479,864	130,162,018				
	G3. Lower Corridor Limit: 80%*B	82,986,576	86,774,678				
	G4. Actuarial Value of Assets End of Year	101,123,590	108,512,188				
Н.	Difference between Market & Actuarial Value of Assets	2,609,630	(43,840)				
ı.	Actuarial Rate of Return	8.1%	7.3%				
J.	Market Value Rate of Return	8.2%	4.6%				
K.	Ratio of Actuarial Value of Assets to Market Value	97.5%	100.0%				



Year Ending	Investment Rate of Return*				
September 30th	Market Value	Actuarial Value			
2014	10.0 %	9.4 %			
2015	(1.2)	8.8			
2016	8.9	7.1			
2017	11.4	7.1 **			
2018	8.2	8.1			
2019	4.6	7.3			
Average Returns: All Years	6.9 %	9.0.0/			
All I Cal S	0.9 %	8.0 %			

^{*} Prior to 9/30/2017, the investment return was based on the combined Police and Firefighter Retirement System.

The above rates are based on the retirement system's financial information reported to the actuary. They may differ from figures that the investment consultant reports, in part because of differences in the handling of administrative and investment expenses, and in part because of differences in the handling of cash flows.



^{**} Before reflecting fresh start of assets as of 10/1/2016 and new asset smoothing method.



FINANCIAL ACCOUNTING INFORMATION

	FASB NO. 35 INFORMATION							
Α.	Valuation Date	October 1, 2019	October 1, 2018					
В.	Actuarial Present Value of Accumulated Plan Benefits							
	1. Vested Benefits							
	a. Members Currently Receiving Paymentsb. Terminated Vested Membersc. Other Membersd. Total	\$ 116,253,411 114,284 29,249,516 145,617,211	\$ 108,512,699 16,284 32,783,228 141,312,211					
	2. Non-Vested Benefits	1,671,546	1,166,862					
	3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	147,288,757	142,479,073					
	4. Accumulated Contributions of Active Members	6,338,976	6,179,116					
C.	Changes in the Actuarial Present Value of Accumulated Plan Benefits							
	1. Total Value at Beginning of Year	142,479,073	131,217,061					
	2. Increase (Decrease) During the Period Attributable to:							
	a. Plan Amendment	112,934	0					
	b. Change in Actuarial Assumptions	0	4,169,767					
	c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	13,190,344	15,088,866					
	d. Benefits Paid	(8,493,594)	(7,996,621)					
	e. Net Increase	4,809,684	11,262,012					
	3. Total Value at End of Period	147,288,757	142,479,073					
D.	Market Value of Assets (Net of COLA Reserve)	98,369,649	93,594,535					
E.	Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods							



SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS GASB Statement No. 67

Fiscal year ending September 30,	2019			2018		2017	
Total Pension Liability							
Service Cost	\$	2,996,276	\$	2,325,806	\$	2,278,992	
Interest		12,125,368		12,106,606		11,308,126	
Benefit Changes		-		-		-	
Difference between actual & expected experience		2,766,907		(2,577,793)		4,638,688	
Assumption Changes		4,551,070		11,883,072		-	
Benefit Payments		(8,543,520)		(8,424,033)		(8,142,089)	
Refunds		(10,566)		(10,449)		(6,673)	
Net Change in Total Pension Liability		13,885,535		15,303,209		10,077,044	
Total Pension Liability - Beginning		168,527,216		153,224,007		143,146,963	
Total Pension Liability - Ending (a)	\$	182,412,751	\$	168,527,216	\$	153,224,007	
Plan Fiduciary Net Position							
Contributions - Employer	\$	6,452,812	\$	4,374,387	\$	5,721,499	
Contributions - Employer (from State)		1,129,759		1,074,825		1,134,704	
Contributions - Non-Employer Contributing Entity		-		-		-	
Contributions - Member		1,044,994		991,333		903,846	
Net Investment Income		4,988,434		8,602,179		10,685,983	
Benefit Payments		(8,543,520)		(8,424,033)		(8,142,089)	
Refunds		(10,566)		(10,449)		(6,673)	
Administrative Expense		(160,131)		(111,297)		(146,391)	
Other		-		160,328 *	•		
Net Change in Plan Fiduciary Net Position		4,901,782		6,657,273		10,150,879	
Plan Fiduciary Net Position - Beginning		115,584,069		108,926,796		98,775,917	
Plan Fiduciary Net Position - Ending (b)	\$	120,485,851	\$	115,584,069	\$	108,926,796	
Net Pension Liability - Ending (a) - (b)		61,926,900		52,943,147		44,297,211	
Plan Fiduciary Net Position as a Percentage							
of Total Pension Liability		66.05 %		68.58 %		71.09 %	
Covered Payroll	\$	11,003,736	\$	10,494,232	\$	8,954,177	
Net Pension Liability as a Percentage							
of Covered Payroll		562.78 %		504.50 %		494.71 %	

^{*} Due from Police Pension Fund for final settlement of Legacy Fund split.



SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY GASB Statement No. 67

	Total			Plan Net Position		Net Pension Liability
FY Ending	Pension	Plan Net	Net Pension	as a % of Total	Covered	as a % of
September 30,	Liability	Position	Liability	Pension Liability	Payroll	Covered Payroll
2017	\$ 153,224,007	\$ 108,926,796	\$ 44,297,211	71.09%	\$ 8,954,177	494.71%
2018	168,527,216	115,584,069	52,943,147	68.58%	10,494,232	504.50%
2019	182,412,751	120,485,851	61,926,900	66.05%	11,003,736	562.78%



NOTES TO SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY GASB Statement No. 67

Valuation Date: October 1, 2018
Measurement Date: September 30, 2019

Methods and Assumptions Used to Determine Net Pension Liability:

Actuarial Cost Method Entry Age Normal

Roll Forward Procedures The Total Pension Liability was developed by using standard actuarial

techniques to roll forward amounts from the October 1, 2018 actuarial

valuation one year to the measurement date.

Inflation 2.50%

Salary Increases 5.00% to 6.25% depending on service

Investment Rate of Return 7.00%

Retirement Age Experience-based table of rates that are specific to the type of

eligibility condition.

Mortality RP-2000 Combined Healthy Participant Mortality Table (for pre-

retirement mortality) and the RP-2000 Mortality Table for Annuitants

(for post-retirement mortality), with mortality improvements

projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2017 FRS Valuation, as mandated by Chapter 112.63, Florida

Statutes.

Other Information:

Notes See Section A in the October 1, 2018 Actuarial Valuation Report.

Effective as of October 1, 2018, the investment return assumption was

lowered from 7.25% to 7.00%.



SCHEDULE OF CONTRIBUTIONS GASB Statement No. 67

	Actuarially		Contribution		Actual Contribution
FY Ending	Determined	Actual	Deficiency	Covered	as a % of
September 30,	Contribution	Contribution	(Excess)	Payroll	Covered Payroll
2017	\$ 5,332,347	\$ 6,856,203	\$ (1,523,856)	\$ 8,954,177	76.57%
2018	6,538,017	5,449,212	1,088,805	10,494,232	51.93%
2019	7,582,571	7,582,571	-	11,003,736	68.91%



NOTES TO SCHEDULE OF CONTRIBUTIONS GASB Statement No. 67

Valuation Date: October 1, 2017

Notes Actuarially determined contributions are calculated as of October 1,

which is two years prior to the end of the fiscal year in which

contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Normal

Amortization Method Level Percentage of Pay, Closed

Remaining Amortization Period 20 years

Asset Valuation Method 5-year smoothed market

Inflation 2.50%

Salary Increases 5.0% to 6.25% based on service

Investment Rate of Return 7.25%

Retirement Age Experience-based table of rates that are specific to the type of

eligibility condition.

Mortality RP-2000 Combined Healthy Participant Mortality Table (for pre-

retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality

improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2016 FRS Valuation, as

mandated by Chapter 112.63, Florida Statutes.

Other Information:

Notes See Section A in the October 1, 2017 Actuarial Valuation Report.

Effective as of October 1, 2017, the investment return assumption was lowered from 8.0% to 7.25%. The mortality assumption for active members prior to retirement was revised in accordance with

a revision to the active member pre-retirement mortality

assumption used by the Florida Retirement System (FRS) in their

July 1, 2016 Actuarial Valuation.



SINGLE DISCOUNT RATE GASB Statement No. 67

A single discount rate of 7.00% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the total actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan'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 (7.00%) was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 7.00%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher.

Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

Current Single Discount					
1% Decrease Rate Assumption 1% In					
6.00%	7.00%	8.00%			
\$82,641,305	\$61,926,900	\$44,987,390			





MISCELLANEOUS INFORMATION

	RECONCILIATION OF MEMBERSHIP DATA					
		From 10/1/18 To 10/1/19	From 10/1/17 To 10/1/18			
A.	Active Members					
5. 6. 7. 8. 9.	Number Included in Last Valuation New Members Included in Current Valuation Non-Vested Employment Terminations Vested Employment Terminations DROP Retirement Service Retirements Disability Retirements Deaths Other - Transfer/Rehire	139 13 (3) (1) (7) 0 0	133 14 (3) 0 (5) 0 0			
10.	Number Included in This Valuation	141	139			
В.	Terminated Vested Members	1				
2.		0 1 0 0 0 0 0	0 0 0 0 0			
C.	DROP Plan Members					
II -	Number Included in Last Valuation Addition from Active Members Retirements Deaths Resulting in No Further Payments Other Number Included in This Valuation	17 7 (3) 0 0 21	16 5 (4) 0 0 17			
D.	Service Retirees, Disability Retirees and Beneficiaries					
1. 2. 3. 4. 5. 6. 7.	Number Included in Last Valuation Additions from Active Members Additions from DROP Additions from Terminated Vested Members Deaths Resulting in No Further Payments Deaths Resulting in New Survivor Benefits End of Certain Period - No Further Payments Other - Data Correction	117 0 3 0 (2) 0 0	112 0 4 0 (1) 1 0			



ACTIVE MEMBERS AS OF OCTOBER 1, 2019

				Yea	rs of Service	to Valuation D	ate				
Age Group	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25 & Up	Totals
20-24 NO	6	4	2	-	-	-	-	-	-	-	12
TOT PAY	337,260	229,184	117,190	-	-	-	-	-	-	-	683,634
AVG PAY	56,210	57,296	58,595	-	-	-	-	-	-	-	56,970
25-29 NO	2	4	7	6	2	3	-	-	-	-	24
TOT PAY	112,420	233,402	414,115	383,767	134,330	208,872	-	-	-	-	1,486,906
AVG PAY	56,210	58,351	59,159	63,961	67,165	69,624	-	-	-	-	61,954
30-34 NO	4	2	7	6	2	9	4	-	-	-	34
TOT PAY	224,840	115,247	417,607	382,266	135,830	690,276	418,948	-	-	-	2,385,014
AVG PAY	56,210	57,624	59,658	63,711	67,915	76,697	104,737	-	-	-	70,147
35-39 NO	1	1	3	3	1	9	6	10	-	-	34
TOT PAY	56,210	58,215	181,741	182,759	67,890	685,335	594,588	1,098,031	-	-	2,924,769
AVG PAY	56,210	58,215	60,580	60,920	67,890	76,148	99,098	109,803	-	-	86,023
40-44 NO	-	-	-	2	-	-	5	13	-	-	20
TOT PAY	-	-	-	128,039	-	-	484,428	1,297,930	-	-	1,910,397
AVG PAY	-	-	-	64,020	-	-	96,886	99,841	-	-	95,520
45-49 NO	-	-	-	-	-	-	-	10	1	-	11
TOT PAY	-	-	-	-	-	-	-	1,068,190	126,033	-	1,194,223
AVG PAY	-	-	-	-	-	-	-	106,819	126,033	-	108,566
50-54 NO	-	1	-	-	-	-	2	2	-	-	5
TOT PAY	-	59,425	-	-	-	-	186,944	201,640	-	-	448,009
AVG PAY	-	59,425	-	-	-	-	93,472	100,820	-	-	89,602
55-59 NO	-	-	-	-	-	-	-	1	-	-	1
TOT PAY	-	-	-	-	-	-	-	95,847	-	-	95,847
AVG PAY	-	-	-	-	-	-	-	95,847	-	-	95,847
60-64 NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
65 & Up NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
TOT NO	13	12	19	17	5	21	17	36	1	-	141
TOT AMT	730,730	695,473	1,130,653	1,076,831	338,050	1,584,483	1,684,908	3,761,638	126,033	-	11,128,799
AVG AMT	56,210	57,956	59,508	63,343	67,610	75,452	99,112	104,490	126,033	-	78,928



INACTIVE MEMBERS AS OF OCTOBER 1, 2019

	Terminat	ed Vested	Dis	abled	Retired		Bene	ficiaries	Grand Total		
		Total		Total		Total		Total		Total	
Age	Number	Benefits	Number	Benefits	Number	Benefits	Number	Benefits	Number	Benefits	
Under 20	0	-	0	-	0	-	2	7,884	2	7,884	
20 - 24	0	-	0	-	0	-	0	-	0	-	
25 - 29	0	-	0	-	0	-	0	-	0	-	
30 - 34	1	28,716	0	-	0	-	0	-	1	28,716	
35 - 39	0	-	0	-	0	-	1	5,337	1	5,337	
40 - 44	0	-	0	_	0	-	1	17,081	1	17,081	
45 - 49	0	-	0	-	11	870,705	0	-	11	870,705	
50 - 54	0	-	0	-	21	1,537,190	0	-	21	1,537,190	
55 - 59	0	-	1	39,808	35	2,579,870	0	-	36	2,619,678	
60 - 64	0	-	2	72,857	19	1,310,235	0	_	21	1,383,092	
65 - 69	0	-	1	25,040	19	1,307,396	1	35,160	21	1,367,596	
70 - 74	0	-	0	-	11	613,790	3	49,291	14	663,081	
75 - 79	0	-	0	-	6	214,885	1	27,253	7	242,138	
80 - 84	0	-	0	-	1	20,868	0	_	1	20,868	
85 - 89	0	-	0	-	0	-	1	12,157	1	12,157	
90 - 94	0	-	0	-	1	11,153	0	-	1	11,153	
95 - 99	0	-	0	-	0	-	1	12,245	1	12,245	
100 & Ove	r 0	-	0	-	0	-	0	-	0	-	
Total	1	28,716	4	137,705	124	8,466,092	11	166,408	140	8,798,921	
Average Ag	ge	35		62		61		59		61	



SECTION F

SUMMARY OF PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS

A. Ordinances

The Plan was established under the Code of Ordinances for the City of Delray Beach, Florida, Chapter 33, and was most recently amended under Ordinance No. 17-16 passed and adopted on its second reading on October 4, 2016. The Plan is also governed by certain provisions of Chapter 175, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

B. Effective Date

April 22, 1974

C. Plan Year

October 1 through September 30

D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

E. Eligibility Requirements

All full-time firefighters

F. Credited Service

Years and completed months of full-time service with the City during which time prescribed employee contributions are made. No service is credited for any periods of employment for which the member received a refund of their contributions.

G. Compensation

Compensation is the total base wages, including state education compensation and fire career education compensation, but excluding overtime, bonuses and any other payments.

H. Final Average Compensation (FAC)

For Members hired prior to October 4, 2016:

The average of Compensation over the highest 3 years of Credited Service.

For Members hired on or after October 4, 2016:

The average of Compensation over the highest 5 years out of the last 10 years of Credited Service.



I. Normal Retirement

For Members hired prior to October 4, 2016 with 20 or more years of service as of that date:

Eligibility: A member may retire on the first day of the month coincident with or next

following the earlier of:

(1) age 55 and 10 years of Credited Service, or

(2) 20 years of Credited Service regardless of age.

Benefit: 3.00% (or 3.50% of FAC for those electing the enhanced multiplier) for each year of

Credited Service; subject to a maximum benefit equal to 87.50% of FAC.

Normal Form

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly

income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or

remarriage of spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases

are available when the revenue under Chapter 175 exceeds \$1,206,994.

For Members hired prior to October 4, 2016 with less than 20 years of service as of that date:

Eligibility: A member may retire on the first day of the month coincident with or next

following the earlier of:

(1) age 55 and 10 years of Credited Service, or

(2) 20 years of Credited Service regardless of age.

Benefit: For those retiring with more than 20 years of service: 3.00% of FAC (or 3.50% of

FAC for those electing the enhanced multiplier) for each year of Credited Service prior to October 4, 2016. For Credited Service earned after October 4, 2016, 3.00% of FAC for each year of Credited Service after October 4, 2016. Members hired

after April 9, 2013 are not eligible for the enhanced multiplier.

For those retiring with less than 20 years of service: 2.50% of FAC for each year of Credited Service prior to October 4, 2016. For Credited Service earned after

October 4, 2016, 3.00% of FAC for each year of Credited Service after October 4,

2016.

The maximum annual starting benefit is \$100,000, but not less than 2.00% of average monthly earnings for each year of continuous service. The maximum benefit amount will be increased annually by 2% each October 1st beginning

October 1, 2016.



Normal Form

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly

income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For the benefit based on service accrued after October 4,

2016, the normal form is a 10-Year Certain and Life annuity.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after

separating from employment.

For Members hired after October 4, 2016:

Eligibility: A member may retire on the first day of the month coincident with or next

following the earlier of:

(1) age 55 and 10 years of Credited Service, or

(2) 25 years of Credited Service regardless of age.

Benefit: 2.75% of FAC for each year of Credited Service. The maximum annual starting

benefit is \$100,000, but not less than 2.00% of average monthly earnings for each year of continuous service. The maximum benefit amount will be increased

annually by 2% each October 1st beginning October 1, 2016.

Normal Form

of Benefit: 10 Years Certain and Life thereafter.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases

are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after

separating from employment.



J. Early Retirement

For Members hired prior to October 4, 2016:

Eligibility: A member may elect to retire earlier than the Normal Retirement Eligibility upon

attainment of age 50 and 10 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 3.0% for each year by which the

Early Retirement date precedes the Normal Retirement date.

Normal Form

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly

income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For the benefit based on service accrued after October 4,

2016, the normal form is a 10-Year Certain and Life annuity.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after

separating from employment.

For Members hired on or after October 4, 2016:

Early retirement is not available.

K. Delayed Retirement

Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

L. Service Connected Disability

Eligibility: Any member who becomes totally and permanently disabled as a result of an act

occurring in the performance of service for the City is immediately eligible for a

disability benefit.

Benefit: The disability benefit is equal to the accrued benefit, but not less than 60% of FAC.

Normal Form

of Benefit: Payable until death or recovery from disability or until the member reaches Early

or Normal Retirement Age and elects to receive Early or Normal Retirement

Benefits in lieu of disability benefits. Other options are also available.

COLA: None



M. Non-Service Connected Disability

Eligibility: Any member with at least 10 years of Credited Service who becomes totally and

permanently disabled is immediately eligible for a disability benefit.

Benefit: The accrued Normal Retirement Benefit with a minimum equal to 2.00% of FAC for

each year of Credited Service, with a minimum of 25% of FAC.

Normal Form

of Benefit: Payable until death or recovery from disability or until the member reaches Early

or Normal Retirement Age and elects to receive Early or Normal Retirement

Benefits in lieu of disability benefits. Other options are also available.

COLA: None

N. Death in the Line of Duty

Eligibility: Any member whose death is determined to be the result of a service incurred

injury is eligible for survivor benefits regardless of Credited Service.

Benefit: Spouse will receive 50% of FAC, plus 5% to each unmarried child under 18 (age

22 if full-time student), subject to an overall maximum of 60% of FAC.

Normal Form

of Benefit: Payable for the life of spouse, or until age 18 (age 22 if full-time student) for

children.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after

separating from employment

O. Other Pre-Retirement Death

Eligibility: All members are eligible for survivor benefits.

Benefit: \$2,500 lump sum is payable if the member has less than one year of service. A

\$5,000 lump sum is payable if the member has more than one year of service

but less than five.

If the member has five or more years of service, a \$5,000 lump sum is payable, plus a month benefit of 65% of the accrued benefit to the spouse (as of the date

of death), subject to a minimum of 20% of FAC. In addition, 5% to each

unmarried child under 18 (age 22 if full-time student). The total monthly benefit is subject to a maximum of 50% of FAC and 35% after death or remarriage of

spouse.



Normal Form

of Benefit: Payable for the life of spouse, or until age 18 (age 22 if full-time student) for

children.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after

separating from employment

P. Post Retirement Death

Benefit determined by the form of benefit elected upon retirement.

Q. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the life annuity and the 50%, 66 2/3%, 75% and 100% Joint and Survivor options with or without the pop-up feature.

R. Vested Termination

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion

of 10 years of Credited Service.

Benefit: The benefit is the member's accrued Normal Retirement Benefit. Benefit begins on

the date that would have been the member's Normal Retirement date based on

Credited Service at termination.

Normal Form

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly

income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For the benefit based on service accrued after October 4,

2016, the normal form is a 10-Year Certain and Life annuity.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after

separating from employment.



S. Refunds

Eligibility: All members terminating employment with less than 10 years of Credited Service

are eligible.

Benefit: Refund of the member's contributions with simple interest of 3%.

T. Member Contributions

9.00% of Compensation until the member has earned the maximum normal retirement benefit.

U. State Contributions

Chapter 175 Premium Tax Refunds.

V. Employer Contributions

Any additional amount determined by the actuary needed to fund the plan properly according to State laws.

W. Cost of Living Increases

Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment.

X. Deferred Retirement Option Plan

Eligibility: Plan members who have met the eligibility requirements for Normal Retirement.

Benefit: The member's Credited Service and FAC are frozen upon entry into the DROP. The

monthly retirement benefit as described under Normal Retirement is calculated

based upon the frozen Credited Service and FAC.

Maximum

DROP Period: 60 months

Interest

Credited: For members who enter the DROP, the member's DROP account is credited at the

net rate of return on retirement fund assets during the period the employee

participates in the DROP.

Normal Form

of Benefit: Lump Sum, Direct Rollover, or Partial Lump Sum with a Direct Rollover of

remaining balance.



Y. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Delray Beach Firefighters' Retirement System liability if continued beyond the availability of funding by the current funding source.

Z. Changes from Previous Valuation

In compliance with newly adopted Florida Statutes Chapter 112.1816, the following additional provisions are reflected:

As provided and subject to the limitations in Section 112.1816, Florida Statutes, effective July 1, 2019, a firefighter who is diagnosed with certain specified cancers is presumed to have contracted those cancers while in the line of duty for purposes of determining the disability or death benefit payable from the Plan.



Item 5.c.ii. Experience Study Results

(Will be provided via email when received)

City of Delray Beach Firefighters' Retirement System

EXPERIENCE INVESTIGATION FOR THE 7 YEARS ENDED SEPTEMBER 30, 2019





May 20, 2020

Board of Trustees City of Delray Beach Firefighters' Retirement System Delray Beach, Florida

Re: Experience Investigation for the 7-Year Period Ending September 30, 2019

Dear Board Members:

Gabriel, Roeder, Smith & Company is pleased to provide the results of our experience investigation for the City of Delray Beach Firefighters' Retirement System. The period covered by this study is October 1, 2012 through September 30, 2019. Based upon the results, certain changes in actuarial assumptions for valuation purposes are recommended.

The Table of Contents, which immediately follows, sets out the material contained in this report.

This Report was prepared at the request of the Board and is intended for use by the Pension Plan (Plan) and those designated or approved by the Board. This Report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board.

The purpose of this Report is to evaluate the assumptions and methods to be used for the October 1, 2019 and subsequent years' Actuarial Valuations, and to describe the financial effect of the recommended assumption and method changes based on our findings. This Report should not be relied on for any purpose other than the purpose described above.

The study was performed on the basis of participant data and financial information supplied by the Plan Administrator, the City, and the prior actuary in connection with the valuations performed during the years studied. We checked for internal and year-to-year consistency, but did not audit this data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator, the City, and the prior actuary.

The enclosed calculations are based upon the Plan provisions as summarized in the October 1, 2019 Actuarial Valuation Report. If you have reason to believe the assumptions used are unreasonable, the Plan provisions are incorrectly described or referenced, or that important Plan provisions relevant to this study are not described, you should contact the undersigned prior to relying on this information.

The valuation date used for calculating the financial effect of the assumption changes was October 1, 2019. Future actuarial measurements may differ significantly from the current measurements presented in this Report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or

decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

This Report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Gabriel, Roeder, Smith & Company will be pleased to review this Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

leffrew Amrose, MAAA

Énrolled Actuary No. 20-6599

Trisha Amrose, MAAA

Enrolled Actuary No. 20-8010



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SECTION A

SUMMARY OF FINDINGS

SUMMARY OF FINDINGS

The 7-year period (October 1, 2012 to September 30, 2019) covered by this experience investigation period provided sufficient data to form a basis for recommending updates in the following demographic and financial assumptions used in the actuarial valuation of the Plan.

Recommended changes in actuarial assumptions resulting from this experience investigation, including the approximate impact on the FYE 2021 required City contributions as a dollar amount and as a percent of covered payroll and the impact on the funded ratio, are summarized below.

For comparison purposes, the required City contribution for the fiscal year ending September 30, 2021 is 63.86% of covered payroll, or approximately \$7.92 million, and the funded ratio as of October 1, 2019 is 63.5%.

Our recommendations are as follows:

—Update the future salary increase assumption to reflect higher than expected real salary increases.

Estimated First Year Impact on:					
Required Employer Contribution Funded Ratio					
+\$56,082 or (0.08%) of covered payroll	+0.32%				

 Update assumed future retirement rates to reflect generally higher observed retirement experience than expected.

Estimated First Year Impact on:					
Required Employer Contribution Funded Ratio					
+\$28,531 or +0.23% of covered payroll	(0.07%)				

 Update assumed rates of future separation from employment to reflect generally lower than expected separation.

Estimated First Year Impact on:					
Required Employer Contribution Funded Ratio					
(\$40,936) or (0.33%) of covered payroll	+0.18%				

—Update assumed rates of future mortality to reflect updated mortality assumptions used in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

Estimated First Year Impact on:			
Required Employer Contribution Funded Ratio			
(\$403,157) or (3.25%) of covered payroll	+1.55%		



-Update the net investment return assumption from 7.00% to 6.75%.

Estimated First Year Impact on:		
Required Employer Contribution Funded Ratio		
+\$538,370 or +4.34% of covered payroll	(1.77%)	

—Update the net investment return assumption from 7.00% to 6.50%.

Estimated First Year Impact on:			
Required Employer Contribution Funded Ratio			
+\$1,097,829 or +8.85% of covered payroll	(3.53%)		

 Update all demographic assumptions, salary scale assumption and different combinations of changes to the investment return assumption.

Investment Return Assumption	7.00%	6.75%	6.50%
Required Employer Contribution	(\$339,207) or (3.24%) of covered payroll	+\$178,671 or +0.90% of covered payroll	+\$716,563 or +5.20% of covered payroll
Funded Ratio	+1.98%	+0.23%	(1.51%)

Note: The sum of the individual cost impacts does not equal the impact of all changes combined due to the interaction of Plan provisions and actuarial assumptions with one another and the effect that one assumption can have on the impact of another assumption change.





EXPERIENCE INVESTIGATION RESULT

Methodology

The methodology, basic results and conclusions of the seven-year experience investigation of the actuarial assumptions are described below.

The expected salaries at the end of each year were obtained by use of the salary scale assumption used in the October 1, 2019 actuarial valuation. The resulting expected salaries were then compared with the actual salaries reported.

The number of members exposed to risk during each period was tabulated (exposure) and the expected incidence of separation (separation of members not eligible for normal retirement), retirement and disability were obtained by use of the retirement, separation and disability rates employed in the October 1, 2019 actuarial valuation. The actual number of retirements, separations and disabilities was tabulated and compared with those expected.

Finally, an evaluation of the Plan's investment return assumption was conducted, using forward-looking capital market assumptions (of expected investment returns and volatilities for various asset classes) collected from 14 different investment consultants.

Consideration was given to the size of the group. Over the 7-year experience study period reviewed, there were a total of 973 exposures (each active member compared from one year to the subsequent year). This number of exposures is sufficient to provide partial credibility to the observed experience, but it is insufficient to be considered *fully credible*. Therefore, some weight was given to the current assumptions while developing our recommended demographic assumptions going forward.



Basic Results and Conclusions

Rates of Salary Increase

Observed rates of real salary increases (net of inflation) during the experience investigation period were generally higher than expected based on the current assumption.

We propose revised assumed rates of salary increase based on completed years of service as shown in the tables below. Actual versus expected salary increase experience is shown in Appendix A on page 18.

Salary Scale			
Years of Service	Current Rates	Proposed Rates	
< 5	6.25%	8.25%	
5 - 9	6.25%	7.75%	
10 - 14	5.00%	5.75%	
15 - 19	5.00%	5.00%	
20+	5.00%	4.50%	



Rates of Retirement

The current normal retirement eligibility is as follows:

- Normal retirement for active members hired before October 4, 2016 is the earlier of age 55 with 10 years of service or 20 years of service.
- Normal retirement for active members hired after October 4, 2016 is the earlier of age 55 with 10 years of service or 25 years of service.

The retirement experience studied in this report is based on the retirement pattern for members hired before October 4, 2016 only since members after this date were not eligible for retirement during the study period. We based the proposed retirement rates for members hired after October 4, 2016 on the experience of members hired before this date. We recommend monitoring the retirement experience for members hired after October 4, 2016 as it emerges.

The observed number of retirements during the experience investigation period was generally higher than expected based on the current assumed rates of retirement. The current and proposed retirement rates are shown in the following tables. Actual versus expected experience is shown in Appendix B on page 19.

Normal Retirement for Members Hired Before October 4, 2016			
Age	Years of Service	Current Rates	Proposed Rates
55 +	10 - 19	17.5%	20.0%
All	20	25.0%	25.0%
All	21	10.0%	17.5%
All	22	10.0%	17.5%
All	23	25.0%	25.0%
All	24	25.0%	40.0%
All	25	100.0%	100.0%

Normal Retirement for Members Hired After October 4, 2016			
Age	Years of Service	Current Rates	Proposed Rates
55 +	10 - 24	17.5%	20.0%
All	25	100.0%	30.0%

The current early retirement eligibility is as follows:

- Early retirement for active members hired before October 4, 2016 is age 50 with 10 years of service.
- Early retirement is not available for active members hired after October 4, 2016.

Under the current assumptions, no early retirement rates are assumed. We recommend no change to this since there have been no early retirements over the period studied.



Rates of Employment Separation

Currently, a member is vested when they have ten years of service.

The observed rates of employment separations during the experience investigation period were generally lower than expected.

The current and proposed separation (withdrawal) rates are shown in the following table. Actual versus expected experience is shown in Appendix C on page 20.

Withdrawal Rates Employees With Less Than 10 Years of Service			
Years of Service Current Rates Proposed Rate			
0 - 1	6.04%	6.50%	
2 - 3	5.45%	5.50%	
4 - 5	5.42%	5.00%	
6 - 7	4.62%	3.75%	
8 - 9	3.53%	3.50%	

Withdrawal Rates Employees With More Than 10 Years of Service			
Age Current Rates Proposed Rat			
0 - 34	4.6%	1.5%	
35 - 39	1.7%	1.5%	
40 - 44	0.0%	1.0%	
45 +	0.0%	1.0%	



Rates of Disability

The actual number of disabilities were in line with the number of expected disabilities. As a result, we propose maintaining the current rates of disability. Also, we proposed maintaining the assumption that 75% of disability retirements are service connected and 25% are non-service connected. Actual versus expected experience is shown in Appendix D on page 21.

Disability			
		Proposed	
Age	Current Rates	Rates	
20 - 24	0.07%	0.07%	
25 - 29	0.08%	0.08%	
30 - 34	0.10%	0.10%	
35 - 39	0.12%	0.12%	
40 - 44	0.18%	0.18%	
45 - 49	0.34%	0.34%	
50 - 54	0.58%	0.58%	
55 - 59	0.78%	0.78%	



Rates of Mortality

Chapter 112.63(1)(f) of the Florida Statutes requires each Local Pension Plan to use the mortality tables used in either of the two most recently published actuarial valuation reports of the Florida Retirement System (FRS), including the projection scale for mortality improvement.

The FRS has updated the mortality assumption in their July 1, 2019 Actuarial Valuation Report. We recommend using the same mortality tables for the City of Delray Beach Firefighters' Retirement System in the October 1, 2019 Actuarial Valuation Report.

The updated mortality tables are the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018.

For disabled retirees, the male mortality tables are 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and the female mortality tables are 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Female Table and 20% Headcount Weighted Safety Disabled Retiree Female Table, both with no provision being made for future mortality improvements.

Life expectancy for healthy post-retirement under the proposed and current mortality table are shown in Appendix E on page 22.



Amortization Method and Period

Currently, the Unfunded Actuarial Accrued Liability (UAAL) is being paid off as a level percent of pay using a 1.17% payroll growth assumption and amortization bases are being paid off over a 20-year period.

The purpose of amortizing the UAAL as a level percent of covered payroll is so the required City contribution rate remains level when there are no actuarial gains or losses. Under the level percentage of pay amortization method, the payments start out low and increase by the payroll growth assumption each year.

The combination of a high payroll growth assumption and a long amortization period can lead to negative amortization (i.e. the payment applied to each amortization base will not be enough to cover the interest portion) which is generally not recommended in the actuarial community. The combination of a 1.17% payroll growth assumption and a 20-year amortization period in this Plan does not result in negative amortization payments. For this reason, the use of a 1.17% payroll growth assumption in the calculation of the payments on the UAAL is reasonable in our opinion.

Changes in the UAAL due to assumption/method changes, plan changes and actuarial gains or losses are paid off over a 20-year period in this Plan. Based on the Florida Statutes, these changes in the UAAL must be paid off over a period of time not to exceed 30 years. The use of a 20-year instead of a 30-year amortization period increases contribution volatility but also aligns better with the expected future working lifetime of active employees. Since the normal retirement date for firefighters in this plan is generally 20 or 25 years of service depending on the officer's hire date, the current amortization of 20 years is reasonable in our opinion.

If the amortization period is lowered to 15 years for all current bases with a longer than 15-year amortization period, the required city contribution would increase by about \$270,000. The payments increase, but less interest is paid over time. Shortening the amortization period to 15 years will increase contribution volatility, and this increase could be significant, especially given the current environment in the financial markets.

We believe the amortization payment method and amortization period are both reasonable, and therefore we recommend no change.



Rate of Investment Return

The selection of the actuarial assumed rate of return is a major decision. It has even been a controversial topic for many pension boards and outside observers at times.

THE USE OF HISTORICAL RETURNS IN SETTING THE INVESTMENT RETURN ASSUMPTION

We have prepared the following table which provides the information regarding the historical returns for the Plan. Please note that while we did not have investment returns prior to 2014, most pension plans have earned over 7% per year for the last 10 years and 30 years.

	Market Value
Year Ended	Return*
9/30/14	10.0 %
9/30/15	(1.2)
9/30/16	8.9
9/30/17	11.4
9/30/18	8.2
9/30/19	4.6
Average Returns:	6.9 %

It is important that the Board be able to defend the investment return assumption that they adopt. In our opinion, which is supported by the Actuarial Standards of Practice (ASOP), we believe the assumption adopted is best supported if it is based on projections from the experts in the field (i.e. the fourteen national investment consultants in our study). The evidence supporting an investment return assumption should not be "nobody really knows what future returns will be" or "we did not want to change our current assumption".

The following is taken from ASOP No. 27 regarding the use of historical returns in the setting of the investment return assumption.

- The discount rate used in the measurement of a pension obligation is a **forward-looking assumption**. While the actuary may use some historical results in establishing expectations regarding the future, the discount rate reflects an expectation of events to come, not events that have already occurred.
- The actuary should consider the possibility that some historical economic data may not be appropriate for use in developing assumptions for future periods due to changes in the underlying environment.



- The actuary should develop a reasonable economic assumption based on the actuary's estimate of **future** experience, the actuary's observation of the estimates inherent in market data, or a combination thereof.
- The investment return assumption reflects the **anticipated** returns on the plan's current and, if appropriate for the measurement, future assets.

We do not recommend basing the investment return solely on the historical returns of the Plan for a number of reasons. Using only the historical returns to set the investment return assumption is not recommended because the assumption will change based on the number of years in the look-back period, and the assumption will not reflect future anticipated changes in the economic environment. It is also important to note that consideration is given to the historical returns of each asset class in the investment consultants' forward-looking forecasts.

Furthermore, as the size of a fund increases, the investments may shift into less volatile, lower return investments. Since the expected return is based on how the fund is invested, the historical fund returns will be less indicative of the future as the asset allocation changes.

HOW TO DETERMINE THE ACTUARIAL ASSUMED RATE OF RETURN

The assumed net long-term expected rate of return is the Plan fiduciaries' best estimate of the future compound investment return of the fund. A building block approach should be used, in which the expected real returns (net of inflation) for each asset class in which the Plan is invested are estimated and multiplied by the asset allocation percentage of that asset class.

City of Delray Beach Firefighters' Retirement System's Asset Allocation

The Plan's target asset allocation detailed in the most recent Investment Policy is shown below.

Asset Class	Target
Domestic Equity Securities	42.5%
International Equity Securities	15.0%
Total Equity	57.5%
Core Fixed Income	20.0%
Non-core fixed income	7.5%
Total Fixed Income	27.5%
Real Estate	10.0%
Alternatives	5.0%
Total Alternatives	15.0%
Grand Total	100.0%



FORWARD-LOOKING CAPITAL MARKET ASSUMPTIONS

Best practice for selecting the net investment return assumption considers a fund's asset allocation and reliable forecasts for capital market assumptions for each relevant asset class.

GRS is not an investment consulting firm and does not provide investment consulting or forecasting services. But GRS maintains a survey of the forecasts of capital market assumptions from the following fourteen (14) major national investment consulting and forecasting firms to obtain a consensus:

Fourteen Major National Investment Consultants and Forecasters								
Aon/Hewitt	Mercer							
Blackrock	Meketa							
BNY/Mellon	NEPC							
Cambridge	R. V. Kuhns & Associates							
Callan	Versus							
J. P.Morgan	VOYA							
Marquette Associates	Wilshire							

Of these 14 investment consultants, they all provide short to mid-term capital market assumptions (over the next 5-15 years), while six of them provided long-term capital market assumptions (over the next 20-30 years). We have separately shown the short to mid-term forecasts and the long-term forecasts in our analysis.

Mapping the Asset Allocation

The investment consultants do not all provide their capital market assumptions in exactly the same asset classes as expressed on the previous page, so we have mapped the Plan's target asset allocation to the "best fit" asset classes of each investment consultant.

Build-up of Comparable Net Expected Returns

The following tables show the results of applying the mapping and calculation process of the nominal returns for each of the investment consultants. The expected nominal returns are called the "arithmetic means". The first table shows the results of the short to mid-term capital market assumptions. The second table shows the results of the long-term capital market assumptions (from the six investment consultants who provided long-term assumptions).



Short to Mid-Term Capital Market Assumptions

Investment Consultant	Investment Consultant Expected Nominal Return	Alpha for Active Management	Investment Consultant Inflation Assumption	Expected Real Return (2)+(3)–(4)	Actuary Inflation Assumption	Expected Nominal Return (5)+(6)	Active Management Expenses	Expected Nominal Return Net of Expenses (7)-(8)	Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	5.17%	0.58%	2.20%	3.55%	2.50%	6.05%	0.58%	5.47%	12.56%
2	5.53%	0.58%	2.50%	3.61%	2.50%	6.11%	0.58%	5.53%	11.23%
3	6.23%	0.58%	2.50%	4.31%	2.50%	6.81%	0.58%	6.23%	11.67%
4	5.89%	0.58%	2.20%	4.27%	2.50%	6.77%	0.58%	6.19%	8.95%
5	6.30%	0.58%	2.25%	4.63%	2.50%	7.13%	0.58%	6.55%	11.28%
6	6.03%	0.58%	2.00%	4.61%	2.50%	7.11%	0.58%	6.53%	9.97%
7	6.56%	0.58%	2.21%	4.92%	2.50%	7.42%	0.58%	6.84%	12.15%
8	6.30%	0.58%	2.00%	4.88%	2.50%	7.38%	0.58%	6.80%	11.36%
9	6.95%	0.58%	2.31%	5.22%	2.50%	7.72%	0.58%	7.14%	11.68%
10	7.04%	0.58%	2.26%	5.36%	2.50%	7.86%	0.58%	7.28%	12.30%
11	6.84%	0.58%	2.30%	5.12%	2.50%	7.62%	0.58%	7.04%	9.78%
12	7.12%	0.58%	2.15%	5.55%	2.50%	8.05%	0.58%	7.47%	11.12%
13	7.00%	0.58%	1.70%	5.88%	2.50%	8.38%	0.58%	7.80%	11.44%
14	7.35%	0.58%	2.00%	5.93%	2.50%	8.43%	0.58%	7.85%	11.00%
Average	6.45%	0.58%	2.18%	4.85%	2.50%	7.35%	0.58%	6.77%	11.18%

Long-Term Capital Market Assumptions

Investment Consultant	Investment Consultant Expected Nominal Return		Investment Consultant Inflation Assumption	Expected Real Return	Actuary Inflation Assumption	Expected Nominal Return (5)+(6)	Active Management Expenses	Expected Nominal Return Net of Expenses (7)-(8)	Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	7.11%	0.58%	2.30%	5.39%	2.50%	7.89%	0.58%	7.31%	9.78%
2	7.05%	0.58%	2.20%	5.43%	2.50%	7.93%	0.58%	7.35%	12.15%
3	7.42%	0.58%	2.50%	5.50%	2.50%	8.00%	0.58%	7.42%	11.23%
4	7.71%	0.58%	2.75%	5.54%	2.50%	8.04%	0.58%	7.46%	11.28%
5	7.31%	0.58%	2.31%	5.58%	2.50%	8.08%	0.58%	7.50%	11.93%
6	8.07%	0.58%	2.60%	6.05%	2.50%	8.55%	0.58%	7.97%	11.12%
Average	7.44%	0.58%	2.44%	5.58%	2.50%	8.08%	0.58%	7.50%	11.25%

Normalizing for Inflation

Since each investment consultant uses slightly different inflation assumptions, in columns (4) through (7) the returns are normalized for inflation so that each investment consultant's gross 1-year return includes the same inflation assumption.



Returns Net of Investment-related Expenses

The above exhibits show the development of a return assumption that is net of investment-related expenses. Investment-related expenses in the Plan are approximately 0.68% of assets (68 basis points) which means that the current expected gross return is approximately 7.68%. For purposes of this study we have assumed that there are 10 basis points of passive management expenses and 58 basis points of active management expenses for a total of 68 basis points of investment-related expenses.

Active and passive investment expenses are accounted for in the calculation of the expected return shown in column 9 on the prior page (i.e. it is net of investment-related expenses). A description of how the investment-related expenses are reflected in the returns shown in Column 9 is as follows:

- The investment returns from the Investment Consultants are net of passive investment expenses as they are included in their forecasts.
- Active management investment fees (Column 8), which are assumed to be 58 basis points, are subtracted from the returns.
- Alpha for active management equal to 58 basis points is added to the returns (Column 3) in order to cover the active management expenses.
 - While excess "alpha" returns may be expected by some to be achieved by the Plan's current and future investment managers and investment consultant, we cannot add alpha value in our assessment or development of our recommendation for the net investment return assumption.

Based on the above, all expenses (active and passive) are accounted for in the development of the return shown in Column 9 and therefore the return is net of investment-related expenses. These returns are called the expected "arithmetic means".

Arithmetic and Geometric Returns

Arithmetic expected returns represent the investment forecaster's expectation for any one given year. Geometric expected returns represent the investment forecaster's expectation for the average compound return over a given horizon period. Everything in the tables on the previous page relates to arithmetic means.

Geometric compounded average returns are always lower than arithmetic average returns. Actuarial valuations use compounding for measuring costs and liabilities. That is why the expected compound average return (geometric mean) is more appropriate for an actuarial investment return assumption.

As an investment return assumption, the geometric expected return is the return assumption that has a 50% chance of being achieved as a compound average over time. The geometric expected returns for the investment consultants who provided capital market assumptions are shown in the following tables. The first table shows the geometric expected returns using the short to mid-term capital market assumptions. The second table shows the geometric expected returns using the long-term capital market assumptions (from the three investment consultants who provided long-term assumptions).



Short to Mid-Term Capital Market Assumptions

Investment	Distribution of 20-Year Average Geometric Net Nominal Return							
Consultant	40th	60th						
(1)	(2)	(3)	(4)					
1	4.03%	4.73%	5.43%					
2	4.31%	4.93%	5.57%					
3	4.94%	5.59%	6.25%					
4	5.31%	5.82%	6.32%					
5	5.32%	5.95%	6.59%					
6	5.51%	6.07%	6.63%					
7	5.48%	6.16%	6.84%					
8	5.56%	6.20%	6.84%					
9	5.86%	6.51%	7.17%					
10	5.90%	6.58%	7.28%					
11	6.05%	6.59%	7.15%					
12	6.28%	6.90%	7.53%					
13	6.56%	7.20%	7.84%					
14	6.68%	7.30%	7.92%					
Average	5.56%	6.18%	6.81%					

Long-Term Capital Market Assumptions

Investment Consultant	Distribution of 20 - 30 Year Average Geometric Net Nominal Return 40th 50th 60th									
(1)	(2)	(3)	(4)							
1	6.31%	6.86%	7.42%							
2	5.99%	6.67%	7.35%							
3	6.21%	6.84%	7.47%							
4	6.24%	6.87%	7.51%							
5	6.18%	6.85%	7.52%							
6	6.78%	6.78% 7.40% 8.03%								
Average	6.28%	6.91%	7.55%							

As shown in the first table, the average short to mid-term expected geometric return (or the 50th percentile of compound average returns) net of investment-related expenses is 6.18%. The short to mid-term forecasting period is generally the next 5 - 15 years, so this means there is a 50-50 chance of achieving a 6.18% compound average net investment return over the next 5 - 15 years. Among the six investment consultants who provided long-term capital market assumptions, the average long-term expected geometric return net of investment-related expenses is 6.91%. This means the



consensus opinion is that there is a 50-50 chance of achieving a 6.91% net compound average investment return over the next 20 to 30 years. Based on the forecasts, the "most appropriate rate net of investment-related expenses" would be between 6.18% and 6.91%.

Recommendation

We recognize that the capital market assumptions of each investment consultant surveyed differ from the average rate amongst the 14 consultants and that this analysis is not an exact science. Based on this, we believe the upper end of the range for the rate net of investment-related expenses is 6.75% to 7.00%.

Our recommendation is to lower the investment return assumption from the current level of 7.00% net of investment-related expenses to a rate between 6.18% and 6.91% net of investment-related expenses. That being said, we do believe that the current assumption of 7.00% is in a range of reasonableness. Our study shows the financial impact of lowering the net return assumption from 7.00% to 6.75% and 6.50%.



Other Assumptions and Methods

We do not recommend any change to the funding method, asset smoothing method or inflation assumption being used to determine the funding requirements. Below is a list of these items along with a description of each.

- Individual Entry-Age Normal Actuarial Cost Method Normal cost and the allocation of benefit values between service rendered before and after the valuation date are determined using an Individual Entry-Age Actuarial Cost Method having the following characteristics:
 - the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
 - (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce/(increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) are amortized by level (principal & interest combined) percent-of-payroll contributions over a reasonable period of future years.

- Actuarial Value of Assets The Actuarial Value of Assets phase in the difference between the actual market value and the expected actuarial value of assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.
- **Inflation** is assumed to be 2.50% per year. The average forecasted long-term CPI of the 6 national investment consultants shown in the investment return assumption section of our experience study report is 2.44%.



SECTION C

APPENDICES

APPENDIX A

COMPARISON OF ACTUAL AND EXPECTED ANNUAL MEMBER SALARIES

	Salary Scale														
		Cu	rrent Salary Ir	ncrease Rate	S										
					Assumed				Actual						
Years of				Assumed	Real		%	Actual	Real						
Service	Prior Year	Expected	% Increase	Inflation	Increase	Actual	Increase	Inflation	Increase						
< 5	9,902,548	10,521,457	6.25%	2.50%	3.75%	10,728,919	8.35%	1.50%	6.85%						
5 - 9	8,062,430	8,566,332	6.25%	2.50%	3.75%	8,706,880	7.99%	1.50%	6.49%						
10 - 14	18,212,844	19,123,486	5.00%	2.50%	2.50%	19,360,375	6.30%	1.50%	4.80%						
15 - 19	10,057,277	10,560,141	5.00%	2.50%	2.50%	10,491,120	4.31%	1.50%	2.81%						
20+	6,924,879	7,271,123	5.00%	2.50%	2.50%	7,047,040	1.76%	1.50%	0.26%						
Totals	53,159,978	56,042,539	5.42%	2.50%	2.92%	56,334,334	5.97%	1.50%	4.47%						

	Salary Scale											
	Proposed Rates											
		Proposed	Proposed									
Years of		Inflation	Real									
Service	% Increase	Assumption	Increase									
< 5	8.25%	2.50%	5.75%									
5 - 9	7.75%	2.50%	5.25%									
10 - 14	5.75%	2.50%	3.25%									
15 - 19	5.00%	2.50%	2.50%									
20+	20+ 4.50% 2.50% 2.00%											
Totals	6.21%	2.50%	3.71%									

In developing the proposed salary scale, we gave credibility to both the prior assumptions, which were developed based on prior experience, and the actual experience during the study period. Giving credibility to the experience in both the current study period and the study period covered under the prior experience study report is important because they cover periods of time with varying economic landscapes which could impact salary increases.



APPENDIX B

COMPARISON OF ACTUAL AND EXPECTED RETIREMENTS

	Normal Retirement for Members Hired Before October 4, 2016												
Age	Years of Service	Exposures	Expected NR's	Expected %	Actual NR's	Actual %	Expected NR's (Proposed Rates)	Proposed %					
55 +	10 - 19	4	0.70	17.50%	1.0	25.00%	0.8	20.00%					
All	20	22	5.50	25.00%	6.0	27.27%	5.5	25.00%					
All	21	26	2.60	10.00%	3.0	11.54%	4.6	17.50%					
All	22	25	2.50	10.00%	8.0	32.00%	4.4	17.50%					
All	23	17	4.25	25.00%	4.0	23.53%	4.3	25.00%					
All	24	13	3.25	25.00%	8.0	61.54%	5.2	40.00%					
All	25	5	5.00	100.00%	5.0	100.00%	5.0	100.00%					
Totals		112	23.8		35.0		29.7						

In developing the proposed retirement rates, we gave credibility to both the prior assumptions, which were developed based on prior experience, and the actual experience during the study period. Giving credibility to the experience in both the current study period and the study period covered under the prior experience study report is important because they cover periods of time with varying economic landscapes which could impact when a member's decision to retire.



APPENDIX C

COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS

	Withdrawal Experience												
Years of Service	Age	Exposures	Expected W/D's	Expected %	Actual W/D's	Actual %	Expected W/D's (Proposed Rates)	Proposed %					
0 - 1	All Ages	116	7.0	6.04%	11.0	9.48%	7.5	6.50%					
2 - 3	All Ages	95	5.2	5.45%	5.0	5.26%	5.2	5.50%					
4 - 5	All Ages	41	2.2	5.42%	2.0	4.88%	2.1	5.00%					
6 - 7	All Ages	50	2.3	4.62%	0.0	0.00%	1.9	3.75%					
8 - 9	All Ages	65	2.3	3.53%	3.0	4.62%	2.3	3.50%					
10+	0 - 34	69	3.2	4.57%	1.0	1.45%	1.0	1.50%					
	35 - 39	94	1.6	1.73%	0.0	0.00%	1.4	1.50%					
	40 - 44	102	0.0	0.00%	0.0	0.00%	1.0	1.00%					
	45 +	70	0.0	0.00%	0.0	0.00%	0.7	1.00%					
Totals		702	23.8		22.0		23.1						

In developing the proposed withdrawal rates, we gave credibility to both the prior assumptions, which were developed based on prior experience, and the actual experience during the study period. Giving credibility to the experience in both the current study period and the study period covered under the prior experience study report is important because they cover periods of time with varying economic landscapes which could impact when a member's decision to terminate employment before becoming eligible for retirement.



APPENDIX D

COMPARISON OF ACTUAL AND EXPECTED DISABILITIES

	Disability												
						Expected							
						Dis.							
		Expected		Actual		(Proposed							
Age	Exposures	Disabilities	Expected %	Dis.	Actual %	Rates)	Proposed %						
20 - 24	35	0.03	0.07%	0.0	0.00%	0.03	0.07%						
25 - 29	145	0.12	0.08%	0.0	0.00%	0.12	0.08%						
30 - 34	183	0.18	0.10%	0.0	0.00%	0.18	0.10%						
35 - 39	153	0.19	0.12%	0.0	0.00%	0.19	0.12%						
40 - 44	132	0.24	0.18%	0.0	0.00%	0.24	0.18%						
45 - 49	94	0.32	0.34%	0.0	0.00%	0.32	0.34%						
50 - 54	62	0.36	0.58%	0.0	0.00%	0.36	0.58%						
55 - 59	10	0.08	0.78%	0.0	0.00%	0.08	0.78%						
Totals	814	1.52		0.0		1.52							

As shown above, the actual number of disability's in the period of study was in line with the expected disabilities. As a result, we propose no changes to the current rates of disability assumption.



APPENDIX E

COMPARISON OF PROPOSED AND CURRENT MORTALITY TABLES

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Proposed Mortality Table

	Probability of Dying Next Year			re Life ctancy
Sample Age in 2019	Men Women		Men	Women
50	0.42%	0.20%	32.31	36.15
55	0.56%	0.36%	27.54	31.12
60	0.93%	0.61%	22.97	26.35
65	1.32%	0.92%	18.73	21.86
70	2.10%	1.46%	14.74	17.61
75	3.58%	2.47%	11.15	13.69
80	6.41%	4.23%	8.09	10.25

Current Mortality Table

	Probabili	ty of Dying	Futu	re Life
Sample Age in				
2019	Men	Women	Men	Women
50	0.53%	0.23%	34.12	38.50
55	0.66%	0.32%	29.49	33.48
60	0.89%	0.46%	24.92	28.58
65	1.28%	0.72%	20.51	23.83
70	1.95%	1.21%	16.36	19.36
75	3.17%	2.04%	12.61	15.26
80	5.21%	3.42%	9.37	11.62



APPENDIX F

Purpose of the Actuarial Valuation

In a defined benefit pension plan, an employer makes a promise to its employees of a lifetime pension. The amount of the monthly pension is determined by a *benefit formula* which is often based upon a multiplier percentage and the number of years of service and the average final earnings of the employee.

The employer must design and follow a systematic plan for advance-funding this obligation. That is accomplished by establishing a pension fund and performing annual actuarial valuations to measure the liabilities associated with the obligation and to calculate how much the employer must contribute to the pension fund in order to make good on its promise.

The calculations in the actuarial valuation are performed each year to re-measure the liabilities. The stakeholders need to know how the plan is doing in its goal of systematically financing the promised benefits. So it is important to make the actuarial calculations in accordance with the professional actuarial standards of practice and the accounting standards.

Role of Actuarial Assumptions

The nature of the pension promise and its systematic funding require long term projections of the employee workforce (using demographic assumptions) and long term projections of the salaries and investment returns (using economic assumptions). The entire actuarial valuation process depends on the selection and use of reasonable actuarial assumptions as to future demographics and future economics. There are many different actuarial assumptions employed in an actuarial valuation. The primary actuarial assumptions include:

- 1. Rates of Salary Increases
- 2. Rates of Retirement
- 3. Rates of Mortality
- 4. Rates of Employment Separation
- 5. Rates of Disability
- 6. Rate of Investment Return

The actuary and plan management must be comfortable with the actuarial assumptions. The assumptions must be reasonable. Without a level of confidence in the reasonableness of the actuarial assumptions, the stakeholders and users of the valuation results cannot have confidence in the results. However, there is no way to have confidence in the actuarial assumptions unless an actuarial experience study is performed to assess the reasonableness of the current assumptions or to change them to be more in line with past experience and with future expectations.

For this reason the Board has requested that we undertake an actuarial experience study to recommend changes to the actuarial assumptions used in the annual actuarial valuation.



APPENDIX G

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Plan's future financial condition include:

- 1. Investment risk actual investment returns may differ from the either assumed or forecasted returns;
- 2. Contribution risk actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
- 3. Salary and Payroll risk actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- 4. Longevity risk members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
- 5. Other demographic risks members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return is less (or more) than the assumed rate, the cost of the Plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.



The computed contribution amounts may be considered as a minimum contribution that complies with the pension Board's funding policy and the State statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the Plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Assessment

Risk assessment was outside the scope of this report. Risk assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. We are prepared to perform such assessment to aid the Board in the decision making process.

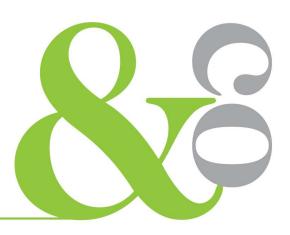


Item 5.d. AndCo Consulting

Item 5.d.i. Portfolio Performance Review Quarter End March 31, 2020

Investment Performance Review Period Ending March 31, 2020

Delray Beach Firefighters' Retirement System

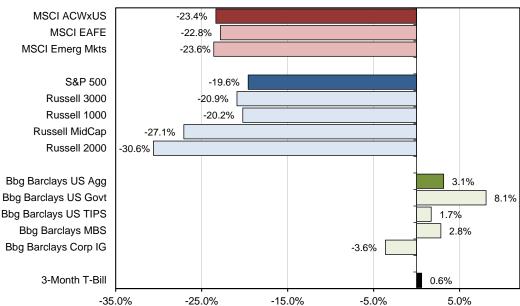


1st Quarter 2020 Market Environment

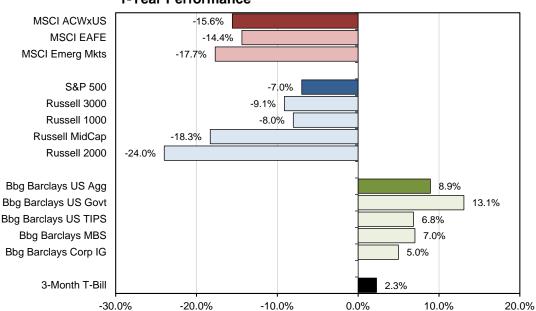


- Global risk asset class returns declined significantly during the 1st quarter of 2020 due primarily to the COVID-19 (Coronavirus) pandemic. Both domestic and international equities experienced significant drawdowns as investors moved into perceived haven assets such as US Treasury bonds. Equity market volatility, as measured by the VIX Index, reached its highest level since the Financial Crisis in 2008. Through the quarter, global economic growth turned negative as countries responded to the pandemic by shuttering their economies. In the US, as a result of the decision to institute social distancing and shelter-in-place orders, labor markets suffered significant losses as businesses closed or furloughed employees. Rising economic concerns resulted in swift action by the Federal Reserve (Fed) which cut its overnight lending rate to between 0% to 0.25%. Importantly, the US government responded with a stimulus package consisting of forgivable loans and other short-term benefits, that is designed to act as a bridge for the economy until businesses can reopen. Within domestic equity markets, large cap stocks outperformed small cap equities during the guarter with the S&P 500 Index returning -19.6% versus a -30.6% return for the small cap Russell 2000 Index. US equity returns over the 1-year period turned negative as a result of the drawdown with large and mid-cap stocks returning -7.0% and -18.3% respectively, while small cap stocks fell -24.0%.
- International markets also posted negative returns for the 1st quarter. Similar to US markets, international returns were impacted by the Coronavirus and deteriorating economic fundamentals. International returns also faced headwinds from a strengthening US dollar (USD) which appreciated against most major currencies during the period. Developed markets outpaced emerging markets during the period with the MSCI EAFE Index falling -22.8% versus a -23.6% decline for the MSCI Emerging Markets Index. Both developing and emerging markets posted losses over the 1-year period, returning -14.4% and -17.7% respectively.
- As expected during periods of rising volatility, high quality fixed income outperformed equities during the 1st quarter as investors looked for relative safety amid the equity market drawdown. The broad market Bloomberg Barclays Aggregate Index gained 3.1% as interest rates fell following rising concerns related to the Coronavirus and central bank stimulus from the Fed and other global central banks. US Government bonds were the best performing securities for the 1st quarter returning 8.1%. Investment grade corporate bonds suffered negative returns on concerns about economic growth prospects in the future. The bond market has meaningfully outperformed the equity market over the trailing 1-year period with the Bloomberg Barclays Aggregate posting a solid 8.9% return.

Quarter Performance



1-Year Performance

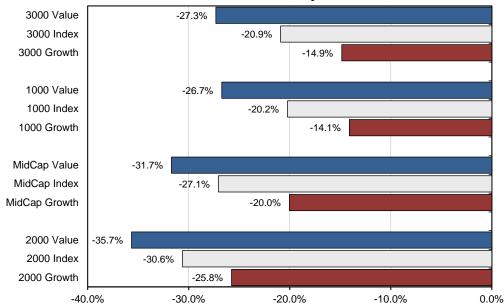


Source: Investment Metrics

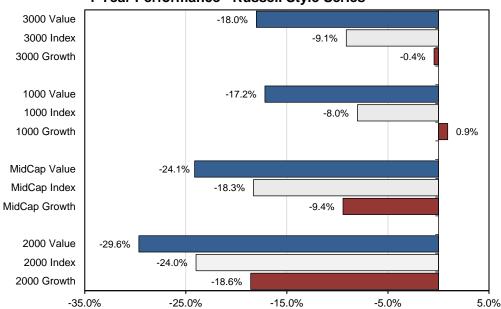


- US equity returns were significantly lower during the 1st quarter with varied results across both style and market capitalization. Concerns related to the Coronavirus, in combination with signs that the US economy could be entering into recession weighed on equities. Labor markets came under significant pressure during the quarter as companies began laying off employees in response to the government's decision to mandate a shelter-in-place approach to dealing with the pandemic. In response to the deteriorating economic conditions, the Fed took unprecedented action on March 15th and lowered the Fed Fund's rate to between 0% to 0.25%. The Fed also announced that it would be purchasing up to \$500 billion in US Treasury bonds and \$200 billion in mortgage-backed bonds. Subsequently, the Fed announced on March 23rd that it would begin purchasing unlimited amounts of US Treasury and mortgage-backed bonds. This announcement was well received by investors and marked the recent low in equity markets.
- During the quarter, higher market capitalization stocks were down less than lower market capitalization stocks across the style spectrum. The large cap Russell 1000 Index lost -20.2% during the period versus a -30.6% return for the small cap Russell 2000 Index. Investors preferred large cap stocks relative to small cap stocks as they are typically viewed as less risky during periods of rising market volatility given the size of their balance sheets and ability to generate cash flow. When viewed over the most recent 1-year period, large cap stocks significantly outpaced small cap stocks with the Russell 1000 posting a -8.0% loss compared to the -24.0% drawdown in the Russell 2000.
- In general, value stocks underperformed growth stocks across market capitalizations during the 1st quarter despite value stocks trading near all-time lows based on valuation metrics. Importantly, value indexes contain large exposures to such sectors as energy, consumer durables and financials, all of which came under pressure during the quarter. Large cap growth stocks held up better than large cap value stocks due to larger weightings in the technology and industrials sectors as well as a smaller exposure to the underperforming energy sector. The Russell 1000 Growth Index was the least negative style index for the period, returning -14.1%. The small cap value index posted the weakest relative return for the quarter with a loss of -35.7%. Results over the 1-year period were mixed with value stocks underperforming across market capitalizations while large cap stocks outpaced both mid and small cap stocks due in large part to the exposure to technology stocks and relative underweights to both energy and financial stocks.

Quarter Performance - Russell Style Series



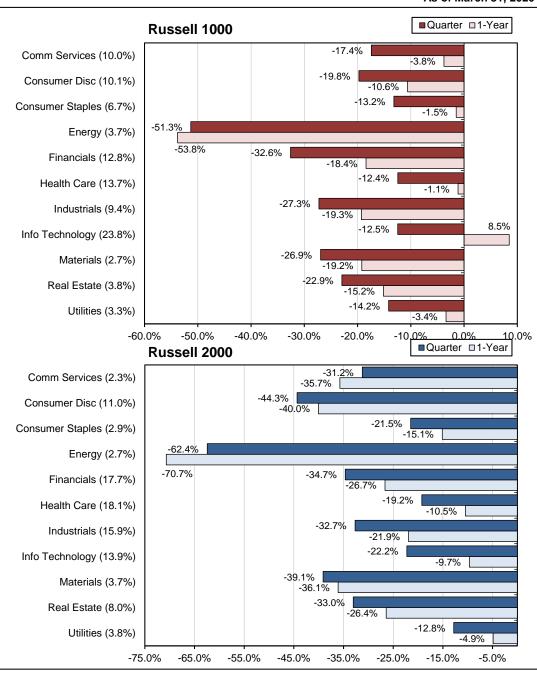
1-Year Performance - Russell Style Series



Source: Investment Metrics



- Generally, sector performance was negative across large cap sectors for the 1st quarter. The outlier during the period was the energy sector which saw significant losses due primarily to the drop in oil prices as a result of demand destruction related to the Coronavirus and the inability of OPEC to agree on production cuts. Health care and technology were the two of the least negative during the quarter returning -12.4% and -12.5%. Energy stocks fell a staggering -51.3% during the quarter as crude oil prices fell as global economic growth receded during the period. Financial stocks also lagged, declining -32.6%, as interest rates fell and a flat yield curve, in combination with fewer borrowers, increased pressure on financial stocks. Returns over the 1-year period were also generally negative with only the technology sector showing a positive return (+8.5%). Similar to the quarter's results, energy stocks underperformed by a considerable margin relative to other sectors. Industrials, materials, and financials also lagged for the year returning -19.3%, -19.2% and -18.4% respectively.
- Quarterly results for small capitalization sectors were generally worse than their large capitalization counterparts with only utilities outperforming during the period. All eleven economic sectors saw substantial losses during the period with only three of eleven sectors outpacing the Russell 2000 Index return for the quarter. Similar to large capitalization sectors, defensive sectors were less negative as investors gravitated toward their relative safety and higher yields. Utilities was the least negative sector, returning -12.8%, while healthcare and consumer staples returned -19.2% and -21.5%, respectively. The cyclically oriented energy sector was the largest detractor for the period, posting a disconcerting loss of --62.4% as global energy prices collapsed. Consumer discretionary stocks also fell substantially during the quarter returning -44.3% as consumer activity fell sharply following the decision to impose shelter-in-place orders. Financial stocks, which were down -34.7% for the quarter, were negatively impacted by the Fed's decision to lower interest rates and the significant decline in lending activity. Similar to quarterly performance, the trailing 1-year period returns were broadly negative. Utilities, technology and health care sectors were the down the least, returning -4.9%, -9.7% and -10.5%, respectively.





As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



Top 10 Weighted Stocks					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Microsoft Corp	5.09%	0.3%	35.5%	Information Technology	
Apple Inc	4.47%	-13.2%	35.6%	Information Technology	
Amazon.com Inc	3.48%	5.5%	9.5%	Consumer Discretionary	
Facebook Inc A	1.70%	-18.7%	0.1%	Communication Services	
Berkshire Hathaway Inc B	1.53%	-19.3%	-9.0%	Financials	
Alphabet Inc Class C	1.49%	-13.0%	-0.9%	Communication Services	
Johnson & Johnson	1.49%	-9.5%	-3.6%	Health Care	
Alphabet Inc A	1.48%	-13.2%	-1.3%	Communication Services	
JPMorgan Chase & Co	1.20%	-35.0%	-8.4%	Financials	
Visa Inc Class A	1.18%	-14.1%	3.8%	Information Technology	

	Top 10 Weighted Stocks					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
Teladoc Health Inc	0.77%	85.2%	178.8%	Health Care		
NovoCure Ltd	0.40%	-20.1%	39.8%	Health Care		
Amedisys Inc	0.40%	10.0%	48.9%	Health Care		
Generac Holdings Inc	0.39%	-7.4%	81.9%	Industrials		
Lumentum Holdings Inc	0.38%	-7.1%	30.4%	Information Technology		
Repligen Corp	0.35%	4.4%	63.4%	Health Care		
Haemonetics Corp	0.35%	-13.3%	13.9%	Health Care		
ACADIA Pharmaceuticals Inc	0.33%	-1.2%	57.4%	Health Care		
Trex Co Inc	0.32%	-10.8%	30.3%	Industrials		
Rexford Industrial Realty Inc	0.32%	-9.7%	16.6%	Real Estate		

Тор	Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Moderna Inc	0.03%	53.1%	47.2%	Health Care	
Legg Mason Inc	0.02%	37.2%	86.1%	Financials	
Taubman Centers Inc	0.01%	36.6%	-15.3%	Real Estate	
Virtu Financial Inc A	0.00%	31.9%	-7.8%	Financials	
Zscaler Inc	0.02%	30.9%	-14.2%	Information Technology	
Regeneron Pharmaceuticals Inc	0.17%	30.0%	18.9%	Health Care	
Citrix Systems Inc	0.07%	28.0%	44.0%	Information Technology	
RingCentral Inc Class A	0.07%	25.6%	96.6%	Information Technology	
NortonLifeLock Inc	0.04%	25.4%	40.9%	Information Technology	
Tesla Inc	0.32%	25.3%	87.2%	Consumer Discretionary	

Top 10 Performing Stocks (by Quarter)					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Waitr Holdings Inc Class A	0.00%	282.0%	-90.0%	Consumer Discretionary	
Novavax Inc	0.03%	241.2%	23.3%	Health Care	
Vir Biotechnology Inc	0.02%	172.5%	N/A	Health Care	
Athersys Inc	0.03%	143.9%	100.0%	Health Care	
Forty Seven Inc	0.17%	142.4%	490.5%	Health Care	
Kala Pharmaceuticals Inc	0.01%	138.2%	6.3%	Health Care	
Aduro Biotech Inc	0.01%	132.2%	-31.2%	Health Care	
Tocagen Inc	0.00%	128.8%	-88.8%	Health Care	
Inovio Pharmaceuticals Inc	0.05%	125.5%	99.5%	Health Care	
Neon Therapeutics Inc	0.00%	123.7%	-59.1%	Health Care	

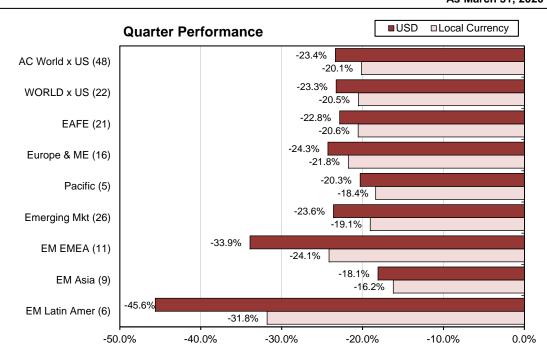
Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Centennial Resource Dev. Inc A	0.00%	-94.3%	-97.0%	Energy
Kosmos Energy Ltd	0.00%	-84.0%	-85.0%	Energy
Apache Corp	0.01%	-83.5%	-87.5%	Energy
Transocean Ltd	0.00%	-83.1%	-86.7%	Energy
Apergy Corp	0.00%	-83.0%	-86.0%	Energy
Targa Resources Corp	0.01%	-82.7%	-81.7%	Energy
Norwegian Cruise Line Holdings Ltd	0.01%	-81.2%	-80.1%	Consumer Discretionary
MFA Financial Inc	0.00%	-79.7%	-76.9%	Financials
Chesapeake Energy Corp	0.00%	-79.1%	-94.4%	Energy
Macerich Co	0.00%	-78.4%	-85.6%	Real Estate

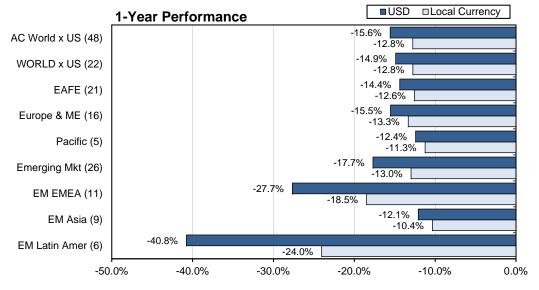
Bottom 10 Performing Stocks (by Quarter)					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Independence Contract Drilling Inc	0.00%	-93.0%	-97.5%	Energy	
QEP Resources Inc	0.01%	-92.5%	-95.6%	Energy	
Whiting Petroleum Corp	0.00%	-90.9%	-97.4%	Energy	
Amplify Energy Corp	0.00%	-90.4%	-93.0%	Energy	
Penn Virginia Corp	0.00%	-89.8%	-93.0%	Energy	
Pacific Drilling SA	0.00%	-89.8%	-97.1%	Energy	
Nine Energy Service Inc	0.00%	-89.7%	-96.4%	Energy	
Forum Energy Technologies Inc	0.00%	-89.4%	-96.5%	Energy	
Oasis Petroleum Inc	0.01%	-89.3%	-94.2%	Energy	
SM Energy Co	0.01%	-89.1%	-93.0%	Energy	

Source: Morningstar Direct



- International equity returns were negative in USD terms for the 1st quarter as markets were negatively impacted by the Coronavirus. In local currency terms, developed and emerging markets performed slightly better due to US dollar (USD) strength against most major currencies which created a significant headwind for US investors. The MSCI ACWI ex US Index lost -20.1% in local currency terms while a USD investor experienced a loss of -23.4% due to the aforementioned currency effect. Similar to US markets, international equity markets were severely impacted by concerns regarding headwinds from slowing economic data. Global central banks reacted by providing additional stimulus measures which are designed to provide the market with liquidity and restore confidence. The European Central Bank (ECB) and the Japanese Central Bank (JCB) announced new programs to purchase securities in an effort to boost markets while the Bank of England (BOE) cut its policy rate to 0.1% and announced additional quantitative easing in an effort to counteract a deterioration in the economy.
- Results for developed market international indices were negative in both local currency terms and USD terms for the 1st quarter. Prior to the onset of the Coronavirus, there were notable developments within the political sphere. The UK formally withdrew from the EU in January. While there remains much uncertainty surrounding what the relationship between the UK and the EU will look like, both sides are continuing to negotiate for a final withdrawal later this year. In Europe, Italy and Spain were hard hit by the Coronavirus. Already beset by relatively low GDP growth in historical terms, the region is expected to experience recession. In Japan, the economy was already under pressure as a result of declining trade with China prior to the onset of the Coronavirus. The Olympics were also rescheduled to 2021 in an effort to reduce the number of potential infections.
- Emerging markets continued their trend from 2019, underperforming relative to developed markets during the 1st quarter. The MSCI Emerging Markets Index fell -23.6% and -19.1% in USD and local currency terms, respectively. The US and China made headway in resolving their trade war by signing the Phase One trade deal in January. Countries with greater sensitivities to commodity prices or a strong USD tended to underperform during the period. Regionally, Asian countries outperformed both EMEA and Latin America, primarily due to their aggressive response to the Coronavirus. Within Latin America, Brazil and Mexico were hard hit as a result of the selloff in oil prices. Argentina underperformed as the country considered delaying the payment of interest on its sovereign debt.







MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.5%	-18.0%	-11.5%
Consumer Discretionary	11.1%	-26.8%	-15.0%
Consumer Staples	12.6%	-13.5%	-8.5%
Energy	4.0%	-36.2%	-37.9%
Financials	16.5%	-31.6%	-24.7%
Health Care	14.3%	-8.9%	7.1%
Industrials	14.2%	-26.4%	-16.0%
Information Technology	7.6%	-17.7%	-1.7%
Materials	6.7%	-26.8%	-20.5%
Real Estate	3.3%	-27.6%	-27.1%
Utilities	4.2%	-13.2%	-5.1%
Total	100.0%	-22.8%	-14.4%
MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.5%	-14.1%	-9.9%
Consumer Discretionary	11.8%	-24.1%	-12.9%
Consumer Staples	10.5%	-14.7%	-9.9%
Energy	5.2%	-38.5%	-37.1%
Financials	19.2%	-31.0%	-24.9%
Health Care	10.5%	-9.2%	4.6%
Industrials	11.4%	-26.2%	-17.1%
Information Technology	10.2%	-17.5%	1.3%
Materials	7.0%	-27.5%	-22.8%
Real Estate	3.0%	-27.6%	-25.9%
Utilities	3.7%	-15.9%	-8.7%
Total	100.0%	-23.4%	-15.6%
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	13.1%	-9.6%	-8.2%
Consumer Discretionary	15.4%	-18.1%	-8.3%
Consumer Staples	6.6%	-19.8%	-15.7%
Energy	5.9%	-39.9%	-35.8%
Financials	21.6%	-31.1%	-27.6%
Health Care	3.6%	-8.5%	-8.5%
Industrials	4.9%	-28.0%	-26.5%
Information Technology	16.9%	-17.8%	3.2%
Materials	6.7%	-30.7%	-31.3%
Real Estate	2.9%	-26.7%	-21.5%
Utilities	2.5%	-26.0%	-23.4%
Total	100.0%	-23.6%	-17.7%

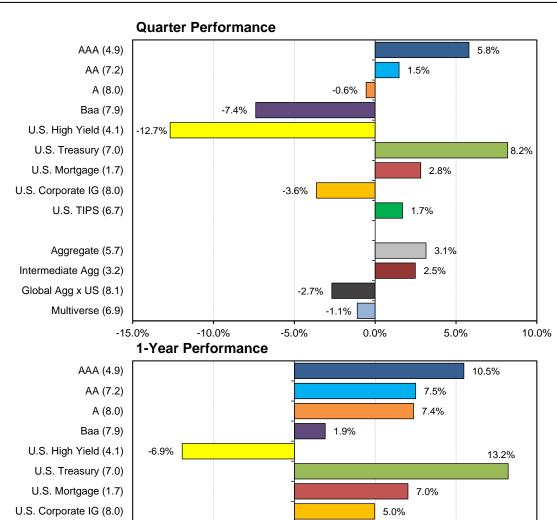
	MSCI-EAFE	MSCI-ACWIxUS	Quarter	1- Year
Country	Weight	Weight	Return	Return
Japan	26.3%	17.4%	-16.8%	-6.7%
United Kingdom	15.1%	10.0%	-28.8%	-23.0%
France	10.8%	7.1%	-27.6%	-17.7%
Switzerland	10.7%	7.1%	-11.5%	3.5%
Germany	8.3%	5.5%	-27.0%	-17.5%
Australia	5.9%	3.9%	-33.3%	-26.3%
Netherlands	4.2%	2.7%	-20.7%	-7.7%
Hong Kong	3.8%	2.5%	-17.3%	-21.1%
Sweden	2.8%	1.8%	-21.4%	-11.2%
Spain	2.6%	1.7%	-29.8%	-26.5%
Denmark	2.2%	1.4%	-8.0%	4.5%
Italy	2.2%	1.4%	-29.3%	-21.4%
Singapore	1.2%	0.8%	-28.2%	-22.3%
Finland	1.0%	0.7%	-19.1%	-18.0%
Belgium	0.9%	0.6%	-32.6%	-30.2%
Israel	0.6%	0.4%	-18.1%	-18.4%
Ireland	0.6%	0.4%	-25.7%	-8.3%
Norway	0.5%	0.4%	-33.4%	-31.3%
New Zealand	0.3%	0.2%	-16.4%	-1.0%
Portugal	0.2%	0.1%	-13.1%	-2.5%
Austria	0.2%	0.1%	-42.9%	-39.7%
Total EAFE Countries	100.0%	66.0%	-22.8%	-14.4%
Canada	100.070	6.3%	-27.5%	-19.9%
Total Developed Countries		72.3%	-23.3%	-14.9%
China		11.3%	-10.2%	-5.8%
Taiwan		3.4%	-19.1%	1.3%
Korea		3.3%	-22.5%	-16.8%
India		2.1%	-31.1%	-30.9%
Brazil		1.4%	-50.2%	-41.9%
South Africa		1.0%	-40.3%	-37.1%
Russia		0.9%	-36.4%	-14.4%
Saudi Arabia		0.7%	-24.0%	-28.9%
Thailand		0.6%	-33.8%	-32.5%
Mexico		0.5%	-35.5%	-31.9%
Malaysia		0.5%	-19.2%	-21.1%
Indonesia		0.4%	-39.6%	-36.8%
Qatar		0.3%	-17.3%	-15.1%
Philippines		0.2%	-32.2%	-30.5%
Poland		0.2%	-36.5%	-39.9%
Chile		0.2%	-33.6%	-47.1%
United Arab Emirates		0.2%	-27.1%	-30.3%
Turkey		0.1%	-30.1%	-19.8%
Peru		0.1%	-35.8%	-39.4%
Colombia		0.1%	-49.7%	-47.3%
Hungary		0.1%	-39.0%	-31.3%
Greece		0.1%	-45.2%	-30.4%
Argentina		0.0%	-39.3%	-51.0%
Egypt		0.0%	-27.1%	-10.8%
Czech Republic		0.0%	-38.5%	-38.3%
Pakistan		0.0%	-39.7%	-39.0%
Total Emerging Countries		27.7%	-23.6%	-17.7%
Total ACWIxUS Countries		100.0%	-23.4%	-15.6%

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



- Fixed income market returns during the 1st quarter were bifurcated between high- and low-quality bonds. Interest rates fell across the US Treasury Yield Curve through the quarter as investors sought safety and lower volatility assets. As a result of the deterioration of the US economy, the Fed took unprecedented action and lowered interest rates to between 0% to 0.25%. As a result, short term interest rates fell dramatically. The benchmark US Treasury 10-Year bond yield fell by more than 120 basis points during the quarter ending the period at a yield of 0.70%. In addition to lowering interest rates, the Fed committed to purchasing near unlimited US Treasury bonds and Agency mortgage bonds while implementing additional programs that allow for the purchase of corporate bonds. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 3.1% and 8.9%, respectively.
- Within investment grade credit, higher quality issues outperformed lower quality issues during the quarter. More specifically, investors rotated out of lower quality issues due to the expectation for deterioration in the economy as a result of shelter-in-place protection measures. On an absolute basis, without negating the duration differences in the sub-indices, high yield credit was the worst performing sector returning -12.7% for the quarter, while AAA was the best performing, returning 5.8%. High yield spreads relative to comparable US Treasury issues widened to their highest levels since the 2008 Financial Crisis at nearly 1,100 basis points. Within investment grade bonds, Baa also underperformed, returning -7.4%. Much has been made in recent years about the growth of Baa bond issues outstanding and the potential for downgrades should a recession ensue. Returns over the 1-year period show generally positive returns with only high yield bonds posting a negative result. Within investment grade bonds, AAA bonds outperformed returning 10.5% compared to 7.5%, 7.4% and 1.9%, respectively, for AA, A and Baa rated issues.
- Within the Bloomberg Barclays US Aggregate Bond Index, defensive US Treasury, government agency and mortgage backed sectors outperformed investment grade corporate issues over the 1-year period. The defensive sectors benefited from the flight to quality as investors preferred lower volatility issues despite their lower relative yields. Over the 1-year period, US Treasury bonds returned 13.2% while US mortgage backed and investment grade corporate issues returned 7.0% versus a 5.0%, respectively. High yield bonds were the only negative performer for the year in the chart primarily due to the quarter's dramatic spread widening and resulting weak performance. Additionally, commodity-related lower quality issues were negatively impacted with the significant decline in oil prices.



U.S. TIPS (6.7)

Aggregate (5.7)

Multiverse (6.9)

-10.0%

-5.0%

Intermediate Agg (3.2)

Global Agg x US (8.1)

Source: Bloomberg



15.0%

6.8%

6.9%

0.7%

0.0%

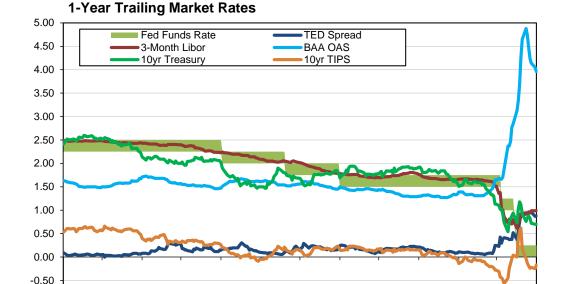
3.5%

5.0%

8.9%

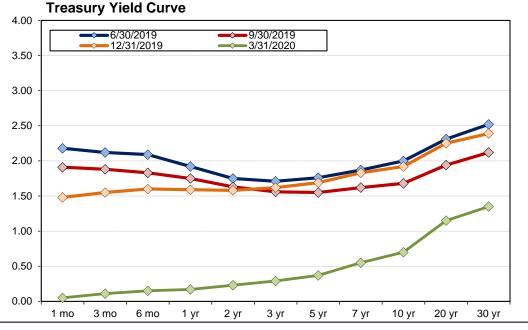
10.0%

- Global fixed income returns continued their relative underperformance when compared to their domestic counterparts during the 1st quarter. Yields across developed markets fell in the first quarter following the onset of the Coronavirus. While the number of negative yielding bonds has recently subsided, countries such as Germany, Sweden and Switzerland continue to have lower, or in some cases negative yields. As mentioned, the USD appreciated against most developed currencies during the quarter, acting as a headwind to global bond index performance. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -2.7% for the period. Global bonds also trailed over the 1-year period with the Global Aggregate ex US Index returning 0.7% versus 8.9% return for the domestic Bloomberg Barclays Aggregate Index. Global growth is expected to slow considerably in the 1st and 2nd quarters as countries continue to manage through the Coronavirus pandemic. Importantly, global central banks are acting in coordination to provide sufficient liquidity in an effort to calm markets. As a result, interest rates, and bond returns, are expected to remain low until economic activity resumes.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that over the last year, the 10-year Treasury yield (green line) has fallen from roughly 2.5% to roughly 0.7%. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates an abrupt increase in credit spreads during the 1st quarter of 2020 as investors moved to higher quality assets during the quarter's risk-off environment. Prior to that, spreads had remained relatively range bound over the previous three quarters as investors sought out higher relative yields in corporate bonds. The orange line illustrates US Treasury TIPS which reflect investor expectations of future inflation. Over the trailing year, TIPS yields had already been trending generally lower due to concerns about the sustainability of global economic growth. Following the drawdown in the 1st quarter, TIPS yields were negative as investors believed that the US economy would enter a recession.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift in US interest rates is clearly visible over the last quarter. The primary driver of this change in the curve was due to the supportive actions taken by the Fed, which reversed recent interest rate increases, and a broad flight to the perceived safety of US Treasury securities.



Mar-19 Apr-19 May-19 Jun-19 Jul-19 Aug-19 Sep-19 Oct-19 Nov-19 Dec-19 Jan-20 Feb-20 Mar-20

-1.00





Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

As of March 31, 2020

Total Fund Compliance:	Yes	No	N/A
1. The Total Plan return equaled or exceeded the 7.25% actuarial earnings assumption over the trailing three and five year periods.		•	
2. The Total Plan return equaled or exceeded the total plan benchmark over the trailing three and five year periods.		•	
3. The Total Plan return ranked within the top 40th percentile of its peer group over the trailing three and five year periods.	•		

^{*} Based off gross of fees and public plan peer group.

Total Equity Compliance:	Yes	No	N/A
1. Total equity returns meet or exceed the benchmark over the trailing three and five year periods.		•	
2. Total equity returns ranked within the top 40th percentile of its peer group over the trailing three and five year periods.			•
3. The total equity allocation was less than 70% of the total plan assets at market.	•		
4. Total foreign equity was less than 25% of the total plan assets at market.	•		

Total Fixed Income Compliance:	Yes	No	N/A
1. Total fixed income returns meet or exceed the benchmark over the trailing three and five year periods.		•	
2. Total fixed income returns ranked within the top 40th percentile of its peer group over the trailing three and five year periods.		•	
3. No more than 15% of the fixed income portfolio was rated below BBB/Baa.	•		

	VG To	tal Stoc	k Mkt		Boston		G	reat Lake	s
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•			•			•
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•			•
3. Less than four consecutive quarters of under performance relative to the benchmark.			•	•					•
4. Three and five-year down-market capture ratio less than the index.*			•			•			•
5. Manager reports compliance with PFIA.			•			•	•		

	Rhum	bline R1	000G	Р	olen LC	G	VC	Mid-Cap	p
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
Manager outperformed the index over the trailing three and five year periods.*			•			•			•
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•			•
3. Less than four consecutive quarters of under performance relative to the benchmark.			•	•					•
4. Three and five-year down-market capture ratio less than the index.*			•			•			•
5. Manager reports compliance with PFIA.			•	•				_	•



Delray Beach Fire Pension Plan Compliance Checklist

As of March 31, 2020

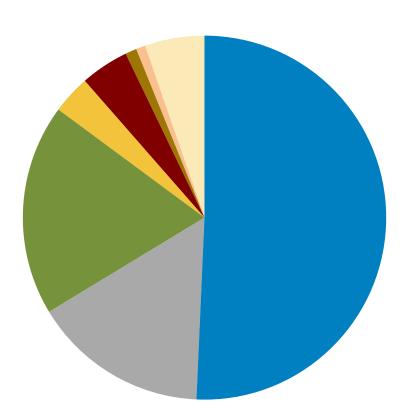
	H.L.	. Intl Eqเ	uity		GHA		Temp	oleton Glo	obal
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*	•					•		•	
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*	•					•		•	
Less than four consecutive quarters of under performance relative to the benchmark.	•			•			•		
4. Three and five-year down-market capture ratio less than the index.*	•					•	•		
5. Manager reports compliance with PFIA.			•	•					•

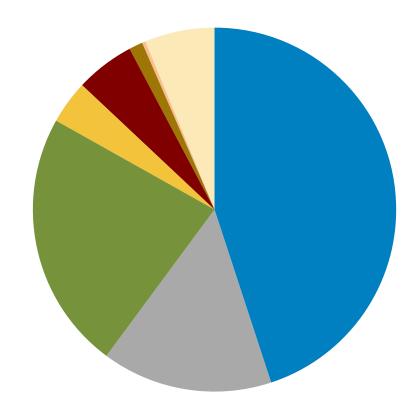
	Ame	rican Re	alty						
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*		•							
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*		•							
3. Less than four consecutive quarters of under performance relative to the benchmark.	•								
4. Three and five-year down-market capture ratio less than the index.*			•						
5. Manager reports compliance with PFIA.			•						

^{*3} years used when 5 years unavailable



December 31, 2019 : \$120,842,379 March 31, 2020 : \$100,344,081

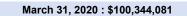


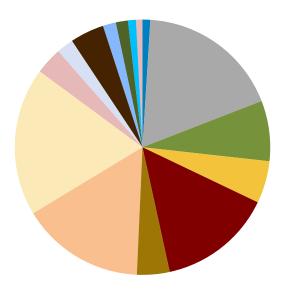


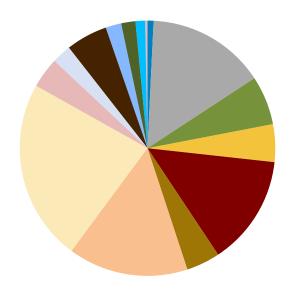
Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ US Equity	61,274,675	50.7	■ US Equity	45,109,737	45.0
International Equity	18,891,727	15.6	International Equity	15,238,850	15.2
US Fixed Income	22,697,277	18.8	US Fixed Income	23,067,015	23.0
Global Fixed Income	4,133,660	3.4	Global Fixed Income	3,879,206	3.9
US Private Real Estate	5,205,045	4.3	US Private Real Estate	5,270,848	5.3
US Real Return	1,225,142	1.0	US Real Return	1,225,142	1.2
Cash	993,718	0.8	Cash	302,388	0.3
US Private Equity	6,421,135	5.3	US Private Equity	6,250,896	6.2



December 31, 2019 : \$120,842,379



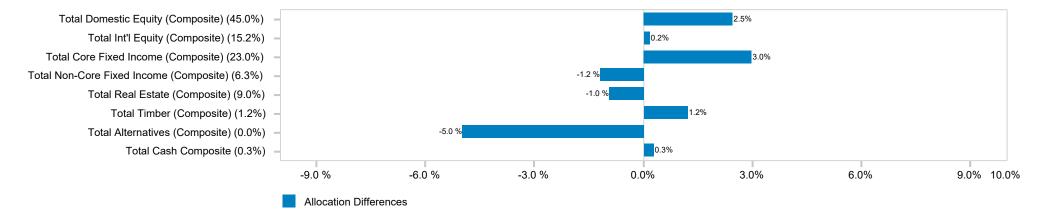


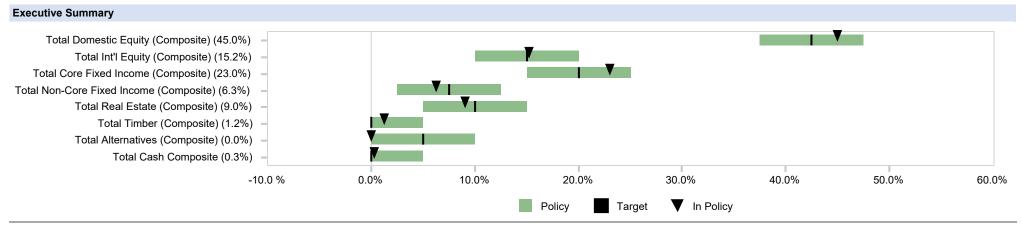


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Vanguard Total Stock Mkt (VTSAX)	1,190,435	1.0	Vanguard Total Stock Mkt (VTSAX)	762,653	0.8
■ Boston LCV	21,894,223	18.1	■ Boston LCV	15,049,927	15.0
■ Great Lakes SMid Cap	9,248,928	7.7	■ Great Lakes SMid Cap	6,229,802	6.2
Vanguard Mid-Cap Index (VIMAX)	6,452,105	5.3	Vanguard Mid-Cap Index (VIMAX)	4,792,554	4.8
■ Polen Capital LCG	17,500,830	14.5	■ Polen Capital LCG	13,986,922	13.9
■ Rhumbline R1000G	4,988,154	4.1	■ Rhumbline R1000G	4,287,879	4.3
Harding Loevner Intl Equity (HLIZX)	18,891,727	15.6	Harding Loevner Intl Equity (HLIZX)	15,238,850	15.2
Garcia Hamilton Fixed Income	22,697,277	18.8	Garcia Hamilton Fixed Income	23,067,015	23.0
Templeton Global Total Return (FTTRX)	4,133,660	3.4	Templeton Global Total Return (FTTRX)	3,879,206	3.9
Crescent Direct Lending Levered Fund	2,584,868	2.1	Crescent Direct Lending Levered Fund	2,449,590	2.4
American Core Realty	5,205,045	4.3	American Core Realty	5,270,848	5.3
Angelo Gordon Net Lease Realty Fund III, L.P.	1,982,987	1.6	Angelo Gordon Net Lease Realty Fund III, L.P.	1,982,987	2.0
■ Dune Real Estate Fund III	1,853,280	1.5	Dune Real Estate Fund III	1,818,319	1.8
Molpus Woodlands Timber	1,225,142	1.0	Molpus Woodlands Timber	1,225,142	1.2
Mutual Fund Cash	3,329	0.0	Mutual Fund Cash	3,337	0.0
■ R&D	990,389	0.8	■ R&D	299,051	0.3



	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Total Fund (Composite)	100,344,081	100.00	100.00	0.00	-
Total Domestic Equity (Composite)	45,109,737	44.96	42.50	2.46	-2,463,502
Total Int'l Equity (Composite)	15,238,850	15.19	15.00	0.19	-187,237
Total Core Fixed Income (Composite)	23,067,015	22.99	20.00	2.99	-2,998,198
Total Non-Core Fixed Income (Composite)	6,328,796	6.31	7.50	-1.19	1,197,010
Total Real Estate (Composite)	9,072,154	9.04	10.00	-0.96	962,254
Total Timber (Composite)	1,225,142	1.22	0.00	1.22	-1,225,142
Total Alternatives (Composite)	-	0.00	5.00	-5.00	5,017,204
Total Cash Composite	302,388	0.30	0.00	0.30	-302,388







Comparative Performance																	
	Q	ΓR	YT	D.	FY	TD	1 Y	/R	2 Y	/R	3 \	Y R	5 Y	/R	Incer	otion	Inception Date
Total Fund (Net)	-15.02	(68)	-15.02	(68)	-9.91	(53)	-5.65	(48)	-0.41	(30)	2.48	(24)	3.17	(19)	4.40	(50)	10/01/2005
Total Fund Policy	-12.24	(35)	-12.24	(35)	-7.41	(22)	-3.35	(20)	1.12	(13)	3.92	(8)	4.65	(4)	5.55	(11)	
Difference	-2.78		-2.78		-2.50		-2.30		-1.53		-1.44		-1.48		-1.15		
IM Mixed-Asset Target Alloc Moderate (MF) Median	-13.55		-13.55		-9.77		-5.89		-1.57		1.42		2.25		4.39		
Total Fund (Gross)	-14.95	(78)	-14.95	(78)	-9.78	(73)	-5.35	(59)	-0.08	(39)	2.82	(53)	3.58	(49)	4.86	(89)	10/01/2005
Total Fund Policy	-12.24	(33)	-12.24	(33)	-7.41	(26)	-3.35	(26)	1.12	(15)	3.92	(19)	4.65	(10)	5.55	(47)	
Difference	-2.71		-2.71		-2.37		-2.00		-1.20		-1.10		-1.07		-0.69		
All Public Plans-Total Fund Median	-13.14		-13.14		-8.52		-4.73		-0.43		2.88		3.52		5.51		
Total Equity	-22.82		-22.82		-15.78		-10.79		-3.12		2.03		3.13		5.32		10/01/2005
Total Equity Policy	-21.47		-21.47		-14.48		-11.21		-3.17		2.36		3.80		5.02		
Difference	-1.35		-1.35		-1.30		0.42		0.05		-0.33		-0.67		0.30		
Total Domestic Equity	-23.92	(63)	-23.92	(63)	-17.22	(60)	-11.25	(50)	-1.48	(40)	2.45	(49)	3.79	(47)	6.16	(51)	10/01/2005
Total Domestic Equity Policy	-20.84	(46)	-20.84	(46)	-13.81	(42)	-9.74	(44)	-0.84	(37)	3.78	(39)	5.54	(31)	7.23	(33)	
Difference	-3.08		-3.08		-3.41		-1.51		-0.64		-1.33		-1.75		-1.07		
IM U.S. All Cap Equity (SA+CF+MF) Median	-21.45		-21.45		-15.65		-11.30		-3.11		2.17		3.43		6.18		
Total Int'l Equity	-19.34	(11)	-19.34	(11)	-11.14	(9)	-9.40	(11)	-7.16	(23)	0.90	(20)	1.12	(23)	2.68	(7)	05/01/2007
Total Int'l Policy	-23.36	(60)	-23.36	(60)	-16.52	(59)	-15.57	(66)	-10.07	(59)	-1.96	(65)	-0.64	(65)	-0.40	(98)	
Difference	4.02		4.02		5.38		6.17		2.91		2.86		1.76		3.08		
IM International Large Cap Core Equity (SA+CF) Median	-22.61		-22.61		-15.57		-13.81		-9.47		-1.50		-0.06		1.18		
Total Fixed Income	0.43	(39)	0.43	(39)	0.88	(36)	4.76	(54)	4.65	(49)	3.88	(42)	3.76	(8)	5.08	(19)	10/01/2005
Total Fixed Policy	3.15	(11)	3.15	(11)	3.33	(9)	8.93	(9)	6.68	(11)	4.82	(12)	3.36	(23)	4.43	(55)	
Difference	-2.72		-2.72		-2.45		-4.17		-2.03		-0.94		0.40		0.65		
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	-0.60		-0.60		-0.10		5.13		4.55		3.58		2.79		4.50		
Total Real Estate	0.89	(61)	0.89	(61)	2.05	(71)	3.70	(80)	6.77	(60)	7.73	(46)	8.74	(58)	4.49	(100)	07/01/2007
NCREIF ODCE	0.90	(61)	0.90	(61)	2.44	(60)	5.25	(64)	6.49	(62)	7.04	(60)	8.74	(58)	5.49	(69)	
Difference	-0.01		-0.01		-0.39		-1.55		0.28		0.69		0.00		-1.00		
IM U.S. Open End Private Real Estate (SA+CF) Median	1.23		1.23		2.87		5.88		7.18		7.56		9.10		5.97		
Total Timber	0.00		0.00		-4.27		-2.95		0.70		-2.85		-0.33		2.41		07/01/2007
NCREIF Timberland Index	0.11		0.11		0.07		1.30		1.84		2.48		2.80		4.87		
Difference	-0.11		-0.11		-4.34		-4.25		-1.14		-5.33		-3.13		-2.46		



	Q1	R	YT	'D	FY	ΓD	1 Y	′R	2 Y	/R	3 \	/R	5 \	/R	Ince	Inception Date	
Total Domestic Equity (Composite)	-23.92		-23.92		-17.22		-11.25		-1.48		2.45		3.79		6.16		10/01/2005
Vanguard Total Stock Mkt (VTSAX)	-20.87	(41)	-20.87	(41)	-13.74	(37)	-9.24	(35)	N/A		N/A		N/A		-9.24	(35)	04/01/2019
CRSP U.S. Total Market TR Index	-20.88	(41)	-20.88	(41)	-13.76	(37)	-9.24	(35)	-0.62	(33)	3.99	(31)	5.74	(24)	-9.24	(35)	
Difference	0.01		0.01		0.02		0.00		N/A		N/A		N/A		0.00		
IM U.S. Equity (MF) Median	-23.21		-23.21		-17.64		-14.20		-4.65		-0.07		2.18		-14.20		
Boston LCV	-31.18	(86)	-31.18	(86)	-25.47	(85)	-19.18	(69)	-8.54	(70)	N/A		N/A		-8.57	(69)	01/01/2018
Russell 1000 Value Index	-26.73	(57)	-26.73	(57)	-21.30	(59)	-17.17	(58)	-6.44	(50)	-2.18	(63)	1.90	(58)	-6.94	(54)	
Difference	-4.45		-4.45		-4.17		-2.01		-2.10		N/A		N/A		-1.63		
IM U.S. Large Cap Value Equity (SA+CF) Median	-26.27		-26.27		-20.54		-16.16		-6.51		-1.15		2.38		-6.56		
Great Lakes SMid Cap	-32.47	(90)	-32.47	(90)	-28.30	(92)	N/A		N/A		N/A		N/A		-29.00	(89)	08/01/2019
Russell 2500 Index	-29.72	(59)	-29.72	(59)	-23.72	(56)	-22.47	(76)	-10.00	(64)	-3.10	(57)	0.49	(65)	-25.48	(70)	
Difference	-2.75		-2.75		-4.58		N/A		N/A		N/A		N/A		-3.52		
IM U.S. SMID Cap Core Equity (SA+CF) Median	-28.03		-28.03		-22.76		-18.30		-8.45		-2.18		1.82		-23.50		
Total Growth	-13.08	(38)	-13.08	(38)	-3.70	(28)	2.99	(10)	11.43	(2)	11.57	(38)	8.83	(56)	6.06	\ · /	07/01/2007
Russell 1000 Growth Index	-14.10	(60)	-14.10	(60)	-4.98	(45)	0.91	(29)	6.67	(31)	11.32	(41)	10.36	(26)	9.26	(29)	
Difference	1.02		1.02		1.28		2.08		4.76		0.25		-1.53		-3.20		
IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	-13.61		-13.61		-5.36		-0.89		5.38		10.54		9.07		8.68		
Rhumbline R1000G	-14.03	(46)	-14.03	(46)	-4.92	(37)	0.97	(32)	6.69	(36)	N/A		N/A		6.59	(43)	01/01/2018
Russell 1000 Growth Index	-14.10	(48)	-14.10	(48)	-4.98	(37)	0.91	(32)	6.67	(36)	11.32	(39)	10.36	(32)	6.57	(44)	
Difference	0.07		0.07		0.06		0.06		0.02		N/A		N/A		0.02		
IM U.S. Large Cap Growth Equity (SA+CF) Median	-14.38		-14.38		-6.14		-1.51		5.47		10.04		9.07		5.91		
Polen Capital LCG	-12.80	(32)	-12.80	(32)	-3.35	(24)	3.58	(9)	N/A		N/A		N/A		16.83	(12)	01/01/2019
Russell 1000 Growth Index	-14.10	(48)	-14.10	(48)	-4.98	(37)	0.91	(32)	6.67	(36)	11.32	(39)	10.36	(32)	13.51	(39)	
Difference	1.30		1.30		1.63		2.67		N/A		N/A		N/A		3.32		
IM U.S. Large Cap Growth Equity (SA+CF) Median	-14.38		-14.38		-6.14		-1.51		5.47		10.04		9.07		11.44		
/anguard Mid-Cap Index (VIMAX)	-25.72	` '	-25.72	(26)	-20.61	(24)	-16.65	(21)	-6.01	(19)	-0.26	(14)	N/A		2.45	` '	07/01/2015
CRSP U.S. Mid Cap TR Index	-25.74	(27)	-25.74	(27)	-20.64	(25)	-16.65	(21)	-6.01	(18)	-0.25	(13)	2.11	(13)		(12)	
Difference	0.02		0.02		0.03		0.00		0.00		-0.01		N/A		-0.02		
IM U.S. Mid Cap Core Equity (MF) Median	-28.30		-28.30		-23.24		-19.67		-9.31		-3.64		-0.37		-0.42		
Total Int'l Equity (Composite)	-19.34		-19.34		-11.14		-9.40		-7.16		0.90		1.12		2.68		05/01/2007
Harding Loevner Intl Equity (HLIZX)	-19.34	(18)	-19.34	(18)	-11.20	(16)	-9.47	(17)	- 7.19	(19)	0.88	(20)	N/A		2.23	(21)	09/01/2016
MSCI AC World ex USA (Net)	-23.36	(47)	-23.36	(47)	-16.52	(50)	-15.57	(47)	-10.07	(37)	-1.96	(43)	-0.64	(45)	0.44	(39)	
Difference	4.02		4.02		5.32		6.10		2.88		2.84		N/A		1.79		
IM International Equity (MF) Median	-23.74		-23.74		-16.56		-15.96		-11.68		-2.51		-0.95		-0.22		



	QT	ΓR	ΥT	'D	FY	TD	1 Y	′R	2 Y	′R	3 Y	'R	5 \	/R	Incer	otion	Inception Date
Total Core Fixed Income	1.69		1.69		1.66		6.51		5.28		3.90		3.23		4.30		10/01/2005
Core Fixed Policy	3.15		3.15		3.33		8.93		6.68		4.82		3.36		4.37		
Difference	-1.46		-1.46		-1.67		-2.42		-1.40		-0.92		-0.13		-0.07		
Garcia Hamilton Fixed Income	1.69	(51)	1.69	(51)	1.66	(60)	6.51	(77)	5.28	(88)	N/A		N/A		4.43	(77)	01/01/2018
Blmbg. Barc. U.S. Aggregate Index	3.15	(25)	3.15	(25)	3.33	(24)	8.93	(27)	6.68	(37)	4.82	(47)	3.36	(72)	5.23	(37)	
Difference	-1.46		-1.46		-1.67		-2.42		-1.40		N/A		N/A		-0.80		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.73		1.73		1.99		7.83		6.32		4.77		3.47		4.99		
Total Non-Core Fixed Income	-3.86		-3.86		-1.87		-0.93		2.27		3.22		4.45		7.16		07/01/2010
Bloomberg Barclays Global Aggregate	-0.33		-0.33		0.16		4.20		1.88		3.55		2.64		2.54		
Difference	-3.53		-3.53		-2.03		-5.13		0.39		-0.33		1.81		4.62		
Templeton Global Total Return (FTTRX)	-6.16	(70)	-6.16	(70)	-4.39	(63)	-5.99	(96)	-1.89	(92)	-1.15	(98)	0.89	(88)	2.35	(32)	07/01/2011
Blmbg. Barc. Global Multiverse	-1.11	(14)	-1.11	(14)	-0.47	(11)	3.47	(18)	1.57	(34)	3.37	(11)	2.67	(7)	1.77	(51)	
Difference	-5.05		-5.05		-3.92		-9.46		-3.46		-4.52		-1.78		0.58		
IM Global Fixed Income (MF) Median	-3.20		-3.20		-3.28		0.97		0.76		2.28		1.79		1.82		
Total Real Estate (Composite)	0.89		0.89		2.05		3.70		6.77		7.73		8.74		4.49		07/01/2007
American Core Realty	1.54	(27)	1.54	(27)	3.03	(32)	6.11	(42)	7.15	(53)	7.44	(58)	8.45	(62)	5.57	(67)	07/01/2007
NCREIF ODCE	0.90	(61)	0.90	(61)	2.44	(60)	5.25	(64)	6.49	(62)	7.04	(60)	8.74	(58)	5.49	(69)	
Difference	0.64		0.64		0.59		0.86		0.66		0.40		-0.29		0.08		
IM U.S. Open End Private Real Estate (SA+CF) Median	1.23		1.23		2.87		5.88		7.18		7.56		9.10		5.97		
Total Timber (Composite)	0.00		0.00		-4.27		-2.95		0.70		-2.85		-0.33		2.41		07/01/2007
Molpus Woodlands Timber	0.00		0.00		-4.27		-2.95		0.85		-0.37		1.24		2.19		06/01/2008
NCREIF Timberland Index	0.11		0.11		0.07		1.30		1.84		2.48		2.80		3.69		
Difference	-0.11		-0.11		-4.34		-4.25		-0.99		-2.85		-1.56		-1.50		



[^] Some products shown on IRR page.

Comparative Performance - IRR

As of March 31, 2020

Comparative Performance - IRR			
	QTR	Inception	Inception Date
Molpus Woodlands Timber	0.00	1.98	06/24/2008
Angelo Gordon Net Lease Realty Fund III, L.P.	0.00	6.91	03/10/2014
Dune Real Estate Fund III	0.00	10.67	11/06/2014
Crescent Direct Lending Levered Fund	0.00	7.62	10/09/2014

Comparative Performance																			
	FY	TD		2018 o 2019	Oct-2 To Sep-2	0	Oct-: T Sep-	0	Oct-2 To Sep-2	0	Oct-2 T Sep-	0	Oct-2 T Sep-	0	Т	2012 o 2013	Oct-2011 To Sep-2012	Oct- T Sep-	
Total Fund (Net)	-9.91	(53)	4.54	(44)	8.29	(13)	11.09	(29)	8.82	(51)	-1.22	(28)	10.01	(29)	10.96	(41)	16.79 (51)	1.26	(20)
Total Fund Policy	-7.41	(22)	5.02	(34)	8.59	(12)	11.90	(17)	10.34	(19)	0.55	(5)	10.23	(26)	10.24	(52)	15.21 (75)	2.15	(12)
Difference	-2.50		-0.48		-0.30		-0.81		-1.52		-1.77		-0.22		0.72		1.58	-0.89	
IM Mixed-Asset Target Alloc Moderate (MF) Median	-9.77		4.00		5.09		10.04		8.82		-2.35		8.37		10.34		16.89	-0.53	
Total Fund (Gross)	-9.78	(73)	4.89	(32)	8.66	(23)	11.49	(58)	9.41	(61)	-0.72	(49)	10.58	(39)	11.52	(58)	17.35 (53)	1.61	(34)
Total Fund Policy	-7.41	(26)	5.02	(29)	8.59	(24)	11.90	(50)	10.34	(33)	0.55	(21)	10.23	(46)	10.24	(71)	15.21 (77)	2.15	(24)
Difference	-2.37		-0.13		0.07		-0.41		-0.93		-1.27		0.35		1.28		2.14	-0.54	
All Public Plans-Total Fund Median	-8.52		4.32		7.13		11.82		9.74		-0.78		9.93		12.02		17.55	0.68	
Total Equity	-15.78		3.19		13.13		16.40		11.59		-3.61		13.96		21.06		25.94	-0.85	
Total Equity Policy	-14.48		1.49		13.60		18.94		13.34		-6.20		11.73		19.62		22.72	-4.71	
Difference	-1.30		1.70		-0.47		-2.54		-1.75		2.59		2.23		1.44		3.22	3.86	
Total Domestic Equity	-17.22	(60)	5.47	(19)	16.10	(45)	14.99	(78)	12.80	(36)	-1.73	(53)	17.23	(34)	22.56	(56)	27.44 (46)	3.01	(15)
Total Domestic Equity Policy	-13.81	(42)	2.36	(41)	17.73	(32)	18.62	(45)	14.77	(19)	-1.18	(47)	17.67	(29)	22.03	(60)	29.64 (25)	0.48	(32)
Difference	-3.41		3.11		-1.63		-3.63		-1.97		-0.55		-0.44		0.53		-2.20	2.53	
IM U.S. All Cap Equity (SA+CF+MF) Median	-15.65		0.96		15.03		18.17		11.44		-1.47		15.77		23.35		26.94	-1.62	
Total Int'l Equity	-11.14	(9)	-3.33	(74)	5.85	(14)	18.68	(69)	7.98	(50)	-8.63	(65)	6.07	(51)	16.67	(89)	21.58 (5)	-10.95	(70)
Total Int'l Policy	-16.52	(59)	-1.23	(47)	1.76	(60)	19.61	(59)	9.26	(33)	-12.16	(90)	4.77	(64)	16.48	(90)	14.49 (82)	-10.81	(69)
Difference	5.38		-2.10		4.09		-0.93		-1.28		3.53		1.30		0.19		7.09	-0.14	
IM International Large Cap Core Equity (SA+CF) Median	-15.57		-1.56		2.53		20.30		7.91		-7.16		6.10		22.60		17.31	-9.40	
Total Fixed Income	0.88	(36)	7.91	(77)	0.99	(12)	3.93	(19)	5.81	(48)	2.09	(44)	6.00	(22)	2.81	(8)	11.79 (14)	3.12	(76)
Total Fixed Policy	3.33	(9)	10.30	(29)	-1.22	(64)	0.07	(84)	5.19	(68)	2.94	(17)	3.96	(74)	-2.35	(90)	5.75 (84)	5.96	(9)
Difference	-2.45		-2.39		2.21		3.86		0.62		-0.85		2.04		5.16		6.04	-2.84	
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	-0.10		9.67		-0.91		1.28		5.71		1.85		4.74		-0.98		7.74	4.40	
Total Real Estate	2.05	(71)	5.87	(74)	10.10	(25)	9.82	(29)	9.06	(91)	14.70	(58)	12.33	(65)	8.10	(98)	13.00 (47)	14.11	(88)
NCREIF ODCE	2.44	(60)	6.17	(72)	8.82	(55)	7.81	(56)	10.62	(65)	14.71	(58)	12.39	(64)	12.47	(66)	11.77 (64)	18.03	(43)
Difference	-0.39		-0.30		1.28		2.01		-1.56		-0.01		-0.06		-4.37		1.23	-3.92	
IM U.S. Open End Private Real Estate (SA+CF) Median	2.87		6.89		8.98		8.05		11.02		15.32		12.63		13.18		12.89	16.62	
Total Timber	-4.27		5.58		-9.38		0.28		6.48		6.70		9.49		4.51		-5.86	3.87	
NCREIF Timberland Index	0.07		2.10		4.00		3.28		3.28		9.26		10.38		9.68		2.25	0.26	
Difference	-4.34		3.48		-13.38		-3.00		3.20		-2.56		-0.89		- 5.17		-8.11	3.61	
Total Alternatives	N/A		N/A		4.94		8.16		9.11		-3.68		6.84		-9.88		-8.55	-0.85	
Alternatives Policy	-4.45		7.72		8.07		9.04		10.41		1.09		7.56		-3.91		-2.59	1.58	
Difference	N/A		N/A		-3.13		-0.88		-1.30		-4.77		-0.72		-5.97		-5.96	-2.43	



	FY	TD	Oct- T Sep-		Oct-2 To Sep-2	0	Oct- T Sep-	0	Т	2015 o 2016	Oct-2 To Sep-2	0		2013 o 2014	Oct-7 T Sep-	0	Oct-2011 To Sep-2012	Oct-2 To Sep-2	0
Total Domestic Equity (Composite)	-17.22		5.47		16.10		14.99		12.80		-1.73		17.23		22.56		27.44	3.01	
Vanguard Total Stock Mkt (VTSAX)	-13.74	(37)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
CRSP U.S. Total Market TR Index	-13.76	(37)	2.92	(34)	17.62	(31)	18.64	(40)	14.99	(27)	-0.55	(46)	17.77	(23)	21.59	(55)	29.96 (29)	0.46	(32)
Difference	0.02		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
IM U.S. Equity (MF) Median	-17.64		0.12		13.30		17.48		12.11		-0.92		13.74		22.54		27.33	-1.87	
Macquarie (Delaware Value)	N/A		N/A		N/A		12.49	(89)	19.29	(10)	-3.67	(57)	21.59	(17)	24.74	(40)	29.80 (34)	6.36	(8)
Russell 1000 Value Index	-21.30	(59)	4.00	(39)	9.45	(78)	15.12	(76)	16.19	(26)	-4.42	(65)	18.89	(42)	22.30	(60)	30.92 (26)	-1.89	(62)
Difference	N/A		N/A		N/A		-2.63		3.10		0.75		2.70		2.44		-1.12	8.25	
IM U.S. Large Cap Value Equity (SA+CF) Median	-20.54		2.32		11.76		17.92		13.30		-3.29		18.36		23.68		28.16	-0.98	
Boston LCV	-25.47	(85)	3.47	(43)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
Russell 1000 Value Index	-21.30	, ,	4.00	(39)	9.45	(78)	15.12	(76)	16.19	(26)	-4.42	(65)	18.89	(42)	22.30	(60)	30.92 (26)	-1.89	(62)
Difference	-4.17		-0.53		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
IM U.S. Large Cap Value Equity (SA+CF) Median	-20.54		2.32		11.76		17.92		13.30		-3.29		18.36		23.68		28.16	-0.98	
Great Lakes SMid Cap	-28.30	(92)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
Russell 2500 Index	-23.72	(56)	-4.04	(67)	16.19	(57)	17.79	(70)	14.44	(35)	0.38	(74)	8.97	(72)	29.79	(58)	30.93 (41)	-2.22	(71)
Difference	-4.58		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
IM U.S. SMID Cap Core Equity (SA+CF) Median	-22.76		-2.24		16.28		18.79		12.61		2.28		11.29		30.27		30.24	-0.86	
Total Growth	-3.70	(28)	11.18	(5)	22.19	(73)	14.70	(95)	7.63	(88)	4.20	(36)	18.19	(40)	18.74	(62)	29.37 (35)	8.43	(3)
Russell 1000 Growth Index	-4.98	(45)	3.71	(39)	26.30	(38)	21.94	(31)	13.76	(20)	3.17	(48)	19.15	(28)	19.27	(56)	29.19 (37)	3.78	(22)
Difference	1.28		7.47		-4.11		-7.24		-6.13		1.03		-0.96		-0.53		0.18	4.65	
IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	-5.36		2.74		24.87		20.28		11.16		3.02		17.25		19.76		27.49	0.80	
Rhumbline R1000G	-4.92	(37)	3.70	(53)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
Russell 1000 Growth Index	-4.98	(37)	3.71	(52)	26.30	(37)	21.94	(38)	13.76	(23)	3.17	(54)	19.15	(40)	19.27	(64)	29.19 (39)	3.78	(30)
Difference	0.06		-0.01		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
IM U.S. Large Cap Growth Equity (SA+CF) Median	-6.14		3.82		24.44		20.83		11.60		3.53		18.19		20.25		27.69	1.38	
Sawgrass Large Cap Growth	N/A		N/A		21.72	(66)	14.70	(92)	7.63	(87)	4.20	(40)	18.19	(51)	18.74	(69)	29.37 (38)	N/A	
Russell 1000 Growth Index	-4.98	(37)	3.71	(52)	26.30	(37)	21.94	(38)	13.76	(23)	3.17	(54)	19.15	(40)	19.27	(64)	29.19 (39)	3.78	(30)
Difference	N/A		N/A		-4.58		-7.24		-6.13		1.03		-0.96		-0.53		0.18	N/A	
IM U.S. Large Cap Growth Equity (SA+CF) Median	-6.14		3.82		24.44		20.83		11.60		3.53		18.19		20.25		27.69	1.38	
Polen Capital LCG	-3.35	(24)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
Russell 1000 Growth Index	-4.98	(37)	3.71	(52)	26.30	(37)	21.94	(38)	13.76	(23)	3.17	(54)	19.15	(40)	19.27	(64)	29.19 (39)	3.78	(30)
Difference	1.63		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	N/A	
IM U.S. Large Cap Growth Equity (SA+CF) Median	-6.14		3.82		24.44		20.83		11.60		3.53		18.19		20.25		27.69	1.38	



Comparative Performance Total Fund Trailing Returns As of March 31, 2020

	FYTD	Oct-2018 To Sep-2019	То	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Lazard SMid Cap Core	N/A	N/A	13.70 (68)	20.53 (24)	10.26 (88)	4.02 (40)	11.99 (36)	31.12 (33)	30.14 (52)	-9.00 (97)
Russell 2500 Index	-23.72 (56)	-4.04 (67) 16.19 (57)	17.79 (70)	14.44 (35)	0.38 (74)	8.97 (72)	29.79 (58)	30.93 (41)	-2.22 (71)
Difference	N/A	N/A	-2.49	2.74	-4.18	3.64	3.02	1.33	-0.79	-6.78
IM U.S. SMID Cap Core Equity (SA+CF) Median	-22.76	-2.24	16.28	18.79	12.61	2.28	11.29	30.27	30.24	-0.86
Vanguard Mid-Cap Index (VIMAX)	-20.61 (24)	3.65 (24) 13.42 (30)	15.30 (49)	12.63 (40)	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Mid Cap TR Index	-20.64 (25)	3.70 (22) 13.44 (30)	15.33 (47)	12.68 (39)	1.76 (22)	15.94 (13)	28.08 (41)	26.23 (50)	-0.18 (22)
Difference	0.03	-0.05	-0.02	-0.03	-0.05	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Core Equity (MF) Median	-23.24	1.09	10.84	15.23	11.87	-1.05	12.32	27.52	26.17	-3.68
Total Int'l Equity (Composite)	-11.14	-3.33	5.85	18.68	7.98	-8.63	6.07	16.67	21.58	-10.95
Harding Loevner Intl Equity (HLIZX)	-11.20 (16)	-3.34 (62) 5.85 (10)	18.65 (58)	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA (Net)	-16.52 (50)	-1.23 (44) 1.76 (34)	19.61 (48)	9.26 (51)	-12.16 (64)	4.77 (43)	16.48 (56)	14.49 (65)	-10.81 (38)
Difference	5.32	-2.11	4.09	-0.96	N/A	N/A	N/A	N/A	N/A	N/A
IM International Equity (MF) Median	-16.56	-1.94	0.08	19.36	9.32	-8.75	4.26	17.81	16.20	-12.08



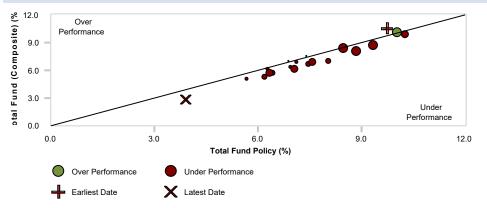
	FY	TD	Oct-2	0	Oct-2)	Oct-2	0	Oct-2	0	Oct-2)	Oct-2	0	Oct-2	0	Oct-20		Oct-2)
Total Core Fixed Income	1.66		Sep-2	2019	Sep-2 -0.67	2018	Sep-	2017	Sep-	2016	Sep-2	2015	Sep-	2014	Sep-	2013	Sep-2	012	Sep-2 4.42	011
	3.33		8.74 10.30				0.82		5.78 5.19		3.88		4.40		-1.26		7.71		5.26	
Core Fixed Policy Difference	-1.67		-1.56		-1.22 0.55		0.07 0.75		0.59		2.94 0.94		3.96 0.44		-1.68 0.42		5.16 2.55		-0.84	
		(00)		(0.0)																
Garcia Hamilton Fixed Income	1.66	` '	8.74	(96)	N/A	(0-)	N/A	(0.4)	N/A	(0.0)	N/A	(00)	N/A	(0.0)	N/A	(=0)	N/A	(00)	N/A	(=a)
Blmbg. Barc. U.S. Aggregate Index		(24)		(70)	-1.22	(87)	0.07	(84)	5.19	(80)	2.94	(62)	3.96	(80)	-1.68	(78)	5.16 ((89)		(50)
Difference	-1.67		-1.56		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.99		10.43		-0.75		0.61		5.66		3.02		4.45		-1.27		6.60		5.26	
Mutual of America Core Fixed	N/A		N/A		N/A		0.82	(39)	5.78	(43)	3.88	(7)	4.43	(51)	-1.01	(38)	7.24 ((37)	N/A	
Blmbg. Barc. U.S. Aggregate Index	3.33	(24)	10.30	(70)	-1.22	(87)	0.07	(84)	5.19	(80)	2.94	(62)	3.96	(80)	-1.68	(78)	5.16 ((89)	5.26	(50)
Difference	N/A		N/A		N/A		0.75		0.59		0.94		0.47		0.67		2.08		N/A	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.99		10.43		-0.75		0.61		5.66		3.02		4.45		-1.27		6.60		5.26	
Total Non-Core Fixed Income	-1.87		5.13		4.97		11.18		6.07		-2.56		9.33		11.74		24.76		-3.22	
Bloomberg Barclays Global Aggregate	0.16		7.60		-1.31		-1.26		8.83		-3.26		1.19		-2.64		5.07		4.00	
Difference	-2.03		-2.47		6.28		12.44		-2.76		0.70		8.14		14.38		19.69		-7.22	
Templeton Global Total Return (FTTRX)	-4.39	(63)	2.50	(99)	-1.90	(66)	13.82	(1)	2.64	(94)	-8.23	(95)	5.71	(22)	5.29	(2)	15.90 ((3)	N/A	
Blmbg. Barc. Global Multiverse	-0.47			(51)	-1.32	` '	-0.56	(77)	9.23	(25)	-3.56	` '	1.40	(79)	-2.22		5.57 (3.85	(11)
Difference	-3.92	(/	-5.04	(/	-0.58	()	14.38	(* *)	-6.59	()	-4.67	(/	4.31	()	7.51	(00)	10.33	()	N/A	(/
IM Global Fixed Income (MF) Median	-3.28		7.65		-1.29		1.02		7.42		-3.85		3.37		-1.81		7.17		1.74	
Total Real Estate (Composite)	2.05		5.87		10.10		9.82		9.06		14.70		12.33		8.10		13.00		14.11	
American Core Realty	3.03	(32)	6.81	(52)	8.50	(61)	7.52	(63)	9.04	(91)	13.98	(65)	12.49	(60)	12.27	(69)	11.56 ((66)	16.11	(63)
NCREIF ODCE	2.44	(60)	6.17	(72)	8.82	(55)	7.81	(56)	10.62	(65)	14.71	(58)	12.39	(64)	12.47	(66)	11.77 ((64)	18.03	(43)
Difference	0.59	,	0.64	,	-0.32	(/	-0.29	()	-1.58	()	-0.73	()	0.10	` '	-0.20	` '	-0.21	,	-1.92	` '
IM U.S. Open End Private Real Estate (SA+CF) Median	2.87		6.89		8.98		8.05		11.02		15.32		12.63		13.18		12.89		16.62	
Total Timber (Composite)	-4.27		5.58		-9.38		0.28		6.48		6.70		9.49		4.51		-5.86		3.87	
• •																				
Amsouth Timber Fund	N/A		N/A		-15.26		-0.52		6.12		11.73		7.98		3.85		-1.33		2.00	
NCREIF Timberland Index	0.07		2.10		4.00		3.28		3.28		9.26		10.38		9.68		2.25		0.26	
Difference	N/A		N/A		-19.26		-3.80		2.84		2.47		-2.40		-5.83		-3.58		1.74	
Molpus Woodlands Timber	-4.27		5.90		-2.66		1.18		6.08		1.64		10.96		5.25		-10.32		5.68	
NCREIF Timberland Index	0.07		2.10		4.00		3.28		3.28		9.26		10.38		9.68		2.25		0.26	
Difference	-4.34		3.80		-6.66		-2.10		2.80		-7.62		0.58		-4.43		-12.57		5.42	
Alternatives																				
Westwood Income Opportunity Fund (WHGIX)	N/A		N/A		4.94	(36)	8.14	(60)	9.20	(40)	-3.83	(46)	N/A		N/A		N/A		N/A	
Alternatives Policy	-4.45	(11)	7.72	(15)	8.07	(18)	9.04	(50)	10.41	(24)	1.09	(11)	7.56	(55)	-3.91	(95)	-2.59 ((100)	1.58	(24)
Difference	N/A		N/A		-3.13		-0.90		-1.21		-4.92		N/A		N/A		N/A		N/A	
IM Flexible Portfolio (MF) Median	-11.36		2.59		3.38		9.02		8.55		-4.23		7.99		8.17		15.66		-0.87	



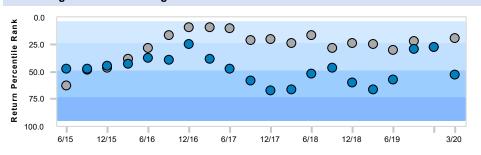




3 Yr Rolling Under/Over Performance - 5 Years

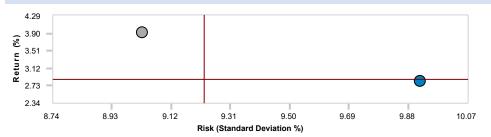


3 Yr Rolling Percentile Ranking - 5 Years



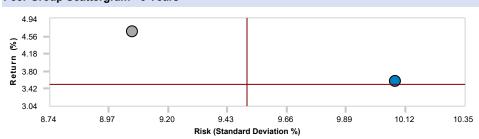
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
Total Fund (Composite)	20	1 (5%)	11 (55%)	8 (40%)	0 (0%)	
Total Fund Policy	20	12 (60%)	7 (35%)	1 (5%)	0 (0%)	

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Total Fund (Composite)	2.82	9.92
Total Fund Policy	3.92	9.03
Median	2.88	9.22

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Total Fund (Composite)	3.58	10.08
Total Fund Policy	4.65	9.06
Median	3.52	9.51

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.47	100.08	110.21	-1.35	-0.66	0.15	1.09	8.01
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.27	1.00	7.03

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.53	98.12	115.24	-1.45	-0.61	0.29	1.10	7.90
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.42	1.00	6.69





3.93

13.67



5.91

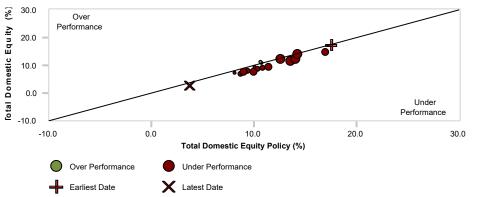
-14.88

IM U.S. All Cap Equity (SA+CF+MF) Median

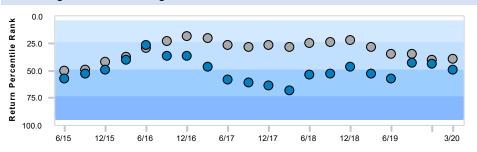
8.16

0.67

3 Yr Rolling Under/Over Performance - 5 Years



3 Yr Rolling Percentile Ranking - 5 Years



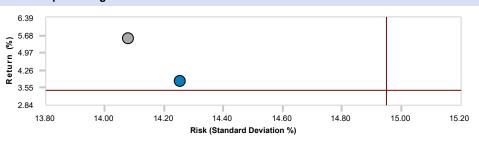
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
Total Domestic Equity	20	0 (0%)	10 (50%)	10 (50%)	0 (0%)	
 Total Domestic Equity Policy 	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)	

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
 Total Domestic Equity 	2.45	16.47
 Total Domestic Equity Policy 	3.78	15.67
Median	2.17	16.48

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
 Total Domestic Equity 	3.79	14.25
 Total Domestic Equity Policy 	5.54	14.08
Median	3.43	14.95

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity	2.23	98.26	104.17	-1.34	-0.51	0.12	1.04	13.44
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.20	1.00	12.45

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity	2.29	93.00	101.00	-1.62	-0.72	0.25	1.00	11.12
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.37	1.00	10.54



Peer Group Analysis - IM U.S. Equity (MF) 30.00 44.00 36.00 20.00 28.00 10.00 0 0 0 20.00 0.00 0 0 0 0 0 12.00 00 -10.00 Return Return 00 4.00 0 -20.00 00 -4.00 -30.00 -12.00 -40.00 -20.00 -50.00 -28.00 -60.00 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 Oct-2013 То То To To То To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2019 2018 2017 2016 2015 2014 Vanguard Tot Stock Mkt (VTSAX) 20.87 (41) 13.74 (37) -9.24 (35) N/A N/A N/A N/A Vanguard Tot Stock Mkt (VTSAX) N/A N/A N/A N/A N/A N/A © CRSP U.S. Total Market TR Indx 20.88 (41) 13.76 (37) -9.24 (35) -0.62 (33) 3.99 (31) 7.35 (28) CRSP U.S. Total Market TR Indx 2.92 (34) 7.62 (31) 8.64 (40) 4.99 (27) 0.55 (46) 7.77 (23) 5.74 (24) Median 23.21 17.64 14.20 -4.65 -0.07 3.64 2.18 Median 0.12 3.30 7.48 2.11 -0.923.74 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending** Ending Ending **Ending** Ending Ending Dec-2019 Sep-2019 Jun-2019 Mar-2019 Dec-2018 Sep-2018 Vanguard Tot Stock Mkt (VTSAX) 9.01 (33) 1.09 (38) 4.09 (40) N/A N/A N/A CRSP U.S. Total Market TR Indx 9.00 (33)(38)4.08 (40)14.06 (46) -14.26 (41) 7.08 (30)1.11

3.52

13.62

-15.37



5.33

IM U.S. Equity (MF) Median

7.91

0.38

Peer Group Analysis - IM U.S. Large Cap Value Equity (SA+CF) 20.00 32.00 26.00 12.00 20.00 0 4.00 0 0 0 14.00 0 -4.00 0 0 8.00 Return Return -12.00 00 2.00 0 -20.00 0 -4.00 0 0 -28.00 -10.00 -36.00 -16.00 -44.00 -22.00 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 Oct-2013 To To Τo Τo To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Sep-2014 ·31.18 (86) ·25.47 (85) ·19.18 (69) -8.54 (70) Boston LCV N/A N/A N/A Boston LCV 3.47 (43) N/A N/A Russell 1000 Value Index ·26.73 (57) ·21.30 (59) ·17.17 (58) -6.44 (50) -2.18 (63) 2.78 (62) 1.90 (58) Russell 1000 Value Index 4.00 (39) 9.45 (78) 15.12 (76) 16.19 (26) -4.42 (65) 18.89 (42) Median -26.27 20.54 -16.16 -6.51 -1.15 3.37 2.38 Median 2.32 11.76 17.92 13.30 -3.29 18.36 **Comparative Performance**

Comparative remormance						
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Boston LCV	8.30 (39)	2.78 (21)	5.51 (13)	10.75 (72)	-13.85 (58)	6.11 (41)
Russell 1000 Value Index	7.41 (60)	1.36 (60)	3.84 (53)	11.93 (45)	-11.72 (31)	5.70 (51)
IM U.S. Large Cap Value Equity (SA+CF) Median	7.90	1.67	3.96	11.74	-13.40	5.71



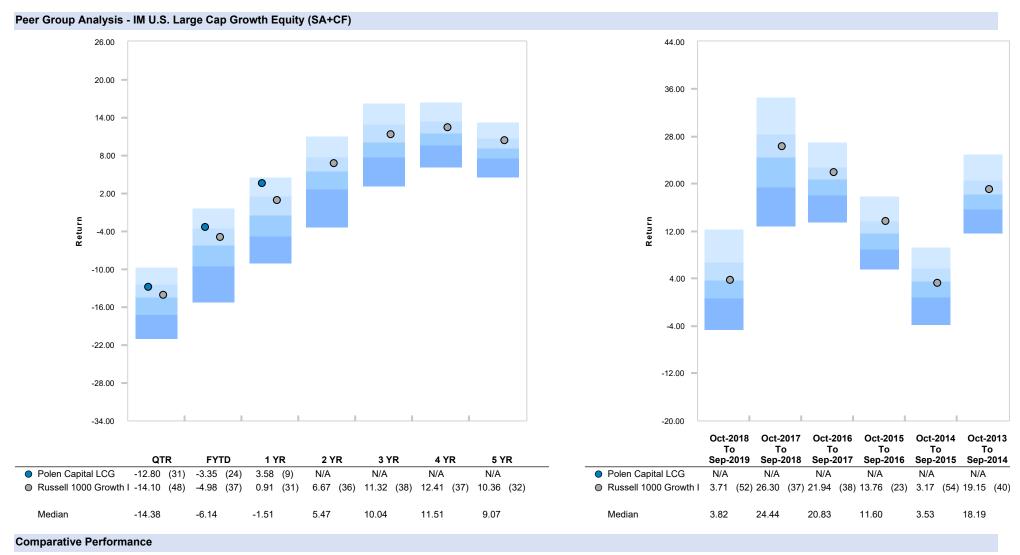




Peer Group Analysis - IM U.S. Large Cap Growth Equity (SA+CF) 26.00 44.00 20.00 36.00 14.00 0 0 28.00 0 0 8.00 0 0 0 20.00 0 2.00 0 0 Return Return 0 -4.00 12.00 0 0 -10.00 4.00 00 0 0 0 -16.00 -4.00 -22.00 -12.00 -28.00 -34.00 -20.00 Oct-2015 Oct-2014 Oct-2018 Oct-2017 Oct-2016 Oct-2013 To Τo To To To To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Sep-2014 -4.92 (37) Rhumbline R1000G -14.03 (46) 0.97 (31) 6.69 (35) N/A N/A N/A Rhumbline R1000G 3.70 (53) Russell 1000 Growth I -14.10 (48) -4.98 (37) 0.91 (31) 6.67 (36) 11.32 (38) 12.41 (37) 10.36 (32) O Russell 1000 Growth I 3.71 (52) 26.30 (37) 21.94 (38) 13.76 (23) 3.17 (54) 19.15 (40) Median -14.38 -6.14 -1.51 5.47 10.04 11.51 9.07 Median 3.82 24.44 20.83 11.60 3.53 18.19 Comparative Performance

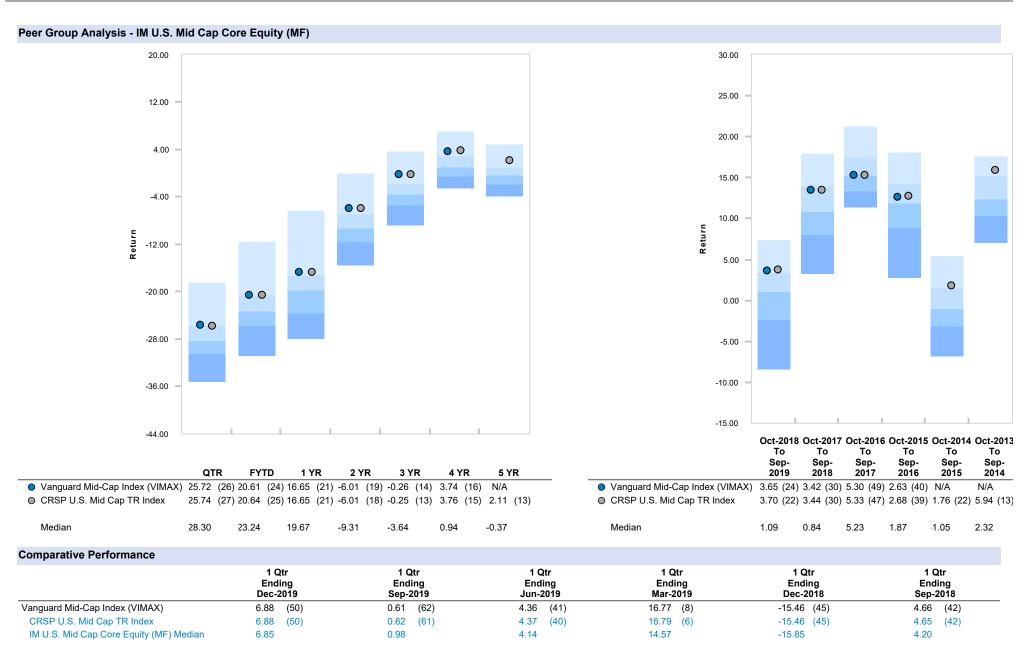
Comparative r enformance						
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Rhumbline R1000G	10.60 (26)	1.49 (28)	4.63 (57)	16.08 (48)	-15.87 (61)	9.16 (23)
Russell 1000 Growth Index	10.62 (26)	1.49 (28)	4.64 (57)	16.10 (47)	-15.89 (61)	9.17 (22)
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.59	0.61	4.91	15.98	-15.31	8.12





	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Polen Capital LCG	10.84 (22)	0.96 (43)	6.15 (23)	17.27 (28)	N/A	N/A
Russell 1000 Growth Index	10.62 (26)	1.49 (28)	4.64 (57)	16.10 (47)	-15.89 (61)	9.17 (22)
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.59	0.61	4.91	15.98	-15.31	8.12







3 Yr Rolling Under/Over Performance - 5 Years 20.0 20.0 Mid-Cap Index (VIMAX) 15.0 5.0 0.0 0.0 -5.0 Over Performance 5.0 0.0 Under Performance 0.0 5.0 10.0 15.0 20.0 -5.0 CRSP U.S. Mid Cap TR Index (%) X Latest Date Under Performance Earliest Date

3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 25.0 50.0 75.0 100.0 12/16 6/17 12/17 6/18 12/18 6/19 3/20 6/15 12/15 6/16 5-25 25-Median Median-75 75-95 **Total Period** Count Count Count Count Vanguard Mid-Cap Index (VIMAX) 8 5 (63%) 3 (38%) 0 (0%) 0 (0%) O CRSP U.S. Mid Cap TR Index 20 15 (75%) 5 (25%) 0 (0%) 0 (0%)



	3.00					
(%)	2.00 -	0				
Return	1.00					
Re	0.00 -					
	-1.00					
	15.40	15.60	15.80	16.00	16.20	16.40
			Risk (Standard I	Deviation %)		

Return	Standard Deviation
-0.26	17.59
-0.25	17.60
-3.64	18.11
	-0.26 -0.25

	Return	Deviation
Vanguard Mid-Cap Index (VIMAX)	N/A	N/A
CRSP U.S. Mid Cap TR Index	2.11	15.56
Median	-0.37	16.13

Historical Statistics - 3 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Vanguard Mid-Cap Index (VIMAX)	0.03	99.96	100.05	-0.02	-0.66	-0.02	1.00	14.65
CRSP U.S. Mid Cap TR Index	0.00	100.00	100.00	0.00	N/A	-0.02	1.00	14.66
Historical Statistics - 5 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Vanguard Mid-Cap Index (VIMAX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Mid Cap TR Index	0.00	100 00	100 00	0.00	N/A	0.14	1 00	12 33

Peer Group Scattergram - 5 Years



Fund Information

Fund Name: Vanguard Index Funds: Vanguard Mid-Cap Index Fund; Admiral Shares

Fund Family: Vanguard Group Inc

Ticker: VIMAX
Inception Date: 11/12/2001
Fund Assets: \$47,640 Million

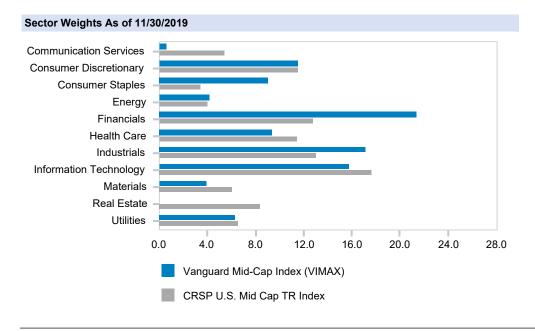
Portfolio Turnover: 16%

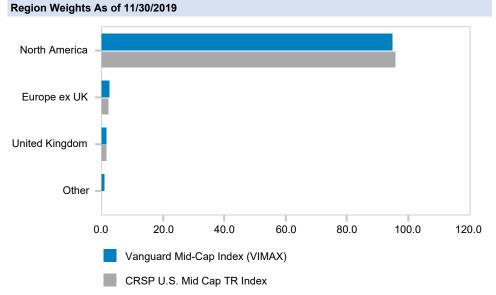
Portfolio Assets:	\$115,437 Million
Portfolio Manager :	Butler/Johnson
PM Tenure :	20012016

Fund Style: IM U.S. Mid Cap Core Equity (MF)
Style Benchmark: CRSP U.S. Mid Cap TR Index

Portfolio Characteristics As o	f 11/30/2019	
	Portfolio	Benchmark
Total Securities	350	344
Avg. Market Cap (\$)	17,723,234,994	13,984,478,420
Price/Earnings (P/E)	30.31	22.18
Price/Book (P/B)	6.05	3.13
Dividend Yield	2.22	1.60
Annual EPS	24.56	4.18
5 Yr EPS	13.43	11.66
3 Yr EPS Growth	18.53	N/A
Beta (3 Years, Monthly)	1.00	1.00

Top Ten Securities As of 11/30/2019		
Advanced Micro Devices Inc ORD	1.0 %	
Newmont Goldcorp Corp ORD	0.7 %	
Amphenol Corp ORD	0.7 %	
ONEOK Inc ORD	0.7 %	
TransDigm Group Inc ORD	0.7 %	
WEC Energy Group Inc ORD	0.6 %	
Motorola Solutions Inc ORD	0.6 %	
IHS Markit Ltd ORD	0.6 %	
Eversource Energy ORD	0.6 %	
SBA Communications Corp ORD	0.6 %	





Statistics provided by Lipper. Most recent available data shown.



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Peer Group Analysis - IM International Large Cap Core Equity (SA+CF) 14.00 36.00 8.00 28.00 00 2.00 20.00 0 0 0 -4.00 12.00 0 Return Return 0 0 -10.00 4.00 0 0 0 0 -16.00 -4.00 0 0 0 -22.00 -12.00 0 -28.00 -20.00 -34.00 -28.00 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 Oct-2013 To To To To To Τo QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Sep-2014 ● Total Int'l Equity -19.34 (11) -11.14 (9) -9.40 (11) -7.16 (23) 0.90 (20) 2.76 (27) 1.12 (23) Total Int'l Equity -3.33 (74) 5.85 18.68 (69) 7.98 (50) -8.63 (65) 6.07 (51) (14) □ Total Int'l Policy -23.36 (60) -16.52 (59) -15.57 (66) -10.07 (59) -1.96 (65) 1.61 (49) -0.64 (65) Total Int'l Policy -1.23 (47) 1.76 (60) 19.61 (59) 9.26 (33) -12.16 (90) 4.77 (64) Median -22.61 -15.57 -13.81 -9.47 -1.50 1.60 -0.06Median -1.56 2.53 20.30 7.91 -7.16 6.10 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending Ending Ending Ending Ending **Ending** Dec-2019 Sep-2019 Jun-2019 Mar-2019 Dec-2018 Sep-2018

-2.38 (85)

(63)

-1.80

-1.47

4.45

2.98

3.58

(22)

(64)

11.60 (35)

10.31

10.86

(62)

-15.04 (86)

-11.46 (21)

-13.16

10.15 (20)

8.92

8.99

(52)



1.67

0.71

1.01

(31)

(62)

Total Int'l Equity

Total Int'l Policy

IM International Large Cap Core Equity (SA+CF) Median

3/20

3 Yr Rolling Under/Over Performance - 5 Years 15.0 Over Total Int'l Equity (%) Performance 0.0 Under Performance -5.0 -5.0 0.0 5.0 10.0 15.0 Total Int'l Policy (%) Over Performance Under Performance

3 Yr Rolling Percentile Ranking - 5 Years 25.0 50.0 75.0

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
Total Int'l Equity	20	2 (10%)	6 (30%)	6 (30%)	6 (30%)	
Total Int'l Policy	20	1 (5%)	3 (15%)	6 (30%)	10 (50%)	

12/17

6/18

12/18

6/19

6/17

12/16

6/16

Peer Group Scattergram - 3 Years 1.96 0.98 0.00 -0.98 -1.96 -2.94 14.20 14.40 14.60 14.80 15.00 15.20 Risk (Standard Deviation %)

X Latest Date

Earliest Date

	1.60				_		
	1.60						
(%)	0.80 —						
	0.00						
Return	0.00						
_	-0.80						
	-1.60		1	1		1	
	13.40	13.60	13.80	14.00	14.20	14.40	14.60
			Risk (S	tandard Deviation	%)		

	Return	Standard Deviation
Total Int'l Equity	0.90	14.41
 Total Int'l Policy 	-1.96	14.94
Median	-1.50	15.05

	Return	Standard Deviation
Total Int'l Equity	1.12	13.67
 Total Int'l Policy 	-0.64	14.39
Median	-0.06	14.27

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity	3.33	102.55	88.55	2.77	0.84	0.01	0.94	11.19
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	-0.18	1.00	12.17

100.0

6/15

Peer Group Scattergram - 5 Years

HISTORICAI STATISTIC	s - 5 fears							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity	3.86	97.98	89.32	1.70	0.43	0.07	0.92	10.13
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	-0.05	1.00	10.98



Peer Group Analysis - IM International Equity (MF) 20.00 40.00 30.00 12.00 20.00 4.00 0 0 0 10.00 0 -4.00 0 Return Return 0 0.00 -12.00 0 0 -10.00 0 -20.00 0 -20.00 -28.00 -30.00 -36.00 -40.00 Oct-Oct-Oct-Oct-Oct-Oct--44.00 2018 2017 2016 2015 2014 2013 To To To Τo To To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2019 2018 2017 2016 2015 2014 Harding Loevner Intl Equity (HLIZX) 19.34 (18) 11.20 (16) -9.47 (17) -7.19 (19) 0.88 (20) N/A N/A Harding Loevner Intl Equity (HLIZX) 3.34 (62) 5.85 (10) 8.65 (58) N/A N/A N/A MSCI AC World ex USA (Net) 23.36 (47) 16.52 (50) 15.57 (47) 10.07 (37) -1.96 (43) 1.61 (40) -0.64 (45) MSCI AC World ex USA (Net) 1.23 (44) 1.76 (34) 9.61 (48) 9.26 (51) 2.16 (64) 4.77 (43) Median 23.74 16.56 15.96 11.68 -2.51 0.99 -0.95 Median 1.94 0.08 9.36 9.32 8.75 4.26 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending **Ending Ending** Ending **Ending** Ending Dec-2019 Sep-2019 Jun-2019 Mar-2019 Dec-2018 Sep-2018 Harding Loevner Intl Equity (HLIZX) 10.09 (42) -2.40 (61) 4.45 (18) 11.60 (35) -15.04 (81) 1.67 (13) MSCI AC World ex USA (Net) 8.92 (62)-1.80 (47)2.98 (43)(54)-11.46 (44) 0.71 (31) 10.31 IM International Equity (MF) Median 9.60 2.58 10.54 -12.22 -0.27 -1.90



3 Yr Rolling Under/Over Performance - 5 Years Over Performance O

3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 00000000000 25.0 75.0 100.0 12/16 6/17 12/17 6/18 12/18 6/19 3/20 12/15 6/16 6/15 5-25 25-Median Median-75 75-95 **Total Period** Count Count Count Count Harding Loevner Intl Equity (HLIZX) 3 1 (33%) 2 (67%) 0 (0%) 0 (0%) MSCI AC World ex USA (Net) 20 0 (0%) 9 (45%) 11 (55%) 0 (0%)

Peer Group Scattergram - 3 Years 2.00 2.00 -2.00 13.86 14.28 14.70 15.12 15.54 15.96 16.38 16.80 Risk (Standard Deviation %)

Earliest Date

Over Performance

X Latest Date

	J						
-0.20							
% -0.40 = -0.60 =							
-0.80 =	0						
œ							
-1.00							
		1	1	1		1	
14.20	14.40	14.60	14.80	15.00	15.20	15.40	15.60
			Risk (Standard I	Deviation %)			

	Return	Standard Deviation
 Harding Loevner Intl Equity (HLIZX) 	0.88	14.41
 MSCI AC World ex USA (Net) 	-1.96	14.94
Median	-2.51	16.24

0.00

100.00

Return	Standard Deviation
N/A	N/A
-0.64	14.39
-0.95	15.28
	N/A -0.64

-0.05

1.00

Historical Statistics - 3 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Harding Loevner Intl Equity (HLIZX)	3.33	102.46	88.57	2.75	0.83	0.01	0.94	11.19
MSCI AC World ex USA (Net)	0.00	100.00	100.00	0.00	N/A	-0.18	1.00	12.17
Historical Statistics - 5 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Harding Loevner Intl Equity (HLIZX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

0.00

N/A

100.00

Peer Group Scattergram - 5 Years



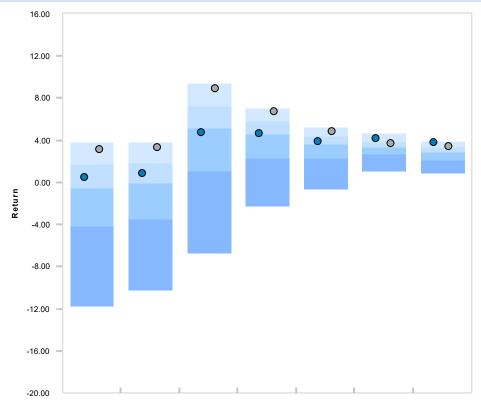
10.98

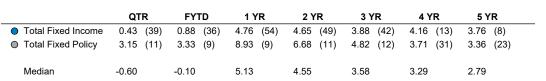
MSCI AC World ex USA (Net)

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Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF+MF)





		Oct-2018 To	Oct-2017 To	Oct-2016 To	Oct-2015 To	Oct-2014 To	Oct-2013 To
	-7.00						
	-4.00 —						
	-1.00		0	0			
	2.00		•			•	
Return	5.00			•	•	0	•
	8.00 -	•					
	11.00 -	0					
	14.00 -						
	17.00						

	Oct-2 To Sep-2)	Oct-2 To Sep-2	0	To	0	To)	To)	Oct-2 To Sep-2)
 Total Fixed Income 	7.91	(77)	0.99	(12)	3.93	(19)	5.81	(48)	2.09	(44)	6.00	(22)
Total Fixed Policy	10.30	(29)	-1.22	(64)	0.07	(84)	5.19	(68)	2.94	(17)	3.96	(74)
Median	9.67		-0.91		1.28		5.71		1.85		4.74	

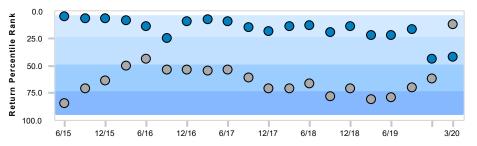
Comparative Performance						
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Total Fixed Income	0.45 (44)	1.57 (75)	2.23 (89)	2.36 (93)	1.53 (15)	0.46 (35)
Total Fixed Policy	0.18 (67)	2.27 (35)	3.08 (46)	2.94 (79)	1.64 (9)	0.02 (79)
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	0.36	2.12	3.04	3.42	0.72	0.26



Standard

3 Yr Rolling Under/Over Performance - 5 Years 7.5 Over **Lotal Fixed In co me** 4.5 3.0 1.5 Performance X Under Performance 0.0 0.0 1.5 3.0 4.5 6.0 7.5 Total Fixed Policy (%)

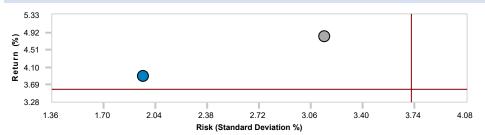
3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
 Total Fixed Income 	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)	
 Total Fixed Policy 	20	1 (5%)	2 (10%)	13 (65%)	4 (20%)	

Peer Group Scattergram - 3 Years

Over Performance

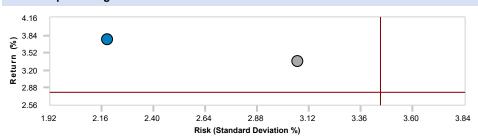


Earliest Date

X Latest Date

	Return	Standard Deviation
 Total Fixed Income 	3.88	1.96
 Total Fixed Policy 	4.82	3.15
Median	3.58	3.72

Peer Group Scattergram - 5 Years



Return	Deviation
3.76	2.19
3.36	3.07
2.79	3.45
	3.76 3.36

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income	1.94	63.79	26.69	1.44	-0.48	1.03	0.50	1.03
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.95	1.00	1.26

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income	1.98	74.61	24.66	1.90	0.18	1.17	0.55	1.15
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.73	1.00	1.58



Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF) 14.00 17.00 14.00 11.00 0 11.00 8.00 0 8.00 5.00 Return Return 0 0 0 5.00 2.00 0 0 2.00 -1.00 0 -1.00 -4.00 -4.00 -7.00 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 Oct-2013 To To То To То To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2019 2018 2017 2016 2015 2014 Garcia Hamilton Fixed Income 1.69 (51) 1.66 (60) 6.51 (77) 5.28 (88) N/A N/A N/A Garcia Hamilton Fixed Income 8.74 (96) N/A N/A N/A N/A N/A Blmbg. Barc. U.S. Aggregate Index 3.15 (25) 3.33 (24) 8.93 (27) 6.68 (37) 4.82 (47) 3.71 (69) 3.36 (72) Blmbg. Barc. U.S. Aggregate Index 0.30 (70) 1.22 (87) 0.07 (84) 5.19 (80) 2.94 (62) 3.96 (80) Median 1.73 1.99 7.83 6.32 4.77 3.80 3.47 Median 0.43 0.750.61 5.66 3.02 4.45 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending Ending Ending** Ending **Ending Ending** Dec-2019 Sep-2019 Jun-2019 Mar-2019 Dec-2018 Sep-2018 Garcia Hamilton Fixed Income -0.02 (88) 2.37 (41) 2.34 (96) 2.50 (96) 1.25 (66) -0.19 (95) Blmbg. Barc. U.S. Aggregate Index 0.18 (58) 2.27 (70) 3.08 (70)2.94 (83)1.64 (25)0.02 (84)

3.12

3.23



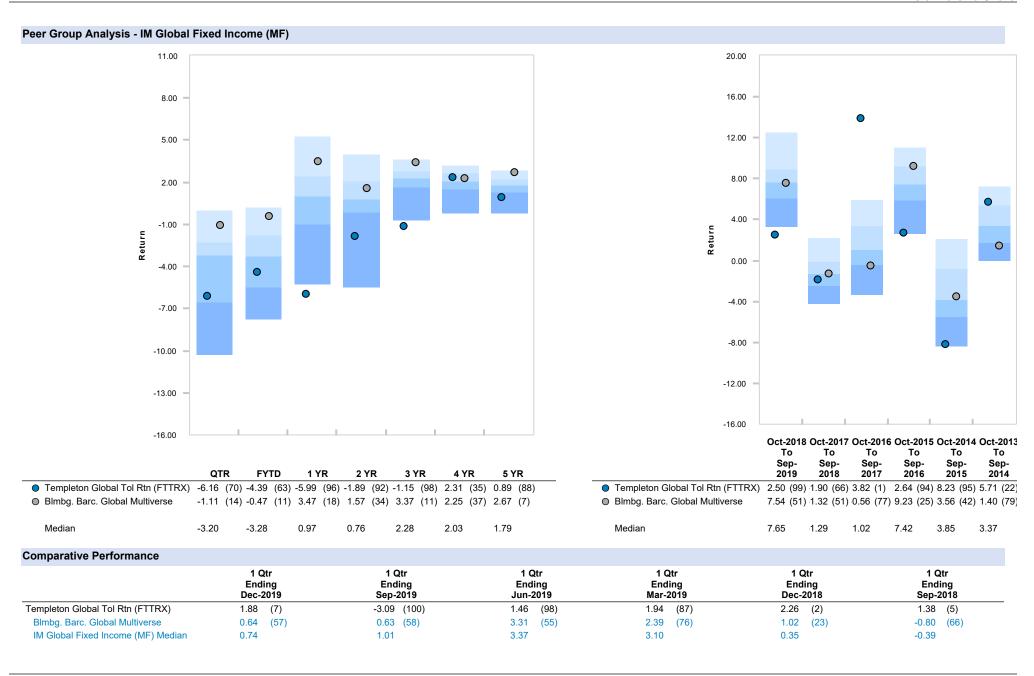
0.18

1.40

IM U.S. Broad Market Core Fixed Income (SA+CF) Median

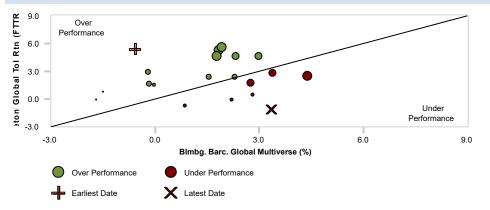
0.22

2.33

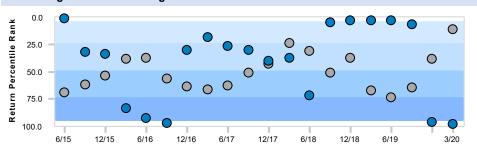




3 Yr Rolling Under/Over Performance - 5 Years

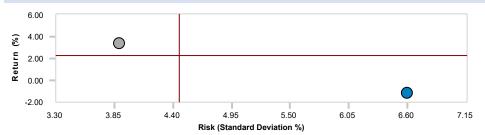


3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
 Templeton Global Tol Rtn (FTTRX) 	20	7 (35%)	7 (35%)	1 (5%)	5 (25%)	
 Blmbg. Barc. Global Multiverse 	20	2 (10%)	6 (30%)	12 (60%)	0 (0%)	

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
 Templeton Global Tol Rtn (FTTRX) 	-1.15	6.60
 Blmbg. Barc. Global Multiverse 	3.37	3.89
Median	2.28	4.46

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
 Templeton Global Tol Rtn (FTTRX) 	0.89	7.17
 Blmbg. Barc. Global Multiverse 	2.67	4.55
Median	1.79	4.94

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton Global Tol Rtn (FTTRX)	7.47	-14.53	-3.70	-1.26	-0.58	-0.41	0.10	5.29
Blmbg. Barc. Global Multiverse	0.00	100.00	100.00	0.00	N/A	0.40	1.00	2.33

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton Global Tol Rtn (FTTRX)	8.59	-10.70	-39.90	1.27	-0.19	0.00	-0.04	5.05
Blmbg. Barc. Global Multiverse	0.00	100.00	100.00	0.00	N/A	0.35	1.00	3.04

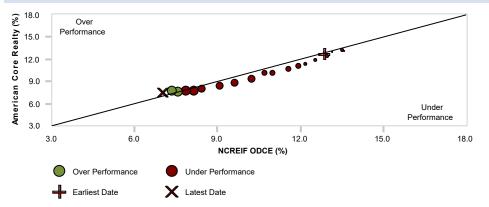


Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF) 20.00 28.00 17.00 24.00 14.00 20.00 11.00 00 16.00 00 8.00 00 00 00 0 Return Return 00 0 5.00 12.00 0 00 00 2.00 8.00 00 0 0 -1.00 4.00 -4.00 0.00 -7.00 -4.00 -10.00 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 Oct-2013 To To To To To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Sep-2014 American Core Realty 1.54 (27) 3.03 (32) 6.11 (42) 7.15 (53) 7.44 (58) 7.26 (62) 8.45 (62) American Core Realty 6.81 (52) 8.50 (61) 7.52 (63) 9.04 (91) 13.98 (65) 12.49 (60) NCREIF ODCE 0.90 (61) 2.44 (60) 5.25 (64) 6.49 (62) 7.04 (60) 7.44 (59) 8.74 (58) NCREIF ODCE 6.17 (72) 8.82 (55) 7.81 (56) 10.62 (65) 14.71 (58) 12.39 (64) Median 1.23 2.87 5.88 7.18 7.56 7.86 9.10 Median 6.89 8.98 8.05 11.02 15.32 12.63 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending Ending** Ending Ending **Ending** Ending Dec-2019 Sep-2019 Jun-2019 Mar-2019 Dec-2018 Sep-2018 American Core Realty 1.46 (71) 1.44 (71) 1.53 (26)1.74 (72) 1.94 (25) 2.19 (43) NCREIF ODCE 1.53 1.39 (75)1.34 (57)1.69 (76)1.62 (58)2.09 (51) (63)IM U.S. Open End Private Real Estate (SA+CF) Median 1.41 1.73 2.09 1.65 1.75 1.99

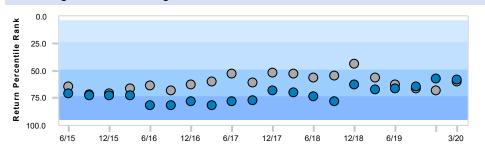


Standard

3 Yr Rolling Under/Over Performance - 5 Years

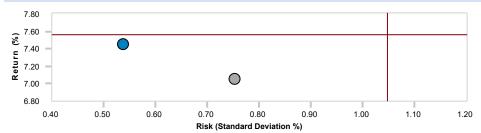


3 Yr Rolling Percentile Ranking - 5 Years



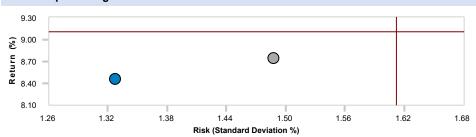
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
 American Core Realty 	20	0 (0%)	0 (0%)	13 (65%)	7 (35%)	
 NCREIF ODCE 	20	0 (0%)	1 (5%)	19 (95%)	0 (0%)	

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
 American Core Realty 	7.44	0.54
NCREIF ODCE	7.04	0.75
Median	7.56	1.05

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
 American Core Realty 	8.45	1.33
NCREIF ODCE	8.74	1.49
Median	9.10	1.61

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
American Core Realty	0.51	105.50	N/A	0.24	0.74	1.82	1.02	0.00
NCREIF ODCE	0.00	100.00	N/A	0.00	N/A	1.75	1.00	0.00

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
American Core Realty	0.80	96.84	N/A	0.28	-0.33	1.95	0.94	0.00
NCREIF ODCE	0.00	100.00	N/A	0.00	N/A	1.93	1.00	0.00



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	Market Value	Uncalled Capital Commitment	OTD IDD	lacentica IDD	Inception Date	Francisco d Tomorio etico.
	Market Value	Communent	QTD IRR	Inception IRR	inception Date	Expected Termination
*Angelo Gordon Net Lease Realty Fund III, L.P.	\$1,974,273.00	\$84,111	0	6.91	3/10/2014	4/1/2027
*Crescent Direct Lending Levered Fund	\$2,817,878.00	\$668,697	0	7.62	10/9/2014	12/1/2022
*Dune Real Estate Fund III	\$1,853,280	\$135,491	0.88	10.67	11/6/2014	12/1/2024
*Molpus Woodlands Timber	\$1,325,625.00	\$0	0	1.98	6/24/2008	5/2018-5/2022

^{*} Market Value as of 12-31-2019

Market Value includes contributions & distributions since end of period.



otal Fund Policy Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
an-1978		Oct-2013	_ , ,
S&P 500 Index	65.00	Wilshire 5000 Total Market Index (full-cap) Index	35.00
Blmbg. Barc. U.S. Gov't/Credit	30.00	MSCI AC World ex USA (Net)	15.00
FTSE 3 Month T-Bill	5.00	Blmbg. Barc. U.S. Aggregate Index	27.50
		NCREIF ODCE	5.00
Apr-2007		Quadrant Custom Policy	5.00
Blmbg. Barc. U.S. Gov't/Credit	30.00	NCREIF Timberland Index	5.00
Blmbg. Barc. U.S. TIPS 1-10 Year	5.00	CPI+5%	7.50
S&P 500 Index	60.00		
MSCI EAFE (Net) Index	5.00	May-2014	
2-4 0007		Wilshire 5000 Total Market Index (full-cap) Index	35.00
Oct-2007	40.00	MSCI AC World ex USA (Net)	15.00
MSCI EAFE (Net) Index	10.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Bloomberg Barclays Intermed Aggregate Index	30.00	NCREIF ODCE	10.00
Blmbg. Barc. U.S. TIPS 1-10 Year	5.00	NCREIF Timberland Index	5.00
Russell 3000 Index	50.00	CPI+5%	7.50
NCREIF Property Index	5.00		
an-2010		Jul-2015	05.00
MSCI AC World ex USA (Net)	15.00	Wilshire 5000 Total Market Index (full-cap) Index	35.00
Blmbg. Barc. U.S. Aggregate Index	30.00	MSCI AC World ex USA (Net)	15.00
Bloomberg Barclays U.S. TIPS Index	5.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Russell 3000 Index	45.00	NCREIF ODCE	10.00
NCREIF Property Index	5.00	NCREIF Timberland Index	5.00
NONEII Froperty index	3.00	Alternatives Policy	7.50
ul-2010		Nov-2015	
Wilshire 5000 Total Market Index (full-cap) Index	35.00	Wilshire 5000 Total Market Index (full-cap) Index	42.50
MSCI AC World ex USA (Net)	15.00	MSCI AC World ex USA (Net)	15.00
Blmbg. Barc. U.S. Aggregate Index	25.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Bloomberg Barclays U.S. TIPS Index	5.00	NCREIF ODCE	10.00
NCREIF ODCE	5.00	Alternatives Policy	5.00
Barclay BTOP 50	5.00	, mornant out only	0.00
Quadrant Custom Policy	5.00		
NCREIF Timberland Index	5.00		



Total Equity Policy	
Allocation Mandate	Weight (%)
Oct-2005	
S&P 500 Index	95.00
FTSE 3 Month T-Bill	5.00
Apr-2007	
FTSE 3 Month T-Bill	5.00
S&P 500 Index	85.00
MSCI EAFE (Net) Index	10.00
Oct-2007	
MSCI EAFE (Net) Index	15.00
Russell 3000 Index	85.00
Jan-2010	
MSCI AC World ex USA (Net)	25.00
Russell 3000 Index	75.00
Jul-2010	
MSCI AC World ex USA (Net)	45.00
Wilshire 5000 Total Market Index (full-cap) Index	55.00
Nov-2015	
MSCI AC World ex USA (Net)	25.00
Wilshire 5000 Total Market Index (full-cap) Index	75.00

Domestic Equity Policy					
Allocation Mandate	Weight (%)				
Oct-2005					
S&P 500 Index	100.00				
Oct-2007					
Russell 3000 Index	100.00				
Jul-2010					
Wilshire 5000 Total Market Index (full-cap) Index	100.00				

Total Int'l Policy	
Allocation Mandate	Weight (%)
Jan-1970	
MSCI EAFE (Net) Index	100.00
Jan-2010	
MSCI AC World ex USA (Net)	100.00
Alkania akhasa Ballasa	
Alternatives Policy Allocation Mandate	Weight (9/)
	Weight (%)
Aug-2010 Barclay BTOP 50	100.00
Barday BTOT 50	100.00
Nov-2013	
CPI+5%	100.00
Jul-2015	
S&P 500 Index	50.00
Blmbg. Barc. U.S. Aggregate Index	50.00
Total Fixed Policy	
Allocation Mandate	Weight (%)
Oct-2005	
Blmbg. Barc. U.S. Gov't/Credit	95.00
FTSE 3 Month T-Bill	5.00
Jan-2007	
Blmbg. Barc. U.S. Gov't/Credit	85.00
Blmbg. Barc. U.S. TIPS 1-10 Year	15.00
Oct-2007 Blmbq, Barc, U.S. TIPS 1-10 Year	15.00
Bloomberg Barclays Intermed Aggregate Index	85.00
bloomberg bardays intermed Aggregate index	03.00
Jan-2010	
Bloomberg Barclays U.S. TIPS Index	15.00
Blmbg. Barc. U.S. Aggregate Index	85.00
Oct-2013	
Blmbg. Barc. U.S. Aggregate Index	100.00



	Market Value (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)	Fee Schedule
Vanguard Total Stock Mkt (VTSAX)	762,653	305	0.04	0.04 % of Assets
Boston LCV	15,049,927	82,775	0.55	0.55 % of First \$25 M 0.45 % of Next \$25 M 0.35 % of Next \$50 M 0.25 % Thereafter
Great Lakes SMid Cap	6,229,802	-		
Rhumbline R1000G	4,287,879	1,715	0.04	0.04 % of Assets
Polen Capital LCG	13,986,922	83,922	0.60	0.60 % of Assets
Vanguard Mid-Cap Index (VIMAX)	4,792,554	3,834	0.08	0.08 % of Assets
Harding Loevner Intl Equity (HLIZX)	15,238,850	128,006	0.84	0.84 % of Assets
Garcia Hamilton Fixed Income	23,067,015	57,668	0.25	0.25 % of Assets
Templeton Global Total Return (FTTRX)	3,879,206	25,991	0.67	0.67 % of Assets
American Core Realty	5,270,848	57,979	1.10	1.10 % of Assets
Total Fund (Composite)	100,344,081	442,194	0.44	



Active	Return

- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.

Alpha

- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.

Beta

- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.

Consistency

- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.

Distributed to Paid In (DPI)

- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.

Down Market Capture

- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance

Downside Risk

- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.

Excess Return

- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.

Excess Risk

- A measure of the standard deviation of a portfolio's performance relative to the risk free return.

Information Ratio

- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.

Public Market Equivalent (PME)

- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.

R-Squared

- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.

Return

- Compounded rate of return for the period.

Sharpe Ratio

- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.

Standard Deviation

- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.

Total Value to Paid In (TVPI)

- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life

Tracking Error

- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.

Treynor Ratio

- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.

Up Market Capture

- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

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Item 5.d.ii. Flash Report

April 2020

Investment Performance Review Monthly Flash Period Ending April 30, 2020

Delray Beach Firefighters' Retirement System



Comparative Performance Total Fund Trailing Returns As of April 30, 2020

Comparative Performance									
	МТН	QTD	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Total Fund (Net)	7.49	7.49	-8.65	-3.16	-1.55	4.72	4.52	4.90	10/01/2005
Total Fund Policy-Monthly	7.73	7.73	-5.45	-0.25	1.87	6.16	6.03	5.94	
Difference	-0.24	-0.24	-3.20	-2.91	-3.42	-1.44	-1.51	-1.04	
Total Fund (Gross)	7.49	7.49	-8.57	-3.02	-1.27	5.07	4.92	5.35	10/01/2005
Total Fund Policy-Monthly	7.73	7.73	-5.45	-0.25	1.87	6.16	6.03	5.94	
Difference	-0.24	-0.24	-3.12	-2.77	-3.14	-1.09	-1.11	-0.59	
Total Equity	11.56	11.56	-13.90	-6.04	-5.04	5.46	5.11	6.08	10/01/2005
Total Equity Policy	12.02	12.02	-12.03	-4.20	-4.06	5.83	5.65	5.81	
Difference	-0.46	-0.46	-1.87	-1.84	-0.98	-0.37	-0.54	0.27	
Total Domestic Equity	13.58	13.58	-13.59	-5.97	-4.14	6.82	6.35	7.06	10/01/2005
Total Domestic Equity Policy	13.50	13.50	-10.15	-2.17	-1.51	7.86	8.14	8.12	
Difference	0.08	0.08	-3.44	-3.80	-2.63	-1.04	-1.79	-1.06	
Total Int'l Equity	5.58	5.58	-14.84	-6.19	-7.77	1.72	1.37	3.09	05/01/2007
Total Int'l Policy	7.58	7.58	-17.55	-10.19	-11.51	-0.25	-0.17	0.16	
Difference	-2.00	-2.00	2.71	4.00	3.74	1.97	1.54	2.93	
Total Fixed Income	1.87	1.87	2.31	2.77	6.52	4.35	4.12	5.18	10/01/2005
Total Fixed Policy	1.78	1.78	4.98	5.17	10.84	5.17	3.80	4.53	
Difference	0.09	0.09	-2.67	-2.40	-4.32	-0.82	0.32	0.65	
Total Real Estate	0.00	0.00	0.89	2.05	3.70	7.73	8.74	4.46	07/01/2007
NCREIF ODCE	0.00	0.00	0.92	2.46	5.27	7.05	8.74	5.45	
Difference	0.00	0.00	-0.03	-0.41	-1.57	0.68	0.00	-0.99	
Total Timber	0.00	0.00	0.00	-4.27	-2.95	-2.85	-0.33	2.39	07/01/2007
NCREIF Timberland Index (Monthly)	0.00	0.00	0.11	0.07	1.30	2.48	2.80	4.84	
Difference	0.00	0.00	-0.11	-4.34	-4.25	-5.33	-3.13	-2.45	



Comparative Performance Total Fund Trailing Returns As of April 30, 2020

	МТН	QTD	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Total Domestic Equity (Composite)	13.58	13.58	-13.59	-5.97	-4.14	6.82	6.35	7.06	10/01/2005
Vanguard Total Stock Mkt (VTSAX)	13.26	13.26	-10.38	-2.31	-1.13	N/A	N/A	2.58	04/01/2019
CRSP U.S. Total Market TR Index	13.26	13.26	-10.39	-2.32	-1.14	8.02	8.32	2.58	
Difference	0.00	0.00	0.01	0.01	0.01	N/A	N/A	0.00	
Boston LCV	11.87	11.87	-23.01	-16.62	-14.52	N/A	N/A	-3.76	01/01/2018
Russell 1000 Value Index	11.24	11.24	-18.49	-12.45	-11.01	1.42	3.90	-2.35	
Difference	0.63	0.63	-4.52	-4.17	-3.51	N/A	N/A	-1.41	
Total Growth	14.48	14.48	-0.48	10.25	12.29	16.42	11.86	7.14	07/01/2007
Russell 1000 Growth Index	14.80	14.80	-1.39	9.08	10.84	15.69	13.34	10.38	
Difference	-0.32	-0.32	0.91	1.17	1.45	0.73	-1.48	-3.24	
Rhumbline R1000G	14.76	14.76	-1.34	9.12	10.87	N/A	N/A	12.81	01/01/2018
Russell 1000 Growth Index	14.80	14.80	-1.39	9.08	10.84	15.69	13.34	12.80	
Difference	-0.04	-0.04	0.05	0.04	0.03	N/A	N/A	0.01	
Polen Capital LCG	14.40	14.40	-0.25	10.57	12.69	N/A	N/A	27.99	01/01/2019
Russell 1000 Growth Index	14.80	14.80	-1.39	9.08	10.84	15.69	13.34	24.89	
Difference	-0.40	-0.40	1.14	1.49	1.85	N/A	N/A	3.10	
Great Lakes SMid Cap	14.29	14.29	-22.82	-18.05	N/A	N/A	N/A	-18.85	08/01/2019
Russell 2500 Index	14.55	14.55	-19.50	-12.62	-14.20	1.13	3.62	-14.63	
Difference	-0.26	-0.26	-3.32	-5.43	N/A	N/A	N/A	-4.22	
Vanguard Mid-Cap Index (VIMAX)	14.40	14.40	-15.02	-9.18	-8.09	3.90	N/A	5.29	07/01/2015
CRSP U.S. Mid Cap TR Index	14.40	14.40	-15.05	-9.21	-8.10	3.92	4.98	5.32	
Difference	0.00	0.00	0.03	0.03	0.01	-0.02	N/A	-0.03	
Total Int'l Equity (Composite)	5.58	5.58	-14.84	-6.19	-7.77	1.72	1.37	3.09	05/01/2007
Harding Loevner Intl Equity (HLIZX)	5.58	5.58	-14.84	-6.25	-7.84	1.70	N/A	3.71	09/01/2016
MSCI AC World ex USA (Net)	7.58	7.58	-17.55	-10.19	-11.51	-0.25	-0.17	2.46	
Difference	-2.00	-2.00	2.71	3.94	3.67	1.95	N/A	1.25	



	МТН	QTD	YTD	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Total Core Fixed Income	2.38	2.38	4.10	4.08	9.08	4.45	3.74	4.45	10/01/2005
Core Fixed Policy	1.78	1.78	4.98	5.17	10.84	5.17	3.80	4.47	
Difference	0.60	0.60	-0.88	-1.09	-1.76	-0.72	-0.06	-0.02	
Garcia Hamilton Fixed Income	2.38	2.38	4.10	4.08	9.08	N/A	N/A	5.32	01/01/2018
Blmbg. Barc. U.S. Aggregate Index	1.78	1.78	4.98	5.17	10.84	5.17	3.80	5.83	
Difference	0.60	0.60	-0.88	-1.09	-1.76	N/A	N/A	-0.51	
Total Non-Core Fixed Income	0.02	0.02	-3.84	-1.85	-1.73	3.29	4.31	7.10	07/01/2010
Bloomberg Barclays Global Aggregate	1.96	1.96	1.63	2.12	6.56	3.84	2.82	2.72	
Difference	-1.94	-1.94	-5.47	-3.97	-8.29	-0.55	1.49	4.38	
Templeton Global Total Return (FTTRX)	0.09	0.09	-6.07	-4.31	-7.28	-1.02	0.70	2.34	07/01/2011
Blmbg. Barc. Global Multiverse	2.04	2.04	0.91	1.56	5.84	3.67	2.84	1.98	
Difference	-1.95	-1.95	-6.98	-5.87	-13.12	-4.69	-2.14	0.36	
Total Real Estate (Composite)	0.00	0.00	0.89	2.05	3.70	7.73	8.74	4.46	07/01/2007
American Core Realty	0.00	0.00	1.54	3.03	6.11	7.44	8.45	5.53	07/01/2007
NCREIF ODCE	0.00	0.00	0.92	2.46	5.27	7.05	8.74	5.45	
Difference	0.00	0.00	0.62	0.57	0.84	0.39	-0.29	0.08	
Total Timber (Composite)	0.00	0.00	0.00	-4.27	-2.95	-2.85	-0.33	2.39	07/01/2007
Molpus Woodlands Timber	0.00	0.00	0.00	-4.27	-2.95	-0.37	1.24	2.17	06/01/2008
NCREIF Timberland Index (Monthly)	0.00	0.00	0.11	0.07	1.30	2.48	2.80	3.71	
Difference	0.00	0.00	-0.11	-4.34	-4.25	-2.85	-1.56	-1.54	
Alternatives									



[^] Some products shown on IRR page.

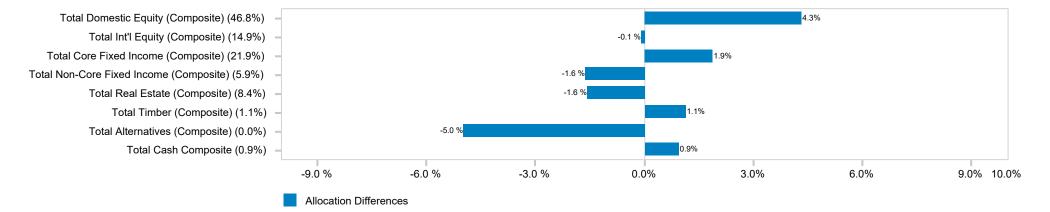
Comparative Performance - IRR

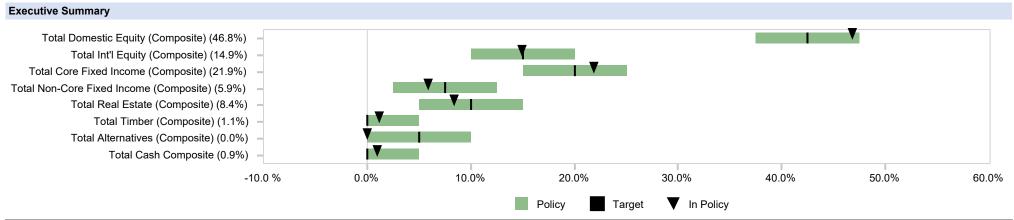
As of April 30, 2020

Comparative Performance - IRR			
	QTD	Inception	Inception Date
Molpus Woodlands Timber	0.00	1.97	06/24/2008
Angelo Gordon Net Lease Realty Fund III, L.P.	0.00	6.80	03/10/2014
Dune Real Estate Fund III	0.00	10.54	11/06/2014
Crescent Direct Lending Levered Fund	0.00	7.56	10/09/2014



	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Total Fund (Composite)	107,854,428	100.00	100.00	0.00	-
Total Domestic Equity (Composite)	50,508,356	46.83	42.50	4.33	-4,670,223
Total Int'l Equity (Composite)	16,088,541	14.92	15.00	-0.08	89,624
Total Core Fixed Income (Composite)	23,612,837	21.89	20.00	1.89	-2,041,951
Total Non-Core Fixed Income (Composite)	6,330,066	5.87	7.50	-1.63	1,759,016
Total Real Estate (Composite)	9,072,154	8.41	10.00	-1.59	1,713,289
Total Timber (Composite)	1,225,142	1.14	0.00	1.14	-1,225,142
Total Alternatives (Composite)	-	0.00	5.00	-5.00	5,392,721
Total Cash Composite	1,017,334	0.94	0.00	0.94	-1,017,334







Asset Allocation Compliance

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The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

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Item 5.e. Lewis, Longman & Walker

Item 5.e.i. Fire Members Who Were in General Employees' Retirement Plan



REPLY TO: TALLAHASSEE

MEMORANDUM

TO: Lynn Gelin, City Attorney; Marie Kalka, Finance Director

City of Delray Beach

FROM: Jim Linn

DATE: April 10, 2020

SUBJECT: Correction of Firefighters' Retirement Plan Participation Matter

This memo describes the steps required to correct the pension participation status of Kevin Green and Keith Tomey, certified firefighters who were required by law to participate in the Firefighters' Retirement Plan ("Fire Plan") when they were hired, but were inadvertently enrolled in the General Employees' Retirement Plan ("General Plan"). State law and the Fire Plan require all certified firefighters, with the exception of the Fire Chief, to participate in the Fire Plan as a condition of employment. Failure to meet this requirement could result in the withholding of premium tax money from the state. This memo also describes the retirement options that are available to Keith Tomey upon his promotion to Fire Chief.

Assistant Chief Kevin Green

- Assistant Chief Green was hired on June 4, 2012, and began contributing 3.05% of his compensation to the General Plan on June 4, 2013 through automatic payroll deduction. To date, he has contributed \$27,189.77 to the General Plan. If he had been a member of the Fire Plan since his date of hire, his employee contributions would have been \$86,853.21.
- Assistant Chief Green should be transferred to the Fire Plan, with credited service retroactive to June 4, 2012 (his date of hire). His employee contributions to the General Plan should be transferred to the Fire Plan to offset his total required Fire Plan contributions:

245 Riverside Ave., Suite 510 Jacksonville, Florida 32202 T: 904.353.6410 F: 904.353.7619

100 Second Ave., South Suite 501-S 315 South Calhoun St., Suite 830 St. Petersburg, Florida 33701 T: 727.245.0820 F: 727.290.4057

Tallahassee, Florida 32301 T: 850.222.5702 F: 850.224.9242

Suite 364 Tampa, FL 33606 T: 813.775.2331

TAMPA

WEST PALM BEACH

301 West Platt St. 515 North Flagler Dr., Suite 1500 West Palm Beach, Florida 33401

T: 561.640.0820 F: 561.640.8202

Lynn Gelin, City Attorney Marie Kalka, Finance Director April 10, 2020 Page 2

Required Fire Plan Contributions: \$86,853.21
Less contributions to the General Plan: (\$27,189.77)
Net required Fire Plan contributions: \$59,663.44

- As shown above, Assistant Chief Green's required contributions to the Fire Plan exceed the employee contributions he made to the General Plan by \$59,663.44. This amount will need to be paid to the Fire Plan. In view of the fact that the City erroneously gave Assistant Chief Green the option of participating in the General Plan when he was hired, the City may decide to pay the net required Fire Plan contribution of \$59,663.44.
- Going forward, Mr. Green's automatic payroll deduction for pension contributions must be increased to 9% of his compensation, which is the current employee contribution rate for the Fire Plan.

Chief Keith Tomey

- Chief Tomey was hired on December 27, 2016, and began contributing 3.05% of his compensation to the General Plan on December 27, 2017 through automatic payroll deduction. This was increased to 6.5% on August 28, 2018, when he elected the optional enhanced multiplier. To date, he has contributed \$26,171.66 to the General Plan. If he had been a member of the Fire Plan since his date of hire, his employee contributions would have been \$44,651.48.
- Chief Tomey should be transferred to the Fire Plan, with credited service retroactive to December 27, 2016 (his date of hire).
- Chief Tomey's contributions to the General Plan should be transferred to the Fire Plan to offset his total required Fire Plan contributions:

Required Fire Plan Contributions: \$44,651.48
Less contributions to the General Plan: (\$26,171.66)
Net required Fire Plan contributions: \$18,479.82

As shown above, Chief Tomey's required contributions to the Fire Plan exceed the
employee contributions he made to the General Plan by \$18,479.82. This amount will
need to be paid to the Fire Plan. In view of the fact that the City erroneously gave Chief
Tomey the option of participating in the General Plan when he was hired, the City may
decide to pay the net required Fire Plan contribution of \$18,479.82. This would be
required only if Chief Tomey elects to remain in the Fire Plan (see below).

Upon his promotion to Fire Chief, Chief Tomey can stay in the Fire Plan or he can opt-out of the Fire Plan and elect one of the following retirement options:

Lynn Gelin, City Attorney Marie Kalka, Finance Director April 10, 2020 Page 3

Option 1:

- Chief Tomey can elect to participate in the City's General Plan as a new member, with credited service starting the date that he was promoted to Fire Chief. He cannot continue his participation in the General Plan, because he was ineligible to participate in the General Plan until he became Fire Chief. The election must be made in writing.
- If Chief Tomey elects to participate in the General Plan, he will receive a refund of his employee contributions in the amount of \$26,171.66 (the amount he contributed to the General Plan), plus interest of three percent. See City Code Section 33.76(G)(2).
- Chief Tomey would not be eligible to buy back his service under the General Plan, unless
 the plan is amended. Currently, the General Plan allows a member who has five years of
 credited service to purchase up to three years of credited service for prior employment
 with another City, but not prior employment with the City of Delray Beach. See City
 Code Section 35.094.
- Members who purchase credited service are required to pay the full actuarial cost of this service (which is much greater than the employee contributions they would have made for this service).
- The City could decide to adopt a narrow amendment to the General Plan to allow Chief Tomey to purchase the service that he accrued while in the General Plan.

Option 2:

- Chief Tomey can elect to participate in the City's Deferred Compensation Plan for Non-Participating Employees, in which the City will contribute 9.5% of Chief Tomey's compensation to a 457 account. This election must be made in writing. See City Policy EB-12.
- If Chief Tomey elects to participate in the Deferred Compensation Plan, he will receive a refund of his employee contributions in the amount of \$26,171.66 (the amount he contributed to the General Plan), plus interest of three percent. City Code Section 33.76(G)(2).

Please let me know if you have any questions or want to discuss.



City of Delray Beach Finance Department M E M O R A N D M

TO:

Alexa DeFranco, Payroll Administrator

FROM:

Marie Kalka, Finance Director

SUBJECT:

Change Pension Plan from General to Fire - ASSISTANT FIRE CHIEF KEVIN GREEN

DATE:

May 5, 2020

The following employee was enrolled in the General Employee Pension Plan at date of hire and needs to be converted to the Fire Pension Plan as required by State Law.

Employee Name:

Kevin L Green

Employee #:

274781

Pay Period Effective:

April 25 - May 8, 2020

Pay Date:

May 15, 2020

Specifically:

- 1. End GE Pension Contributions (deductions) and GE Pension Benefits paid by the City using an end date of April 24, 2020.
- 2. Start Fire Pension Contributions (deductions) and Fire Pension Benefits paid by the City using a start date of April 25, 2020.
- 3. Change the Retirement Plan Code from G65 to PF

CC:

Lynn Gelin, City Attorney
Duane D'Andrea, HR Director
Lisa Castronovo, Pension Administrator
Kevin Green, Assistant Fire Chief



City of Delray Beach Finance Department M E M O R A N D M

TO: Alexa DeFranco, Payroll Administrator

FROM: Marie Kalka, Finance Director

SUBJECT: Change Pension Plan from General to Fire – FIRE CHIEF KEITH TOMEY

DATE: May 5, 2020

The following employee was enrolled in the General Employee Pension Plan at date of hire and needs to be converted to the Fire Pension Plan as required by State Law as Assistant Fire Chief and as elected since becoming Fire Chief.

Employee Name: Louis K. Tomey

Employee #: 159630

Pay Period Effective: April 25 – May 8, 2020

Pay Date: May 15, 2020

Specifically:

- 1. End GE Pension Contributions (deductions) and GE Pension Benefits paid by the City using an end date of April 24, 2020.
- 2. Start Fire Pension Contributions (deductions) and Fire Pension Benefits paid by the City using a start date of April 25, 2020.
- 3. Change the Retirement Plan Code from G65 to PF

CC: Lynn Gelin, City Attorney
Duane D'Andrea, HR Director
Lisa Castronovo, Pension Administrator
Keith Tomey, Fire Chief