FORT WORTH EMPLOYEES' RETIREMENT FUND

# Annual Comprehensive Financial Report

For Fiscal Years Ended September 30, 2022 and 2021


# My Corner of Cowtown

***ON THE COVER:***

Fund staff members Brad Duckworth and and Toccara Oxford show off a wonderful mural in Fort Worth near Southside. The mural, painted by artist Kristen Soble, is on the side of Pouring Glory, a popular destination for eats, beer, and company. No doubt many locals think of the restaurant as "My Corner of Cowtown." Of course, there are many other places in our city that people have a special attachment to. Read on to discover several more places that people think of as "My Corner of Cowtown."


FORT WORTH EMPLOYEES' RETIREMENT FUND

# Annual Comprehensive Financial Report

For Fiscal Years Ended September 30, 2022,
and September 30, 2021

Prepared by the Staff of the
Fort Worth Employees' Retirement Fund
Eleza Bennett, Interim Executive Director

FORT WORTH EMPLOYEES' RETIREMENT FUND

3801 Hulen St., Suite 101 Fort Worth, TX 76107
817-632-8900 fwretirement.org

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2022

# Key Numbers

**2022 Investment Rate of Return**

**-8.7%**

**Rate of Return Since Inception**

**8.23%**

**Fund Net Position**

**$2.5 billion**

**Benefits Paid**

**$260 million**

**Refunds Paid**

**$6.0 million**

**Contributions from Employers**

**$137.5 million**

**Contributions from Members**

**$65.8 million**

**Benefits Recipients (City)**

**4,829 (41%)**

**Inactive Members (City)**

**401 (4%)**

**Active Members (City)**

**6,685**

*3,941 General Employees*

*1,749 Police Members (Civil Service)*

*995 Firefighters (Civil Service)*

**Active Members (Staff)**

**21**

TABLE OF
# Contents

*"My Corner of Cowtown"*

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# Introductory Section


*"My Corner of Cowtown is **The Trailhead at Clearfork**. It's on the Trinity Trails, but you don't have to be a runner or a cyclist to enjoy this spot. The lawn is just a wonderful place to hang out. And when you're ready to grab a bite to eat or do some shopping, there is a great assortment of restaurants and shops just a couple minutes away. Go for the food, go for the stores, or go just to hang out."*

**DOUG WILSON**
**PLACE 9 - COUNCIL APPOINTEE**
**2023 BOARD OF TRUSTEES CHAIR**

*"For My Corner of Cowtown, I chose **Club Ritzy** on Oakland Boulevard. It's one of Fort Worth's Black-Owned Businesses! This was the first date location for my honey and me in 2020. The club has great live music, amazing DJs, and the friendly staff makes you feel like family. We also enjoy their food and liquid libations! Their slogan is, "Where sophistication meets elegance," and that perfectly captures the flavor of this Fort Worth hot spot. If you haven't been to Club Ritzy's yet, all I can say is, you need to check it out soon!"*


**TRUSTEE ANDREA WRIGHT**
**PLACE 4, ACTIVE GENERAL EMPLOYEES GROUP D**
**2023 BOARD OF TRUSTEES VICE CHAIR**

# LETTER OF Transmittal

March 10, 2023

Board of Trustees
Fort Worth Employees' Retirement Fund
3801 Hulen Street, Suite 101
Fort Worth, Texas 76107

Dear Board Members and Plan Participants:

It is my pleasure to submit to you the Annual Comprehensive Financial Report (Annual Report) of the Fort Worth Employees' Retirement Fund (the Fund) for the fiscal years ended September 30, 2022, and 2021. Our mission is to provide retirement benefits and exceptional services while sustaining our members' trust. Responsibility for both the accuracy of the data and the completeness and fairness of its presentation rests with me and the staff of the Fund. To the best of my knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the Fund. I trust that you and the members of the Fund will find the Annual Report helpful in understanding your retirement plan.

**Accounting and Internal Controls**

The financial statements have been prepared in accordance with Generally Accepted Accounting Principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB) rules. The accompanying financial statements are prepared using the accrual basis of accounting. Member and employer contributions are recognized when due, pursuant to formal commitments as well as statutory or contractual requirements. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made.

The Fund's independent auditors have audited the financial statements and issued unmodified opinions as of and for the years ended September 30, 2022 and 2021. The purpose of the audit is to give reasonable assurance to users of those financial statements, the Board, and participants of the Fund, that the financial statements present fairly, in all material respects, information regarding the Fund's Fiduciary Net Position in conformity with GAAP. A significant responsibility of the staff is to ensure that the Fund has in place an adequate system of internal control.

A system of internal control is defined as systematic measures instituted by an organization to achieve the following objectives:
1. Conduct its business in an efficient manner;
2. Safeguard its assets and resources;
3. Deter and detect errors, fraud, and theft;
4. Ensure accuracy and completeness of its accounting data;
5. Produce reliable and timely financial and management information; and
6. Promote adherence to management's policies and procedures.

These controls include design of business systems, appropriate segregation of duties and responsibilities, sound practices, and capable personnel. There are limits to internal control, such as the cost to mitigate some risks may outweigh the risk itself, internal controls may be overridden, or collusion may foil control design. I believe the Fund's internal controls are adequate and are working as designed.

### Financial Information

An overview of the fiscal operations of the Fund is presented in the Management's Discussion and Analysis (MD&A) preceding the financial statements in the Financial Section. It provides a narrative introduction, overview, and analysis of the basic financial statements. The MD&A compliments this letter of transmittal and should be read in conjunction with it.

### Fund Overview

The Fund is a multiple employer agent defined benefit pension plan. The Fund covers employees of the City of Fort Worth (City Plan) and the employees of the Fund (Staff Plan). The City Plan was established by City Ordinance in 1945 and the Staff Plan was established through Administrative Rules in 2007. The Fund provides retirement, disability, and death benefits to its members. All employees of the City of Fort Worth and the Fund are members except elected officers and non-salaried appointed members of administrative boards and commissions, part-time, temporary and contract employees, and employees paid in part by another governmental agency. The two plans are comingled for investment purposes and are both administered by the 13-member Retirement Fund Board of Trustees. Each plan has a separate actuarial valuation completed each year and its own funded status based on current and projected assets and liabilities. The City plan is a component unit of the City of Fort Worth and is included in the City's financial statements.

The Retirement Fund Board of Trustees (the Board) is comprised of four active members of the Fund, three retired members of the Fund, and six Trustees appointed by the City Council of Fort Worth, Texas. All Board members serve a two-year term commencing on September 1st; there are no term limits. The Board selects a chairperson and a vice-chairperson annually, in September.

### Investments

The Fund's primary investment objective is to establish a stable, diversified investment portfolio that in the long-term, will meet or exceed the Board approved assumed actuarial rate of return in order to maintain or improve the funded status of the Fund and provide sufficient liquidity to timely pay benefits. The Trustees adopted the following key investment objectives.

- The Board's investment objective is to achieve an average long-term total rate of return which satisfies the actuarial assumed rate of return. The target actuarial rate of return is set at 7.00% including an assumed inflation rate of 2.50% and a target actuarial real rate of return of 4.50%.
- The Fund shall prudently manage overall risk through diversification, by establishing and updating a strategic asset allocation using an asset allocation model that balances return expectations and risk exposures related to institutionally investible geographies, asset classes, and investment strategies.
- The Fund shall periodically rebalance the total assets to manage active risk relative to the strategic asset allocation and various benchmarks, as well as liquidity. Rebalancing activities shall consider both the impact on the Fund and transaction cost of the activity.
- The investment activities of the Fund shall be executed in a cost-effective manner.

The Fund ended the fiscal year with a $2.5 billion fund balance and an annualized net return of -8.80%. Additionally, the Fund underperformed the actuarial assumed rate of 7.0%. For the three-year, five-year, and ten-year periods the Fund has returned 5.41%, 5.14%, 6.35% annualized, respectively.

**Actuarial Funding Status**

Pursuant to the provisions of the Fund, the Board engages an independent actuarial firm to perform annual actuarial valuations. The Fund's funding objective is to ensure contributions, when combined with present assets and future investment returns, will be sufficient to meet the financial obligations to present and future retirees and beneficiaries.

Annual actuarial valuations measure the progress toward these goals, as well as the adequacy of the contribution rate. The Fund's actuary assumes that the Fund's investments will return 7.0% over the long-term. The differences between the assumed and the actual investment return are phased in (smoothed) over five years yielding an actuarial value of assets.

The Actuarial Value of Assets (AVA), Actuarial Accrued Liability (AAL), and the Funded Ratio of the City and Staff Plans, based on the actuarial valuation, as of December 31, 2021, are as follows:

## AVA, AAL and Funded Ratio

| Plan | Assets (AVA) | Liabilities (AAL) | Funded (Ratio) |
|---|---|---|---|
| City | $2,692,751,013 | $4,891,936,665 | 55.0% |
| Staff | $ 7,848,613 | $10,375,055 | 75.6% |

A schedule of funding progress is included in the actuarial section. The funded status of the Fund is reviewed annually. Experience studies are conducted every three to five years with the most recent being completed December 31, 2018. The Fund will complete another experience study within the five-year window.

### Certificate of Achievement

The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to the Fund for its Annual Report for the fiscal year ended September 30, 2021. This was the twelfth year that the Fund has earned this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Annual Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current Annual Report continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

### Public Pension Standards Award

For 2022, the Fund earned the Public Pension Coordinating Council Recognition Award for Funding and Administration. This is the eighth year that the Fund has received this award. This award is in recognition of meeting professional standards for plan administration as set forth by the Council. The standards serve as a benchmark by which to measure public defined benefit plans.

### Acknowledgments

The preparation of the Annual Report in a timely manner is made possible by the dedicated teamwork of the Fund's staff, under the leadership, dedication, and support of the Board. I am sincerely grateful to the Board and staff, as well as to all our professional service providers, who perform so diligently to ensure the successful operation and financial soundness of the Fund.

Respectfully submitted,

Eleza Bennett
Interim Executive Director

# Awards & Recognition


Public Pension Coordinating Council

***Recognition Award for Administration***
***2022***

Presented to

**Fort Worth Employees' Retirement Fund**

In recognition of meeting professional standards for
plan administration as
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle
Program Administrator

# Board of Trustees

*As of September 30, 2022.*

PLACE 9
**Doug Wilson**
Appointed Trustee
BOARD CHAIR

PLACE 4
**Andrea Wright**
Active Employee General Employees, Group D
(Elected seat)
BOARD VICE-CHAIR

PLACE 1
**Lloyd Cook**
Active Employee Police Dept.
(Elected seat)

PLACE 2
**Stephen Stegint**
Fire Dept. Active Employees
(Elected seat)

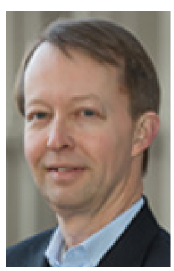
PLACE 3
**Loraine Coleman**
Active Employee General Employees, Group C
(Elected seat)

PLACE 5
**Landon Stallings**
Fire Dept. Retired Employees
(Elected seat)

PLACE 6
**Kevin Foster**
Police Dept. Retired Employees
(Elected seat)

PLACE 7
**Marsha Anderson**
Retired Employee General Employees
(Elected seat)

PLACE 8
**Jesus Payán**
Appointed Trustee



PLACE 10
**Steve Litke**
Appointed Trustee

PLACE 11
**Steve Purvis**
Appointed Trustee

PLACE 12
**Jim Lacamp**
Appointed Trustee

PLACE 13
**Reginald Zeno**
Fort Worth CFO and Interim Assistant City Manager
(Standing seat)

# Administrative Organization

*As of September 30, 2022.*

**Eleza Bennett**
Interim Executive Director
and Benefits Manager

**Mary Chang**
General Counsel

**Annette Connor**
Executive/Legal Assistant

**Mary Beth Lane**
Pension Administration System Analyst

**Jeff Rodriguez**
Communications Specialist

**Karen Epp**
Accounting Manager

**Christian Wetshi**
Senior Accountant

**Charles Henry**
IT Systems Administrator

**Derrick Dagnan**
Chief Investment Officer

**Christina Wu**
Investment Officer

**Branden George**
Investment Analyst

**Rebecca Earley**
Investments Assistant/Portfolio Analyst

**Toccara Oxford**
Benefits Analyst

**Carla Thom**
Member Services Specialist

**Mary Braddock**
Member Services Specialist

**Brad Duckworth**
Member Services Assistant

**Desireé Negrete**
Member Services Assistant

**Joanna White**
Member Services Assistant

**Sudie Sherrard**
Administrative Assistant

# Professional Service Providers

**Actuary**
Gabriel, Roeder, Smith &
Company

**Auditors**
Eide Bailly, LLP

**Custodian**
Northern Trust

**Legal Counsel**
DLA Piper, LLP
Jackson Walker, LLP
Ice Miller, LLP

**Investment Consultants**
Aksia, LLC
Verus Advisory, Inc.

Complete list of Investment Management Fees: Page 58, Investment Managers: Page 67;
Investment Management, Performance, and Brokers' Fees by Asset Class: Page 72;
Schedule of Brokers' Fees: Page 73.

CITY PLAN SUMMARY OF
# Key Provisions

**Membership**

An employee becomes a member upon regular employment with the City and contributes to the Fund.

**Definitions**

*Key Terms:*

- Final Average Compensation (FAC): average annual earnings over the member's highest three or five calendar years of service.
- Credited Service: length of time employed by the City of Fort Worth and making contributions to the Fund or purchased service.
- Group I – General employees hired prior to July 1, 2011.
- Group II – General employees hired on or after July 1, 2011.
- Group III – Police Officers hired prior to January 1, 2013.
- Group IV – Police Officers hired on or after January 1, 2013.
- Group V – Firefighters hired prior to January 10, 2015.
- Group VI – Firefighters hired on or after January 10, 2015.

**Contributions**

*Contributions from Employer (City):*

- Contributes 25.44% for Group I General employees and Group V Firefighters on regular retirement eligible earnings, overtime, vacation sellback, and wellness.
- Contributes 25.44% for Group II General employees and Group VI Firefighters on regular retirement eligible earnings only.
- Contributes 26.16% for Group III Police Officers on regular retirement eligible earnings, overtime, vacation sellback, and wellness.
- Contributes 26.16% for Group IV Police Officers on regular retirement eligible earnings only.

*Contributions from Member (Regular City Employee):*

On or after July 19, 2019:

- A Group I General employee contributes 9.35% on regular retirement eligible earnings, vacation sellback, overtime, and wellness. In addition, for the length of time the employee has service prior to October 1, 2013, they contribute an additional 0.7% on the same earnings.
- A Group II General employee contributes 9.35% on regular retirement eligible earnings and overtime.
- A Group III Police Officer contributes 10.53% on regular retirement eligible earnings, vacation sellback, overtime, and wellness.
- A Group IV Police Officer contributes 10.53% on regular retirement eligible earnings and overtime.
- A Group V Firefighter contributes 10.05% on regular retirement eligible earnings, built-in overtime, regular overtime, vacation sellback, and wellness.
- A Group VI Firefighter contributes 10.05% on regular retirement eligible earnings, built-in overtime and regular overtime.

## City Plan Key Provisions CONTINUED

On or after January 1, 2020:

- A Group I General employee contributes 9.35% on regular retirement eligible earnings, vacation sellback, overtime, and wellness. In addition, for the length of time the employee has service prior to October 1, 2013, they contribute an additional 0.7% on the same earnings.
- A Group II General employee contributes 9.35% on regular retirement eligible earnings and overtime.
- A Group III Police Officer contributes 12.53% on regular retirement eligible earnings, vacation sellback, overtime, and wellness.
- A Group IV Police Officer contributes 12.53% on regular retirement eligible earnings and overtime.
- A Group V Firefighter contributes 12.05% on regular retirement eligible earnings, built-in overtime, regular overtime, vacation sellback, and wellness.
- A Group VI Firefighter contributes 12.05% on regular retirement eligible earnings, built-in overtime and regular overtime.

On or after January 1, 2021:

- A Group I General employee contributes 9.35% on regular retirement eligible earnings, vacation sellback, overtime, and wellness. In addition, for the length of time the employee has service prior to October 1, 2013, they contribute an additional 0.7% on the same earnings.
- A Group II General employee contributes 9.35% on regular retirement eligible earnings and overtime.
- A Group III Police Officer contributes 13.13% on regular retirement eligible earnings, vacation sellback, overtime, and wellness.
- A Group IV Police Officer contributes 13.13% on regular retirement eligible earnings and overtime.
- A Group V Firefighter contributes 12.05% on regular retirement eligible earnings, built-in overtime, regular overtime, vacation sellback, and wellness.
- A Group VI Firefighter contributes 12.05% on regular retirement eligible earnings, built-in overtime and regular overtime.

On or after January 1, 2022:

- A Group I General employee contributes 10.15% on regular retirement eligible earnings, vacation sellback, overtime, and wellness. In addition, for the length of time the employee has service prior to October 1, 2013, they contribute an additional 0.7% on the same earnings.
- A Group II General employee contributes 10.15% on regular retirement eligible earnings and overtime.
- A Group III Police Officer contributes 13.93% on regular retirement eligible earnings, vacation sellback, overtime, and wellness.
- A Group IV Police Officer contributes 13.93% on regular retirement eligible earnings and overtime.
- A Group V Firefighter contributes 12.85% on regular retirement eligible earnings, built-in overtime, regular overtime, vacation sellback, and wellness.

• A Group VI Firefighter contributes 12.85% on regular retirement eligible earnings, built-in overtime and regular overtime.

**Vesting**

Vesting occurs following five years of credited service.

**Retirement Pension**

*Eligibility:*

• Normal Retirement – A member's age and years of service equal 80 points. For Group II members, the minimum retirement age is 55. Attainment of age 65 with five or more years of service.

• Early Retirement – Groups I, III, IV, V, and VI may elect an early retirement and receive a reduced pension at age 50 with five or more years of service. For Group II members, the minimum retirement age is 55 for early retirement.

• Special Retirement – Groups III and IV members may retire after completing 25 years of service regardless of age or points.

*Benefit Calculation:*

• Groups I and III – Benefits are calculated using a multiplier of 3% of the high three FAC earnings multiplied by total credited years of service prior to October 1, 2013. From October 1, 2013 forward, benefits are calculated using a multiplier of 2.5% of the high five FAC multiplied by total credited years of service on or after October 1, 2013.

• Group V – Benefits are calculated using a multiplier of 3% of the high three FAC earnings multiplied by total credited years of service prior to January 10, 2015. From January 10, 2015 forward, benefits are calculated using a multiplier of 2.5% of the high five FAC multiplied by total credited years of service on or after January 10, 2015.

• Groups II, IV, and VI – Benefits are calculated using a multiplier of 2.5% of the high five FAC multiplied by total credited years of service.

• For members in Groups I, III, and V that were not hired or vested by October 23, 2007, the high three FAC is capped by using their fourth highest year and limiting each higher year to 12% above the preceding amount.

*Payment Options:*

Under normal or special retirement, a member may elect to receive between 5% and 25% of the actuarial value of their retirement benefit in a lump sum and receive a reduced monthly pension benefit.

**Deferred Retirement**

A member who has attained the normal retirement date may elect to remain in active service with the City and defer retirement by participating in the Deferred Retirement Option Program (DROP).

• DROP allows a member to accrue a monthly amount in their DROP account equal to what they would have received if they had retired (Retirement Pension).

- The member will receive the balance of that account at actual separation from active City employment.
- If a member remains in DROP for more than 72 months, there will no longer be accruals made to their DROP account.

**Disabilty Retirement Pension**

When a member is injured on or off the job, they have the option to apply for the disability benefit. Disability benefits are subject to Board approval. For Disability, the multiplier used for Groups I and III on credited service prior to October 1, 2013, and Group V on credited service prior to January 10, 2015 is 2.75%, and on or after the respective dates the multiplier on credited service is 2.25%. For Groups II, IV, and VI, the multiplier is 2.25% on credited service. If the disability was in the line of duty, the years of service are projected to normal or special retirement.

**Early Retirement Pension**

A vested member may elect to retire early after meeting the age requirements (see Eligibility). The multiplier for Groups I and III prior to October 1, 2013, and Group V prior to January 15, 2015 is 2.75%. On or after the respective dates the multiplier is 2.25%. For Groups II, IV, and VI, the multiplier is 2.25%. There is a penalty of 5% per year for electing this option prior to normal retirement eligibility.

**Vested Terminated Pension**

A member with at least five years of credited service (vested) who separates from service may choose to leave their contributions with the Fund and receive a vested termination pension benefit at a later date. Members who take a vested termination pension are not eligible to take an actuarial equivalent lump sum.

**Death Benefits**

*Death Before Retirement:*

- If a member dies in the line of duty, the surviving spouse will receive a monthly pension of 75% of the member's accrued pension benefit projected to normal retirement.
- If the death is not in the line of duty, but occurs after a member is vested, the surviving spouse will receive a monthly pension of 75% of the member's accrued unreduced pension based on actual years of credited service.
- If the death is not in the line of duty and occurs before the member is vested, the surviving spouse or designated beneficiary will receive a refund of the member's contributions plus interest.

*Death After Retirement:*

- If a Group I, III, or V member dies after retiring, provided that member and the surviving spouse have been married for at least one year prior to member's retirement date, the surviving spouse will receive 75% of the member's current pension.

• A Group II, IV, or VI member does not have any automatic survivor benefits. They may elect to take an actuarially reduced pension at retirement to provide survivor benefits to a designated beneficiary.
• All members may elect to take an actuarially reduced pension to provide survivor benefits to a designated beneficiary, if they are unmarried at the time of retirement.

**Cost of Living Adjustment (COLA)**

*Upon Retirement:*
Groups I and III for service prior to October 1, 2013, and Group V for service prior to January 10, 2015, who retire or enter DROP by January 1, 2021, by election have one of the following two options:
• Simple 2% COLA – An annual 2% fixed increase is awarded January 1st of every year. The 2% is calculated on the original base pension and will not change.
• Ad-Hoc COLA – The annual increase is awarded on January 1st and may vary each year from 0% to 4%. The COLA amount is based on the funding status of the plan and is compounded.

Groups I and III for service on or after October 1, 2013 through July 19, 2019 and Group V on or after January 10, 2015 through July 19, 2019have the Simple 2% COLA, if they retire or enter DROP by January 1, 2021.

Groups I, III and V for all service prior to July 19, 2019, who are not retired or enrolled in DROP on or before January 1, 2021, have a Variable COLA or 13th check subject to actuarial conditions and approval of the Fund Board of Trustees and City Council. There is no COLA for service after July 19, 2019.

Groups II, IV, and VI are not eligible for any COLA.

STAFF PLAN SUMMARY OF

# Key Provisions

**Membership**

An employee becomes a member upon regular employment with the Fort Worth Employees' Retirement Fund (the Fund) and contributes to the Fund.

**Definitions**

*Key Terms:*

- Final Average Salary: average annual salary over the member's highest three calendar years of service.
- Credited Service: length of time employed by the Fund and making contributions to the Fund or purchased service.

**Contributions**

*Employer and Member:*

- The Fund contributes the actuarially determined amount each year.
- Members shall contribute 10.50% of their annual salary each year.

**Vesting**

Vesting occurs following five years of credited service.

**Retirement Pension**

*Eligibility:*

- Normal Retirement - A member's age and years of service equal 80 points.
- Attainment of age 65 with five or more years of service.
- Early Retirement - Attainment of age 50 with five or more years of service may elect an early retirement and receive a reduced pension.

*Benefit Calculation:*

Benefits are calculated using a multiplier of 3% of the three-year highest average salary multiplied by total credited years of service.

*Payment Options:*

Under normal retirement, a member may elect to receive between 5% and 25% of the actuarial value of their retirement benefit in a lump sum and receive a reduced monthly pension benefit.

**Deferred Retirement**

A member who has attained the normal retirement date may elect to remain in active service with the Fund and defer retirement by participating in DROP.

- DROP allows a member to accrue a monthly amount in their DROP account equal to what they would have received if they had retired.
- The member will receive the balance of that account at actual separation from service date.
- If a member remains in DROP for more than 60 months, there will no longer be accruals made to their DROP account.

**Disabiltiy Retirement Pension**

When a member is injured on or off the job, they have the option to apply for the disability benefit. Disability benefits are subject to Board approval and use a 2.75% multiplier in the benefit calculation.

## Staff Plan Key Provisions CONTINUED

**Early Retirement Pension**

A vested member may elect to retire early after meeting the age requirements. Early retirement benefits are subject to Board approval. The multiplier is 2.75% and there is a penalty of 5% per year for electing this option prior to normal retirement eligibility.

**Vested Terminated Pension**

A member with at least five years of credited service (vested) who separates from service may choose to leave their contributions with the Fund and receive a vested termination pension benefit at a later date. Members who take a vested termination pension are not eligible to take an actuarial equivalent lump sum.

**Death Benefits**

*Death Before Retirement:*
If a member dies in the line of duty, the surviving spouse will receive a monthly pension of 75% of the member's accrued pension benefit projected to normal retirement.
If the death is not in the line of duty, but occurs after a member is vested, the surviving spouse will receive a monthly pension of 75% of the member's accrued unreduced pension based on actual years of credited service.
If the death is not in the line of duty and occurs before the member is vested, the surviving spouse or designated beneficiary will receive a refund of the member's contributions plus interest.

*Death After Retirement:*
If a member, who retired on or before September 30, 2019, dies after retiring, provided that member and the surviving spouse have been married for at least one year prior to member's retirement date, the surviving spouse will receive 75% of the member's current pension.
If a member, who retired on or after October 1, 2019, dies after retiring, provided that member and the surviving spouse have been married for at least one year prior to member's retirement date, the surviving spouse will receive 50% of the member's current pension.
A member who retires after October 1, 2019, may elect to take an actuarially reduced pension at retirement to increase the surviving spouse benefit.

**Cost of Living Adjustment (COLA)**

*Upon Retirement:*
As of October 1, 2019, all active employees and new hires will receive the 1% COLA beginning at age 60. Members who retired prior to October 1, 2019 receive the 2% COLA unless they were terminated prior to February 24, 2016. Terminated Vested members prior to February 24, 2016 will receive the Ad-Hoc COLA.
Simple 2% COLA – An annual 2% fixed increase is awarded January 1st of every year. The 2% is calculated on the original base pension and will not change.
Simple 1% COLA – An annual 1% fixed increase is awarded January 1st of every year after the retired member reaches age 60. The 1% is calculated on the original base pension and will not change.
Ad-Hoc COLA – The annual increase is awarded on January 1st and may vary each year from 0% to 4%. The COLA amount is based on the funding status of the plan and is compounded.

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# Financial Section


*"My Corner of Cowtown is **The Fort Worth City Credit Union**. Since 1986, when the City of Fort Worth hired me, I have had a long relationship with the Credit Union. Almost on a daily basis, it has touched every aspect of my life, and it has always been there for me. What more could one ask for from a partnership?"*

**TRUSTEE MARSHA ANDERSON**
**PLACE 7, RETIRED GENERAL EMPLOYEES**

*"For My Corner of Cowtown, I chose **The Ridglea Theater.** It opened in 1950, has been renovated, and is now listed on the National Registry of Historic Places. The Ridglea also is special to me because for several years, I worked out of Fire Station 16, which is right around the corner. It was always a welcome sight to see the neon lights when we were returning from a late-night call. It made me feel connected to 16's territory and happy to know the people inside were having a good time seeing awesome shows in such a great city. I'm pleased to say we never had to rescue the theater from a blaze, and I'm glad to see that this landmark theater is still standing tall."*


**TRUSTEE STEPHEN STEGINT**
**PLACE 2, ACTIVE FIREFIGHTERS**

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# INDEPENDENT Auditor's Report

CPAs & BUSINESS ADVISORS

To the Board of Trustees of the
Employees' Retirement Fund of the
City of Fort Worth, Texas

## Report on the Audit of the Financial Statements

### *Opinion*

We have audited the combined financial statements of the Employees' Retirement Fund of the City of Fort Worth, Texas (the Fund), a fiduciary fund of the City of Fort Worth, as of and for the years ended September 30, 2022, and 2021, and the related notes to the combined financial statements, which collectively comprise the Fund's basic combined financial statements as listed in the table of contents.

In our opinion, the accompanying combined financial statements referred to above present fairly, in all material respects, the respective fiduciary net position of the Fund, as of September 30, 2022, and 2021, and the respective changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

### *Basis for Opinion*

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States (Government Auditing Standards). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Combined Financial Statements section of our report. We are required to be independent of the Fund and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

***Responsibilities of Management for the Combined Financial Statements***

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

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

Our objectives are to obtain reasonable assurance about whether the combined financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and Government Auditing Standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the combined financial statements.

In performing an audit in accordance with GAAS and Government Auditing Standards, we:

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

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

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

***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in net pension liability (City and Staff), schedule of net pension liability, schedule of actuarially determined employer contributions, and schedule of combined money-weighted investment returns (collectively the required supplementary information) be presented to supplement the basic combined financial statements. Such information is the responsibility of management and, although not a part of the basic combined 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 combined financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combined financial statements, and other knowledge we obtained during our audit of the basic combined 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.

***Supplementary Information***

Our audit was conducted for the purpose of forming an opinion on the combined financial statements that collectively comprise the Fund's basic combined financial statements. The other supplementary information accompanying financial information listed as other supplemental information in the table of contents are presented for purposes of additional analysis and are not a required part of the basic combined financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic combined financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic combined 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 combined financial statements or to the basic combined financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information accompanying financial information listed as other supplemental schedules in the table of contents are fairly stated, in all material respects, in relation to the basic combined financial statements as a whole.

***Other Information***

Management is responsible for the other information included in the annual report. The other information comprises the introductory, investment, actuarial, and statistical sections but does not include the basic combined financial statements and our auditor's report thereon. Our opinion on the basic combined financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the combined financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic combined financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

***Other Reporting Required by Government Auditing Standards***

In accordance with Government Auditing Standards, we have also issued our report dated December 20, 2022, on our consideration of the Fund 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 Fund 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 Fund internal control over financial reporting and compliance.

Eide Bailly LLP

Boise, Idaho
December 20, 2022

## MANAGEMENT'S

# Discussion & Analysis

## (UNAUDITED)

The Board of Trustees (the Board) of the Employees' Retirement Fund of the City of Fort Worth, Texas (the Fund) is pleased to provide this overview and analysis of the financial performance and activities of the Fund for the fiscal years ended September 30, 2022 and 2021. We encourage readers to consider the information presented here in conjunction with the financial statements that follow.

### Overview of Financial Statements

The Management's Discussion and Analysis is intended to serve as an introduction to the Fund's basic financial statements. The Fund's financial statements are composed of financial statements and notes to the financial statements. This report also contains required supplementary information in addition to the basic financial statements.

### Financial Statements

There are two basic financial statements presented within this annual report. The Combined Statements of Fiduciary Net Position as of September 30, 2022, and 2021 give a snapshot of the financial position of the Fund at a particular point in time. The Combined Statements of Changes in Fiduciary Net Position for the fiscal years ended September 30, 2022, and 2021, provide a view of the fiscal years' additions to and deductions from net position.

### Notes to Financial Statements

The notes are an integral part of the basic financial statements and provide additional background information that is essential to gain a complete understanding of the data provided within the Fund's financial statements.

### Required Supplementary Information

The required supplementary information consists of the Schedule of Changes in Net Pension Liability – City Plan, Schedule of Changes in Net Pension Liability – Staff Plan, the Schedule of Net Pension Liability, the Schedule of Actuarially Determined Employer Contributions and Schedule of Combined Money-Weighted Investment Returns and Notes to Required Supplementary Information.

### Other Supplementary Information

The other supplementary information consists of the Schedule of Administrative Expenses, the Schedule of Investment Management Fees, and the Schedule of Professional Services.

### Financial Highlights

The Fund's net position decreased by ($326,701,765) in fiscal year 2022 compared to an increase of $464,294,918 in 2021 and a increase of $55,843,984 in 2020. The Fund's decreased net position is a result of benefit payments and refunds paid out by the Fund exceeding contributions and investment income. In 2022, benefit payments and refunds exceeded contributions and investment losses by ($319,818,734) compared to a 2021 difference of $470,415,743, and a 2020 difference of $61,178,068. During fiscal year 2022, investment income (loss) totaled ($257,553,091), compared to $525,425,305 in 2021 and $110,848,700 in 2020. The following table shows a summary of the Fund's net position.

## Combined Fiduciary Net Position

*September 30, 2022, 2021, and 2020*

| | 2022 | 2021 | 2020 |
|---|---|---|---|
| **Assets** | | | |
| Cash | $ 200,631 | $ 107,585 | $ 159,222 |
| Receivables from Securities Sold | 157,790,865 | 155,072,129 | 190,963,266 |
| Other Receivables and Prepaid Expenses | 15,930,918 | 15,800,600 | 13,118,129 |
| Investments | 2,820,202,103 | 3,015,428,655 | 2,506,931,126 |
| Capital Assets, Net | 6,837,792 | 4,524,627 | 2,870,137 |
| **Total Assets** | 3,000,962,309 | 3,190,933,596 | 2,714,041,880 |
| **Liabilities** | | | |
| Payables for Securities Purchased | 181,436,851 | 177,845,110 | 239,986,072 |
| Obligations Under Securities Lending | 306,215,799 | 174,422,862 | 99,508,929 |
| Other Liabilities | 1,552,811 | 207,011 | 383,184 |
| **Total Liabilities** | 489,205,461 | 352,474,983 | 339,878,185 |
| **Net Position Restricted for Pensions** | $ 2,511,756,848 | $ 2,838,458,613 | $ 2,374,163,695 |

## Combined Changes in Fiduciary Net Position

*For Fiscal Years Ended September 30, 2022, 2021, and 2020*

| | 2022 | 2021 | 2020 |
|---|---|---|---|
| **Additions** | | | |
| Contributions | $ 203,313,198 | $ 189,153,625 | $ 181,473,046 |
| Investment Income (Loss), Net | (257,553,091) | 525,425,305 | 110,848,700 |
| **Total Additions** | (54,239,893) | 714,578,930 | 292,321,746 |
| **Deductions** | | | |
| Benefit Payments | 259,572,108 | 238,975,451 | 227,370,496 |
| Refund of Contributions | 6,006,733 | 5,187,736 | 3,773,182 |
| Administrative Expenses | 6,782,659 | 5,999,639 | 5,215,391 |
| Depreciation | 100,372 | 121,186 | 118,693 |
| **Total Deductions** | 272,461,872 | 250,284,012 | 236,477,762 |
| **Change in Net Position** | (326,701,765) | 464,294,918 | 55,843,984 |
| **Fiduciary Net Position, Beginning of Year** | 2,838,458,613 | 2,374,163,695 | 2,318,319,711 |
| **Net Position Restricted for Pensions** | $ 2,511,756,848 | $ 2,838,458,613 | $ 2,374,163,695 |

### Financial Analysis

During fiscal year 2022, the Fund's investment portfolio returned -8.80% net of fees, compared to 22.44% for 2021 and 4.86% for 2020. The Fund's 2022 performance was impacted by the U.S. Federal Reserve's (the Fed) dramatic pace of interest rate increases, which are aimed at controlling the highest levels of inflation that global developed markets have seen in 40 years.

The Fund's equity portfolio returned -21.43% in fiscal year 2022, versus a -20.66% return for the Global ACWI Index. This sell-off related to inflation and recession concerns and was broad across geographic zones, company sizes, and styles. Of note, value stocks significantly outperformed growth stocks for the trailing year.

With Americans facing inflation concerns and interest rate hikes, the Fund's fixed income portfolio returned a disappointing -14.49%. In comparison, the Bloomberg US Aggregate Bond index was down 14.60%. This represents one of the worst periods in history for fixed-income returns. The impact of the Fed actions can be seen in the difference in returns for long-duration bonds down, which were down around 30%, while short-duration bonds were down around 4%.

The Fund's alternative asset classes provided significant diversification from the liquid traditional asset classes and performed admirably. Private equity had a positive return of 10.87%, which was more than 22% better than the benchmark of the Russell 3000 plus 3%.

Real assets also returned a positive 17.8%, as inflation-sensitive assets like real estate and commodities benefited from significant price appreciation. The Fund's absolute return portfolio returned 2.29%, as short positions hedged against the adverse returns in the equity and fixed income markets.

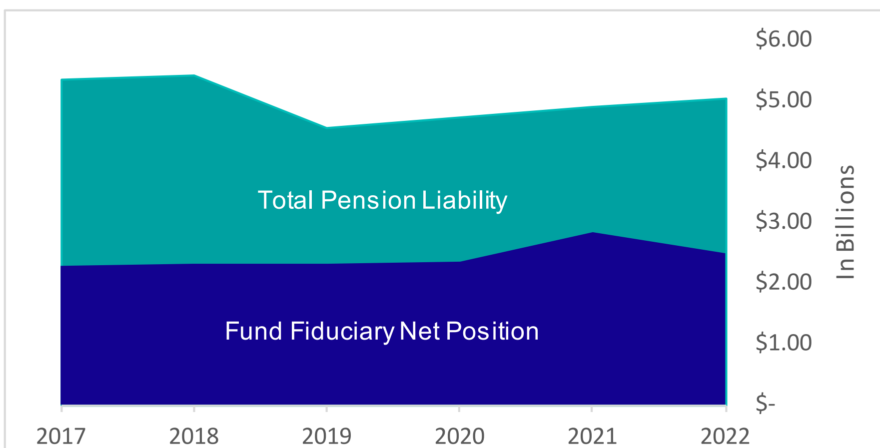
### Funding Progress

The actuarial reporting measurements as required by Governmental Accounting Standards Board (GASB) are the total pension liability, net pension liability, and fund fiduciary net position as a percentage of the total pension liability. The census data used is as of December 31, 2021, and all other measurements are calculated as of the fiscal year end of the Fund: September 30, 2022. For the City Plan, these measurements are as follows:

## Funding Progress: City Plan

*Fiscal Years Ending September 30 - in billions*

| Year | Total Pension Liability | Fund Fiduciary Net Position | Net Pension Liability | Net Position as a Percent of Total Pension Liability |
|---|---|---|---|---|
| **2022** | $ 5.04 | $ 2.50 | $ 2.54 | 49.69% |
| **2021** | 4.89 | 2.83 | 2.06 | 57.85% |
| **2020** | 4.73 | 2.37 | 2.36 | 50.09% |
| **2019** | 4.57 | 2.31 | 2.26 | 50.59% |
| **2018** | 5.42 | 2.32 | 3.09 | 42.86% |
| **2017** | 5.35 | 2.27 | 3.08 | 42.40% |



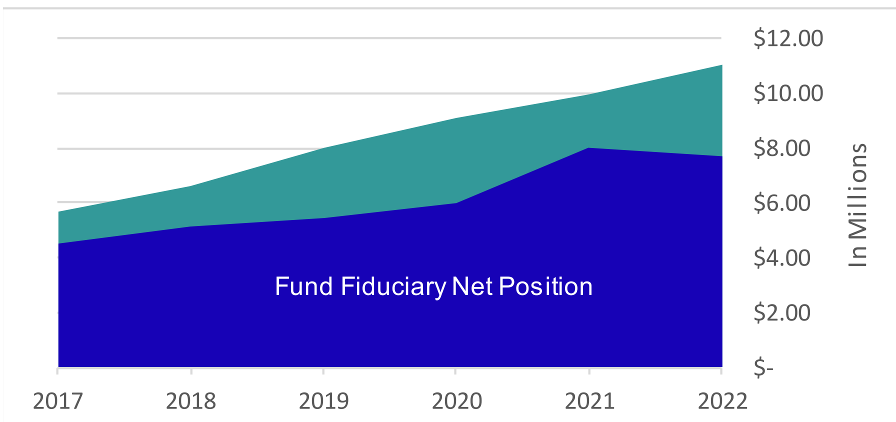

**Requests for information:** This financial report is designed to provide a general overview of the Fund's finances. Questions concerns any of the information provided should be addressed to the Employees' Retirement Fund of the City of Fort Worth, 3801 Hulen St., Suite 101, Fort Worth, TX. 76107.

The Staff Plan will also continue to be measured using an annual valuation performed at calendar year end as well as evaluated with GASB required disclosures at statement of net position date. For the Staff Plan, these measurements are as follows:

## Funding Progress: Staff Plan

*Fiscal Years Ending September 30* **-** *in millions*

| Year | Total Pension Liability | Fund Fiduciary Net Position | Net Pension Liability | Net Position as a Percent of Total Pension Liability |
|---|---|---|---|---|
| **2022** | $ 11.01 | $ 7.70 | $ 3.40 | 69.41% |
| **2021** | 9.96 | 8.02 | 1.95 | 80.47% |
| **2020** | 9.06 | 6.00 | 3.06 | 66.24% |
| **2019** | 8.04 | 5.46 | 2.58 | 67.88% |
| **2018** | 6.65 | 5.17 | 1.48 | 77.73% |
| **2017** | 5.70 | 4.53 | 1.17 | 77.71% |



# Combined Statements of Fiduciary Net Position

*September 30, 2022 and 2021*

| | City Plan 2022 | Staff Plan 2022 | Combined Totals 2022 | City Plan 2021 | Staff Plan 2021 | Combined Totals 2021 |
|---|---|---|---|---|---|---|
| **Assets** | | | | | | |
| **Investments in Trust, at Fair Value** | | | | | | |
| Government Obligations | $ 86,225,178 | $ 266,163 | $ 86,491,341 | $ 98,539,648 | $ 280,057 | $ 98,819,705 |
| U.S. Treasuries | 93,725,000 | 289,315 | 94,014,315 | 130,787,915 | 371,710 | 131,159,625 |
| Short-term Marketable Securities | 82,878,227 | 255,832 | 83,134,059 | 106,858,714 | 303,701 | 107,162,415 |
| Corporate Obligations | 128,238,877 | 395,854 | 128,634,731 | 182,209,369 | 517,853 | 182,727,222 |
| Asset and Mortgage Backed Obligations | 58,660,970 | 181,077 | 58,842,047 | 40,630,123 | 115,474 | 40,745,597 |
| International Obligations | 4,046,849 | 12,492 | 4,059,341 | 12,546,462 | 35,657 | 12,582,119 |
| Corporate Stocks | 258,521,935 | 798,016 | 259,319,951 | 441,576,973 | 1,254,997 | 442,831,970 |
| Exchange Traded Funds (ETF) | 469,813,131 | 1,450,239 | 471,263,370 | - | - | - |
| Commingled Funds | 772,470,742 | 2,384,495 | 774,855,237 | 1,198,556,774 | 3,406,393 | 1,201,963,167 |
| Alternative Investments | 551,668,997 | 1,702,915 | 553,371,912 | 621,248,336 | 1,765,637 | 623,013,973 |
| Securities Lending Collateral | 305,350,640 | 865,159 | 306,215,799 | 173,981,837 | 441,025 | 174,422,862 |
| **Total Investments** | 2,811,600,546 | 8,601,557 | 2,820,202,103 | 3,006,936,151 | 8,492,504 | 3,015,428,655 |
| **Receivables** | | | | | | |
| Employee Contributions | 3,774,467 | - | 3,774,467 | 3,235,082 | - | 3,235,082 |
| Employer Contributions | 7,858,652 | - | 7,858,652 | 6,836,880 | - | 6,836,880 |
| Other | 1,222 | - | 1,222 | 1,133 | - | 1,133 |
| Accrued Income | 4,256,903 | 12,061 | 4,268,964 | 5,685,321 | 14,412 | 5,699,733 |
| Due From Broker Securities Sold | 157,345,050 | 445,815 | 157,790,865 | 154,680,032 | 392,097 | 155,072,129 |
| **Total Receivables** | 173,236,294 | 457,876 | 173,694,170 | 170,438,448 | 406,509 | 170,844,957 |
| **Prepaid Expenses** | 27,535 | 78 | 27,613 | 27,702 | 70 | 27,772 |
| **Cash** | 200,064 | 567 | 200,631 | 107,313 | 272 | 107,585 |
| **Capital Assets** | | | | | | |
| Building | 3,621,677 | 10,261 | 3,631,938 | 3,499,775 | 8,872 | 3,508,647 |
| Land | 403,856 | 1,144 | 405,000 | 403,976 | 1,024 | 405,000 |
| Furniture and Equipment | 266,843 | 756 | 267,599 | 167,360 | 424 | 167,784 |
| Software | 3,839,810 | 10,879 | 3,850,689 | 1,734,156 | 4,395 | 1,738,551 |
| **Total Capital Assets** | 8,132,186 | 23,040 | 8,155,226 | 5,805,267 | 14,715 | 5,819,982 |
| Accumulated Depreciation | (1,313,712) | (3,722) | (1,317,434) | (1,292,080) | (3,275) | (1,295,355) |
| **Capital Assets, Net** | 6,818,474 | 19,318 | 6,837,792 | 4,513,187 | 11,440 | 4,524,627 |
| **Total Assets** | 2,991,882,913 | 9,079,396 | 3,000,962,309 | 3,182,022,801 | 8,910,795 | 3,190,933,596 |
| **Liabilities** | | | | | | |
| Due to Broker Securities Purchased | 180,924,233 | 512,618 | 181,436,851 | 177,395,432 | 449,678 | 177,845,110 |
| Other | 1,548,424 | 4,387 | 1,552,811 | 206,488 | 523 | 207,011 |
| Obligations Under Securities Lending | 305,350,640 | 865,159 | 306,215,799 | 173,981,837 | 441,025 | 174,422,862 |
| **Total Liabilities** | 487,823,297 | 1,382,164 | 489,205,461 | 351,583,757 | 891,226 | 352,474,983 |
| **Net Position Restricted for Pensions** | $ 2,504,059,616 | $ 7,697,232 | $ 2,511,756,848 | $ 2,830,439,044 | $ 8,019,569 | $ 2,838,458,613 |

The Notes to Combined Financial Statements are an integral part of these statements.

# Combined Statements of Changes in Fiduciary Net Position

*For Fiscal Years Ended September 30, 2022 and 2021*

| | City Plan | Staff Plan | Combined Totals | City Plan | Staff Plan | Combined Totals |
|---|---|---|---|---|---|---|
| | 2022 | | 2022 | 2021 | | 2021 |
| **Investment Income (Loss)** | | | | | | |
| Net Appreciation(Depreciation) in Fair Value | $ (294,950,964) | $ (903,191) | $ (295,854,155) | $ 488,027,622 | $ 1,302,615 | $ 489,330,237 |
| Interest and Dividend Income | 30,065,149 | 90,037 | 30,155,186 | 25,565,989 | 69,429 | 25,635,418 |
| Less: Investment Management Fees | (5,815,511) | (17,195) | (5,832,706) | (6,165,860) | (16,673) | (6,182,533) |
| Other Income | 13,327,572 | 39,531 | 13,367,103 | 16,344,742 | 44,531 | 16,389,273 |
| Investment Income Before Securities Lending | (257,373,754) | (790,818) | (258,164,572) | 523,772,493 | 1,399,902 | 525,172,395 |
| **Securities Lending Activities** | | | | | | |
| Securities Lending Income | 761,957 | 2,290 | 764,247 | 315,212 | 856 | 316,068 |
| Securities Lending Expenses | (152,308) | (458) | (152,766) | (62,987) | (171) | (63,158) |
| Net Securities Lending Income | 609,649 | 1,832 | 611,481 | 252,225 | 685 | 252,910 |
| **Total Net Investment Income (Loss)** | (256,764,105) | (788,986) | (257,553,091) | 524,024,718 | 1,400,587 | 525,425,305 |
| **Contributions** | | | | | | |
| Employee Contributions | 65,593,975 | 224,122 | 65,818,097 | 60,281,553 | 328,077 | 60,609,630 |
| Employer Contributions | 137,012,301 | 482,800 | 137,495,101 | 128,046,174 | 497,821 | 128,543,995 |
| **Total Contributions** | 202,606,276 | 706,922 | 203,313,198 | 188,327,727 | 825,898 | 189,153,625 |
| **Total Additions (Deductions)** | (54,157,829) | (82,064) | (54,239,893) | 712,352,445 | 2,226,485 | 714,578,930 |
| **Benefit Payments** | | | | | | |
| Retirement | 197,964,463 | 199,979 | 198,164,442 | 188,161,116 | 181,061 | 188,342,177 |
| Disability | 5,076,806 | - | 5,076,806 | 5,136,081 | - | 5,136,081 |
| Surviving Spouse | 21,882,859 | - | 21,882,859 | 20,499,937 | - | 20,499,937 |
| Children | 46,439 | - | 46,439 | 48,594 | - | 48,594 |
| Actuarial Equivalent | 734,241 | - | 734,241 | 575,710 | - | 575,710 |
| DROP Payouts | 33,667,321 | - | 33,667,321 | 24,372,952 | - | 24,372,952 |
| **Total Benefit Payments** | 259,372,129 | 199,979 | 259,572,108 | 238,794,390 | 181,061 | 238,975,451 |
| **Other Payments** | | | | | | |
| Refunds/Terminations | 5,994,097 | 12,636 | 6,006,733 | 5,187,736 | - | 5,187,736 |
| Depreciation | 100,064 | 308 | 100,372 | 120,844 | 342 | 121,186 |
| Administrative | 6,755,309 | 27,350 | 6,782,659 | 5,971,101 | 28,538 | 5,999,639 |
| **Total Other Payments** | 12,849,470 | 40,294 | 12,889,764 | 11,279,681 | 28,880 | 11,308,561 |
| **Total Deductions** | 272,221,599 | 240,273 | 272,461,872 | 250,074,071 | 209,941 | 250,284,012 |
| **Increase (Decrease) in Net Position** | (326,379,428) | (322,337) | (326,701,765) | 462,278,374 | 2,016,544 | 464,294,918 |
| **Net Position Restricted for Pensions, Beginning** | 2,830,439,044 | 8,019,569 | 2,838,458,613 | 2,368,160,670 | 6,003,025 | 2,374,163,695 |
| **Net Position Restricted for Pensions, Ending** | $ 2,504,059,616 | $ 7,697,232 | $ 2,511,756,848 | $ 2,830,439,044 | $ 8,019,569 | $ 2,838,458,613 |

The Notes to Combined Financial Statements are an integral part of these statements.

# NOTES TO COMBINED
# Financial Statements

## Note 1. Plan Description

The following description of the Employees' Retirement Fund of the City of Fort Worth, Texas (the Fund), is provided for general information purposes only. Participants (or members) should refer to the Plan Documents for more information.

### General

The Fund is a multiple employer agent plan that covers employees of the City of Fort Worth (City Plan) and the employees of the Fort Worth Employees' Retirement Fund (Staff Plan). The Fund and City Plan were established by City Ordinance on September 12, 1945. The Staff Plan was established through Administrative Rules in 2007 and both plans are governed by State statute (Vernon's Civil Statutes, Title 109, Article 6243i) effective June 15, 2007. The City Plan is included in the financial statements of the City of Fort Worth.

The Fund provides retirement, disability and death benefits to its members and beneficiaries. All employees of the City of Fort Worth and the Retirement Fund Staff are members except elected officers and non-salaried appointed members of administrative boards and commissions, part-time, temporary and contract employees, and employees paid in part by another governmental agency. The two plans are commingled for investment purposes and are both administered by the 13-member Retirement Fund Board of Trustees. Each plan has a separate actuarial valuation completed each year.

The Retirement Fund Board of Trustees (the Board) is comprised of four active members of the Fund, three retired members of the Fund, and six trustees appointed by the Fort Worth City Council. All Board members serve a two-year term commencing on September 1st and annually select a chairperson and a vice-chairperson.

The Staff Plan was designed as a carve-out plan, with benefits identical to those of the General City employees (City of Fort Worth employees who are not civil service, police, or fire) in August 2007, and continues with those benefits. Contribution rates were identical until fiscal year 2011, at which time the City Plan employer rates increased by 4%. This rate increase was not applied to the Staff Plan. At the time the Staff Plan was established in August of 2007, there were three Fund employees who were vested in the City Plan. At retirement, those employees will receive part of their retirement from the City Plan and the rest from the Staff Plan.

Since the creation of the Staff Plan, other vested members of the City Plan have been hired by the Fund. These employees also will receive part of their retirement from the respective Plan in which they earned credit. The remaining Fund employees will receive any retirement benefits due to them from the Staff Plan only. The first actuarial valuation for the Staff Plan was completed as of January 1, 2008. Changes to the Staff Plan are determined by the Board.

The City has received a favorable letter of determination from the Internal Revenue Service (IRS) that its Plan is qualified under Section 401(a) of the Internal Revenue Code. The authority to define or amend employer and employee contribution rates or benefits is given to the Fort Worth City Council (the City Council). The City Plan is considered part of the City's financial reporting entity and is included in the City's basic financial statements. The City's payroll for employees covered by the City Plan for the years ended September 30, 2022, and 2021 was approximately $560 and $523 million, respectively.

Effective June 15, 2007, article 6243i of the Texas Revised Civil Statutes (Article 6243i) redefined the composition and structure of the Board, providing authority to the Board for benefit administration, asset investment and actuarial assumptions and authority to the Fund sponsor for benefit design and contribution percentage. Article 6243i also permitted the Board to create administrative rules that govern the administration of benefits of the Fund.

The Board may change the administrative operation of the Fund without the City's approval, while any increases to the benefit structure must be approved by the City, following an actuarial assessment. A reduction in benefits must be approved by the City, and the City must notify the Board 90 days in advance of such benefit reduction.

As of September 30, 2022, and 2021, the Fund's membership consisted of the following members:

## Combined Planned Membership

*Years ended September 30*

| | City Plan | | Staff Plan | |
|---|---|---|---|---|
| | **2022** | **2021** | **2022** | **2021** |
| Retirees currently receiving benefits | 4,088 | 4,036 | 4 | 4 |
| Beneficiaries currently receiving benefits | 818 | 793 | 0 | 0 |
| Terminated employees entitled to benefits | 437 | 401 | 6 | 6 |
| Terminated employees entitled to a refund | 1,051 | 888 | 3 | 1 |
| **Total Non-Active Members** | 6,394 | 6,118 | 13 | 11 |
| **Active Members** | | | | |
| Vested | 4,603 | 4,456 | 10 | 10 |
| Non-vested | 2,023 | 2,059 | 9 | 8 |
| **Total Active Members** | 6,626 | 6,515 | 19 | 18 |
| **Total Plan Membership** | 13,020 | 12,633 | 32 | 29 |

### Vesting
Members vest in the Fund after five years of credited service. Vested members are eligible for normal retirement on the last day of the month in which the earlier of the following occurs: the member's age plus years of credited service equals 80 (Rule of 80), or the vested member reaches age 65. Members terminating employment prior to vesting are entitled to receive their contributions plus interest. Members who are vested have the option of receiving their contributions plus interest or leaving their contributions in the fund and receiving retirement benefits as described above.

### Pension Benefits
In October of 2012, the City passed an ordinance change amending the benefits for new hire police civil service and split the benefits for existing police civil service and general employees, making changes similar to the November 2010 ordinance. Existing Police and General employees will have a different benefit calculation based on their hire date and dates of service. On September 16, 2014, and October 21, 2014, the City passed ordinance amendments making similar changes for new hire firefighters and existing firefighters, respectively, who previously had been unchanged. On December 11, 2018, the City passed an ordinance amending the benefits for all members. In February 2019, City employees voted in election to increase employee contributions.

The City Plan consists of six groups, described generally as follows:
Group I – A General Employee hired prior to July 1, 2011.
Group II – A General Employee hired on or after July 1, 2011.
Group III – A Police Officer hired prior to January 1, 2013.
Group IV – A Police Officer hired on or after January 1, 2013.
Group V – A Firefighter hired prior to January 10, 2015.
Group VI – A Firefighter hired on or after January 10, 2015.

A member's normal retirement date is determined using the Rule of 80, or age 65 with at least 5 years of credited service. The City has adopted a 25-year-and-out program for police officers, which allows for full (unreduced) retirement after 25 years of service, regardless of age. Group II requires a minimum age of 55 at Rule of 80 to be eligible to retire. Each of the benefits are calculated by using an average annual compensation value multiplied by years of service and a multiplier percentage. The table below describes the variables for each group:

| Group Number | Multiplier for Service prior to 10/01/2013 | Multiplier for Service on or after 10/01/2013 | Average Annual Compensation for service prior to 10/01/2013 | Average Annual Compensation for service on or after 10/01/2013 | Credited years of benefit service |
|---|---|---|---|---|---|
| Group I | 3% | 2.5% | Average of highest 3 (overtime included) | Average of highest 5 (overtime excluded) | Actual years and months of credited service |
| Group II | 2.5% | 2.5% | Average of highest 5 (overtime, wellness, vacation, and sellback excluded) | Average of highest 5 (overtime, wellness, vacation, and sellback excluded) | Actual years and months of credited service |
| Group III | 3% | 2.5% | Average of highest 3 (overtime included) | Average of highest 5 (overtime excluded) | Actual years and months of credited service |
| Group IV | 2.5% | NA | Average of highest 5 (overtime, wellness, vacation, and sellback excluded) | Average of highest 5 (overtime, wellness, vacation, and sellback excluded) | Actual years and months of credited service |

| Group Number | Multiplier for Service prior to 10/01/2015 | Multiplier for Service on or after 10/01/2015 | Average Annual Compensation for service prior to 10/01/2015 | Average Annual Compensation for service on or after 10/01/2015 | Credited years of benefit service |
|---|---|---|---|---|---|
| Group V | 3% | 2.5% | Average of highest 3 (overtime included) | Average of highest 5 (overtime excluded) | Actual years and months of credited service |
| Group VI | NA | 2.5% | Average of highest 5 (overtime, wellness, vacation, and sellback excluded) | Average of highest 5 (overtime, wellness, vacation, and sellback excluded) | Actual years and months of credited service |

### Cost of Living Adjustment (COLA)

Members of Groups I, III and V, as defined in the City ordinance, receive COLAs based on their selection of either simple 2% COLA or the ad-hoc COLA for service prior to either October 1, 2013, or January 10, 2015, depending on the group, provided they are retired or enrolled in DROP on or before January 1, 2021. [For members of Groups I, III and V] Service on or after October 1, 2013, or January 10, 2015, through January 19, 2019, depending on the group, receives a simple 2% COLA, if retired or enrolled in DROP on or before January 1, 2021. Ad-hoc COLAs are compound and granted if the amortization period required to pay-off the unfunded liability is 28.0 years or less.

Members who are eligible to receive a COLA, are granted that COLA on January 1 of that year. The member must be retired by September 30 of the preceding year (or in DROP) in order to be eligible. For members of Groups I, III and V who are not retired or enrolled in DROP on or before January 1, 2021, there is a Variable COLA or 13th check that applies to service prior to July 19, 2019, which is subject to actuarial conditions and approval by the Fund Board of Trustees and City Council. Groups II, IV and VI are not eligible for a COLA. There is no COLA for service after July 19, 2019, for any Group.

### Deferred Retirement Option Program

If a member continues to work after the normal retirement date, the member is required to make contributions to the Fund until the date of actual retirement. Members continue to accrue credited service until they retire unless they are enrolled in the Deferred Retirement Option Program (DROP). A member who has attained the normal or special retirement date may elect to remain in active service with the City and defer retirement by participating in the DROP.

The DROP allows a member to accrue a monthly amount, into a notional account that does not earn interest, equal to what they would have received if they had retired. Retirement benefits are calculated at the DROP entry date and service and compensation beyond that date do not accrue to the benefit calculation but contributions on wages continue. The DROP account is payable when service ends and the only changes to the benefit upon the DROP exit are credit for unused applicable leave and eligible COLA increases. DROP is limited to 72 months.

In September 2007, the Board voted to allow members that have entered the DROP to leave a part or all of their DROP balance with the Fund. Members that elect this option are credited the same earnings as the Fund on a monthly basis and are subject to losses if the Plan incurs negative earnings on Fund assets. On September 8, 2022, the Board voted to revise the DROP distribution payment options and no longer apply monthly investment returns to member’s DROP accounts.

Drop balances for all active and inactive City Plan participants totaled $150.1 million for the fiscal year ending in 2022 and $154.2 million for the fiscal year ending in 2021.

### Cash Balance

General City employees hired after July 1, 2011, will not have overtime in their high five salary calculation. Alternatively, their contributions from overtime are placed in a cash balance account and the City pays 100% matching dollars plus interest at retirement. However, as of October 1, 2013, the cash balance plan is closed, and no new contributions will be added to existing account balances.

### Death and Disability Benefits

Upon the death of a retired member in Group I, III or V, the surviving spouse shall receive a monthly pension equal to 75% of the amount being paid to the retired member. If a vested member dies before retirement, the surviving spouse shall receive a monthly pension equal to 75% of the member's accrued pension, subject to certain minimum benefits. Active employees who become totally disabled while in the line of duty receive annual disability benefits that are equal to normal retirement benefits that would have accrued had the member worked to their normal retirement date. Members who become totally disabled while not in the line of duty receive disability benefits that are equal to retirement benefits that have accumulated as of the time, they become disabled, provided the member was vested. Non-vested members who become totally disabled while not in the line of duty receive a refund of contributions, plus interest.

Groups II, IV, VI and unmarried members of any group have no joint survivorship benefit, they only have the designated beneficiary actuarially neutral option. Any member may elect to have a designated beneficiary survivor benefit at 25%, 50%, 75% or 100% by reducing their current benefit, making the cost to the plan actuarially neutral.

### Obligation to Contribute to the Fund

Effective the first payroll of fiscal year 2011, the City contributed to the Fund an amount equal to 19.74% (20.46% for sworn police officers) of the salaries of members. Effective the first payroll of calendar year 2019, the City shall contribute to the Fund an amount equal to 24.24% (24.96% for sworn police officers) of the salaries of members. The City Council, through its budget appropriation, has the right to contribute an additional amount over and above the members' contributions.

Prior to July 19, 2019, employees of the City, as a condition of their employment, commencing on the effective date of their membership in the Fund, contributed 8.25% (8.73% for sworn police officers) of their salary to the Fund. Beginning July 19, 2019, as a condition of employment, commencing on the effective date of their membership in the Fund, employees of the City, shall contribute 9.35% for General Employees, 10.05% for sworn fire fighters and 10.53% for sworn police officers of their salary to the Fund. In addition, General employees with service prior to October 1, 2013, pay an additional 0.7% of their salary to the Fund for the length of that service until the date of their actual retirement or earlier termination of employment.

Beginning with the first pay day after January 1, 2020, employees of the City, shall contribute 9.35% for General Employees, 12.05% for sworn fire fighters and 12.53% for sworn police officers of their salary to the Fund. In addition, General employees with service prior to October 1, 2013, pay an additional 0.7% of their salary to the Fund for the length of that service.

Beginning with the first pay day after January 1, 2021, employees of the City, contributed 9.35% for General Employees, 12.05% for sworn fire fighters and 13.13% for sworn police officers of their salary to the Fund. In addition, General employees with service prior to October 1, 2013, pay an additional 0.7% of their salary to the Fund for the length of that service. The employer and employee contribution rates are not used when the actuary determines the annual required contributions to the Fund.

Effective the first payroll of calendar year 2022, the City shall contribute to the Fund an amount equal to 25.44% (26.16% for sworn police officers) of the salaries of members. Employees of the City, as a condition of their employment, commencing on the effective date of their membership in the Fund, contribute 10.15% for General Employees, 12.85% for sworn fire fighters and 13.93% for sworn police officers of their salary to the Fund. General employees with service prior to October 1, 2013, pay an additional 0.7% of their salary to the Fund for the length of that service until the date of their actual retirement or earlier termination of employment.

## Note 2. Summary of Significant Accounting Policies

The following are the significant accounting policies followed by the Fund:

### Basis of Accounting

The Fund's Combined Financial Statements are prepared using the accrual basis of accounting in accordance with the standards of the Governmental Accounting Standards Board for pension trust funds. Employer and employee contributions are recognized when due, pursuant to formal commitments as well as statutory or contractual requirements. Benefits and refunds of the plan are recognized when due and payable in accordance with the terms of the plan. Purchases and sales of investments are recorded on a trade-date basis.

### Cash and Cash Equivalents

For cash deposits and cash equivalents, the custodial credit risk is the risk that in the event of a bank failure, the Fund's deposits may not be returned. The Fund's deposits are held by Northern Trust and Frost Bank. As of September 30, 2022, and 2021, the Fund had bank balances of $200,631 and $107,585, respectively, that are in demand accounts subject to coverage by Federal Deposit Insurance Corporation (FDIC) but are not collateralized. The Fund does not have a deposit policy for custodial credit risk; however, management believes that the Fund's custodial credit risk exposure is mitigated by the financial strength of the banking institutions in which the deposits are held.

### Property and Equipment

Property and equipment are reported on the cost basis. The Fund provides for depreciation on the straight-line method over the estimated useful lives of the assets.

The following estimated useful lives are used in providing for depreciation:
Building: 40 years
Furniture and Equipment: 5 – 7 years

### Investment Policy Statement

The Board of Trustees (The Board) of the Fort Worth Employees' Retirement Fund (The Fund) has adopted an Investment Policy Statement as a framework for the investment of the Fund's assets. The authority to amend that statement rests entirely with the Board. The Investment Policy Statement was amended by the Board on August 24, 2022. A copy of the Investment Policy Statement can be found in its entirety on the Fund's website.

**Valuation of Investments**

Investments are stated at fair value. When available, quoted market prices are used to value investments. Investments that do not have quoted market prices are priced from information received from the external manager.

In these cases, external managers are independent investment managers that manage assets that are not held directly by the Fund. Examples of these kinds of investments are pooled real estate funds, pooled private equity investments and hedge funds. These assets are pooled and managed on behalf of a number of investors. The underlying partnerships allow for withdrawals at various times during the year as provided for by the respective underlying agreements, which may include an initial lockup period, or be subject to a gate provision or suspension of redemptions.

The Fund utilizes a variety of financial instruments in their trading strategies, which contain varying degrees of off-balance sheet risk. However, due to the nature of the Fund's investments, such risks are limited to the Fund's capital balance in each underlying partnership. Below is a listing and description of the various investments used by the Fund:

- **Broad US Equity:** Equity securities listed on a recognized US securities exchange or quoted on the NASDAQ National Market System are priced at the regular trading session's closing price on the exchange or system in which such securities are principally traded. Securities not traded on the valuation date are priced at the most recent quoted bid price.

- **Broad International Equity:** Global securities' prices are based upon primary local market quotations. Depending upon local convention or regulation, the price may represent the last sale price or the mean between the last bid and ask price at the close of the appropriate exchange or at other designated times as determined by the appropriate governing body.

- **Exchange Traded Fund (ETF):** Exchange-traded-funds, or ETFs, are funds traded on exchanges that generally track a specific index. The funds are priced daily based on supply and demand.

- **Fixed Income - Bank Loans:** Bank Debt and Syndicated loans that are traded in the secondary market will be priced using a pricing vendor quote, or if unavailable, a broker quote as directed by the client or delegate. Structured loans which are bi-lateral or multi-lateral agreements between the lender and the borrower will be priced at a level to be determined by the investment manager and approved by the Fund. Based on information available to the investment manager, the Fund will rely on the investment manager to indicate the current value of the loan/debt.

● **Fixed Income - Government/Corporate Bonds:** These securities are priced by a pricing vendor on the basis of bid or mid evaluations in accordance with a region's market convention, using factors which include but are not limited to market quotations, yields, maturities, and the bond's terms and conditions. The pricing vendors use proprietary methods to arrive at the evaluated price. These prices represent the price a dealer would pay for a security (typically in an institutional round lot).

● **Real Estate, Absolute Return, Private Equity, Real Return:** The Fund's investments in limited partnerships are valued at estimated fair value based on the Fund's proportionate share of the partnerships' fair value as recorded by the partnership. The Fund uses information provided by the limited partnership, such as audited financial statements, periodic information on the holdings and activities and periodic statements of fair value of the limited partnership and other information accumulated by management pertinent to the investment to estimate fair value. The limited partnerships allocate gains, losses and expenses to the partners based on the ownership percentage as described in the partnership agreements. It is the Fund's policy to use the most recent available valuation, adjusting for cash flows as necessary up until the period is closed. The closing date is consistent each year. Estimates are used by management in determining the fair value of the Fund's investments in limited partnerships. The amount received upon sale of the investments may differ significantly from the recorded amount.

There are certain market risks, credit risks, foreign exchange currency risks, or events that may subject the Fund's investment portfolio to economic changes occurring in certain industries, sectors, or geographies.

Net investment income includes net appreciation in the fair value of investments, interest income, dividend income, and investment expenses. Investment expense includes custodian and management fees, and all other significant investment-related costs.

### Rate of Return

The Fund uses two approaches for calculating investment returns for reporting purposes. For the fiscal years ended September 30, 2022, and 2021, the annual money-weighted return on the Fund assets, net of investment expenses, was -8.67% and 22.52%, respectively. The money-weighted return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. In addition, for the fiscal years ended September 30, 2022, and 2021, the time-weighted return on Fund assets net of fees was -8.80% and 22.44%, respectively. The time-weighted rate of return is defined as the compounded growth rate of $1 over the period being measured and is not sensitive to contributions or withdrawals.

### Interest and Dividends Receivable and Due to/from Broker
Interest income is recorded on an accrual basis. Dividends are recorded on the ex-dividend date. Recording activity in such a manner, results in interest and dividends receivable. The balance due to broker securities purchased and due from broker securities sold represents trades pending settlement and amounts due to foreign currency contracts.

### Foreign Currency Transactions
The Fund is a party to financial instruments with off balance sheet risk, primarily foreign currency forward contracts. Forward transactions are contracts or agreements for delayed delivery of commodities, securities, or money market instruments in which the seller agrees to make delivery at a specified future date of a specified commodity or instrument, at a specified price or yield. Entering into these investments involves not only the risk of dealing with counterparties and their ability to meet the terms of the contracts, but also the risk associated with market fluctuations.

Gains and losses resulting from foreign exchange contracts (transactions denominated in a currency other than the Fund's functional currency-US dollars) are recorded by the Fund based on changes in fair values and are combined with similar transactions in the accompanying combined statements of changes in fiduciary net position and are included in net investment income (loss). The Fund structures its foreign exchange contracts and enters into certain transactions to substantially mitigate the Fund's exposure to fluctuations in foreign exchange rates.

Investment and broker accounts denominated in foreign currencies outstanding on September 30, 2022, and 2021, were converted to the Fund's functional currency at the foreign exchange rates quoted on September 30, 2022, and 2021. These foreign exchange gains and losses are included in net appreciation in fair value of investments in the accompanying combined statements of changes in fiduciary net position.

### Use of Estimates
The preparation of Combined Financial Statements and required supplementary information in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of net positions, and changes therein, the net pension liability at the date of the Combined Financial Statements, and changes therein. Actual results could differ from those estimates.

The Plan invests in various investment securities. Investment securities are exposed to various risks, such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the combined statements of fiduciary net position.

The net pension liability is reported based on certain assumptions pertaining to interest rates, inflation rates, and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimations and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near-term would-be material to the Combinded Financial Statements.

### Expenses

The Fund staff is responsible for providing or contracting with vendors to provide all administrative functions necessary for operation of the Fund. The Board approves an annual budget for the administration of the Fund and these expenses are paid from current Fund assets.

### Multiple Employer Agent Plan

The Combined Financial Statements are prepared as a multiple employer agent plan. Assets are commingled for investment purposes. Financial statements are presented with combined information for each employer. Required supplemental information is also presented for each employer.

### New Accounting Pronouncements

GASB Statement No. 87, *Leases*, is effective for all reporting periods starting on or after July 1, 2021. The Fund has adopted the provisions of GASB Statement No. 87, and it was determined that there was no material effect on the Combined Financial Statements. The Fund has leases on one office printer and on half of the office building.

## Note 3. Net Pension Liability

The net pension liability is measured using the total pension liability less the pension plan's fiduciary net position. The total pension liability as of September 30 is based on the results of the actuarial valuation dated December 31 and rolled forward using generally accepted actuarial procedures. The total pension liability for the City Plan is calculated using the long-term expected rate of return.

For the City Plan, the net position was projected to be available to make all projected future benefit payments of current plan members. The long-term expected rate of return on Retirement Fund investments, with adjustment to account for administrative expenses, was applied to the projected benefit payments. The following table reflects the Net Pension Liability for the City Plan:

## Schedule of Net Pension Liability: City Plan

*Years Ended September 30*

| Fiscal Year Ending 09/30 | Total Pension Liability | Plan Net Position | Net Pension Liability | Plan Net Position as a Percent of Total Pension Liability | Covered Payroll | Net Pension Liability as a Percent of Covered Payroll |
|---|---|---|---|---|---|---|
| **City Plan** | | | | | | |
| 2014 | $ 3,610,674,395 | $ 2,081,575,247 | $ 1,529,099,148 | 57.65% | $ 391,216,461 | 390.86% |
| 2015 | 4,127,343,024 | 2,003,269,563 | 2,124,073,461 | 48.54% | 404,507,497 | 525.10% |
| 2016 | 5,318,307,112 | 2,097,716,741 | 3,220,590,371 | 39.44% | 424,371,512 | 758.91% |
| 2017 | 5,354,699,800 | 2,270,521,836 | 3,084,177,964 | 42.40% | 447,488,158 | 689.22% |
| 2018 | 5,422,613,892 | 2,324,335,575 | 3,098,278,317 | 42.86% | 467,754,197 | 662.37% |
| 2019 | 4,571,921,160 | 2,312,863,285 | 2,259,057,875 | 50.59% | 484,410,754 | 466.35% |
| 2020 | 4,728,026,182 | 2,368,160,670 | 2,359,865,512 | 50.09% | 509,575,065 | 463.10% |
| 2021 | 4,892,874,650 | 2,830,439,044 | 2,062,435,606 | 57.85% | 523,064,436 | 394.30% |
| 2022 | 5,039,105,797 | 2,504,059,616 | 2,535,046,181 | 49.69% | 559,690,772 | 452.94% |

For the Staff Plan, the net position was projected to be available to make all projected future benefit payments of current plan members. The long-term expected rate of return on Retirement Fund investments, with adjustment to account for administrative expenses, was applied to the projected benefit payments. The following table reflects the Net Pension Liability for the Staff Plan:

## Schedule of Net Pension Liability: Staff Plan

*Years Ended September 30*

| Fiscal Year Ending 09/30 | Total Pension Liability | Plan Net Position | Net Pension Liability | Plan Net Position as a Percent of Total Pension Liability | Covered Payroll | Net Pension Liability as a Percent of Covered Payroll |
|---|---|---|---|---|---|---|
| **Staff Plan** | | | | | | |
| 2014 | $ 4,156,464 | $ 2,772,401 | $ 1,384,063 | 66.70% | $ 1,432,884 | 96.59% |
| 2015 | 4,130,487 | 3,088,220 | 1,042,267 | 74.77% | 1,539,199 | 67.71% |
| 2016 | 5,218,030 | 3,715,866 | 1,502,164 | 71.21% | 1,587,554 | 94.62% |
| 2017 | 5,697,981 | 4,526,754 | 1,171,227 | 79.44% | 1,507,141 | 77.71% |
| 2018 | 6,648,357 | 5,167,655 | 1,480,702 | 77.73% | 1,588,685 | 93.20% |
| 2019 | 8,038,352 | 5,456,426 | 2,581,926 | 67.88% | 1,533,139 | 168.41% |
| 2020 | 9,062,509 | 6,003,025 | 3,059,484 | 66.24% | 1,510,527 | 202.54% |
| 2021 | 9,966,499 | 8,019,569 | 1,946,930 | 80.47% | 2,061,061 | 94.46% |
| 2022 | 11,090,045 | 7,697,232 | 3,392,813 | 69.41% | 2,134,492 | 158.95% |

### Actuarial Methods and Assumptions

Actuarial valuations involve projections of benefit payments, contributions, and other amounts decades into the future. These projections are based on actuarial assumptions and methods adopted by the Fund's Board of Trustees. Assumptions such as salary increases, investment rates of return, retirement and disability rates, mortality, and inflation are compared against actual experience by actuarial experience studies conducted every three years. These studies assist the Fund's Board in evaluating the accuracy with which the assumptions predict actual experience. A three-year experience study was completed in the first quarter of 2019 for the period January 1, 2016, through December 31, 2018.

## Schedule of Significant Actuarial Assumptions 2021

*As of December 31, 2021*

| | City Plan | Staff Plan |
|---|---|---|
| **Actuarial Cost Method** | Entry Age Normal | Entry Age Normal |
| **Amortization Method** | Level Percentage of Payroll, 30-year closed beginning in 2018 | Leveled Dollar, Layered |
| **Remaining Amortization Perioc** | 27 years | 30 years for new layers |
| **Asset Valuation Method** | Five-year smoothed fair value | Five-year smoothed fair value |
| **Inflation** | 2.50% | 2.50% |
| **Salary Increases** | 3.25% - 28.25% | 2.75% - 5.35% |
| **Investment Rate of Return** | 7.00% | 7.00% |
| **Retirement Age** | Experience-based table of rates based on job classification and number of years since first retirement eligibility. | Experience-based table of rates based on job classification and number of years since first retirement eligibility. |
| **Mortality** | PubG-2010 Mortality Tables for General Employees and PubS-2010 Healthy Retiree Mortality Table for Police Officers and Firefighters. Generational mortality improvements from the year 2010 using the ultimate mortality improvements rates in the 2014-2019 MP tables. | PubG-2010 Mortality Tables. Generational mortality improvements from the year 2010 using the ultimate mortality improvements rates in the 2014-2019 MP tables. |
| **Cost-of-Living Adjustment** | A 2% cost-of-living adjustment (COLA) is assumed for all members in the guaranteed COLA program. No COLAs are assumed for members with a variable COLA. Timing of conditional Ad-Hoc COLAs is based on an open group projection. | 4.0% COLAs are assumed for members participating in the Ad-Hoc COLA program. |

### Expected Return Arithmetic Basis

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2022, and 2021, are summarized in the following tables:

## Target Asset Allocation and Arithmetic Real Rate of Return

*As of September 30*

| | 2022 | | 2021 | |
|---|---|---|---|---|
| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return | Target Allocation | Long-Term Expected Real Rate of Return |
| Global Equity | 42.00% | 5.70% | 45.00% | 6.81% |
| Fixed Income | 16.00% | 2.20% | 19.00% | 1.51% |
| Real Return | 3.00% | 6.60% | 2.00% | 5.25% |
| Real Estate | 10.00% | 6.50% | 8.00% | 4.88% |
| Absolute Return | 10.00% | 3.80% | 10.00% | 2.61% |
| Private Equity | 18.00% | 10.50% | 15.00% | 8.00% |
| Cash | 1.00% | 0.80% | 1.00% | -0.50% |
| **Total** | 100.00% | | 100.00% | |

### Sensitivity of Net Pension Liability

The following tables present the net pension liability of the City Plan and the Staff Plan using their respective discount rates in 2022 and 2021, plus or minus 1%.
The City Plan and the Staff Plan were calculated using the expected rate return of 7.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage-point lower 6.00% or one percentage-point higher 8.00% than the current rate.

## Sensitivity of Net Pension Liability to Changes in Discount Rate

*Fort Worth Employees' Retiirement Fund - Years Ended September 30*

| | | City Plan | | Staff Plan | |
|---|---|---|---|---|---|
| **Net Pension Liability** | | **2022** | **2021** | **2022** | **2021** |
| **1% Decrease** | **6.00%** | $ 3,146,635,982 | $ 2,662,326,996 | $ 5,016,214 | $ 3,431,426 |
| **Discount Rate** | **7.00%** | $ 2,535,046,181 | 2,062,435,606 | 3,392,813 | 1,946,930 |
| **1% Increase** | **8.00%** | $ 2,027,061,400 | 1,564,823,142 | 2,063,335 | 732,800 |

## Note 4. Fair Value Measurement (GASB 72)

The Fund categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The three levels of the fair value hierarchy are based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable. Level 3 valuations are derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. Investments that use inputs that are of different levels are categorized based on the lowest level of input used to determine the fair value of the investment.

Equity investments that are classified as Level 1 are valued using prices quoted in active markets for those securities. Level 1 debt securities are US Treasuries. Commingled debt funds that are publicly traded are also included in Level 1.

Debt and derivative securities classified as Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. These debt and derivative securities have non-proprietary information that was readily available to market participants, from independent sources, which are known to be actively involved in the market. Cash and cash equivalents are short-term investments valued based on cost and accrued interest which approximates fair value. Equity securities classified as Level 2 are derived from associated traded security values or convertible securities valued similar to debt securities through a bid evaluation process.

Debt and derivative securities classified in Level 3 are valued similar to Level 2 securities but have limited bids, limited trade information, limited trade activity, pricing from multiple sources but differences in prices above an acceptable level or pricing provided by a single source. Equity securities classified as Level 3 have limited trade information. These securities are priced off last trade price or estimated off recent trades and corporate actions.

Assets listed in the Investments Measured at NAV (Net Asset Value) table are invested with managers in structures that the Fund receives values for shares held in the investment structure with the manager. The liquidity of these structures is listed in the table.

# Financial Statement Notes

**Equity Investments –** This consists of two Commingled Global Equity Funds that are passive institutional investment funds that invest in global equities diversified across all sectors focused on large to mid-cap equities. One of the global equity funds is based on a cap weighted MSCI ACWI index and the second fund tracks the investment results of the Russell 1000 Growth Index, composed of large- and mi-capitalization U.S. equities that exhibit growth characteristics. There is also one active Commingled Emerging Market Equity Fund that is an institutional investment fund that invests in emerging market equities diversified across all sectors focused on large to mid-cap equities.

**Absolute Return Funds –** This category consists of several different styles of funds as well as different liquidity structures. When redeeming from these funds, there is typically a notice period ranging from one to three months' notice and funds can hold back a small portion of the assets until an annual audit is conducted. In some cases, mangers designate particular investments as longer hold periods than the funds liquidity schedule, in these cases they side pocket the investment, and these assets are not available immediately upon redemption.

Equity Long/Short funds include investments in two funds. Equity long/short funds maintain some level of market exposure by investing in US or global equities both long and short with the level of exposure varying over time.

Event-driven funds include investments in three funds. These funds seek to gain an advantage from pricing inefficiencies that may arise based on corporate actions or events which may change the nature of the underlying investment. The nature of event driven investments often restricts the liquidity of those investments. Multi-Strategy funds invest in multiple strategies in order to diversify risks and reduce volatility. The four funds in this category have been redeemed, with the remaining assets either audit holdback or side-pocketed assets waiting for liquidation.

Relative Value funds include investments in two funds in this category for 2021. Relative Value funds seek returns by identifying mispricing of related securities or financial instruments.

**Alternative Assets –** This category consists of limited partnership structures that invest in companies or real estate which allow for limited or no liquidity for the investor. Private Equity partnerships consists of funds that invest in buyouts, growth equity, venture capital, special situations, mezzanine, and distressed debt. There are 89 partnerships in this category and these partnerships are typically structured with a life from 7-12 years and are considered illiquid.

As investments are sold out of the partnerships, assets are returned to the investors. These funds' fair value is determined using net asset values one quarter in arears and adjusted for cash flows of the most recent quarter. There are three investments in

Real Estate - Core partnerships which invest in highly leased lower leverage properties that provide consistent income to the investors. These funds allow quarterly liquidity to the investors.

A redemption has been submitted from one of these managers, however a gate has been implemented by the manager restricting the flow of redemption proceeds as the manager pursues liquidation of some of the fund assets to meet the investors that have requested redemptions.

**Real Estate –** Non-Core partnerships invest in properties that require some kind of development or improvements to improve the position of the property. There are 23 partnerships in this category and these partnerships are typically structured with a life from 7-12 years and are considered illiquid. As properties are sold out of the partnership, assets are returned to the investors. These funds fair value is determined using net asset values one quarter in arears and adjusted for cash flows of the most recent quarter.

# Investments and Derivative Instruments Measured at Fair Value 2022

*September 30, 2022*

| Investments by Fair Value Level | Fair Value | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| **Short-Term Securities** | $ 389,349,858 | $ 8,313,122 | $ 381,036,736 | $ - |
| **Debt Securities** | | | | |
| Collateralized Debt Obligations | 38,503,338 | - | 26,840,194 | 11,663,144 |
| Commercial Mortgage-Backed Securities | 20,338,709 | - | 15,949,157 | 4,389,552 |
| Corporates | 128,630,331 | - | 128,039,675 | 590,656 |
| Debt Other | 32,605,573 | 32,601,173 | 4,400 | - |
| Exchange Traded Funds (ETF) | 37,491,708 | 37,491,708 | - | - |
| Municipals | 6,008,419 | - | 6,008,419 | - |
| Non U.S. Government | 4,059,341 | - | 4,059,341 | - |
| U.S. Government Agencies | 80,482,922 | - | 75,494,674 | 4,988,248 |
| U.S. Treasuries | 94,014,315 | 94,014,315 | - | - |
| **Total Debt Securities** | 442,134,656 | 164,107,196 | 256,395,860 | 21,631,600 |
| **Equity Securities** | | | | |
| Communication Services | 7,806,934 | 7,244,484 | 562,450 | - |
| Consumer Discretionary | 22,360,552 | 22,228,500 | - | 132,052 |
| Consumer Staples | 7,857,987 | 7,857,987 | - | - |
| Energy | 39,605,559 | 39,605,559 | - | - |
| Equity Other | 16,377,596 | 16,377,596 | - | - |
| Exchange Traded Funds (ETF) | 433,771,662 | 433,771,662 | - | - |
| Financials | 20,498,989 | 20,498,989 | - | - |
| Health Care | 27,663,283 | 27,663,283 | - | - |
| Industrials | 25,647,625 | 25,347,940 | - | 299,685 |
| Information Technology | 26,922,186 | 26,922,186 | - | - |
| Materials | 7,054,823 | 7,054,823 | - | - |
| Real Estate | 4,327,152 | 4,327,152 | - | - |
| Utilities | 3,662,921 | 3,662,921 | - | - |
| **Total Equity Securities** | 643,557,269 | 642,563,082 | 562,450 | 431,737 |
| **Investments Measured at Net Asset Value** | | | | |
| Commingled Global Equity Fund | 363,986,100 | | | |
| Commingled Emerging Market Equity Fund | 49,534,344 | | | |
| Absolute Return | 190,379,664 | | | |
| Private Equity | 340,903,741 | | | |
| Private Credit | 22,088,507 | | | |
| Real Estate - Core | 189,922,588 | | | |
| Real Estate - Non Core | 188,345,376 | | | |
| **Total Investments Measured at Net Asset Value** | **1,345,160,320** | | | |
| **Total Investments by Fair Value Level** | **$ 2,820,202,103** | **$ 814,983,400** | **$ 637,995,046** | **$ 22,063,337** |
| **Investment Derivative Instruments** | | | | |
| Swaps | $ (182,788) | $ (182,788) | $ - | $ - |
| Rights and Warrants | 19,445 | 19,445 | - | - |
| Futures | (134,275) | (134,275) | - | - |
| FX Forwards | 877,775 | - | 877,775 | |
| **Total Investment Derivative Instruments** | **$ 580,157** | **$ (297,618)** | **$ 877,775** | **$ -** |

# Investments Measured at NAV 2022

*September 30, 2022*

| Investments Measured at Net Asset Value | Fair Value | Unfunded Commitments | Redemption Frequency (if Currently Eligible) | Redemption Notice Period |
|---|---|---|---|---|
| **Equity Investments** | | | | |
| Commingled Global Equity Fund | 363,986,100 | $ - | Daily | 1 day |
| Commingled Emerging Market Equity Fund | 49,534,344 | - | Daily | 1 day |
| **Total Equity Investments** | 413,520,444 | - | | |
| | | | | |
| **Absolute Return** | | | | |
| Directional | 31,312,060 | - | Quarterly | 75 days |
| Equity Long/Short | 49,353,768 | - | Quarterly | 45 days |
| Event Driven | 107,551,843 | - | Quarterly, Annually, 3 years | 45-90 days |
| Multi-Strategy | 2,161,993 | - | Annually, Biennial | 45-90 days |
| **Total Absolute Return Investments** | 190,379,664 | - | | |
| | | | | |
| **Other Assets at Net Asset Value** | | | | |
| Private Equity | 340,903,741 | 193,595,555 | Not eligible | N/A |
| Private Credit | 22,088,507 | 62,155,614 | Not eligible | N/A |
| Real Estate - Core | 189,922,588 | - | Quarterly | 60-90 days |
| Real Estate - Non Core | 188,345,376 | 95,731,900 | Not eligible | N/A |
| **Total Other Assets at Net Asset Value** | 741,260,212 | 351,483,069 | | |
| **Total Investments Measured at Net Asset Value** | **$ 1,345,160,320** | **$ 351,483,069** | | |

# Investments and Derivative Instruments Measured at Fair Value 2021

*September 30. 2021*

| Investments by Fair Value Level | Fair Value | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| **Short-Term Securities** | $ 281,585,277 | $ 27,805,264 | $ 253,780,013 | $ - |
| **Debt Securities** | | | | |
| Collateralized Debt Obligations | 28,932,205 | - | 16,734,978 | 12,197,227 |
| Commercial Mortgage-Backed Securities | 11,813,392 | 8,491,226 | 3,322,166 | - |
| Corporates | 182,369,321 | - | 181,952,302 | 417,019 |
| Debt Other | 99,813,049 | 99,455,148 | 357,901 | - |
| Municipals | 7,940,994 | - | 7,487,072 | 453,922 |
| Non U.S. Government | 12,582,119 | - | 12,582,119 | - |
| U.S. Government Agencies | 90,878,711 | - | 84,852,304 | 6,026,407 |
| U.S. Treasuries | 131,159,625 | 131,159,625 | - | - |
| **Total Debt Securities** | 565,489,416 | 239,105,999 | 307,288,842 | 19,094,575 |
| **Equity Securities** | | | | |
| Communication Services | 12,902,981 | 12,337,596 | 565,385 | - |
| Consumer Discretionary | 50,911,295 | 50,911,295 | - | - |
| Consumer Staples | 21,347,033 | 21,347,033 | - | - |
| Energy | 36,494,442 | 36,494,442 | - | - |
| Equity Other | 23,953,170 | 23,953,170 | - | - |
| Financials | 55,982,622 | 55,982,622 | - | - |
| Health Care | 26,928,008 | 26,928,008 | - | - |
| Industrials | 58,538,664 | 58,538,652 | - | 12 |
| Information Technology | 40,166,531 | 40,166,531 | - | - |
| Materials | 18,736,114 | 18,736,114 | - | - |
| Real Estate | 15,920,902 | 15,920,902 | - | - |
| Utilities | 9,487,507 | 9,487,507 | - | - |
| **Total Equity Securities** | 371,369,269 | 370,803,872 | 565,385 | 12 |
| **Investments Measured at Net Asset Value** | | | | |
| Commingled Global Equity Fund | 786,854,386 | | | |
| Commingled Emerging Market Equity Fund | 71,462,701 | | | |
| Absolute Return | 265,551,968 | | | |
| Private Equity | 352,737,038 | | | |
| Private Credit | 4,724,967 | | | |
| Real Estate - Core | 151,272,237 | | | |
| Real Estate | 164,381,396 | | | |
| **Total Investments Measured at Net Asset Value** | **1,796,984,693** | | | |
| **Total Investments by Fair Value Level** | **$ 3,015,428,655** | **$ 637,715,135** | **$ 561,634,240** | **$ 19,094,587** |
| **Investment Derivative Instruments** | | | | |
| Swaps | $ 920,984 | $ - | $ 920,984 | $ - |
| Rights and Warrants | 55,032 | - | - | 55,032 |
| Options | (714) | - | (714) | - |
| FX Forwards | (43,679) | - | (43,679) | - |
| **Total Investment Derivative Instruments** | **$ 931,623** | **$ -** | **$ 876,591** | **$ 55,032** |

# Investments Measured at NAV 2021

*September 30, 2021*

| Investments Measured at Net Asset Value | Fair Value | Unfunded Commitments | Redemption Frequency (if Currently Eligible) | Redemption Notice Period |
|---|---|---|---|---|
| **Equity Investments** | | | | |
| Commingled Global Equity Fund | $ 786,854,386 | $ - | Daily | 1 day |
| Commingled Emerging Market Equity Fund | 71,462,701 | - | Daily | 1 day |
| **Total Equity Investments** | 858,317,087 | - | | |
| | | | | |
| **Absolute Return** | | | | |
| Directional | 25,260,030 | - | Quarterly | 75 days |
| Equity Long/Short | 55,391,408 | - | Quarterly | 45 days |
| Event Driven | 150,107,454 | - | Quarterly, Annually, 3 years | 45-90 days |
| Multi-Strategy | 2,155,802 | - | Annually, Biennial | 45-90 days |
| Relative Value | 32,637,274 | - | Quarterly | 60-90 days |
| **Total Absolute Return Investments** | 265,551,968 | - | | |
| | | | | |
| **Other Assets at Net Asset Value** | | | | |
| Private Equity | 352,737,038 | 126,178,098 | Not eligible | N/A |
| Private Credit | 4,724,967 | 5,000,000 | Not eligible | N/A |
| Real Estate - Core | 151,272,237 | - | Quarterly | 60-90 days |
| Real Estate | 164,381,396 | 77,495,172 | Not eligible | N/A |
| **Total Other Assets at Net Asset Value** | 673,115,638 | 208,673,270 | | |
| **Total Investments Measured at Net Asset Value** | **$ 1,796,984,693** | **$ 208,673,270** | | |

## Note 5. Investments

Substantially all of the Fund's investments are held by its custodian. The Retirement Fund Board of Trustees authorizes various external managers to manage investments within certain policies as set forth by the Board. These policies mandate a diversified portfolio, which includes investments, either directly or in commingled accounts, in real estate, fixed income securities, and equity securities.

Governmental Accounting Standards Board Statement No. 40 "Deposit and Investment Risk Disclosures – an amendment to GASB Statement No. 3" (GASB 40), addresses common deposit and investment risks including custodial credit risk, credit risk, concentration of credit risk, interest rate risk, and foreign currency risk. Required disclosures related to these risks are presented below:

### Custodial Credit Risk

Custodial credit risk is the risk that in the event of failure of the counterparty, the Fund would not be able to recover the value of its investments. The Fund does not have a formal policy for custodial credit risk. As of September 30, 2022, and 2021, all investments are registered in the name of the Employees' Retirement Fund of the City of Fort Worth or in the name of the Fund's custodian, established through a master trust custodial agreement, with the exception of investments in alternative investments and commingled funds.

### Credit Risk of Debt Securities

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Fund's investment policy requires that fixed income securities have a weighted average of no less than investment grade, as rated by Moody's or Standard & Poor's (S&P). However, the policy does provide for high yield fixed income managers to invest in securities with S&P ratings between BB+ and CCC. The policy limits 25% of a manager's portfolio to be rated CCC or lower. Unrated securities should be limited to no more than 20% of a manager's portfolio.

GASB 40 does not require disclosure of US government obligations explicitly guaranteed. The table on the following page shows the Fund's investments as of September 30, 2022, and 2021.

# Credit Risk Analysis 2022 and 2021

*September 30, 2022 and 2021*

| Investment Type | S&P Rating | 2022 Fair Value | 2021 Fair Value |
|---|---|---|---|
| Asset and Mortgage Backed Obligations | AAA | $ 33,349,574 | $ 28,681,254 |
| Asset and Mortgage Backed Obligations | AA | 3,520,525 | 768,313 |
| Asset and Mortgage Backed Obligations | A | 7,403,994 | 2,292,666 |
| Asset and Mortgage Backed Obligations | BBB | 2,477,808 | 1,684,511 |
| Asset and Mortgage Backed Obligations | BB | 316,497 | 956,462 |
| Asset and Mortgage Backed Obligations | B | 577,596 | 940,812 |
| Asset and Mortgage Backed Obligations | CCC | 359,698 | 508,944 |
| Asset and Mortgage Backed Obligations | NR | 10,836,355 | 4,912,635 |
| **Total Asset and Mortgage Backed Obligations** | | 58,842,047 | 40,745,597 |
| | | | |
| Corporate Obligations | AAA | 943,410 | 67,767 |
| Corporate Obligations | AA | 2,129,390 | 1,144,326 |
| Corporate Obligations | A | 35,096,130 | 37,729,297 |
| Corporate Obligations | BBB | 51,420,138 | 87,178,848 |
| Corporate Obligations | BB | 20,595,960 | 28,176,823 |
| Corporate Obligations | B | 13,599,530 | 20,011,225 |
| Corporate Obligations | CCC | 2,949,299 | 6,822,619 |
| Corporate Obligations | CC | - | 50,969 |
| Corporate Obligations | D | 239,832 | - |
| Corporate Obligations | NR | 1,661,042 | 1,545,348 |
| **Total Corporate Obligations** | | 128,634,731 | 182,727,222 |
| | | | |
| Government Agency Obligations | AAA | 80,025,246 | 91,462,877 |
| Government Agency Obligations | AA | 4,401,924 | 5,587,529 |
| Government Agency Obligations | A | 2,064,171 | 1,315,377 |
| Government Agency Obligations | NR | - | 453,922 |
| **Total Government Agency Obligations** | | 86,491,341 | 98,819,705 |

# Credit Risk Analysis, Cont.

*September 30, 2022 and 2021*

| Investment Type | S&P Rating | 2022 Fair Value | 2021 Fair Value |
|---|---|---|---|
| International Obligations | AAA | $ 857,747 | $ - |
| International Obligations | AA | 694,007 | 1,890,963 |
| International Obligations | A | 369,875 | 1,525,554 |
| International Obligations | BBB | 403,434 | 1,731,686 |
| International Obligations | BB | 1,734,278 | 449,421 |
| International Obligations | NR | - | 6,984,495 |
| **Total International Obligations** | | 4,059,341 | 12,582,119 |
| | | | |
| Securities Lending Collateral | AAA | 4,171,114 | 2,141,018 |
| Securities Lending Collateral | AA | 82,276,087 | 28,518,426 |
| Securities Lending Collateral | A | 218,841,836 | 121,041,486 |
| Securities Lending Collateral | BBB | - | 2,788,546 |
| Securities Lending Collateral | NR | 926,762 | 19,933,386 |
| **Total Securities Lending Collateral** | | 306,215,799 | 174,422,862 |
| | | | |
| **Total Fixed Income Subject to Credit Risk** | | 584,243,259 | 509,297,505 |
| | | | |
| U.S. Treasuries (no credit risk) | | 94,014,315 | 131,159,625 |
| Short-term Marketable Securities | | 83,134,059 | 107,162,415 |
| Corporate Stock | | 259,319,951 | 442,831,970 |
| Alternative Investments | | 553,371,912 | 623,013,973 |
| Commingled Funds | | 774,855,237 | 1,201,963,167 |
| Exchange Traded Funds (ETF) | | 471,263,370 | - |
| **Total Fair Value of Investments** | | **$ 2,820,202,103** | **$ 3,015,428,655** |

### Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the Fund's investment in a single issuer. The Fund's investment policy addresses concentration limits on a manager basis. As of September 30, 2022, the Fund did not have any investments where the underlying assets which were registered in the Fund's name totaled more than 5% of assets of the Fund.

### Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. The Fund does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from changing interest rates. The maturities of investments subject to interest rate risk are as follows:

## Interest Rate Risk 2022

*Septmber 30, 2022*

| Investment Type | Less Than 1 Year | 1-5 Years | 6-10 Years | More Than 10 Years | Total Fair Value |
|---|---|---|---|---|---|
| Asset and Mortgage | $ - | $ 5,157,880 | $ 6,271,001 | $ 47,413,166 | $ 58,842,047 |
| Corporate Obligations | 1,406,734 | 62,892,761 | 46,026,564 | 18,308,672 | 128,634,731 |
| Government Obligations | - | 4,512,189 | 456,645 | 81,522,507 | 86,491,341 |
| International Obligations | - | 1,734,278 | 1,631,056 | 694,007 | 4,059,341 |
| Securities Lending Collateral | 306,215,799 | - | - | - | 306,215,799 |
| U.S. Treasuries | 991,289 | 12,487,224 | 41,231,727 | 39,304,075 | 94,014,315 |
| **Total** | **$ 308,613,822** | **$ 86,784,332** | **$ 95,616,993** | **$ 187,242,427** | **$ 678,257,574** |

## Interest Rate Risk 2021

*Septmber 30, 2021*

| Investment Type | Less Than 1 Year | 1-5 Years | 6-10 Years | More Than 10 Years | Total Fair Value |
|---|---|---|---|---|---|
| Asset and Mortgage | $ - | $ 6,284,211 | $ 6,026,842 | $ 28,434,544 | $ 40,745,597 |
| Corporate Obligations | 4,474,069 | 80,572,538 | 72,402,173 | 25,278,442 | 182,727,222 |
| Government Obligations | - | 7,182,986 | 10,121 | 91,626,598 | 98,819,705 |
| International Obligations | 6,984,495 | - | 2,897,663 | 2,699,961 | 12,582,119 |
| Securities Lending Collateral | 174,422,862 | - | - | - | 174,422,862 |
| U.S. Treasuries | - | 57,408,740 | 29,908,046 | 43,842,839 | 131,159,625 |
| **Total** | **$ 185,881,426** | **$ 151,448,475** | **$ 111,244,845** | **$ 191,882,384** | **$ 640,457,130** |

### Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The Fund has no formal investment policy with regard to foreign currency risk as it is considered an intrinsic risk associated with the investment strategy. The Fund's exposure to foreign currency risk on September 30, 2022, and 2021, is presented in the following table.

# Foreign Currency Exposure

| Currency | September 30,2022 Debt | Equity | Alternatives | Total | September 30, 2021 Debt | Equity | Alternatives | Total |
|---|---|---|---|---|---|---|---|---|
| Argentine Peso | $ 3,986 | $ - | $ - | $ 3,986 | $ 5,187 | $ - | $ - | $ 5,187 |
| Australian Dollar | (1,550,946) | 2,534,398 | - | 983,452 | 1,992,776 | - | - | 1,992,776 |
| Brazilian Real | 483,771 | 1,393,871 | - | 1,877,642 | 1,005,049 | 2,386,820 | - | 3,391,869 |
| British Pound Sterling | (817,646) | 16,809,356 | 136,867 | 16,128,577 | 682,617 | 23,638,807 | 869,901 | 25,191,325 |
| Canadian Dollar | 663 | 6,084,387 | - | 6,085,050 | 719 | 6,811,202 | - | 6,811,921 |
| Chilean Peso | 237 | - | - | 237 | 509,287 | - | - | 509,287 |
| Danish Krone | (98,932) | 5,404,043 | - | 5,305,111 | - | 2,616,503 | - | 2,616,503 |
| Euro Currency Unit | (874,878) | 30,319,245 | 66,366,226 | 95,810,593 | 653,456 | 55,902,728 | 67,961,273 | 124,517,457 |
| HK Offshore Chinese Yuan Renminbi | (3,901) | - | - | (3,901) | 103 | - | - | 103 |
| Hong Kong Dollar | 1,523,015 | 13,698,598 | - | 15,221,613 | 141 | 15,452,344 | - | 15,452,485 |
| Indonesian Rupiah | - | 1,961,082 | - | 1,961,082 | - | 738,478 | - | 738,478 |
| Japanese Yen | 32,260 | 15,082,882 | - | 15,115,142 | 5,906 | 39,071,767 | - | 39,077,673 |
| Mexican New Peso | 15,630 | - | - | 15,630 | 15,297 | - | - | 15,297 |
| New Israeli Shekel | - | - | - | - | - | 702,023 | - | 702,023 |
| New Taiwan Dollar | 31,552 | - | - | 31,552 | 35,956 | 11,540,501 | - | 11,576,457 |
| New Zealand Dollar | 748,471 | - | - | 748,471 | 297 | - | - | 297 |
| Norwegian Krone | 527,489 | 2,190,439 | - | 2,717,928 | - | 3,234,422 | - | 3,234,422 |
| Peruvian Nuevo Sol | (13,969) | - | - | (13,969) | (144,845) | - | - | (144,845) |
| Philippine Peso | - | - | - | - | - | 879,919 | - | 879,919 |
| Polish Zloty | 2,209 | - | - | 2,209 | 96 | - | - | 96 |
| Singapore Dollar | 44 | - | - | 44 | 47 | - | - | 47 |
| South African Rand | (92,813) | - | - | (92,813) | 632 | - | - | 632 |
| South Korean Won | - | 2,321,784 | - | 2,321,784 | (158,057) | 5,172,449 | - | 5,014,392 |
| Swedish Krona | - | 4,026,829 | - | 4,026,829 | - | 7,165,017 | - | 7,165,017 |
| Swiss Franc | 1,291 | 16,118,866 | - | 16,120,157 | 1,362 | 13,772,150 | - | 13,773,512 |
| Thai Baht | - | 1,947,757 | - | 1,947,757 | (343,612) | 3,528,359 | - | 3,184,747 |
| **Total** | **$ (82,466)** | **$ 119,893,536** | **$ 66,503,093** | **$ 186,314,163** | **$ 4,262,414** | **$ 192,613,489** | **$ 68,831,174** | **$ 265,707,077** |

### Foreign Currency Exchange Transactions

To manage the foreign currency exchange risks associated with foreign investments, the Fund enters into forward currency contracts. The Fund had net foreign currency contracts with fair value of approximately $877,775 and $(43,679) on September 30, 2022, and 2021, respectively, which contractually obligates the Fund to deliver currencies at a specified date. The Fund could be exposed to risk of loss if the counterparty is unable to meet the terms of a contract or if the value of currency changes unfavorably. On September 30, 2022, and 2021, the fair value of these contracts is included in due to/from broker.

## Note 6. Derivative Financial Instruments

The Fund's investment managers are permitted to invest in derivatives subject to guidelines established by the Board. Derivatives are financial instruments that derive their value, usefulness, and marketability from an underlying instrument which represents direct ownership of an asset or an obligation of an issuer. The Fund's derivative positions are marked to market daily and managers may only trade with counterparties with a credit rating of A-/A3 as defined by Standard & Poor's (S&P) and Moody's, respectively. Substitution and risk control are the only strategies permitted; speculation is strictly prohibited. Derivatives are carried as a receivable when the fair value is positive and as a payable when the fair value is negative on the Combined Statement of Fiduciary Net Position. Fair value is determined based on quoted market prices, if available, or based on differences in cash flows between the fixed and variable rates in each contract as of the measurement date. Gains and losses from derivatives are included in net investment income. The Fund was in possession of the following types of derivatives on September 30, 2022, and 2021:

### Futures Contracts

A futures contract is a standardized contract between two parties to buy or sell a specified asset of standardized quantity and quality for a price agreed upon today with delivery and payment occurring at a specified future date, the delivery date. The contracts are negotiated at a futures exchange, which acts as an intermediary between the two parties and to minimize the risk of default by either party.

### Forward Contracts

A forward contract represents an agreement to buy or sell an underlying asset at a specified date in the future at a specified price. Payment for the transaction is delayed until the settlement or expiration date. A forward contract is a non-standardized contract that is tailored to each specific transaction. Forward contracts are privately negotiated and are intended to be held until the settlement date. Currency forward contracts are used to control currency exposure and facilitate the settlement of international security purchase and sale transactions.

### Options

Options represent or give buyers the right, but not the obligation, to buy (call) or sell (put) an asset at a preset price over a specified period. The option's price is usually a small percentage of the underlying asset's value. As a buyer of financial options, the Fund receives a premium at the outset of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As a purchaser of financial options, the Fund pays a premium at the outset of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option.

### Rights and Warrants

A right is a special type of option that has a short market life, usually existing for no more than a few weeks. Essentially, rights originate when corporations raise money by issuing new shares of common stock. From an investor's perspective, a right enables a stockholder to buy shares of the new issue at a specified price, over a specified, fairly short time period. Rights not executed by their expiration date cease to exist and become worthless. A warrant is a long-term option that gives the holder the right to buy a certain number of shares of stock in a certain company for a certain period of time. Like most options, warrants are found in the corporate sector of the market. Occasionally, warrants can be used to purchase preferred stock or even bonds, but common stock is the leading redemption vehicle. Warrants, like rights, cease to exist and become worthless if they are not executed by their expiration date.

### Swap Agreements

A swap is an agreement between two or more parties to exchange a sequence of cash flows over a period of time in the future based on an underlying asset. No principal is exchanged at the beginning of the swap. The cash flows the counterparties exchange are tied to a "notional" amount. A swap agreement specifies the time period over which the periodic payments will be exchanged. The fair value represents the gains or losses as of the prior marking-to-market.

The Investment Derivatives schedule that follows reports the fair value and changes in fair value and notional amounts of derivatives outstanding as of September 30, 2022, and 2021.

# Investment Derivatives

*As of September 30, 2022 and 2021*

| Derivative Type | Notional Value | 2022 Fair Value | 2021 Fair Value | Changes in Fair Value |
|---|---|---|---|---|
| Investment Derivatives | | | | |
| Futures Contracts | $ 41,111,898 | $ (134,275) | $ - | $ (134,275) |
| Forward Contracts | 93,165,343 | 877,775 | (43,679) | 921,454 |
| Swap Agreements | 58,235,617 | (182,788) | 920,984 | (1,103,772) |
| Options | - | - | (714) | 714 |
| Rights and Warrants | 18,344 | 19,445 | 55,032 | (35,587) |
| **Totals** | **$ 192,531,202** | **$ 580,157** | **$ 931,623** | **$ (351,466)** |

# Investment Derivatives

*As of September 30, 2021 and 2020*

| Derivative Type | Notional Value | 2021 Fair Value | 2020 Fair Value | Changes in Fair Value |
|---|---|---|---|---|
| Investment Derivatives | | | | |
| Futures Contracts | $ 45,035,764 | $ - | $ - | $ - |
| Forward Contracts | 61,845,316 | (43,679) | 491,333 | (535,012) |
| Swap Agreements | 56,584,637 | 920,984 | (599,652) | 1,520,636 |
| Options | 1,700,000 | (714) | (7,434) | 6,720 |
| Rights and Warrants | 18,344 | 55,032 | 32,469 | 22,563 |
| **Totals** | **$ 165,184,061** | **$ 931,623** | **$ (83,284)** | **$ 1,014,907** |

## Credit Risk

The Fund is exposed to credit risk on investment derivatives that are traded over the counter and reported in asset positions. Derivatives exposed to credit risk include currency forward contracts, rights and warrants, and swap agreements. To minimize credit risk exposure, the Fund's managers monitor the credit ratings of the counterparties. Should there be a counterparty failure, the Fund would be exposed to the loss of the fair value of derivatives that are in the asset positions and any collateral provided to the counterparty, net of the effect of applicable netting arrangements. Netting arrangements provide the Fund with a right of offset in the event of bankruptcy or default by the counterparty. Collateral provided by the counterparty reduces the Fund's credit risk exposure.

The following Credit Risk Analysis schedule discloses the counterparty credit ratings of the Fund's investment derivatives by type, as of September 30, 2022, and 2021. These amounts represent the maximum loss that would be recognized if all counterparties fail to perform as contracted, without respect to any collateral or other security or netting arrangement. The schedule displays the fair value of the investments by credit rating in increasing magnitude of risk. Investments are classified by S&P rating. If the investment does not have an S&P rating, the Moody's rating that corresponds to the S&P rating is used. As of September 30, 2022, and 2021, the Fund's credit risk to these investments is disclosed on the following table:

## Investment Derivatives Credit Risk Analysis 2022

*September 30, 2022*

| Derivative Type | AA | A | BBB | Not Rated | Fair Value |
|---|---|---|---|---|---|
| Futures Contracts | $ - | $ - | $ - | $ (134,275) | $ (134,275) |
| Forwards Contracts | - | - | - | 877,775 | 877,775 |
| Swap Agreements | - | (169,827) | - | (12,961) | (182,788) |
| Rights and Warrants | - | - | - | 19,445 | 19,445 |
| **Total** | **$ -** | **$ (169,827)** | **$ -** | **$ 749,984** | **$ 580,157** |

## Investment Derivatives Credit Risk Analysis 2021

*September 30, 2021*

| Derivative Type | AA | A | BBB | Not Rated | Fair Value |
|---|---|---|---|---|---|
| Forwards Contracts | $ - | $ - | $ - | $ (43,679) | $ (43,679) |
| Swap Agreements | - | 15,696 | - | 905,288 | 920,984 |
| Options | - | (714) | - | - | (714) |
| Rights and Warrants | - | - | - | 55,032 | 55,032 |
| **Total** | **$ -** | **$ 14,982** | **$ -** | **$ 916,641** | **$ 931,623** |

### Interest Rate Risk

The interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Interest rate swaps are an example of an investment that has a fair value that is highly sensitive to interest rate changes. These investments, as of September 30, 2022, and 2021, are disclosed on the following table:

## Investment Derivatives Interest Rate Risk Analysis

*September 30, 2022 and 2021*

| | 2022 | | 2021 | |
|---|---|---|---|---|
| Derivative Type | Total Notional Value | Total Fair Value | Total Notional Value | Total Fair Value |
| Interest Rate Swaps | $ 49,035,617 | $ (142,691) | $ 56,584,637 | $ 920,984 |
| Swaptions | 9,200,000 | (40,097) | - | - |
| **Total** | **$ 58,235,617** | **$ (182,788)** | **$ 56,584,637** | **$ 920,984** |

### Foreign Currency Risk

For those forward contracts and swap agreements that are securities issued by foreign countries and foreign businesses there is an exposure to foreign currency risk. Currency forward contracts represent foreign exchange contracts that are used to control currency exposure and facilitate the settlement of international security purchase and sale transactions. The net exposure column of the following schedule indicates the Fund's net foreign currency risk related to derivatives as of September 30, 2022, and 2021.

All values shown in Note 6 are for the positions that the Fund holds directly. The Fund may also have an indirect exposure to derivatives via its commingled funds and its alternative investments. The Fund owns an interest in the commingled and alternative investment funds which in turn holds the actual positions. Indirect exposures via these types of investments are not shown here.

# Investment Derivatives Foreign Currency Risk Analysis

*September 30, 2022 and 2021*

| | 2022 | | | 2021 | | |
|---|---|---|---|---|---|---|
| Currency | Forward Contracts | Swap Agreements | Net Exposure | Forward Contracts | Swap Agreements | Net Exposure |
| Australian Dollar | $ 3,266 | $ - | $ 3,266 | $ (7,808) | $ - | $ (7,808) |
| Brazilian Real | (11,449) | 69,014 | 57,565 | (290,051) | - | (290,051) |
| British Pound Sterling | 121,025 | 377,367 | 498,392 | 119,891 | 193,834 | 313,725 |
| Canadian Dollar | 2,130 | - | 2,130 | - | - | - |
| Chilean Peso | 152,594 | - | 152,594 | (28,541) | - | (28,541) |
| Chinese Yuan Onshore | 47,825 | - | 47,825 | - | - | - |
| Chinese Yuan Offshore | 9,300 | - | 9,300 | - | - | - |
| Colombian Peso | 36,049 | - | 36,049 | - | - | - |
| Danish Krone | 7,013 | - | 7,013 | - | - | - |
| Euro Currency Unit | 112,237 | (789,582) | (677,345) | 116,283 | 635,824 | 752,107 |
| Hong Kong Dollar | (4,167) | - | (4,167) | - | - | - |
| Indian Rupee | 2,736 | - | 2,736 | - | - | - |
| Israeli New Shekel | 43,858 | - | 43,858 | - | - | - |
| Japanese Yen | 12,428 | 159,047 | 171,475 | 869 | (69,752) | (68,883) |
| Mexican Peso | - | - | - | - | - | - |
| New Zealand Dollar | 164,561 | - | 164,561 | - | - | - |
| Norwegian Krone | 21,238 | - | 21,238 | - | - | - |
| Peruvian Sol | (26,443) | - | (26,443) | 45,678 | - | 45,678 |
| South African Rand | 149,287 | - | 149,287 | - | - | - |
| Swiss Franc | 598 | - | 598 | - | - | - |
| Thai Baht | 33,689 | - | 33,689 | - | - | - |
| **Total** | **$ 877,775** | **$ (184,154)** | **$ 693,621** | **$ (43,679)** | **$ 759,906** | **$ 716,227** |

## Note 7. Securities Lending

The Fund is authorized to contractually lend securities to borrowers in accordance with the policy established by the Board. The Fund is currently contracted with Northern Trust to establish, manage, and administer a securities lending program. Northern Trust facilitates lending the Fund’s domestic and international equity and fixed income securities in return for collateral consisting of cash, U.S. government securities and irrevocable letters of credit issued by banks independent of the borrower. As of September 30, all securities lending collateral held is cash. At a loan’s inception, the value of collateral is equal to 102% for securities of United States issuers, and 105% in the case of securities of non-United States issuers, of the fair value of any securities to be loaned, plus any accrued interest.

Cash collateral is to be invested in government securities, bank and corporate notes, bank certificates of deposit, time deposits, bankers' acceptances, repurchase agreements, commercial paper, and asset-backed securities. The contract with Northern Trust specifies guidelines for allowable investments, maturities, and diversification. The Fund does not have the ability to pledge or sell collateral securities without borrower default. The amount of cash collateral held exceeds the value of the assets on loan on September 30, 2022, and 2021.

The Fund earns income from fees paid by the borrowers and interest earned from investing the cash collateral. The contract requires the custodian bank to purchase any loaned securities with collateral provided, however, if the collateral is insufficient to cover the loss, the Fund is liable for the loss. The cash collateral received on each loan was invested in the collateral pool at Northern Trust. Because the loans are terminable at will, their duration generally did not match the duration of the investments made with cash collateral.

In addition, the Plan had no credit risk exposure to borrowers. As of September 30, 2022, and 2021, the value of the cash collateral held was $306,215,799 and $174,422,862, respectively, and the value of securities out on loan on September 30, 2022, and 2021, was $297,796,821 and $170,113,278, respectively. The Fund earned $611,481 and $252,910 net, on its securities lending activity for the fiscal years ended September 30, 2022, and 2021, respectively.

## Note 8. Tax Status

The City Plan obtained its latest determination letter on December 8, 2014, in which the Internal Revenue Service (IRS) stated that the Fund, as then designed, was in compliance with the applicable requirements of the Internal Revenue Code (IRC). The Staff plan obtained its latest determination letter on April 7, 2017, in which the Internal Revenue Service (IRS) stated that the Fund, as then designed, was in compliance with the applicable requirements of the Internal Revenue Code (IRC).

No federal, state, or local income taxes have been provided on the operations of the Fund since the IRS approved the Fund determination letter to be designed and operated in compliance with the applicable requirements of the IRC. Therefore, no provision for income taxes has been included in the Fund's Combined Financial Statements.

The Fund evaluates tax positions taken or expected to be taken in the course of preparing the Fund's tax returns to determine whether the tax positions are "more-likely-than-not" of being sustained by the applicable tax authority. Tax positions deemed to meet a more-likely-than-not threshold should be recorded as a tax expense in the current year. The Board has analyzed the Fund's tax positions for all open tax years and has concluded that, as of September 30, 2022, and 2021, no provision for income taxes is required in the Combined Financial Statements.

As of and during the year ended September 30, 2022, and 2021, the Fund did not have any liabilities for any unrecognized tax positions. The Fund recognizes interest and penalties, if any, related to unrecognized tax positions as tax expense in the statements of changes in fiduciary net position. During the year, the Fund did not incur any tax related interest or penalties.

## Note 9. Plan Termination

### City Plan

While the City has not expressed any intent to discontinue its contributions, it may terminate the City Plan at any time. In the event the City Plan terminates, the net position shall be allocated among the participants and beneficiaries of the City Plan as follows:

- First, benefits that former employees or their beneficiaries are receiving or that employees eligible for retirement would have been receiving had they retired
- Next, other vested benefits
- Finally, all other accrued benefits

If assets remain after the above allocations, they shall be distributed to the City.

### Staff Plan

While the Board has not expressed any intent to discontinue its contributions, it may terminate the Staff Plan at any time. In the event the Staff Plan terminates, the net position shall be allocated among the participants and beneficiaries of the Staff Plan as follows:

- First, benefits that former employees or their beneficiaries are receiving or that employees eligible for retirement would have been receiving had they retired
- Next, other vested benefits
- Finally, all other accrued benefits

If assets remain after the above allocations, they shall be distributed to the Board.

## Note 10. Subsequent Events

As of the issuance of this report, there are no subsequent events to report.

# Required Supplementary Information

# Schedule of Changes in Net Pension Liability: City Plan

*Years ended September 30; unaudited*

| City Plan | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|
| **Total Pension Liability** | | | | |
| Service Cost | $ 92,189,100 | $ 85,592,978 | $ 98,173,277 | $ 123,792,923 |
| Interest | 234,701,479 | 246,292,813 | 252,240,071 | 251,645,608 |
| Benefit Changes | 110,187,898 | (1,828,408) | - | - |
| Difference Between Actual and Expected Experience | (106,951,077) | (10,817,086) | 4,177,731 | 186,853,574 |
| Assumption Changes | - | 364,494,287 | 1,022,192,887 | (327,287,818) |
| Benefit Payments and Refunds | (161,158,600) | (167,065,955) | (185,819,878) | (198,611,599) |
| **Net Change in Total Pension Liability** | 168,968,800 | 516,668,629 | 1,190,964,088 | 36,392,688 |
| **Total Pension Liability - Beginning** | 3,441,705,595 | 3,610,674,395 | 4,127,343,024 | 5,318,307,112 |
| **Total Pension Liability - Ending** | $ 3,610,674,395 | $ 4,127,343,024 | $ 5,318,307,112 | $ 5,354,699,800 |
| **Plan Fiduciary Net Position** | | | | |
| Contributions - Member | $ 31,929,289 | $ 32,541,773 | $ 33,977,411 | $ 35,963,200 |
| Contributions - Employer | 78,165,049 | 80,820,598 | 84,746,991 | 89,408,134 |
| Net Investment Income (Loss) | 159,994,300 | (20,635,550) | 166,305,791 | 250,912,773 |
| Benefit Payments and Refunds | (161,158,600) | (167,065,955) | (185,819,878) | (198,611,599) |
| Administrative Expense | (3,738,927) | (3,823,331) | (4,521,503) | (4,867,413) |
| Other | (130,935) | (143,220) | (241,634) | - |
| **Net Change in Plan Fiduciary Net Position** | $ 105,060,176 | $ (78,305,685) | $ 94,447,178 | $ 172,805,095 |
| Plan Fiduciary Net Position - Beginning | $ 1,976,515,071 | $ 2,081,575,247 | $ 2,003,269,563 | $ 2,097,716,741 |
| Plan Fiduciary Net Position - Ending | 2,081,575,247 | 2,003,269,563 | 2,097,716,741 | 2,270,521,836 |
| **Net Pension Liability Ending** | **$ 1,529,099,148** | **$ 2,124,073,461** | **$ 3,220,590,371** | **$ 3,084,177,964** |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 57.65% | 48.54% | 39.44% | 42.40% |
| Covered Payroll | $ 391,216,461 | $ 404,507,497 | $ 424,371,512 | $ 447,488,158 |
| Net Pension Liability as a Percentage of Covered Payroll | 390.86% | 525.10% | 758.91% | 689.22% |

Please see notes to Required Supplementary Information.

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# Schedule of Changes in Net Pension Liability: City Plan

*Years ended September 30; unaudited*

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| **Total Pension Liability** | | | | | |
| Service Cost | $ 113,947,000 | $ 111,950,763 | $ 70,650,037 | $ 69,156,958 | $ 73,040,581 |
| Interest | 274,954,967 | 290,020,564 | 316,896,226 | 327,263,445 | 338,326,248 |
| Benefit Changes | - | (1,543,331,519) | - | - | - |
| Difference Between Actual and Expected Experience | 62,114,429 | (18,487,311) | (476,723) | 12,410,191 | 230,544 |
| Assumption Changes | (165,300,608) | 536,393,855 | - | - | - |
| Benefit Payments and Refunds | (217,801,696) | (227,239,084) | (230,964,518) | (243,982,126) | (265,366,226) |
| **Net Change in Total Pension Liability** | 67,914,092 | (850,692,732) | 156,105,022 | 164,848,468 | 146,231,147 |
| **Total Pension Liability - Beginning** | 5,354,699,800 | 5,422,613,892 | 4,571,921,160 | 4,728,026,182 | 4,892,874,650 |
| **Total Pension Liability - Ending** | $ 5,422,613,892 | $ 4,571,921,160 | $ 4,728,026,182 | $ 4,892,874,650 | $ 5,039,105,797 |
| **Plan Fiduciary Net Position** | | | | | |
| Contributions - Member | $ 37,618,303 | $ 40,634,725 | $ 56,250,684 | $ 60,281,553 | $ 65,593,975 |
| Contributions - Employer | 93,504,064 | 113,109,911 | 124,743,976 | 128,046,174 | 137,012,301 |
| Net Investment Income (Loss) | 145,408,403 | 67,729,548 | 110,570,539 | 524,024,718 | (256,764,105) |
| Benefit Payments and Refunds | (217,801,696) | (227,239,084) | (230,964,518) | (243,982,126) | (265,366,226) |
| Administrative Expense | (4,915,335) | (5,707,390) | (5,303,296) | (6,091,945) | (6,855,373) |
| Other | - | - | - | - | - |
| **Net Change in Plan Fiduciary Net Position** | $ 53,813,739 | $ (11,472,290) | $ 55,297,385 | $ 462,278,374 | $ (326,379,428) |
| Plan Fiduciary Net Position - Beginning | $ 2,270,521,836 | $ 2,324,335,575 | $ 2,312,863,285 | $ 2,368,160,670 | $ 2,830,439,044 |
| Plan Fiduciary Net Position - Ending | 2,324,335,575 | 2,312,863,285 | 2,368,160,670 | 2,830,439,044 | 2,504,059,616 |
| **Net Pension Liability Ending** | **$ 3,098,278,317** | **$ 2,259,057,875** | **$ 2,359,865,512** | **$ 2,062,435,606** | **$ 2,535,046,181** |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 42.86% | 50.59% | 50.09% | 57.85% | 49.69% |
| Covered Payroll | $ 467,754,197 | $ 484,410,754 | $ 509,575,065 | $ 523,064,436 | $ 559,690,772 |
| Net Pension Liability as a Percentage of Covered Payroll | 662.37% | 466.35% | 463.10% | 394.30% | 452.94% |

Please see notes to Required Supplementary Information.

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# Schedule of Changes in Net Pension Liability: Staff Plan

*Years ended September 30; unaudited*

| Staff Plan | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|
| **Total Pension Liability** | | | | |
| Service Cost | $ 286,870 | $ 303,626 | $ 284,929 | $ 252,967 |
| Interest | 252,813 | 337,668 | 335,753 | 422,610 |
| Benefit Changes | - | - | (786,759) | - |
| Difference Between Actual and Expected Experience | 510,965 | (650,524) | 300,333 | (159,693) |
| Assumption Changes | - | - | 965,041 | - |
| Benefit Payments and Refunds | - | (16,747) | (11,754) | (35,933) |
| **Net Change in Total Pension Liability** | 1,050,648 | (25,977) | 1,087,543 | 479,951 |
| **Total Pension Liability - Beginning** | 3,105,816 | 4,156,464 | 4,130,487 | 5,218,030 |
| **Total Pension Liability - Ending** | $ 4,156,464 | $ 4,130,487 | $ 5,218,030 | $ 5,697,981 |
| **Plan Fiduciary Net Position** | | | | |
| Contributions - Member | $ 296,093 | $ 126,984 | $ 130,973 | $ 124,339 |
| Contributions - Employer | 225,536 | 242,270 | 249,881 | 237,224 |
| Net Investment Income(Loss) | 209,544 | (30,772) | 286,116 | 500,246 |
| Benefit Payments and Refunds | - | (16,747) | (11,754) | (35,933) |
| Administrative Expense | (4,897) | (5,702) | (7,779) | (14,988) |
| Other | (172) | (214) | (19,791) | - |
| **Net Change in Plan Fiduciary Net Position** | $ 726,104 | $ 315,819 | $ 627,646 | $ 810,888 |
| Plan Fiduciary Net Position - Beginning | $ 2,046,297 | $ 2,772,401 | $ 3,088,220 | $ 3,715,866 |
| Plan Fiduciary Net Position - Ending | 2,772,401 | 3,088,220 | 3,715,866 | 4,526,754 |
| **Net Pension Liability Ending** | **$ 1,384,063** | **$ 1,042,267** | **$ 1,502,164** | **$ 1,171,227** |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 66.70% | 74.77% | 71.21% | 79.44% |
| Covered Payroll | $ 1,432,884 | $ 1,539,199 | $ 1,587,554 | $ 1,507,141 |
| Net Pension Liability as a Percentage of Covered Payroll | 96.59% | 67.71% | 94.62% | 77.71% |

Please see notes to Required Supplementary Information.

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# Schedule of Changes in Net Pension Liability: Staff Plan

*Years ended September 30; unaudited*

| Staff Plan | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| **Total Pension Liability** | | | | | |
| Service Cost | $ 274,978 | $ 226,297 | $ 293,767 | $ 362,723 | $ 419,199 |
| Interest | 462,281 | 525,209 | 576,978 | 653,429 | 719,557 |
| Benefit Changes | - | (588,078) | - | - | - |
| Difference Between Actual and Expected Experience | 229,191 | 279,208 | 332,572 | 68,899 | 197,405 |
| Assumption Changes | - | 1,142,887 | - | - | - |
| Benefit Payments and Refunds | (16,074) | (195,528) | (179,160) | (181,061) | (212,615) |
| **Net Change in Total Pension Liability** | 950,376 | 1,389,995 | 1,024,157 | 903,990 | 1,123,546 |
| **Total Pension Liability - Beginning** | 5,697,981 | 6,648,357 | 8,038,352 | 9,062,509 | 9,966,499 |
| **Total Pension Liability - Ending** | $ 6,648,357 | $ 8,038,352 | $ 9,062,509 | $ 9,966,499 | $ 11,090,045 |
| **Plan Fiduciary Net Position** | | | | | |
| Contributions - Member | $ 131,067 | $ 127,207 | $ 124,619 | $ 328,077 | $ 224,122 |
| Contributions - Employer | 250,059 | 241,316 | 353,767 | 497,821 | 482,800 |
| Net Investment Income (Loss) | 303,812 | 170,225 | 278,161 | 1,400,587 | (788,986) |
| Benefit Payments and Refunds | (16,074) | (195,528) | (179,160) | (181,061) | (212,615) |
| Administrative Expense | (27,963) | (54,449) | (30,788) | (28,880) | (27,658) |
| Other | - | - | - | - | - |
| **Net Change in Plan Fiduciary Net Position** | $ 640,901 | $ 288,771 | $ 546,599 | $ 2,016,544 | $ (322,337) |
| Plan Fiduciary Net Position - Beginning | $ 4,526,754 | $ 5,167,655 | $ 5,456,426 | $ 6,003,025 | $ 8,019,569 |
| Plan Fiduciary Net Position - Ending | 5,167,655 | 5,456,426 | 6,003,025 | 8,019,569 | 7,697,232 |
| **Net Pension Liability Ending** | **$ 1,480,702** | **$ 2,581,926** | **$ 3,059,484** | **$ 1,946,930** | **$ 3,392,813** |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 77.73% | 67.88% | 66.24% | 80.47% | 69.41% |
| Covered Payroll | $ 1,588,685 | $ 1,533,139 | $ 1,510,527 | $ 2,061,061 | $ 2,134,492 |
| Net Pension Liability as a Percentage of Covered Payroll | 93.20% | 168.41% | 202.54% | 94.46% | 158.95% |

Please see notes to Required Supplementary Information.

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# Schedule of Net Pension Liability (Unaudited)

*Years ended September 30; unaudited*

| Fiscal Year Ending 09/30 | Total Pension Liability | Plan Net Position | Net Pension Liability | Plan Net Position as a Percent of Total Pension Liability | Covered Payroll | Net Pension Liability as a Percent of Covered Payroll |
|---|---|---|---|---|---|---|
| **City Plan** | | | | | | |
| 2014 | $ 3,610,674,395 | $ 2,081,575,247 | $ 1,529,099,148 | 57.65% | $ 391,216,461 | 390.86% |
| 2015 | 4,127,343,024 | 2,003,269,563 | 2,124,073,461 | 48.54% | 404,507,497 | 525.10% |
| 2016 | 5,318,307,112 | 2,097,716,741 | 3,220,590,371 | 39.44% | 424,371,512 | 758.91% |
| 2017 | 5,354,699,800 | 2,270,521,836 | 3,084,177,964 | 42.40% | 447,488,158 | 689.22% |
| 2018 | 5,422,613,892 | 2,324,335,575 | 3,098,278,317 | 42.86% | 467,754,197 | 662.37% |
| 2019 | 4,571,921,160 | 2,312,863,285 | 2,259,057,875 | 50.59% | 484,410,754 | 466.35% |
| 2020 | 4,728,026,182 | 2,368,160,670 | 2,359,865,512 | 50.09% | 509,575,065 | 463.10% |
| 2021 | 4,892,874,650 | 2,830,439,044 | 2,062,435,606 | 57.85% | 523,064,436 | 394.30% |
| 2022 | 5,039,105,797 | 2,504,059,616 | 2,535,046,181 | 49.69% | 559,690,772 | 452.94% |
| **Staff Plan** | | | | | | |
| 2014 | $ 4,156,464 | $ 2,772,401 | $ 1,384,063 | 66.70% | $ 1,432,884 | 96.59% |
| 2015 | 4,130,487 | 3,088,220 | 1,042,267 | 74.77% | 1,539,199 | 67.71% |
| 2016 | 5,218,030 | 3,715,866 | 1,502,164 | 71.21% | 1,587,554 | 94.62% |
| 2017 | 5,697,981 | 4,526,754 | 1,171,227 | 79.44% | 1,507,141 | 77.71% |
| 2018 | 6,648,357 | 5,167,655 | 1,480,702 | 77.73% | 1,588,685 | 93.20% |
| 2019 | 8,038,352 | 5,456,426 | 2,581,926 | 67.88% | 1,533,139 | 168.41% |
| 2020 | 9,062,509 | 6,003,025 | 3,059,484 | 66.24% | 1,510,527 | 202.54% |
| 2021 | 9,966,499 | 8,019,569 | 1,946,930 | 80.47% | 2,061,061 | 94.46% |
| 2022 | 11,090,045 | 7,697,232 | 3,392,813 | 69.41% | 2,134,492 | 158.95% |

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
Please see notes to Required Supplementary Information.

# Schedule of Actuarially Determined Employer Contributions

*Years ended September 30*

| Fiscal Year Ended September 30 | Actuarially Determined Contributions | Actual Contributions | Contribution Deficiency (Excess) | Covered Payroll | Percentage Contributed |
|---|---|---|---|---|---|
| **City Plan** | | | | | |
| 2014 | $ 82,937,890 | $ 78,165,049 | $ 4,772,841 | $ 391,216,461 | 19.98% |
| 2015 | 93,562,584 | 80,820,598 | 12,741,986 | 404,507,497 | 19.98% |
| 2016 | 101,339,917 | 84,746,991 | 16,592,926 | 424,371,512 | 19.97% |
| 2017 | 112,185,281 | 89,408,134 | 22,777,147 | 447,488,158 | 19.98% |
| 2018 | 131,766,357 | 93,504,064 | 38,262,293 | 467,754,197 | 19.99% |
| 2019 | 136,167,863 | 113,109,911 | 23,057,952 | 484,410,754 | 23.35% |
| 2020 | 160,159,443 | 124,743,976 | 35,415,467 | 509,575,065 | 24.48% |
| 2021 | 165,706,813 | 128,046,174 | 37,660,639 | 523,064,436 | 24.48% |
| 2022 | 180,724,150 | 137,012,301 | 43,711,849 | 559,690,772 | 24.48% |
| **Staff Plan** | | | | | |
| 2014 | $ 114,917 | $ 225,536 | $ (110,619) | $ 1,432,884 | 15.74% |
| 2015 | 95,276 | 242,270 | (146,994) | 1,539,199 | 15.74% |
| 2016 | 244,007 | 249,881 | (5,874) | 1,587,554 | 15.74% |
| 2017 | 169,101 | 237,224 | (68,123) | 1,507,141 | 15.74% |
| 2018 | 244,499 | 250,059 | (5,560) | 1,588,685 | 15.74% |
| 2019 | 243,462 | 241,316 | 2,146 | 1,533,139 | 15.74% |
| 2020 | 353,767 | 353,767 | - | 1,510,527 | 23.42% |
| 2021 | 497,821 | 497,821 | - | 2,061,061 | 24.15% |
| 2022 | 482,800 | 482,800 | - | 2,134,492 | 22.62% |

Please see notes to Required Supplementary Information.

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# Schedule of Money-weighted Investment Returns

*Years ended September 30*

| For Years Ended 9/30 | Annual Investment Returns* |
|---|---|
| 2022 | -8.67% |
| 2021 | 22.52% |
| 2020 | 4.79% |
| 2019 | 2.92% |
| 2018 | 6.50% |
| 2017 | 12.15% |
| 2016 | 8.43% |
| 2015 | -1.06% |
| 2014 | 8.25% |
| 2013 | 10.70% |
| 2012 | 12.98% |
| 2011 | 1.44% |

*Annual money-weighted rate of return, net of investment fees and adjusted for the changing amounts actually invested.
The City and Staff plans are commingled for investment purposes and both plans experience the same return.
Please see notes to Required Supplementary Information.

## NOTES TO

# Required Supplementary Information

### Methods and Assumptions Used in Calculations of Actuarially Determined Contributions

The actuarially determined contribution is equal to the total calculated contribution rate in the prior actuarial valuation, minus the portion expected to be covered by employee contributions, multiplied by the covered- employee payroll. City and member contribution rates are established by ordinance. Employer and member contribution rates for the staff plan are established in the administrative rules.

The assumptions and methods summarized below were adopted by the Board of Trustees on May 27, 2019, based on the experience investigation that covered the three-year period from January 1, 2016, through December 31, 2018. These assumptions first applied for actuarial valuation as of December 31, 2018, and the actuarially determined contribution for fiscal year ending September 30, 2019.

*For Year Ended December 31, 2021*

| | City Plan | Staff Plan |
|---|---|---|
| **Valuation Date** | December 31, 2021 | December 31, 2021 |
| **Actuarial Cost Method** | Entry Age Normal | Entry Age Normal |
| **Amortization Method** | Level Percentage of Payroll, 30-year closed beginning in 2018 | Level Dollar, Layered |
| **Remaining Amortization Period** | 27 years | 30 years for new layers |
| **Asset Valuation Method** | Five-year smoothed fair value | Five-year smoothed fair value |
| **Inflation** | 2.50% | 2.50% |
| **Salary Increases** | 3.25% - 28.25% | 2.75% - 5.35% |
| **Investment Rate of Return** | 7.00% | 7.00% |
| **Discount Rate** | 7.00% | 7.00% |
| **Retirement Age** | Experience-based table of rates based on job classification and number of years since first retirement eligibility. | Experience-based table of rates based on either number of years since first retirement eligibility or age. |
| **Mortality** | PubG-2010 Mortality Tables for General Employees and PubS-2010 Healthy Retiree Mortality Table for Police Officers and Firefighters. Generational mortality improvements from the year 2010 using the ultimate mortality improvements rates in the 2014-2019 MP tables. | PubG-2010 Mortality Table. Generational mortality improvements from the year 2010 using the ultimate mortality improvement rates in the 2014-2019 MP tables. |
| **Cost-of-Living Adjustment** | A 2% cost-of-living adjustment (COLA) is assumed for all members in the Guaranteed COLA program, No COLAs are assumed for members with a Variable COLA. Timing of conditional Ad Hoc COLAs is based on an open group projection. | 4.0% COLAs are assumed for members participating in the ad-hoc COLA program. |

# Notes to Required Supplementary Information CONTINUED

*For Year Ended December 31, 2020*

| | City Plan | Staff Plan |
|---|---|---|
| **Valuation Date** | December 31, 2020 | December 31, 2020 |
| **Actuarial Cost Method** | Entry Age Normal | Entry Age Normal |
| **Amortization Method** | Level Percentage of Payroll, 30-year closed beginning in 2018 | Level Dollar, Layered |
| **Remaining Amortization Period** | 28 years | 30 years for new layers |
| **Asset Valuation Method** | Five-year smoothed fair value | Five-year smoothed fair value |
| **Inflation** | 2.50% | 2.50% |
| **Salary Increases** | 3.25% - 28.25% | 2.75% - 5.35% |
| **Investment Rate of Return** | 7.00% | 7.00% |
| **Discount Rate** | 7.00% | 7.00% |
| **Retirement Age** | Experience-based table of rates based on job classification and number of years since first retirement eligibility. | Experience-based table of rates based on either number of years since first retirement eligibility or age. |
| **Mortality** | PubG-2010 Mortality Tables for General Employees and PubS-2010 Healthy Retiree Mortality Table for Police Officers and Firefighters. Generational mortality improvements from the year 2010 using the ultimate mortality improvements rates in the 2014-2019 MP tables. | PubG-2010 Mortality Table. Generational mortality improvements from the year 2010 using the ultimate mortality improvement rates in the 2014-2019 MP tables. |
| **Cost-of-Living Adjustment** | A 2% cost-of-living adjustment (COLA) is assumed for all members in the Guaranteed COLA program, No COLAs are assumed for members with a Variable COLA. Timing of conditional Ad Hoc COLAs is based on an open group projection. | 4.0% COLAs are assumed for members participating in the ad-hoc COLA program. |

# Other Supplementary Information

# Schedule of Administrative Expenses

*Years Ended September 30, 2022 and 2021*

| | 2022 | 2021 |
|---|---|---|
| **Administrative Office** | | |
| Staff and Benefits | $ 3,145,606 | $ 2,442,855 |
| Contributions to Retirement Fund | 483,754 | 490,449 |
| Due Diligence | 4,940 | - |
| Medical Reviews | 5,754 | 16,423 |
| Insurance | 177,192 | 152,394 |
| Office Expense | 134,872 | 108,502 |
| Building Expenses | 274,444 | 243,096 |
| Conferences and Training | 31,423 | - |
| Strategic Planning | 22,296 | 10,534 |
| Pension Administration Hosting | 300,919 | 284,248 |
| Pension Administration Programming | 304,222 | 386,056 |
| Equipment and Supplies | 128,068 | 100,189 |
| **Total Administrative Office** | 5,013,490 | 4,234,746 |
| | | |
| **Professional Services** | | |
| Actuarial Services | 130,044 | 103,934 |
| Accounting and Auditing | 58,550 | 56,900 |
| Consulting | 1,140,612 | 1,335,271 |
| Legal Services | 334,513 | 174,100 |
| Other Consulting | 105,450 | 94,688 |
| **Total Professional Services** | 1,769,169 | 1,764,893 |
| **Total Administrative Expenses** | **$ 6,782,659** | **$ 5,999,639** |

# Schedule of Investment Management Fees

*As of September 30*

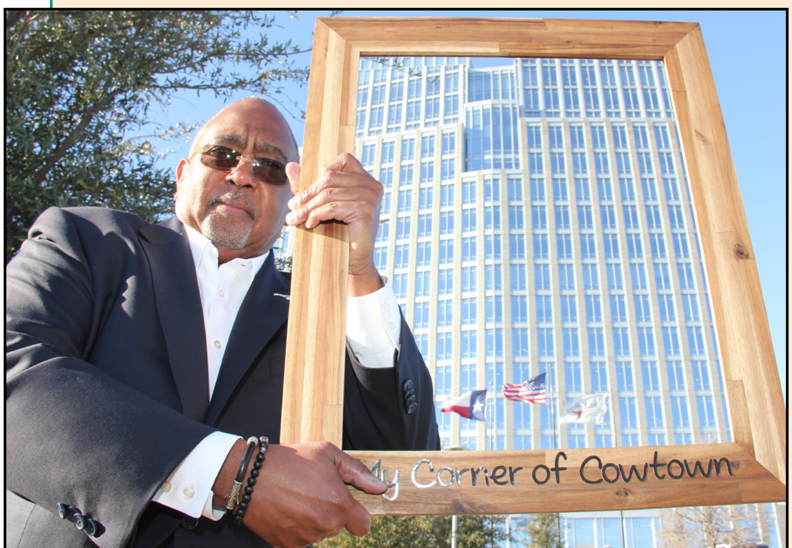
| | 2022 | 2021 |
|---|---|---|
| **Domestic Fixed Income** | | |
| Aberdeen Asset Management | $ 88,672 | $ 382,397 |
| American Century | 356,890 | $ - |
| Garcia Hamilton | 170,754 | 176,228 |
| Pacific Investment Management | 510,685 | 781,403 |
| **Total Domestic Fixed Income** | 1,127,001 | 1,340,028 |
| **International Fixed Income** | | |
| Loomis Sayles | 198,025 | 199,000 |
| **Total International Fixed Income** | 198,025 | 199,000 |
| **Real Estate** | | |
| Hammes | | |
| Heitman Core | 509,149 | 517,374 |
| IPI Data Centers | - | 16,407 |
| Prologis | 475,666 | 195,178 |
| UBS Trumball | 237,385 | 257,024 |
| **Total Real Estate** | 1,222,200 | 985,983 |
| **Domestic Equities** | | |
| Frontier Capital | 5 | 165 |
| Westwood | 290,875 | 739,715 |
| **Total Domestic Equities** | 290,880 | 739,880 |
| **International Equities** | | |
| Franklin Templeton | 321,577 | 819,176 |
| Northern Trust | 135,156 | 198,462 |
| Wellington Horizons | 668,326 | 626,258 |
| WCM Focused | 409,087 | - |
| William Blair | 485,665 | 517,896 |
| **Total International Equities** | 2,019,811 | 2,161,792 |
| **Real Return** | | |
| Harvest | 240,424 | 171,102 |
| **Total Real Return** | 240,424 | 171,102 |
| **Alternative** | | |
| Albourne America | 452 | 430 |
| ERF Private Equity Program | (65,962) | (49,829) |
| Hamilton Lane | 111,817 | 97,266 |
| **Total Alternative** | 46,307 | 47,867 |
| **Custody Fees** | | |
| Northern Trust | 688,058 | 536,881 |
| **Total Custody Fees** | 688,058 | 536,881 |
| **Total Investment Expenses** | **$ 5,832,706** | **$ 6,182,533** |

# Schedule of Professional Services

*As of September 30*

| | 2022 | 2021 |
|---|---|---|
| **Professional Fees** | | |
| Albourne America, LLC | $ - | $ 400,000.00 |
| Aksia Chicago, LLC | 802,482 | 99,812 |
| Brown, Pruitt, Wambsganss, Ferrill & Dean, PC | 7,494 | 6,520 |
| Cascade Investment Compliance & Verification | 33,000 | 27,000 |
| DLA Piper, LLP | 117,895 | 27,578 |
| Eide Bailly, LLP | 58,550 | 56,900 |
| Gabriel, Roeder, Smith & Company | 130,044 | 103,934 |
| Hamilton Lane Advisors, LLC | - | 597,011 |
| Ice Miller, LLP | 127,540 | 86,195 |
| Jackson Walker, LLP | 66,344 | 53,807 |
| McElvaney Public Affairs, LLC | 64,500 | 60,220 |
| RVK, Inc. | 40,213 | 238,448 |
| Seyfarth Shaw, LLP | 15,240 | - |
| Verus | 297,917 | - |
| Whitney Smith Company | 7,950 | 7,468 |
| **Total Professional Fees** | **$ 1,769,169** | **$ 1,764,893** |

# Investment Section




"My Corner of Cowtown is the future **City Hall of Fort Worth**. Our current building was opened in 1975 and no longer meets the needs of our thriving city. The future City Hall complex will feature a larger Council Chambers facility with enhanced technology that will better facilitate interaction between our City team and the community. Our goal is to make the new City Hall more inviting, more accessible, and a place our residents can be proud of. I look forward to the day we can welcome everyone in."

**TRUSTEE REGGIE ZENO**
**CITY OF FORT WORTH**
**CHIEF FINANCIAL OFFICER**
**PLACE 13 (STANDING POSITION)**

"My Corner of Cowtown is the **"Man with a Briefcase" statue** in downtown. I think this 50-foot-tall sculpture captures the essence of Fort Worth's role as a national hub for business. And the sculpture has special significance for me, because in 2006, I was photographed standing next to it for an article in Kiplinger's Financial Magazine [inset]. It was an honor to be featured in the magazine then, and it's an honor for me to feature this iconic Fort Worth sculpture now."

**TRUSTEE STEVE PURVIS**
**PLACE 11, COUNCIL APPOINTEE**
**RETIRED FROM**
**LUTHER KING CAPITAL MANAGEMENT**


FORT WORTH EMPLOYEES' RETIREMENT FUND

FISCAL YEAR

# Market Overview

The 2022 Fiscal Year was as remarkable as both the 2020 and 2021 Fiscal Years. The global economy has seen significant volatility every year since 2019, and we look forward to calmer days. The massive global fiscal and monetary stimulus from the developed economies in 2020, combined with a successful vaccine roll-out in 2021, created a significant global recovery in 2021. The persistently high inflation experienced in late 2021 and 2022 matches levels last seen in the late 1970s and early 1980s.

This inflation has been caused by a combination of supply chain disruptions related to COVID-19, historically significant increases in debt levels and money supply related to the 2020 stimulus, and energy and agriculture supply disruptions related to the 2022 Ukraine-Russia war. It appears that old economic theories based on the work of Adam Smith and Milton Friedman have proven dominant over new Keynesian theories like the Modern Monetary Theory. In short, there is a point where debt levels and government stimulus become excessive and create an inflationary burden.

While several central banks in emerging market countries have experience fighting inflation and began significantly raising interest rates in 2021, the U.S. Federal Reserve and the EU central banks were slow to react. This allowed inflation to accelerate from 2021 into 2022. In response, the Fed has significantly increased the target Fed Funds rate in 2022 through a series of rate increases of up to 75 basis points, bringing the short-term borrowing rate to around 4%.

This activity has rippled throughout global markets, resulting in historically poor performance in stocks (-21%) and bonds (-15%) for the trailing year ending September 30, 2022. Therefore, investors learned a painful lesson in 2022: In times of high inflation, the benefits of holding a diversified portfolio of stocks and bonds can break down.

Despite the adverse global market environment, the U.S. economy posted impressive year-over-year quarterly growth in Real GDP: 5.7% in Q4 2021, 3.7% in Q1 2022, 1.8% in Q2, and 1.9% in Q3. However, we note that, because inflation remains elevated and consumer confidence has declined, real growth is decelerating.

The Fed has made price stability Job No. 1, and it is clear that labor market or recession concerns are now a secondary issue. The deceleration in economic activity is easily seen in several leading economic indicators, such as the ISM Manufacturing PMI Index. Lagging indicators, like the labor market, remain strong, which indicates the U.S. economy has been able to withstand the inflation shock and the Fed's efforts to control inflation.

Looking forward, many economists expect a recession in calendar year 2023, and the Treasury Yield Curve reflects this risk by being significantly inverted, with long-term interest rates below the short-term rates. The market levels for stocks and bonds also reflect this risk, and the questions remaining for investors center on the depth of the recession, and when (or if) the Fed might transition from a restrictive to an accommodative posture.

**While the one-year return fell well below the target actuarial return, it ranked in the 25th percentile of public pensions with assets of $1 billion or greater.**

With respect to the Fort Worth Employees' Retirement Fund investment program, the Fund made several significant changes in Fiscal Year 2021, and additional changes in Fiscal Year 2022:

- We completed an Asset Liability Study with Verus, the Fund's General Consultant.
- We revised the Investment Policy Statement (IPS) based on the Asset Liability Study, which primarily focused on adjusting the strategic asset allocation targets, ranges, and benchmarks.
- In addition, we continued to develop our internal capabilities related to managing the Private Equity portfolio and we refined our compliance efforts with Cascade.

With respect to returns, the Fort Worth Employees' Retirement Fund ended Fiscal Year 2022 with a balance of $2.5 billion and posted a net one-year return of -8.8%. While the one-year return fell well below the target actuarial return of 7.0%, it exceeded the return of the strategic asset allocation policy index by 1.5%, and ranked in the 25th percentile of public pensions with assets of $1 billion or greater according to Verus.

For the year, the total return benefitted from the diversification afforded by alternative assets, as the real asset, private equity, and diversified opportunities portfolio returned 17.8%, 10.9%, and -4.7%, respectively. Traditional assets were a significant detractor, with public equity and fixed income down -21.4% and -14.5%, respectively.

On a relative basis, the public equity portfolio underperformed the ACWI global stock benchmark by -0.8%. All other asset class portfolios performed similar or better relative to benchmarks for the fiscal year (or lagged period).

## Market Overview CONTINUED

Over longer time periods, the Fund has posted a three-year net return of 5.4%, a five-year net return of 5.1%, a ten-year net return of 6.4%. The net return since inception is 8.2%. The Fund's investment returns have benefitted significantly from high returns in private equity and diversified sources of return and income from real assets and diversified opportunities.

At the end of the Fiscal 2022, the asset allocation remained in compliance with the strategic asset allocation and within ranges approved by the Board. The asset allocation reflected a 4.7% underweight to fixed income and a 4.1% underweight to public equity, offset by an 8.1% overweight to real assets.

**Since inception, the Fund has a net return of 8.2%.**

These tactical shifts away from the strategic asset allocation were relatively consistent over the year. The underweight in fixed income and overweight to real assets relates to perceived inflation pressures in the economy and has benefitted returns. The asset allocation deviations from the target for private equity and diversified opportunities were minor and influenced by transitory investment activities and the changes in the IPS strategic asset allocation.

The Fund's investment policies, procedures, goals, objectives, performance of the assets, and transaction costs are regularly monitored in whole or in part by the staff, Cascade, Verus, Aksia, Northern Trust, the Investment Committee, and the Fund's Board. This includes quantitative and qualitative evaluations of vendors and investment managers that serve the Fund.

The investment performance listed above is calculated using a time-weighted rate of return methodology net of fees and based on market values and cash flows. Staff utilizes a monitoring process to compare the performance of individual managers to relevant benchmarks, the performance reports of the custodian, and the performance reports of the investment consultants. To the best of our knowledge, these performance statements are accurate and reliable.

**Prepared by Derrick Dagnan, Chief Investment Officer**

# Investment Summary

*As of September 30, 2022*

| Asset Class | | 9/30/2021 Fair Value | Fair Value % |
|---|---|---|---|
| **Equities** | **$** | **1,026,227,600** | **40.90%** |
| Global Equities | | 278,430,251 | |
| Domestic Large Cap | | 518,458,862 | |
| International Developed | | 163,426,547 | |
| Emerging Markets | | 65,911,941 | |
| **Fixed Income** | | **359,350,663** | **14.32%** |
| Core | | 108,176,316 | |
| Core Plus | | 251,174,347 | |
| **Private Equity** | | **330,343,775** | **13.17%** |
| Venture Capital Private Equity | | 22,069,844 | |
| Other Private Equity | | 308,273,931 | |
| **Diversified Opportunities** | | **300,982,113** | **12.00%** |
| ERF Hedge Funds | | 201,879,665 | |
| Opportunistic Credit | | 21,891,608 | |
| Public Credit | | 77,210,840 | |
| **Real Assets** | | **454,142,052** | **18.10%** |
| Core Real Estate | | 190,213,951 | |
| Non Core Real Estate | | 188,486,761 | |
| Other Real Assets | | 75,441,340 | |
| **Cash Equivalents** | | **36,705,676** | **1.51%** |
| **Transitions** | | **1,257,403** | |
| **Total Asset Allocation** | **$** | **2,509,009,282** | **100.00%** |

| **Reconciling Items to Statement of Net Position** | | |
|---|---|---|
| Accrued Income | | (4,268,964) |
| Alternative Adjustment | | (14,400,000) |
| Broker Receivables | | (157,790,865) |
| Broker Payables | | 181,436,851 |
| Securities Lending Collateral | | 306,215,799 |
| **Total Investments Statement of Net Position** | **$** | **2,820,202,103** |

# Schedule of Asset Allocations and Returns

*September 30, 2022*

| Asset Class | Long-Term Allocation Target | Actual Allocation | Investment Performance (%)* | | |
|---|---|---|---|---|---|
| | | | 1 Yr | 3 Yr | 5 Yr |
| Global Equity | 42.00% | 40.90% | (21.43) | 2.50 | 2.62 |
| MSCI ACWI Index | | | (20.66) | 3.75 | 4.44 |
| Fixed Income | 16.00% | 14.32% | (14.49) | (2.61) | 0.12 |
| Barclays US Aggregate Index | | | (14.60) | (3.26) | (0.27) |
| Diversified Opportunities | 10.00% | 12.00% | (4.73) | 4.52 | 3.35 |
| Diversified Opportunities Custom Index | | | (8.76) | 0.77 | 2.26 |
| Real Assets | 13.00% | 18.10% | 17.82 | 11.23 | 8.63 |
| NCREIF ODCE Index | | | 20.96 | 11.38 | 9.26 |
| Private Equity | 18.00% | 13.17% | 10.87 | 21.31 | 19.13 |
| Private Equity Custom Benchmark | | | (11.28) | 13.07 | 13.92 |
| Cash | 1.00% | 1.51% | 1.96 | 0.85 | 1.34 |
| 90 Day T-Bill | | | 0.62 | 0.59 | 1.15 |
| Total Portfolio | 100.00% | 100.00% | (8.80) | 5.41 | 5.14 |
| Target Allocation Index | | | (10.25) | 5.05 | 4.96 |

*The basis for investment return calculations: A time-weighted rate of return based on the market rate of return.

# Investment Managers

**Global Equities**
Northern Trust
WCM
Wellington Management
William Blair

**Real Return**
Harvest Fund Advisors

**Global Fixed Income**
American Century
Garcia Hamilton
Loomis Sayles & Company
PIMCO
Stone Harbor Investment Partners

**Real Estate**
AEW Capital Management
American Landmark
Ascentris
Campus Clarion
Focus Healthcare Partners
Hammes Partners
Heitman
IPI
Liquid Realty Partners
M&G Investments
Prologis
SC Capital Partners
Stratford Land
UBS Realty Advisors
WestRiver Capital

**Absolute Return**
Cevian Capital
HBK Capital Management
King Street Capital
Luxor Capital Partners*
Sculptor Capital Management*
Southpoint Capital Advisors
The D.E. Shaw Group
Wellington Management

** In Redemption from Manager*

**Private Equity**
3i Investments
Advent International
Altaris Health Partners
American Securities
Apollo
Ascribe Capital
Bay City Capital
BC Partners
Blackstone Group
Brazos Private Equity Partners
Cerberus Capital Management
Cinven Limited
Clearlake Capital
CVC Capital Partners
Energy Capital Partners
Essex Woodlands
Falcon Investment Advisors
GF Capital Partners
GI Partners
Gores Technology Group
Greenspring Associates
Gridiron
Hellman & Friedman
HIG Capital
High Road Capital Partners
Ignition Partners
JMI Management
Kelso & Company
KPS
KRG Capital Partners
Landmark Partners
Leonard Green & Company
Littlejohn & Co.
Madison Dearborn Partners
Marlin Equity Partners
New Enterprise Associates
Oak Hill Advisors
Platinum Equity Capital Partners
Providence Equity Partners
The Riverside Company
Scale Venture Partners
Technology Crossover Ventures
TPG Capital
Vector Capital
Veritas Capital
Vitruvian Partners
Waterland Private Equity
Welsh Carson Anderson & Stowe
Wynnchurch Capital

# Investment Policies Summary Statement

The Board of Trustees (Board) of the Fort Worth Employees' Retirement Fund (the Fund) has adopted an Investment Policy Statement as a framework for the investment of the Fund's assets. The purpose of the Investment Policy Statement is to assist the Board in effectively guiding, supervising, and monitoring the ongoing operations and performance of the Fund. The authority to amend that statement rests solely with the Board. The following provides a brief outline of that statement. A copy of the Investment Policy Statement in its entirety can be found on the Fund's website.

## Investment Objectives

The Fund's primary investment objective is to establish a stable, diversified investment portfolio that in the long-term, will meet or exceed the Board approved assumed actuarial rate of return in order to maintain or improve the funded status of the Fund and provide sufficient liquidity to timely pay benefits. The Trustees adopted the following key investment objectives:

• The Boards' investment objective is to achieve an average long-term total rate of return which satisfies the actuarial assumed rate of return. The target actuarial rate of return is set at 7.00% including an assumed inflation rate of 2.50% and a target actuarial real rate of return of 4.50%.
• The Fund shall prudently manage overall risk through diversification, by establishing and updating a strategic asset allocation using an asset allocation model that balances return expectations and risk exposures related to institutionally investible geographies, asset classes, and investment strategies.
• The Fund shall periodically rebalance the total assets to manage active risk relative to the strategic asset allocation and various benchmarks, as well as liquidity. Rebalancing activities shall consider both the impact on the Fund and transaction cost of the activity.
• The investment activities of the Fund shall be executed in a cost-effective manner.
Board of Trustees

The Board is primarily responsible for establishing the long-term vision of the Fund, oversight, and adopting an Investment Policy Statement (IPS). The IPS is intended to establish prudent investment criteria, set clear objectives, and guide selection of the asset classes and the strategic asset allocation. Management of the Fund assets must be done solely in the financial interest of the beneficiaries of the Fund. It also must be done in a manner consistent with Section 802.2203 of the Texas Government Code, the Fund's Ethics Policy, the ethical guidelines of the CFA Institute, and all applicable domestic and international securities laws, rules, and regulations. The Board, to the extent permitted by Texas law, delegates the operational, program management, and administration of the Fund's investment program to the Executive Director (ED) and Chief Information Officer (CIO). The Board delegates the review and approval of the Investment Implementation Procedures (IIP) employed by the Fund staff to the Investment Committee.

At least annually, the Board reviews the actions of the ED and CIO in order to monitor performance and compliance with the terms of delegation, the IPS, and other policies and procedures.

**Investment Committee**

The Investment Committee is established by the Board and is delegated the responsibility to oversee and provide commentary and recommendations to the Board regarding investment activities, portfolio implementation, and sustainable management of the Fund's investment processes. The Investment Committee assists in development and provides recommendations for both the IPS and IIP. The Investment Committee reviews and provides feedback on significant preliminary actions related to service providers. The committee also evaluates the investment performance, including selected asset classes and external managers, in detail, using reports supplied by the ED, CIO, investment staff, and service providers. At least annually, the Investment Committee reviews the appropriateness of the investment activities delegated to the CIO, including performance of service providers, operating expenses and budgets, asset allocation changes and the rationale for tactical asset allocation positioning.

**Executive Director (ED)**

The ED assumes executive responsibility and authority, as delegated, for all administrative, operational, and other aspects of managing the Fund. The ED monitors compliance of the investment program with the IPS, the Ethics Policy, and any laws, rules, or regulations that may apply. Additionally, the ED reviews and authorizes the use of service providers and employment of Investment Staff. The ED further evaluates the investment performance, processes and procedures through reports provided by the CIO, investment staff, and service providers. Finally, the ED takes emergency, investment-related actions that are deemed essential to protect assets of the FWERF, with such actions being promptly reported to the Executive Committee of the Board.

**Chief Investment Officer (CIO)**

The CIO assumes executive responsibility and authority, as delegated for the investment operations, ongoing evaluation, and management of the assets of the Fund. The CIO ensures compliance with the IPS, IIP, and any laws, rules, or regulations that may apply while operating ethically as a fiduciary with a duty of loyalty, investing and managing Fund assets solely in the financial interest of members and beneficiaries. The CIO collaborates with the ED, Investment Committee, and Board on development and implementation of investment strategies, procedures, the IPS and IIP. The CIO establishes sourcing approaches for the efficient review, selection or termination, and negotiation of contracts with investment related Service Providers, including but not limited to, External Investment Managers, Discretionary External Investment Advisors, External Investment Advisors, General Consultant, and other Service Providers related to the investment program. The CIO periodically reports to the Board, Investment Committee, and Executive Director on administrative, organizational, investment activities, and the outcome of fully executed decisions related to investment actions or service providers.

# Investment Policies Statement CONTINUED

## Compliance

The Fund's General Counsel, in consultation with the ED and CIO, shall maintain a compliance effort, which can be performed by internal resources and/or an external service provider. The compliance function shall maintain a degree of separation from the key investment decision-makers to effectively operate as an unbiased third-party observer with the authority to initiate reports and recommend actions to the ED, Investment Committee and Board, when deemed appropriate. The compliance function will maintain regulatory knowledge and assess investment program adherence and risk related to laws, rules, and regulations. These individuals also will perform an assessment of the Fund's compliance with relevant laws, rules, and regulations, and prepare quarterly and annual reports documenting adherence to policies and procedures.

## Asset Allocation

The Fund's asset allocation policy is intended to reflect and be consistent with the return objective and risk tolerance expressed by the Fund. It is designed to provide the highest probability of meeting or exceeding the Fund's long-term objectives at a level of risk acceptable to the Board. The Board and Investment Committee have reviewed the risk, return, liquidity, and cost characteristics of a wide range of asset allocation approaches (conservative to aggressive). Based on input from the CIO, investment staff, and General Consultant, the Board establishes a strategic asset allocation target and acceptable asset class ranges for investment of the Total Assets. The Board recognizes that market events or other circumstances may dictate that investing above or below the target allocation is desired.

## Rebalancing

Because the asset classes do not move in concert, allocation deviations will occur through normal market activity. The CIO and investment staff should evaluate the asset classes, risk exposures, and return opportunities at least quarterly, and rebalance the portfolio to the strategic asset allocation target or an alternative tactical asset allocation within defined ranges. The CIO should evaluate the impact of rebalancing, along with the transaction cost of rebalancing and any specific market or timing factors that may influence the outcome of trading activity. This evaluation may suggest the planned rebalancing activity is undesired.

Portfolios that drift from the strategic asset allocation target and tactical asset allocation adjustments represent an active risk compared to the strategic asset allocation target; therefore, they should be based on a specific investment thesis or rationale that is communicated to the Investment Committee. Tactical asset allocation shifts should remain within allowable asset class ranges. Asset class exposures that drift outside of the asset class ranges should be rebalanced within the stated range prior to the end of a quarter.

# Schedule of Top Ten Investments

*As of September 30, 2022**

| Name of Investment | Fair Value | Percent of Portfolio |
|---|---|---|
| Northern Trust Collective All Country World Investable | $ 278,430,251 | 17.76% |
| MFC Vanguard Value ETF | 133,207,014 | 8.50% |
| MFC Vanguard Index FDS Total Stock Market ETF | 129,137,997 | 8.24% |
| MFB Northern Trust Collective Russell 1000 Growth Index F | 85,222,849 | 5.46% |
| Heitman America Real Estate Trust LP FD | 54,919,965 | 3.50% |
| William Blair Emerging Leaders Growth CIT Fund | 54,266,147 | 3.46% |
| Iguazu Investors (Cayman) LP | 50,690,534 | 3.23% |
| Realterm Logistics Income Fund | 46,532,522 | 2.97% |
| American Landmark Fund III LP | 39,716,921 | 2.53% |
| MFC Ishares Trust Core S&P US Value ETF | 36,327,386 | 2.32% |

*A complete list of the Fund's holdings is available at the Fund's office by appointment.

# Schedule of Investment Management, Performance, and Brokers' Fees by Asset Class

| Asset Class | Fair Value Assets Under Management | Fees Paid from the Pension Trust Fund: Management Fees | Fees Paid from the Pension Trust Fund: Performance Fees | Fees Netted Against Returns: Brokers Fees | Fees Netted Against Returns: Management Fees | Fees Netted Against Returns: Performance Fees/Carried Interest | Total Fees Direct and Indirect |
|---|---|---|---|---|---|---|---|
| Public Equity | $ 1,026,227,600 | $ 2,310,691 | $ 223,093 | $ 269,904 | $ 465,478 | $ - | $ 3,269,166 |
| Fixed Income | 359,350,663 | 1,325,026 | - | 7,826 | 10,575 | - | 1,343,427 |
| Private Equity | 330,343,775 | 46,307 | - | 62 | 1,573,343 | 5,263,711 | 6,883,423 |
| Diversified Opportunties | 300,982,113 | 240,424 | - | - | 3,631,980 | 8,207,015 | 12,079,419 |
| Real Assets | 454,142,052 | 1,222,200 | - | 23,165 | 284,634 | 114,291 | 1,644,290 |
| Cash Equivelents | 36,705,676 | - | - | - | - | - | - |
| Transitions | 1,257,403 | - | - | - | - | - | - |
| Totals | $ 2,509,009,282 | $ 5,144,648 | $ 223,093 | $ 300,957 | $ 5,966,010 | $ 13,585,017 | $ 25,219,725 |

| Reconciling Items to Statement of Net Position | |
|---|---|
| Accrued Income | $ (4,268,964) |
| Alternative Adjustment | (14,400,000) |
| Broker Receivables | (157,790,865) |
| Broker Payables | 181,436,851 |
| Securities Lending Collateral | $ 306,215,799 |
| **Statement of Net Position** | **$ 2,820,202,103** |

| Total Investment Expenses | |
|---|---|
| Total Direct and Indirect Fees | 25,219,725 |
| Investment Services | |
| Custodial | 688,058 |
| Research | - |
| Investment Consulting | 1,140,612 |
| Legal | 156,782 |
| **Total Investment Expenses** | **27,205,177** |

* Diversified Opportunites include hedge funds, private credit and public credit.

# Schedule of Brokers' Fees

*As of September 30, 2022*

| Broker Name | Number of Shares | Commission Paid | Commission per Share |
|---|---|---|---|
| UBS AG London Branch | 2,840,844 | $ 49,579 | $ 0.02 |
| Morgan Stanley And Co., LLC | 2,596,884 | 31,877 | 0.01 |
| Northern Trust Securities, Inc. | 1,440,843 | 28,817 | 0.02 |
| Goldman, Sachs And Co. | 2,600,823 | 27,153 | 0.01 |
| Bank Of America Corporation | 2,145,459 | 22,292 | 0.01 |
| Credit Suisse International | 1,158,908 | 12,774 | 0.01 |
| Merrill Lynch International Limited | 3,658,442 | 11,500 | 0.00 |
| B. Riley And Co., LLC | 2,543 | 10,748 | 4.23 |
| Bank Of America Merrill Lynch Secs | 198,579 | 8,667 | 0.04 |
| Barclays Capital | 276,091 | 6,574 | 0.02 |
| Macquarie Bank Limited | 1,203,282 | 6,359 | 0.01 |
| UBS Ag Stamford Branch | 529,505 | 5,562 | 0.01 |
| Morgan Stanley And Co.Intrntnal Plc | 831,490 | 5,199 | 0.01 |
| Citigroup Global Markets Inc. | 1,078,025 | 5,028 | 0.00 |
| JP Morgan Securities (Taiwan) Ltd | 2,295,225 | 4,509 | 0.00 |
| The Northern Trust Company | 7,036 | 3,779 | 0.54 |
| J.P. Morgan Securities Plc | 42,194 | 3,086 | 0.07 |
| Instinet Europe Limited | 151,900 | 2,987 | 0.02 |
| Instinet, LLC | 287,869 | 2,879 | 0.01 |
| Carnegie Investment Bank AB | 471,186 | 2,576 | 0.01 |
| Jefferies LLC. | 42,674 | 2,337 | 0.05 |
| JP Morgan Securities (Asia Pacific) | 335,387 | 2,301 | 0.01 |
| Goldman Sachs International | 456,931 | 2,282 | 0.00 |
| Pershing Securities Limited | 4,477 | 2,141 | 0.48 |
| Parel | 39,946 | 2,096 | 0.05 |
| RBC Capital Markets, LLC | 1,934,261 | 2,050 | 0.00 |
| Jefferies International Ltd | 1,236,102 | 1,978 | 0.00 |
| Morgan Stanley And Co. Intl | 250,435 | 1,901 | 0.01 |
| Credit Lyonnais Secs(Asia) Taiwan | 120,000 | 1,856 | 0.02 |
| Liquidnet Europe Limited | 21,355 | 1,847 | 0.09 |
| Morgan Stanley Taiwan Limited | 52,400 | 1,786 | 0.03 |
| Credit Suisse Securities (USA) LLC | 91,648 | 1,643 | 0.02 |
| Credit Suisse Ag, New York Branch | 13,950 | 1,437 | 0.10 |
| National Financial Services LLC | 31,207 | 1,432 | 0.05 |
| Exane S.A. | 82,701 | 1,318 | 0.02 |
| Instinet Pacific Limited | 1,300,726 | 1,175 | 0.00 |
| Wells Fargo Bank Minnesota NA | 824,738 | 1,141 | 0.00 |
| RBC Dominion Securities Inc. | 48,644 | 1,085 | 0.02 |
| Joh. Berenberg,Gossler Und Co.Kg | 18,302 | 1,052 | 0.06 |
| Citigroup Global Markets Europe Ag | 71,445 | 1,039 | 0.01 |
| J.P. Morgan Securities (Far East) | 1,184,376 | 996 | 0.00 |
| CLSA Limited | 128,707 | 812 | 0.01 |
| Kepler Capital Markets | 1,639,456 | 770 | 0.00 |
| UBS Warburg Securities Ltd Taiwan | 505,552,638 | 727 | 0.00 |
| Macquarie Securities Australia Ltd | 1,573,855 | 699 | 0.00 |
| UBS Securities Asia Limited | 12,462,000 | 645 | 0.00 |
| Wells Fargo Bank, N.A. | 7,529,214 | 544 | 0.00 |
| CLSA Singapore Pte Ltd. | 22,068 | 524 | 0.02 |
| Sanford C. Bernstein Ltd | 255,100 | 501 | 0.00 |
| Various Brokers | 72,650,064,399 | 8,895 | 0.00 |
| | 73,211,206,269 | $ 300,957 | $ 0.00 |

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# Actuarial Section


*"My Corner of Cowtown is the **Montgomery Street Café**. Several years back, I did two remodeling projects at my house. Both times, the café was like a second home, cooking up a lot of breakfasts and lunches for me while the work was going on. The Montgomery Street Café has been in business since 1949, and after all these years, it's as good as ever. I love coming here, and I know lots of other firefighters love it, too."*

**TRUSTEE LANDON STALLINGS**
**PLACE 5, RETIRED FIREFIGHTERS**

*"For My Corner of Cowtown, I chose the **Oakwood Cemetery** in Northside. Deeded to the City in 1879, this is the burial place of many important people from our history—people with names like Carswell, Burnett, Courtwright, Euless, and Waggoner. John Peter Smith, who donated the original tract of land, also is buried here. And the cemetery is the source of many great stories; for example, you can see the separate sections for African Americans and for Catholics. There's also a section for bricklayers, and another for some of the bartenders who worked in "Hell's Half Acre." Oakwood is a must-visit for anyone who appreciates cemeteries and history. And as you can see in the photo, it offers an incredible view of our skyline."*

**TRUSTEE KEVIN FOSTER**
**PLACE 6, RETIRED FIREFIGHTERS**

P: 469.524.0000 | www.grsconsulting.com

December 15, 2022

Board of Trustees
Employees' Retirement Fund of the City of Fort Worth
3801 Hulen Street, Suite 101
Fort Worth, TX 76107

**Subject: Actuarial Valuations as of December 31, 2021**

Members of the Board,

At the request of the Employees' Retirement Fund of the City of Fort Worth (FWERF), Gabriel Roeder Smith & Company (GRS) has performed the actuarial valuations of the Employees' Retirement Fund of the City of Fort Worth (City Plan) and the City of Fort Worth Employees' Retirement Fund Staff Retirement Plan (Staff Plan). The information in the Actuarial Section is based on our annual actuarial valuation reports for the two plans, with the most recent valuations conducted as of December 31, 2021, and is intended to be used in conjunction with the full reports. FWERF is an agent multiple-employer defined benefit pension plan covering employees of the City of Fort Worth and employees of the Employees' Retirement Fund of the City of Fort Worth.

This letter and the schedules listed below represent GRS' certification of the funded status as required for the financial report for the fiscal year ended September 30, 2022 for the City Plan and the Staff Plan.

In the Financial Section, GRS prepared the following:

- Sensitivity of the Net Pension Liability to Changes in Discount Rate,
- Schedule of Changes in the Net Pension Liability, and
- Schedule of Actuarially Determined Employer Contributions.

In the Actuarial Section, GRS prepared the following:

- Executive Summary,
- Schedule of Funding Progress,
- Development of Actuarial Value of Assets,
- Actuarial Gain or Loss,
- Analysis of Normal Cost by Component,
- Retirees, Beneficiaries, and Disabled Participants Added to and Removed from Rolls,
- Solvency Test, and
- Distribution of Active Members by Age and Years of Service.

5605 North MacArthur Boulevard | Suite 870 | Irving, Texas 75038-2631

**Data**

The valuation was based upon information as of December 31, 2021, furnished by FWERF staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal 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 FWERF staff.

**Actuarial Assumptions and Methods**

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees on March 27, 2019 based on the experience investigation that covered the three-year period from January 1, 2016 through December 31, 2018. In accordance with the Administrative Rules of FWERF, all actuarial assumptions and methodologies must be adopted by the Board upon the advice of the actuary. We believe the assumptions for the funding valuation are internally consistent and are reasonable, based on the actual experience of FWERF, and meet the parameters of the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuarial assumptions and methods used to develop the *Schedules of Changes in the Net Pension Liability* and the *Schedule of Actuarially Determined Employer Contributions*, noted above, also meet the parameters set forth in the disclosures presented in the Financial Section by Governmental Accounting Standards Board Statement No. 67.

The actuarial accrued liability and corresponding normal cost rate for the City Plan are based on the Entry Age Normal actuarial cost method where the benefits are based on the benefits payable to each individual active member. The same actuarial cost method was selected for financial reporting purposes.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. A review of the impact of a different set of assumptions on the funded status of the City Plan and the Staff Plan are outside the scope of this actuarial valuation.

The current actuarial assumptions are outlined in the section of the ACFR titled “Actuarial Assumptions and Methods.”

**Benefits**

There were no changes to the plan provisions of the City Plan and the Staff Plan during the past year. The current benefit provisions are outlined in the section of the ACFR titled “Summary of Key Provisions.”

**Funding Policy and Objectives – City Plan**

As outlined in the City Code and the Funding Policy adopted by the Board, the funding objective of the City Plan is to fund the sum of the normal cost, the assumed administrative expenses, and an amount necessary to eliminate the UAAL over a closed 30-year period beginning on December 31, 2018 with the goal of eliminating the UAAL by December 31, 2048. Contribution rates should be established which, over time, will remain level as a percent of payroll. As a result, the Actuarially Determined Employer Contribution (ADEC) is based on a closed 30-year amortization of the UAAL as of December 31, 2018 (27 years remaining as of December 31, 2021) and is being amortized as a level percentage of payroll. This ADEC will be equal to the City's portion of the total contributions that are necessary to meet this funding objective and this ADEC is appropriate for use by the Board to monitor progress towards these funding goals.

FWERF receives member contributions of 9.35% of the Member Contributory Payroll for General members, 13.13% of the Member Contributory Payroll for Police members, and 12.05% of the Member Contributory Payroll for Fire members. Based on the current composition of the active plan population, the average member rate is approximately 11.14% of the Member Contributory Payroll.

The City contributes 24.24% of the City Contributory Payroll for General and Fire members and 24.96% of the City Contributory Payroll for Police members to FWERF, as set by City ordinance. Based on the current composition of the active plan population, the average City rate is approximately 24.48% of the City Contributory Payroll. The ADEC for 2022 is 31.38% of City Contributory Payroll, or $167.9 million, which exceeds the expected City contribution by 6.90% of City Contributory Payroll. As a result, the stated funding objective is not being met.

City Contributory Payroll includes unscheduled overtime for Tier 1 members and does not include unscheduled overtime for Tier 2 members.

Based on the current statutory contribution rates, the funding period on the valuation date, excluding projected Risk-Sharing Contributions and Ad Hoc COLAs, is 58 years. Incorporating projected Risk-Sharing Contributions and Ad Hoc COLAs, the funding period is 37 years. The funding period incorporating the projected Risk-Sharing Contributions and Ad Hoc COLAs is the most reasonable estimate for the time until the UAAL is eliminated.

The City Code specifically defines an actuarially determined contribution (ADC) as a contribution "based on a closed 30-year funding of unfunded liabilities." In this context, the ADC is the sum of the anticipated member contributions and the City contributions. Since the City and the members contribute on a different payroll basis, it would not be accurate to add the City and member contribution <u>rates</u> together. As a result, the actuarial valuation will focus on the Actuarially Determined <u>Employer</u> Contribution (ADEC) for purposes of reporting required contribution <u>rates</u> so it is clear which payroll basis is being considered. However, the ADEC will simply be determined as the projected ADC less the anticipated member contributions.

The unfunded actuarial accrued liability (UAAL) of the City Plan decreased from $2.22 billion as of December 31, 2020 to $2.20 billion as of December 31, 2021. The UAAL was expected to increase to $2.28 billion as of December 31, 2021 but the plan incurred a net experience gain of $77 million which decreased the UAAL to $2.20 billion. The primary sources of the experience changes were a $62 million gain on the actuarial valuation of assets and a $15 million gain on liabilities.

Additionally, the funded ratio of the City Plan—actuarial value of assets divided by the actuarial accrued liability—increased from 53.2% to 55.0% as of December 31, 2021. The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

**Funding Policy and Objectives – Staff Plan**

On August 28, 2019, the FWERF Board of Trustees adopted the current funding policy for the Staff Plan. Under the current funding policy, the Total Funding Policy Contribution is determined as the sum of the normal cost, the assumed administrative expenses, and a structured payment towards eliminating the unfunded actuarial accrued liability (UAAL). The payments to the UAAL will be based on layered amortization where each layer is based on a 30-year level-dollar amortization schedule. The Actuarially Determined Employer Contribution (ADEC) is the Total Funding Policy Contribution minus the expected member contributions. The current funding policy directs the employer to contribute the ADEC to the Staff Plan each year.

The Staff Plan receives member contributions of 10.50% of payroll and employer contributions equal to the ADEC, as set by the current funding policy for the Staff Plan. The ADEC for 2022 is $455,471. On an actuarial value of assets basis, the current funding policy should be sufficient to first amortize the UAAL in 27 years.

The unfunded actuarial accrued liability (UAAL) of the Staff Plan decreased from $2,734,377 as of December 31, 2020 to $2,526,442 as of December 31, 2021. The funded ratio of the Staff Plan—actuarial value of assets divided by the actuarial accrued liability—increased from 70.7% to 75.6% as of December 31, 2021. The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

**Certification**

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Governmental Accounting Standards Board, the Internal Revenue Code and ERISA.

The signing actuaries are independent of the plan sponsor. Mr. Falls is an Enrolled Actuary, a Fellow of the Society of Actuaries, and a Member of the American Academy of Actuaries. Mr. Detweiler is an Enrolled Actuary, an Associate of the Society of Actuaries, and a Member of the American Academy of Actuaries. They meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,
**Gabriel, Roeder, Smith & Company**

R. Ryan Falls, FSA, EA, MAAA
Senior Consultant & Actuary

Bill Detweiler, ASA, EA, FCA, MAAA
Consultant

# Executive Summary

*For years ended December 31*

| | City Plan | | Staff Plan | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Membership** | | | | |
| • Number of | | | | |
| - Active members | 6,626 | 6,515 | 19 | 18 |
| - Retirees and beneficiaries | 4,906 | 4,829 | 4 | 4 |
| - Inactive, vested | 437 | 401 | 6 | 6 |
| - Inactive, nonvested | 1,051 | 888 | 3 | 1 |
| - Total | 13,020 | 12,633 | 32 | 29 |
| • Member Contributory Payroll | $ 548,574,824 | $ 523,485,600 | $ 2,115,114 | $ 1,862,109 |
| • Employer Contributory Payroll | $ 534,927,039 | $ 511,922,873 | $ 2,115,114 | $ 1,862,109 |
| **Effective Contribution Rates** | | | | |
| • Members (after phase-in) | 11.14% | 11.14% | 10.50% | 10.50% |
| • Employer | 24.48% | 24.48% | 21.53% | 23.41% |
| Actuarially Determined Employer Contribution | $ 167,860,105 | $ 165,299,896 | $ 455,471 | $ 435,845 |
| • % of Employer Contributory Payroll | 31.38% | 32.29% | 21.53% | 23.41% |
| • Amortization Period | 27 Years | 28 Years | 27 years | 29 years |
| **Assets** | | | | |
| • Fair value (FVA) | $ 2,912,495,617 | $ 2,576,119,427 | $ 8,518,005 | $ 6,834,662 |
| • Actuarial value (AVA) | $ 2,692,751,013 | $ 2,522,727,631 | $ 7,848,613 | $ 6,592,997 |
| • Return on fair value | 15.8% | 10.0% | 15.7% | 10.3% |
| • Return on actuarial value | 9.5% | 7.6% | 10.0% | 8.3% |
| **Actuarial Information on AVA (smoothed)** | | | | |
| • Normal cost % (exclude admin) | 15.89% | 15.95% | 20.98% | 20.62% |
| • Total normal cost | $ 87,168,540 | $ 83,495,953 | $ 443,751 | $ 383,967 |
| • Actuarial accrued liability | $ 4,891,936,665 | $ 4,745,801,026 | $ 10,375,055 | $ 9,327,374 |
| • Unfunded actuarial accrued liability (UAAL) | $ 2,199,185,652 | $ 2,223,073,395 | $ 2,526,442 | $ 2,734,377 |
| • Funded ratio | 55.0% | 53.2% | 75.6% | 70.7% |
| **Actuarial Information on FVA** | | | | |
| • Unfunded actuarial accrued liability (UAAL) | $ 1,979,441,048 | $ 2,169,681,599 | $ 1,857,050 | $ 2,492,712 |
| • Funded ratio | 59.5% | 54.3% | 82.1% | 73.3% |

# Actuarial Assumptions and Methods: City Plan

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees on March 27, 2019 based on the experience investigation that covered the three-year period from January 1, 2016 through December 31, 2018. In accordance with the Administrative Rules of FWERF, all actuarial assumptions and methodologies must be adopted by the Board upon the advice of the Actuary.

## I. Valuation Date

The valuation date is December 31 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

## II. Actuarial Cost Method

The actuarial valuation is used to determine the adequacy of the current City contribution rate, describe the current financial condition of FWERF, analyze changes in the condition of FWERF, and provide various summaries of the data.

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method. Under this method, the first step is to determine the contribution rate (level as a percentage of pay) required to provide the benefits to each member, or the normal cost rate. The normal cost rate consists of two pieces: (i) the member's contribution rate, and (ii) the remaining portion of the normal cost rate which is the employer's normal cost rate. Further, the total normal cost was determined using the "replacement life" application of EAN where the normal cost is based on each member's current benefit structure as though it has always been in place.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL.

The projected funded status and the ADEC are calculated based on the assumption that: (a) future market earnings, net of investment-related expenses, will equal 7.00% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) active members who leave employment will be replaced by new entrants each year such that the Member Contributory Payroll grows at the same rate as the payroll growth assumption, and (d) contributions will remain the same percentage of payroll as described in the Appendix titled Summary of Plan Provisions.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

## III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment returns in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continuing to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). In no event will this amount exceed 120% of market value or be less than 80% of market value.

## IV. Actuarial Assumptions

Investment Return: 7.00% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.50% real rate of return)

**Mortality Decrements:**

*Pre-retirement*

PubG-2010 Employee Mortality Table for General Employees and PubS-2010 Employee Mortality Table for Police Officers and Firefighters. Generational mortality improvements projected from the year 2010 using the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables.

*Healthy Annuitants*

PubG-2010 Healthy Retiree Mortality Table for General Employees and PubS-2010 Healthy Retiree Mortality Table for Police Officers and Firefighters. Generational mortality improvements projected from the year 2010 using the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables. The mortality for all surviving beneficiaries will be based on the PubG-2010 Healthy Retiree Mortality Table.

*Disabled Annuitants*

PubG-2010 Disability Mortality Table for General Employees and PubS-2010 Disability Mortality Table for Police Officers and Firefighters. Generational mortality improvements projected from the year 2010 using the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables.

*In Line of Duty Death*

The percentage of pre-retirement deaths assumed to be in the line of duty are:

| | |
|---|---|
| General Employees: | 0% |
| Police Officers: | 10% |
| Firefighters: | 10% |

**Service Retirement Decrements:**

*Members Who Reach 80 Points Before Age 65*

The following rates reflect the members expected departure from active service and are applied based on years since first becoming eligible for Normal Retirement:

| Year of Eligibiility | General Employees | Police Officers | Firefighters |
|---|---|---|---|
| 1st | 30% | 30% | 30% |
| 2nd | 15 | 15 | 15 |
| 3rd | 20 | 20 | 20 |
| 4th | 25 | 25 | 25 |
| 5th | 25 | 25 | 25 |
| 6th | 35 | 35 | 35 |
| 7th | 35 | 35 | 35 |
| 8th | 35 | 35 | 35 |
| 9th | 35 | 35 | 35 |
| 10th | 100 | 100 | 100 |

Tier II General Employees who reach 80 points (age plus years of eligibility service) prior to age 55 will have their retirement rate increased by 20% in their first year of eligibility.

*Members Who Do Not Reach 80 Points Before Age 65*

The following rates reflect the members expected departure from active service and are applied based on the member's age:

| Age | General Employees | Police Officers | Firefighters |
|---|---|---|---|
| 65-69 | 27.5% | 100% | 100% |
| 70+ | 100 | 100 | 100 |

*Early (Reduced) Retirement*

Police Officers and Firefighters have zero assumed probability of retiring prior to eligibility for Normal (Unreduced) Retirement. The age-based rates at right apply for General Employees:

| Age | General Employees |
|---|---|
| 50-56 | 1.5% |
| 57-58 | 2.5 |
| 59-61 | 3.5 |
| 62 | 8.0 |
| 63-34 | 2.5 |

## City Actuarial Assumptions CONTINUED

*Deferred Retirement Option Program (DROP)*
Every member who reaches Normal (Unreduced) Retirement eligibility prior to age 65 is assumed to enter DROP, leave active service in accordance with the assumed retirement rates, and have participated in DROP for the maximum possible period upon departure from active service.

*Inactive Vested Participants*
Members that terminate with a vested benefit are assumed to choose the most valuable option available to them at the time of termination: withdrawal of contributions or deferred annuity. Dependents of vested members that die prior to reaching Normal Retirement are assumed to elect a withdrawal of contributions.

**Disability Retirement Decrements:**
*Disability Rates*
Rates for males and females at selected ages are shown at right:

| Age | Rate |
|---|---|
| 20 | 0.005% |
| 25 | 0.006 |
| 30 | 0.009 |
| 35 | 0.013 |
| 40 | 0.018 |
| 45 | 0.027 |
| 50 | 0.044 |
| 55 | 0.076 |
| 60 | 0.100 |

*In Line of Duty Disability*
The percentage of disability retirements assumed to be in the line of duty are:

| | |
|---|---|
| General Employees: | 0% |
| Police Officers: | 40% |
| Firefighters: | 15% |

**Termination Decrements for Reasons Other Than Death or Retirement:**
*Withdrawal Rates*
The following service-based rates apply:

| Years of Service | General Employees | Police Officers | Firefighters |
|---|---|---|---|
| 0 | 22.0% | 7.0% | 3% |
| 1 | 15 | 2.0 | 0.5 |
| 2 | 14 | 1.8 | 0.5 |
| 3 | 11 | 1.6 | 0.5 |
| 4 | 9.0 | 1.5 | 0.5 |
| 5 | **See age-based termination rates after five years of employment.** | 1.4 | 0.5 |
| 6 | | 1.3 | 0.5 |
| 7 | | 1.2 | 0.5 |
| 8 | | 1.1 | 0.5 |
| 9-11 | | 1.0 | 0.5 |
| 12-16 | | 1.0 | 0.4 |
| 17+ | | 0.6 | 0.4 |

## City Actuarial Assumptions CONTINUED

After the first five years of employment, age-based rates apply as shown at right for General Employees:

All rates of termination are zero for members eligible for Normal Retirement.

| Age | Rate |
|---|---|
| 25-29 | 11.5% |
| 30-34 | 7.5 |
| 35-39 | 6.0 |
| 40-44 | 5.0 |
| 45-49 | 4.5 |
| 50-54 | 3.2 |
| 55-59 | 2.3 |
| 60-64 | 2.0 |

**Salary Increases:** Increases are assumed to occur at the beginning of the valuation year and vary by employee group. Salary increases include an underlying inflation component of 2.50% and a productivity component of 0.75%.

| Years of Service | General Employees | Police Officers | Firefighters |
|---|---|---|---|
| 0 | 5.85% | 28.25% | 18.25% |
| 1 | 5.65 | 18.25 | 15.25 |
| 2 | 5.45 | 8.25 | 8.25 |
| 3 | 5.25 | 8.25 | 9.75 |
| 4 | 5.05 | 8.25 | 5.75 |
| 5 | 4.85 | 5.75 | 5.75 |
| 6 | 4.65 | 4.50 | 3.25 |
| 7 | 4.45 | 4.50 | 3.25 |
| 8 | 4.25 | 4.50 | 4.75 |
| 9 | 4.05 | 4.50 | 4.75 |
| 10 | 3.85 | 4.50 | 3.25 |
| 11 | 3.65 | 4.50 | 3.25 |
| 12 | 3.45 | 4.50 | 3.25 |
| 13 | 3.25 | 4.50 | 4.75 |
| 14 | 3.25 | 5.75 | 4.75 |
| 15 | 3.25 | 5.75 | 3.25 |
| 16 | 3.25 | 5.75 | 3.25 |
| 17 | 3.25 | 5.75 | 3.25 |
| 18 | 3.25 | 4.50 | 3.25 |
| 19+ | 3.25 | 3.25 | 3.25 |

**Valuation Payroll** is the expected Regular Earnings for the calendar year following the valuation date. It is generally based on the actual pay for the prior year and increased with one year of expected salary increase.

## City Actuarial Assumptions CONTINUED

**Overtime Pay:** Pay for Blue Service benefits for the upcoming year is based on the Valuation Payroll and increased by the following loads to account for unscheduled overtime pay:

| | |
|---|---|
| General Employees: | 3.50% |
| Police Officers: | 7.00% |
| Firefighters: | 18.00% |

Average Earnings Overtime Load: Blue Service benefits are loaded by the following percentages to account for higher than usual overtime worked during the final average earnings period:

| | |
|---|---|
| General Employees: | 0.00% |
| Police Officers: | 2.00% |
| Firefighters: | 6.00% |

**Sick Leave Service Conversions:** Retirement and terminated vested benefits are loaded by the following percentages to account for additional service accrued for unused sick and major medical leave:

| | |
|---|---|
| General Employees: | 3.75% |
| Police Officers: | 2.00% |
| Firefighters: | 2.50% |

Due to the elimination of future accruals of excess sick leave used toward service and FAC at retirement, these load percentages are phased out for each individual member over a 20-year period based on their service as of December 31, 2018.

**Cost-of-Living Adjustments (COLA):** Members who have the Guaranteed 2% COLA are assumed to receive a 2% increase of their base pension amount. The open group projection associated with this valuation incorporates the provisions of the Conditional Ad Hoc COLA and the liability associated with future expected Conditional Ad Hoc COLAs.

**Administrative Expenses:** $6,450,000 for 2022. This amount is reviewed annually based on input from FWERF staff.

**Payroll Growth:** Member Contributory Payroll is assumed to grow at 3.00% per year. Future City Contributory Payroll incorporates the expected transition of the City contributing on Earnings with Overtime for Tier I members to the City contributing on Regular Earnings for Tier II members. As a result, the City Contributory Payroll is expected to increase by approximately 2.8% over the next 30 years.

**Marital Assumptions:** 80% of male members and 60% of female members are assumed to be married. Male member is assumed to be four years older than female beneficiary; and female member is assumed to be the same age as male beneficiary.

## City Actuarial Assumptions CONTINUED

**Decrement Timing:** All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the middle of the valuation year.

**Census Data and Assets**

- The valuation was based on members of FWERF as of the actuarial valuation date and does not take into account future members.
- All census data was supplied by FWERF and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by FWERF.

**Actuarial Model:** This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

# Actuarial Assumptions and Methods: Staff Plan

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees on March 27, 2019, based on the experience investigation that covered the three-year period from January 1, 2016 through December 31, 2018.

## I. Valuation Date

The valuation date is December 31 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

## II. Actuarial Cost Method

The actuarial valuation is used to determine the employer contributions, describe the current financial condition of the Staff Plan, analyze changes in the condition of the Staff Plan, and provide various summaries of the data.

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the first step is to determine the contribution rate (level as a percentage of pay) required to provide the benefits to each member, or the normal cost rate. The normal cost rate consists of two pieces: (i) the member's contribution rate, and (ii) the remaining portion of the normal cost rate which is the employer's normal cost rate. The total normal cost rate is based on the plan provisions that apply to each individual member.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL.

The funding period is the earliest date that the UAAL is expected to be less than or equal to zero based on the UAAL amortization schedule.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

## III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment returns in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continuing to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). In no event will this amount exceed 120% of market value or be less than 80% of market value.

## IV. Actuarial Assumptions

**Investment Return:** 7.00% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.50% real rate of return)

**Mortality Decrements:**

*Pre-retirement*

PubG-2010 Employee Mortality Table. Generational mortality improvements projected from the year 2010 using the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables.

*Healthy Annuitants*

PubG-2010 Healthy Retiree Mortality Table. Generational mortality improvements projected from the year 2010 using the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables.

*Disabled Annuitants*

PubG-2010 Disability Mortality Table. Generational mortality improvements projected from the year 2010 using the ultimate mortality improvement rates from the MP-2014 through MP-2019 tables.

*In Line of Duty Death*

0% of pre-retirement deaths are assumed to be in the line of duty.

**Service Retirement Decrements:**

*Members Who Reach 80 Points by Age 65*

The rates at right reflect the members' expected departure from active service and are applied based on years since first becoming eligible for Normal Retirement:

| Year of Eligibiility | General Employees |
|---|---|
| 1st | 30% |
| 2nd | 15 |
| 3rd | 20 |
| 4th | 25 |
| 5th | 25 |
| 6th | 35 |
| 7th | 35 |
| 8th | 35 |
| 9th | 35 |
| 10th | 100 |

Upon reaching age 70, all eligible members are assumed to retire even if they are less than 10 years past first eligibility for Normal Retirement.

Employees hired on or after September 30, 2019, who reach 80 points (age plus years of eligibility service) prior to age 55 will have their retirement rate increased by 20% in their first year of eligibility.

## Staff Actuarial Assumptions CONTINUED

*Members Who Do Not Reach 80 Points by Age 65*
The rates at right reflect the members' expected departure from active service and are applied based on the member's age:

| Age | Rate |
|---|---|
| 65-69 | 27.5% |
| 70+ | 100 |

*Early (Reduced) Retirement*
Members have zero assumed probability of retiring prior to eligibility for Normal (Unreduced) Retirement.

*Deferred Retirement Option Program (DROP)*
Every member who reaches Normal (Unreduced) Retirement eligibility prior to age 65 is assumed to enter DROP, leave active service in accordance with the assumed retirement rates, and have participated in DROP for the maximum possible period upon departure from active service.

*Inactive Vested Participants*
Members that terminate with a vested benefit are assumed to choose the most valuable option available to them at the time of termination: withdrawal of contributions or deferred annuity. Dependents of vested members that die prior to reaching Normal Retirement are assumed to elect a withdrawal of contributions.

**Disability Retirement Decrements:**
Members have zero assumed probability of retirement due to disability.

**Termination Decrements for Reasons Other Than Death or Retirement:**
Withdrawal Rates
The following service-based rates apply:

| Years of Service | Rate |
|---|---|
| 0 | 22.0% |
| 1 | 15 |
| 2 | 14 |
| 3 | 11 |
| 4 | 9.0 |

After the first five years of employment, age-based rates apply as shown at right:

All rates of termination are zero for members eligible for Normal Retirement

| Age | Rate |
|---|---|
| 25-29 | 11.5% |
| 30-34 | 7.5 |
| 35-39 | 6.0 |
| 40-44 | 5.0 |
| 45-49 | 4.5 |
| 50-54 | 3.2 |
| 55-59 | 2.3 |
| 60-64 | 2.0 |

## Staff Actuarial Assumptions CONTINUED

**Salary Increases:** Increases are assumed to occur at the beginning of the valuation year. Salary increases include an underlying inflation component of 2.50% and a productivity component of 0.25%.

| Years of Service | Rate |
|---|---|
| 0 | 5.35% |
| 1 | 5.15 |
| 2 | 5.95 |
| 3 | 5.75 |
| 4 | 4.35 |
| 5 | 4.35 |
| 6 | 4.15 |
| 7 | 3.95 |
| 8 | 3.75 |
| 9 | 3.55 |
| 10 | 3.35 |
| 11 | 3.15 |
| 12 | 2.95 |
| 13 | 2.75 |
| 14 | 2.75 |
| 15 | 2.75 |
| 16 | 2.75 |
| 17 | 2.75 |
| 18 | 2.75 |
| 19+ | 2.75 |

**Contributory Payroll** is the expected Regular Earnings for the calendar year following the valuation date and limited by IRC Section 401(a)(17). It is generally based on the anticipated salary for the upcoming year as reported by ERF Staff.

**Overtime Pay:** Members are not assumed to receive compensation to account for unscheduled overtime pay.

**Cost-of-Living Adjustments (COLA):** Members who have the Conditional Ad Hoc COLA are assumed to receive 4% annual increases.

**Administrative Expenses:** $30,000 for 2022. This amount is reviewed annually.

**Payroll Growth:** Total payroll is assumed to grow at 2.50% per year.

**Marital Assumptions:** 100% of members are assumed to be married. Male member is assumed to be four years older than female beneficiary; and female member is assumed to be the same age as male beneficiary.

**Decrement Timing:** All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the middle of the valuation year.

**Census Data and Assets**

- The valuation was based on members of the Staff Plan as of the valuation date and does not take into account future members.
- All census data was supplied by FWERF staff and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by FWERF staff.

## Staff Actuarial Assumptions CONTINUED

**Actuarial Model:** This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

# Schedule of Funding Progress

| Actuarial Valuation Date | Actuarial Value of Assets (AVA) | Actuarial Accrued Liability (AAL) | Unfunded Actuarial Accrued Liability (UAAL) | % Funded Ratio | Annual Covered Payroll | UAAL as a Percentage of Covered Payroll |
|---|---|---|---|---|---|---|
| **City Plan** | | | | | | |
| January 1, 2013 | $ 1,854,871,487 | $ 2,909,019,272 | $ 1,054,147,785 | 63.76% | $ 383,801,802 | 274.66% |
| January 1, 2014 | 1,995,112,935 | 3,124,079,563 | 1,128,966,628 | 63.86 | 375,687,978 | 300.51 |
| December 31, 2014* | 2,094,381,418 | 3,365,534,522 | 1,271,153,104 | 62.23 | 373,848,113 | 340.02 |
| December 31, 2015* | 2,154,874,311 | 3,553,200,981 | 1,398,326,670 | 60.65 | 389,527,874 | 358.98 |
| December 31, 2016* | 2,209,893,867 | 3,780,554,300 | 1,570,660,433 | 58.45 | 404,303,585 | 388.49 |
| December 31, 2017* | 2,288,265,169 | 3,956,724,359 | 1,668,459,190 | 57.83 | 433,956,825 | 384.48 |
| December 31, 2018* | 2,324,698,216 | 4,438,326,161 | 2,113,627,945 | 52.38 | 460,564,650 | 458.92 |
| December 31, 2019* | 2,400,393,264 | 4,586,884,563 | 2,186,491,299 | 52.33 | 485,336,445 | 450.51 |
| December 31, 2020* | 2,522,727,631 | 4,745,801,026 | 2,223,073,395 | 53.16 | 504,398,247 | 440.74 |
| December 31, 2021* | 2,692,751,013 | 4,891,936,665 | 2,199,185,652 | 55.04 | 534,927,039 | 411.12 |
| **Staff Plan** | | | | | | |
| January 1, 2012 | $ 1,180,511 | $ 1,930,294 | $ 749,783 | 61.16% | $ 1,547,810 | 48.44% |
| January 1, 2013 | 1,596,824 | 1,924,028 | 327,204 | 82.99 | 1,467,047 | 22.30 |
| January 1, 2014 | 2,286,404 | 2,327,578 | 41,174 | 98.23 | 1,293,628 | 3.18 |
| December 31, 2014* | 2,850,030 | 3,843,480 | 993,450 | 74.15 | 1,541,518 | 64.45 |
| December 31, 2015* | 3,363,797 | 4,563,466 | 1,199,669 | 73.71 | 1,639,398 | 73.18 |
| December 31, 2016* | 3,878,837 | 5,072,901 | 1,194,064 | 76.46 | 1,476,583 | 80.87 |
| December 31, 2017* | 4,533,706 | 5,874,460 | 1,340,754 | 77.18 | 1,582,239 | 84.74 |
| December 31, 2018* | 5,189,502 | 7,531,496 | 2,341,994 | 68.90 | 1,494,667 | 156.69 |
| December 31, 2019* | 5,746,116 | 8,519,648 | 2,773,532 | 67.45 | 1,525,870 | 181.77 |
| December 31, 2020* | 6,592,997 | 9,327,374 | 2,734,377 | 70.68 | 1,862,109 | 146.84 |
| December 31, 2021* | 7,848,613 | 10,375,055 | 2,526,442 | 75.65 | 2,115,114 | 119.45 |

* For the regular actuarial valuation the City of Fort Worth requested the date be changed from 1/1 to 12/31 effective 1/1/2015 valuation.

# Development of Actuarial Value of Assets: City Plan

*As of December 31, 2021*

| | | |
|---|---|---|
| 1 | Fair Value of Assets at the beginning of the year | $ 2,576,119,427 |
| 2 | Net New Investments | |
| | A. Contributions | 189,001,411 |
| | B. Disbursements | (255,260,460) |
| | C. Subtotal | $ (66,259,049) |
| 3 | Fair Value of Assets at the end of year | $ 2,912,495,617 |
| 4 | Net Earnings (3-1-2c) | 402,635,239 |
| 5 | Assumed Rate of Return | 7.00% |
| 6 | Expected Return | 178,009,293 |
| 7 | Excess Return | 224,625,946 |
| 8 | Development of amounts to be recognized as of December 31, 2020 | |

| Period End | Deferrals of Excess(Shortfall) Investment Income | Offsetting of Gains/ (Losses) | Net Deferrals Remaining | Years Remaining | Recognized for this Valuation | Net Deferrals Remaining |
|---|---|---|---|---|---|---|
| December 31, 2017 | $ - | $ - | $ - | 1 | $ - | $ - |
| December 31, 2018 | - | - | - | 2 | - | - |
| December 31, 2019 | - | - | - | 3 | - | - |
| December 31, 2020 | 53,391,796 | - | 53,391,796 | 4 | 13,347,949 | 40,043,847 |
| December 31, 2021 | 224,625,946 | - | 224,625,946 | 5 | 44,925,189 | 179,700,757 |
| Total | $ 278,017,742 | $ - | $ 278,017,742 | | $ 58,273,138 | $ 219,744,604 |

| | | |
|---|---|---|
| 9 | Preliminary Actuarial Value of Assets (3-8) | $ 2,692,751,013 |
| 10 | 80 Percent of Fair Value | 2,329,996,494 |
| 11 | 120 Percent of Fair Value | 3,494,994,740 |
| 12 | Actuarial Value of Assets (9 not less than 10 or greater than 11) | $ 2,692,751,013 |
| 13 | Actuarial Value as a percentage of Fair Value | 92.5% |
| 14 | Estimated Actuarial Value Yield | 9.5% |

# Development of Actuarial Value of Assets: Staff Plan

*As of December 31, 2021*

| | | | |
|---|---|---|---|
| 1 | Fair Value of Assets at the beginning of the year | $ | 6,834,662 |
| 2 | Net New Investments | | |
| | A. Contributions | | 788,138 |
| | B. Disbursements | | (221,626) |
| | C. Subtotal | $ | 566,512 |
| 3 | Fair Value of Assets at the end of year | $ | 8,518,005 |
| 4 | Net Earnings (3-1-2c) | | 1,116,831 |
| 5 | Assumed Rate of Return | | 7.00% |
| 6 | Expected Return | | 498,254 |
| 7 | Excess Return | | 618,577 |
| 8 | Excess Return on Assets for last four years | | |

| Period End | Deferrals of Excess(Shortfall) Investment Income | Offsetting of Gains/ (Losses) | Net Deferrals Remaining | Years Remaining | Recognized for this Valuation | Net Deferrals Remaining |
|---|---|---|---|---|---|---|
| December 31, 2017 | $ - | $ - | $ - | 1 | $ - | $ - |
| December 31, 2018 | - | - | - | 2 | - | - |
| December 31, 2019 | 80,637 | - | 80,637 | 3 | 26,878 | 53,759 |
| December 31, 2020 | 161,028 | - | 161,028 | 4 | 40,257 | 120,771 |
| December 31, 2021 | 618,577 | - | 618,577 | 5 | 123,715 | 494,862 |
| | $ 860,242 | $ - | $ 860,242 | | $ 190,850 | $ 669,392 |

| | | | |
|---|---|---|---|
| 9 | Preliminary Actuarial Value of Assets (3-8) | $ | 7,848,613 |
| 10 | 80 Percent of Fair Value | | 6,814,404 |
| 11 | 120 Percent of Fair Value | | 10,221,606 |
| 12 | Actuarial Value of Assets (9 not less than 10 or greater than 11) | $ | 7,848,613 |
| 13 | Actuarial Value as a percentage of Fair Value | | 92.1% |
| 14 | Estimated Actuarial Value Yield | | 10.0% |

# Actuarial Gain or Loss

*For Year Ended December 31, 2021*

| | | | City Plan | | Staff Plan |
|---|---|---|---|---|---|
| **A** | **Calculation of Total Acturarial Gain or Loss** | | **City Plan** | | **Staff Plan** |
| **1** | Unfunded Actuarial Accrued Liability (UAAL) for prior year | | $ 2,223,073,395 | | $ 2,773,532 |
| **2** | Normal cost for the year (excluding administrative expenses) | | 83,495,953 | | 310,972 |
| **3** | Actual administrative expenses | | 6,321,106 | | 40,000 |
| **4** | Actual contributions during the year | | $ (189,001,411) | | $ (568,978) |
| **5** | Interest at 7.00% | | | | |
| | a On UAAL | | $ 155,615,138 | | $ 194,147 |
| | b On normal cost | | 3,143,597 | | 12,076 |
| | c On contributions | | (6,615,049) | | (19,577) |
| | d Total | | $ 152,143,686 | | $ 186,646 |
| **6** | Assumption Change (Gains)/Losses | | - | | - |
| **7** | Plan Changes | | - | | - |
| **8** | Expected UAAL | | 2,276,032,729 | | 2,742,172 |
| **9** | Actual UAAL | | 2,199,185,652 | | 2,734,377 |
| **10** | Total (Gain)/Loss for the year | | $ (76,847,077) | | $ (7,795) |
| **B** | **SOURCE OF GAINS AND LOSSES** | % of AAL | | % of AAL | |
| **11** | Asset (Gain)lLoss for the year | 1.27% | $ (62,010,564) | 2.00% | $ (207,766) |
| **12** | Pay Increases (Less)/Greater than expected | 0.31% | 15,277,997 | 0.50% | 49,349 |
| **13** | Non-Retired Demographic (Gains)/Losses | 0.07% | (3,290,791) | 0.20% | 16,933 |
| **14** | Post-Retirement Mortality (Gains)/Losses | 0.42% | (20,363,236) | 0.10% | 11,850 |
| **15** | Other (Gains)/Losses | 0.13% | (6,460,483) | 0.40% | (44,828) |
| **16** | Total (Sum of Items 11 through 15) | 2.20% | $ (76,847,077) | 3.20% | $ (174,462) |

# Analysis of Normal Cost by Component

*As of December 31, 2021 and 2020*

| | City Plan | | Staff Plan | |
|---|---|---|---|---|
| | **2021** | **2020** | **2021** | **2020** |
| Gross Normal Cost | | | | |
| Retirement Benefits | 12.95% | 12.97% | 15.34% | 14.68% |
| Termination Benefits | 2.68% | 2.71% | 5.42% | 5.73% |
| Death Benefits | 0.18% | 0.19% | 0.22% | 0.21% |
| Disability Benefits | 0.08% | 0.08% | 0.00% | 0.00% |
| **Totals** | 15.89% | 15.95% | 20.98% | 20.62% |

## Retirees, Beneficiaries, and Disabled Participants Added to and Removed from Rolls

| | ADDED TO ROLLS | | REMOVED FROM ROLLS | | ROLLS-END OF YEAR | | | |
|---|---|---|---|---|---|---|---|---|
| Valuation Date | Number | Annual Allowances | Number | Annual Allowances | Number | Annual Allowances | % Increase in Annual Allowances | Average Annual Allowances |
| **City Plan** | | | | | | | | |
| January 1, 2012 | 224 | $ 8,762,512 | 105 | $ 2,317,797 | 3,636 | $ 117,798,072 | 6.7% | $ 32,398 |
| January 1, 2013 | 218 | 8,738,413 | 148 | 3,282,570 | 3,706 | 125,983,212 | 6.9% | 33,994 |
| January 1, 2014 | 274 | 11,046,752 | 160 | 3,648,176 | 3,820 | 134,496,892 | 6.8% | 35,209 |
| December 31, 2014* | 246 | 10,347,634 | 160 | 3,619,256 | 3,906 | 143,316,261 | 6.6% | 36,691 |
| December 31, 2015* | 259 | 10,091,083 | 123 | 3,230,266 | 4,042 | 152,284,728 | 6.3% | 37,676 |
| December 31, 2016* | 325 | 15,697,903 | 115 | 2,430,574 | 4,252 | 167,629,136 | 9.9% | 39,353 |
| December 31, 2017* | 238 | 11,397,587 | 99 | 2,334,641 | 4,391 | 178,611,771 | 6.7% | 40,677 |
| December 31, 2018* | 283 | 13,192,872 | 91 | 2,299,308 | 4,583 | 191,775,783 | 7.4% | 41,845 |
| December 31, 2019* | 207 | 8,348,201 | 111 | 2,773,120 | 4,679 | 199,693,044 | 4.1% | 42,679 |
| December 31, 2020* | 278 | 12,468,018 | 128 | 3,427,537 | 4,829 | 211,070,412 | 5.7% | 43,709 |
| December 31, 2021* | 221 | 11,228,199 | 144 | 3,684,373 | 4,906 | 220,900,172 | 4.7% | 45,027 |
| **Staff Plan** | | | | | | | | |
| December 31, 2018** | 1 | $ 4,270 | - | $ - | 1 | $ 4,270 | 0.0% | $ 4,270 |
| December 31, 2019** | 3 | 173,378 | - | - | 4 | 177,733 | 4062.4% | 44,433 |
| December 31, 2020* | - | - | - | - | 4 | 179,635 | 1.1% | 44,909 |
| December 31, 2021* | - | - | - | - | 4 | 181,537 | 1.10% | 45,384 |

* For the regular actuarial valuation, the City of Fort Worth requested the date be changed from 1/1 to 12/31, effective with 1/1/2015 valuation.

**The Fort Worth Employees' Retirement Fund Staff Plan had its first retiree in calendar year 2018.

# Solvency Test

**Aggregated Accrued Liabilities**

| Valuation Date | Active and Inactive Members' Contributions | Retirees and Beneficiaries | Active/Inactive Members (Employer's Financed Portion) | Reported Assets | Portions of Accrued Liabilities Covered by Reported Assets | | |
|---|---|---|---|---|---|---|---|
| | (2) | (3) | (4) | (5) | (5)/(2) | {(5)-(2)}/(3) | {(5)-(2)-(3)}/(4) |
| **CITY PLAN** | | | | | | | |
| January 1, 2013 | $ 499,028,022 | $ 1,288,418,634 | $ 1,121,572,616 | $ 1,854,871,487 | 100% | 100% | 6% |
| January 1, 2014 | 529,079,160 | 1,469,007,750 | 1,125,992,653 | 1,995,112,935 | 100% | 100% | 0% |
| December 31, 2014* | 554,657,382 | 1,579,267,555 | 1,231,609,585 | 2,094,381,418 | 100% | 97% | 0% |
| December 31, 2015* | 589,185,131 | 1,713,648,693 | 1,250,367,157 | 2,154,874,311 | 100% | 91% | 0% |
| December 31, 2016* | 505,886,072 | 1,912,833,490 | 1,361,834,738 | 2,209,893,867 | 100% | 89% | 0% |
| December 31, 2017* | 522,640,298 | 2,056,348,215 | 1,377,735,846 | 2,288,265,169 | 100% | 86% | 0% |
| December 31, 2018* | 522,128,181 | 2,492,013,634 | 1,424,184,346 | 2,324,698,216 | 100% | 72% | 0% |
| December 31, 2019* | 538,305,419 | 2,577,229,846 | 1,471,349,298 | 2,400,393,264 | 100% | 72% | 0% |
| December 31, 2020* | 549,298,756 | 2,729,704,927 | 1,466,797,343 | 2,522,727,631 | 100% | 72% | 0% |
| December 31, 2021* | 568,513,616 | 2,844,467,721 | 1,478,955,328 | 2,692,751,013 | 100% | 75% | 0% |
| **STAFF PLAN** | | | | | | | |
| January 1, 2013 | $ 863,597 | $ - | $ 1,060,431 | $ 1,596,824 | 100% | 100% | 69% |
| January 1, 2014** | 1,206,532 | - | 1,121,046 | 2,286,404 | 100% | 100% | 96% |
| December 31, 2014* | 1,378,942 | - | 2,464,538 | 2,850,030 | 100% | 100% | 60% |
| December 31, 2015* | 1,551,657 | - | 3,011,809 | 3,363,797 | 100% | 100% | 60% |
| December 31, 2016* | 1,711,324 | - | 3,361,577 | 3,878,837 | 100% | 100% | 64% |
| December 31, 2017* | 2,000,288 | - | 3,874,172 | 4,533,706 | 100% | 100% | 65% |
| December 31, 2018* | 2,184,114 | 56,334 | 5,291,048 | 5,189,502 | 100% | 100% | 56% |
| December 31, 2019* | 1,703,296 | 2,826,643 | 3,989,709 | 5,746,116 | 100% | 100% | 30% |
| December 31, 2020* | 1,900,836 | 2,792,708 | 4,633,830 | 6,592,997 | 100% | 100% | 41% |
| December 31, 2021* | 2,267,182 | 2,756,739 | 5,351,134 | 7,848,613 | 100% | 100% | 53% |

* For the regular actuarial valuation, the City of Fort Worth requested the date be changed from 1/1 to 12/31 effective with 1/1/2015 valuation.
**Member contributions are greater than Employer contributions due to employee service purchase.

## Distribution of Active Members by Age and Years of Serviced - City Plan

*As of December 31, 2021*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **Under 25** | 166 | 3 | - | - | - | - | - | - | - | 169 |
| | 47,605 | 48,602 | - | - | - | - | - | - | - | 47,624 |
| **25-29** | 406 | 134 | 4 | - | - | - | - | - | - | 544 |
| | 59,253 | 83,887 | 96,796 | - | - | - | - | - | - | 65,598 |
| **30-34** | 376 | 324 | 77 | 4 | - | - | - | - | - | 781 |
| | 61,400 | 85,883 | 94,986 | 68,423 | - | - | - | - | - | 74,904 |
| **35-39** | 298 | 281 | 261 | 122 | 1 | - | - | - | - | 963 |
| | 64,880 | 86,278 | 96,806 | 104,895 | 51,782 | - | - | - | - | 84,833 |
| **40-44** | 207 | 221 | 181 | 227 | 90 | 3 | - | - | - | 929 |
| | 61,229 | 79,254 | 94,183 | 109,025 | 103,355 | 104,297 | - | - | - | 87,836 |
| **45-49** | 177 | 127 | 118 | 205 | 213 | 58 | 1 | - | - | 899 |
| | 62,763 | 73,092 | 92,231 | 101,642 | 111,615 | 114,721 | 96,771 | - | - | 91,920 |
| **50-54** | 165 | 137 | 99 | 161 | 217 | 169 | 29 | 1 | - | 978 |
| | 64,314 | 71,721 | 76,008 | 90,570 | 108,069 | 122,338 | 119,748 | 75,120 | - | 92,248 |
| **55-59** | 128 | 100 | 90 | 105 | 155 | 128 | 48 | 10 | - | 764 |
| | 62,571 | 70,148 | 64,813 | 80,681 | 95,157 | 113,192 | 116,709 | 120,674 | - | 85,570 |
| **60-64** | 71 | 68 | 69 | 67 | 43 | 52 | 19 | 8 | 1 | 398 |
| | 64,687 | 70,462 | 61,945 | 76,275 | 88,945 | 90,733 | 97,918 | 147,016 | 110,648 | 76,530 |
| **Over 64** | 29 | 51 | 33 | 45 | 24 | 8 | 7 | 2 | 2 | 201 |
| | 55,677 | 63,463 | 65,185 | 70,559 | 82,560 | 102,626 | 113,068 | 120,850 | 173,070 | 71,439 |
| **Total Number** | 2,023 | 1,446 | 932 | 936 | 743 | 418 | 104 | 21 | 3 | 6,626 |
| **Average Comp** | $ 60,797 | $ 79,615 | $ 86,568 | $ 96,149 | $103,814 | $ 114,042 | $ 113,687 | $ 128,557 | $ 152,263 | $ 82,791 |

# Historical Active Participant Data

## City Plan

| Valuation Date | Active Count | Average Age | Average Service | Covered Payroll * | Average Salary | Percent Change |
|---|---|---|---|---|---|---|
| 1/1/2013 | 6,278 | 44.3 | 11.2 | $ 375.688 | $ 61,204 | 2.1% |
| 1/1/2014 | 6,199 | 44.5 | 11.4 | $ 373.848 | $ 60,308 | -1.5% |
| 12/31/2014** | 6,198 | 44.6 | 11.4 | $ 389.528 | $ 62,847 | 4.2% |
| 12/31/2015** | 6,280 | 44.6 | 11.3 | $ 404.304 | $ 64,380 | 2.4% |
| 12/31/2016** | 6,414 | 44.3 | 11.1 | $ 415.728 | $ 64,816 | 0.7% |
| 12/31/2017** | 6,579 | 44.1 | 10.8 | $ 442.445 | $ 67,251 | 3.8% |
| 12/31/2018** | 6,589 | 44.2 | 10.7 | $ 494.152 | $ 74,997 | 11.5% |
| 12/31/2019** | 6,709 | 44.2 | 10.7 | $ 514.765 | $ 76,727 | 2.3% |
| 12/31/2020** | 6,515 | 44.3 | 11.0 | $ 523.486 | $ 80,351 | 7.1% |
| 12/31/2021** | 6,626 | 44.2 | 10.9 | $ 548.574 | $ 82,791 | 7.9% |

*Covered payroll in millions.
**The City of Fort Worth requested a change in the date of the evaluation from 1/1/2015 to 12/31/2014.

## Staff Plan

| Valuation Date | Active Count | Average Age | Average Service | Covered Payroll | Average Salary | Percent Change |
|---|---|---|---|---|---|---|
| 1/1/2012 | 19 | 44.7 | 6.0 | $1,547,810 | $ 81,464 | 3.4% |
| 1/1/2013 | 19 | 47.4 | 6.8 | $1,467,047 | $ 77,213 | -5.2% |
| 1/1/2014 | 18 | 47.8 | 7.9 | $1,293,628 | $ 71,868 | -6.9% |
| 12/31/2014* | 19 | 49.3 | 8.5 | $1,541,518 | $ 81,133 | 12.9% |
| 12/31/2015* | 19 | 47.2 | 8.7 | $1,639,398 | $ 86,284 | 6.3% |
| 12/31/2016* | 18 | 49.2 | 9.4 | $1,476,583 | $ 82,032 | -4.9% |
| 12/31/2017* | 18 | 51.3 | 9.8 | $1,582,239 | $ 87,902 | 7.2% |
| 12/31/2018* | 16 | 46.8 | 10.2 | $1,494,667 | $ 93,417 | 6.3% |
| 12/31/2019* | 17 | 46.6 | 8.8 | $1,525,870 | $ 89,757 | -3.9% |
| 12/31/2020* | 18 | 47.5 | 9.2 | $1,862,109 | $ 103,451 | 15.3% |
| 12/31/2021* | 19 | 48.9 | 9.6 | $2,115,114 | $ 111,322 | 7.6% |

*The City of Fort Worth requested a change in the date of the evaluation from 1/1/2015 to 12/31/2014.

# Statistical Section


*"My Corner of Cowtown is **The Fort Worth Stock Show & Rodeo.** This Fort Worth tradition has been running since 1896 and is truly legendary. The incredible daily performances by world-class athletes, the midway, food, exhibits, music and livestock—there really is something for everyone. In addition, the Sale of Champions raises significant scholarship dollars for hard working and deserving kids. Each year, I host friends (even friends from Dallas!) for a day at the rodeo, and everyone leaves with a deeper appreciation for what the West is all about!"*

**TRUSTEE JESUS PAYÁN**

**PLACE 8, COUNCIL APPOINTEE**

*For "My Corner of Cowtown," I chose the **Wedgwood Branch Library**. When I moved to Fort Worth in 1999, one of the things I looked forward to most was access to libraries. This was the first library I visited, and I've been coming to it ever since. I love how it feels like a cozy little "neighborhood" library from the past, and yet it has lots of cutting-edge technology and great programs. My daughter and I have many fond memories of time well-spent at the library, and I look forward to sharing this library with my granddaughters. Fun fact: In 2022, the library celebrated its 60th birthday—where has the time gone? The Wedgwood Branch has changed a lot over the years, but one thing hasn't changed: It will always be one of my favorite places in Fort Worth. "*


**TRUSTEE LORAINE COLEMAN**

**PLACE 3, ACTIVE GENERAL EMPLOYEES, GROUP C**

# Statistical Information Overview

The objective of the Statistical Section is to provide financial statement users with additional historic perspective, context, and detail to assist in using the information in the Basic Financial Statements, Notes to the Basic Financial Statement, Required Supplementary Information, and Other Supplementary Information to understand and assess the Fund's economic condition. The information contained in the statistical section is divided into two distinct sections, financial trends and participant information. All information was derived from Audited Annual Financial Statements and/or our Benefit Administration System.

**Financial Trends**

The Financial trends section is intended to assist readers in understanding how the Fund's financial position has changed over time. The Changes in Plan Net Position for the last ten fiscal years presents additions by source, deductions by type, and total change in plan net position for each year. Additions to net position include member and city contributions. In addition to contributions, additions also include earnings for the Fund's investment activities. Deductions from Net Position are primarily benefit payments and refunds paid to participants.

**Participant Data**

Participant data can be found following the financial data in this section. The schedules include data on member population, age, years of service, and various levels of benefit payment analysis.

# Schedule of Changes in Net Position: City Plan

| City Plan | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|---|
| **Additions** | | | | | |
| Employee Contributions | $ 65,593,975 | $ 60,281,553 | $ 56,250,684 | $ 40,634,725 | $ 37,618,303 |
| Employer Contributions | 137,012,301 | 128,046,174 | 124,743,976 | 113,109,911 | 93,504,064 |
| Investment Income | (256,764,105) | 524,024,718 | 110,570,539 | 67,729,548 | 145,408,403 |
| **Total Additions to Plan Net Position** | (54,157,829) | 712,352,445 | 291,565,199 | 221,474,184 | 276,530,770 |
| **Deductions** | | | | | |
| Retirement | 197,964,463 | 188,161,116 | 178,887,438 | 171,687,119 | 160,170,170 |
| Disability | 5,076,806 | 5,136,081 | 5,191,272 | 5,261,167 | 5,285,218 |
| Survivors | 21,929,298 | 20,548,531 | 19,151,120 | 17,899,384 | 17,231,458 |
| DROP Payouts | 33,667,321 | 24,372,952 | 23,236,549 | 25,734,915 | 28,978,582 |
| Actuarial Equivalent | 734,241 | 575,710 | 724,957 | 920,891 | 875,608 |
| Refund of Contributions | | | | | |
| Separation | 5,759,361 | 5,044,077 | 3,590,965 | 5,517,169 | 4,439,624 |
| Death | 234,736 | 143,659 | 182,217 | 218,439 | 821,036 |
| Depreciation | 100,064 | 120,844 | 118,393 | 122,282 | 107,178 |
| Administrative Expenses | 6,755,309 | 5,971,101 | 5,184,903 | 5,585,108 | 4,808,157 |
| **Total Deductions from Plan Net Position** | 272,221,599 | 250,074,071 | 236,267,814 | 232,946,474 | 222,717,031 |
| **Total Change in Plan Net Position** | (326,379,428) | 462,278,374 | 55,297,385 | (11,472,290) | 53,813,739 |
| **Net Position September 30** | $ 2,504,059,616 | $ 2,830,439,044 | $ 2,368,160,670 | $ 2,312,863,285 | $ 2,324,335,575 |

| City Plan | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| **Additions** | | | | | |
| Employee Contributions | $ 35,963,200 | $ 33,977,411 | $ 32,541,773 | $ 31,929,289 | $ 33,633,645 |
| Employer Contributions | 89,408,134 | 84,746,991 | 80,820,598 | 78,165,049 | 77,992,863 |
| Investment Income | 250,912,773 | 166,305,791 | (20,635,550) | 159,994,300 | 192,363,635 |
| **Total Additions to Plan Net Position** | 376,284,107 | 285,030,193 | 92,726,821 | 270,088,638 | 303,990,143 |
| **Deductions** | | | | | |
| Retirement | 149,317,259 | 136,814,999 | 127,146,361 | 118,458,335 | 110,170,397 |
| Disability | 5,324,746 | 5,349,863 | 5,400,724 | 5,320,505 | 5,477,370 |
| Survivors | 16,706,717 | 16,447,307 | 15,746,605 | 15,282,876 | 14,649,530 |
| DROP Payouts | 21,871,121 | 21,903,824 | 13,397,352 | 13,745,000 | 12,476,037 |
| Actuarial Equivalent | 1,548,691 | 1,524,938 | 1,369,546 | 3,260,271 | 947,258 |
| Refund of Contributions | | | | | |
| Separation | 3,793,510 | 3,618,760 | 3,952,620 | 4,953,166 | 3,936,920 |
| Death | 49,555 | 160,187 | 52,747 | 138,447 | 58,463 |
| Depreciation | 114,971 | 113,526 | 143,219 | 130,935 | 143,945 |
| Administrative Expenses | 4,752,442 | 4,649,611 | 3,823,331 | 3,738,927 | 3,570,422 |
| **Total Deductions from Plan Net Position** | 203,479,012 | 190,583,015 | 171,032,505 | 165,028,462 | 151,430,342 |
| **Total Change in Plan Net Position** | 172,805,095 | 94,447,178 | (78,305,684) | 105,060,176 | 152,559,801 |
| **Net Position September 30** | $ 2,270,521,836 | $ 2,097,716,741 | $ 2,003,269,563 | $ 2,081,575,247 | $ 1,976,515,071 |

# Schedule of Changes in Net Position: Staff Plan

| Staff Plan | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|---|
| **Additions** | | | | | |
| Employee Contributions | $ 224,122 | $ 328,077 | $ 124,619 | $ 127,207 | $ 131,067 |
| Employer Contributions | 482,800 | 497,821 | 353,767 | 241,316 | 250,059 |
| Investment Income | (788,986) | 1,400,587 | 278,161 | 170,225 | 303,812 |
| **Total Additions to Net Position** | (82,064) | 2,226,485 | 756,547 | 538,748 | 684,938 |
| | | | | | |
| **Deductions** | | | | | |
| Retirement | 199,979 | 181,061 | 179,160 | 55,314 | 1,780 |
| Disability | - | - | - | - | - |
| Survivors | - | - | - | - | - |
| DROP Payouts | - | - | - | 140,214 | - |
| Actuarial Equivalent | - | - | - | - | - |
| Refund of Contributions | - | - | - | - | - |
| Death | - | - | - | - | - |
| Separation | 12,636 | - | - | - | 14,294 |
| Depreciation | 308 | 342 | 300 | 288 | 238 |
| Administrative Expenses | 27,350 | 28,538 | 30,488 | 54,161 | 27,725 |
| **Total Deductions from Plan Net Position** | 240,273 | 209,941 | 209,948 | 249,977 | 44,037 |
| **Total Change in Plan Net Position** | (322,337) | 2,016,544 | 546,599 | 288,771 | 640,901 |
| **Net Position September 30** | $7,697,232 | $8,019,569 | $6,003,025 | $5,456,426 | $5,167,655 |

| Staff Plan | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| **Additions** | | | | | |
| Employee Contributions | $ 124,339 | $ 130,973 | $ 126,984 | $ 296,093 | $ 122,316 |
| Employer Contributions | 237,224 | 249,881 | 242,270 | 225,536 | 233,365 |
| Investment Income | 500,246 | 286,116 | (30,772) | 209,544 | 196,564 |
| **Total Additions to Net Position** | 861,809 | 666,970 | 338,482 | 731,173 | 552,245 |
| | | | | | |
| **Deductions** | | | | | |
| Retirement | - | - | - | - | - |
| Disability | - | - | - | - | - |
| Survivors | - | - | - | - | - |
| DROP Payouts | - | - | - | - | - |
| Actuarial Equivalent | - | - | - | - | - |
| Refund of Contributions | - | - | - | - | - |
| Death | - | - | - | - | |
| Separation | 35,933 | 11,754 | 16,747 | - | - |
| Depreciation | 228 | 196 | 214 | 172 | 147 |
| Administrative Expenses | 14,760 | 27,374 | 5,702 | 4,897 | 3,648 |
| **Total Deductions from Plan Net Position** | 50,921 | 39,324 | 22,663 | 5,069 | 3,795 |
| **Total Change in Plan Net Position** | 810,888 | 627,646 | 315,819 | 726,104 | 548,450 |
| **Net Position September 30** | $4,526,754 | $3,715,866 | $3,088,220 | $2,772,401 | $2,046,297 |

# Schedule of Revenue by Source

*For the Ten Years Ended September 30*

| Fiscal Year Ended | Member Contributions | Employer Contributions | Investment Income | Total Revenue |
|---|---|---|---|---|
| **City Plan** | | | | |
| September 30, 2013 | $ 33,633,645 | $ 77,992,863 | $192,363,635 | $303,990,143 |
| September 30, 2014 | 31,929,289 | 78,165,049 | 159,994,300 | 270,088,638 |
| September 30, 2015 | 32,541,773 | 80,820,598 | (20,635,550) | 92,726,821 |
| September 30, 2016 | 33,977,411 | 84,746,991 | 166,305,791 | 285,030,193 |
| September 30, 2017 | 35,963,200 | 89,408,134 | 250,912,773 | 376,284,107 |
| September 30, 2018 | 37,618,303 | 93,504,064 | 145,408,403 | 276,530,770 |
| September 30, 2019 | 40,634,725 | 113,109,911 | 67,729,548 | 221,474,184 |
| September 30, 2020 | 56,250,684 | 124,743,976 | 110,570,539 | 291,565,199 |
| September 30, 2021 | 60,281,553 | 128,046,174 | 524,024,718 | 712,352,445 |
| September 30, 2022 | 65,593,975 | 137,012,301 | (256,764,105) | (54,157,829) |
| **Staff Plan** | | | | |
| September 30, 2013 | $ 122,316 | $ 233,365 | $ 196,564 | $ 552,245 |
| September 30, 2014* | 296,093 | 225,536 | 209,544 | 731,173 |
| September 30, 2015 | 126,984 | 242,270 | (30,772) | 338,482 |
| September 30, 2016 | 130,973 | 249,881 | 286,116 | 666,970 |
| September 30, 2017 | 124,339 | 237,224 | 500,246 | 861,809 |
| September 30, 2018 | 131,067 | 250,059 | 303,812 | 684,938 |
| September 30, 2019 | 127,207 | 241,316 | 170,225 | 538,748 |
| September 30, 2020 | 124,619 | 353,767 | 278,161 | 756,547 |
| September 30, 2021* | 328,077 | 497,821 | 1,400,587 | 2,226,485 |
| September 30, 2022 | 224,122 | 482,800 | (788,986) | (82,064) |

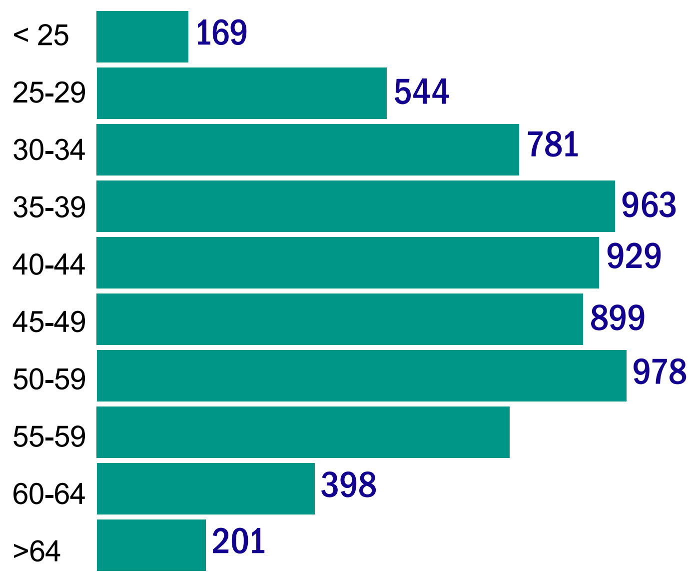
*Member contributions are greatly increased due to employee service purchases.

# Membership Population

| Year Ended | Active Members | Vested Terminated Members | Retired Members and Beneficiaries | Ratio of Non-Actives to Actives |
|---|---|---|---|---|
| **City Plan** | | | | |
| September 30, 2012 | 6,281 | 279 | 3,636 | 0.62 |
| September 30, 2013 | 6,278 | 277 | 3,706 | 0.63 |
| September 30, 2014 | 6,199 | 296 | 3,820 | 0.66 |
| September 30, 2015 | 6,198 | 317 | 3,906 | 0.68 |
| September 30, 2016 | 6,280 | 355 | 4,042 | 0.70 |
| September 30, 2017 | 6,414 | 363 | 4,252 | 0.72 |
| September 30, 2018 | 6,579 | 375 | 4,391 | 0.72 |
| September 30, 2019 | 6,589 | 375 | 4,583 | 0.75 |
| September 30, 2020 | 6,709 | 398 | 4,679 | 0.76 |
| September 30, 2021 | 6,515 | 401 | 4,829 | 0.80 |
| September 30, 2022 | 6,626 | 437 | 4,906 | 0.81 |
| **Staff Plan** | | | | |
| September 30, 2012 | 19 | - | - | - |
| September 30, 2013 | 18 | 1 | - | 0.06 |
| September 30, 2014 | 19 | 1 | - | 0.05 |
| September 30, 2015 | 19 | 2 | - | 0.11 |
| September 30, 2016 | 18 | 3 | - | 0.17 |
| September 30, 2017 | 18 | 5 | - | 0.28 |
| September 30, 2018 | 18 | 7 | 1 | 0.39 |
| September 30, 2019 | 16 | 7 | 4 | 0.69 |
| September 30, 2020 | 17 | 6 | 4 | 0.59 |
| September 30, 2021 | 18 | 6 | 4 | 0.56 |
| September 30, 2022 | 19 | 6 | 4 | 0.53 |

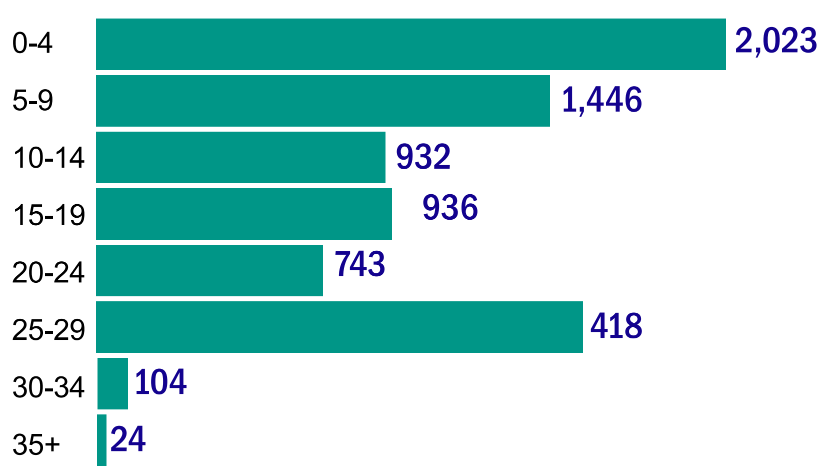
## Distribution of Active Participants by Age: City Plan

*As of September 30, 2022*




## Distribution of Active Participants by Service: City Plan

*As of September 30, 2022*



# Distribution of Retired Members by Type of Benefit: City Plan

*As of September 30, 2022*

| Amount of Monthly Benefit | Number of Retirees | Type of Retirement | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| $ 1 - 500 | 196 | 60 | 11 | 89 | 7 | 29 |
| $ 501 - 1,000 | 454 | 106 | 3 | 304 | 10 | 31 |
| $ 1,001 - 1,500 | 415 | 106 | | 257 | 21 | 31 |
| $ 1,501 - 2,000 | 407 | 103 | - | 261 | 32 | 11 |
| $ 2,001 - 2,500 | 402 | 98 | - | 262 | 32 | 10 |
| $ 2,501 - 3,000 | 390 | 74 | - | 291 | 18 | 7 |
| $ 3,001 - 3,500 | 361 | 62 | - | 272 | 22 | 5 |
| $ 3,501 - 4,000 | 324 | 58 | - | 249 | 15 | 2 |
| $ 4,001 - 4,500 | 267 | 44 | - | 214 | 9 | |
| $ 4,501 - 5,000 | 227 | 21 | - | 202 | 4 | |
| $ 5,001 - 5,500 | 226 | 19 | - | 204 | 3 | - |
| $ 5,501 - 6,000 | 217 | 10 | - | 207 | - | - |
| $ 6,001 - 6,500 | 203 | 7 | - | 195 | - | 1 |
| $ 6,501 - 7,000 | 191 | 5 | - | 184 | 2 | - |
| Over $7,000 | 626 | 5 | - | 621 | - | - |
| | 4,906 | 778 | 14 | 3,812 | 175 | 127 |

1 - Surviving Spouse
2 - Dependent Child
3 - Regular Retirement
4 - Disability Retirement
5 - QDRO/Alternate Payee

# Schedule of Average Benefit Payments by Years of Service & Final Avg. Salary: City

Schedule of Average Benefit Payments by Years of Service and Final Average Salary - City Plan

| Retirement Effective Dates | Years of Credited Service | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |
| **Period 01/01/2011 to 12/31/2011** | | | | | | | |
| *Average Monthly Benefits | 0 | $838 | $1,233 | $1,942 | $3,758 | $5,311 | $6,172 |
| Average Final Salary | 0 | ** | ** | ** | ** | ** | ** |
| Number of Active Retirees | 0 | 26 | 15 | 22 | 36 | 64 | 15 |
| **Period 01/01/2012 to 12/31/2012** | | | | | | | |
| *Average Monthly Benefits | 0 | $655 | $1,182 | $2,405 | $3,567 | $5,439 | $5,410 |
| Average Final Salary | 0 | ** | ** | ** | ** | ** | ** |
| Number of Active Retirees | 0 | 16 | 13 | 16 | 31 | 64 | 21 |
| **Period 01/01/2013 to 12/31/2013** | | | | | | | |
| *Average Monthly Benefits | 0 | $873 | $1,222 | $2,536 | $3,645 | $5,439 | $6,185 |
| Average Final Salary | 0 | ** | ** | ** | ** | ** | ** |
| Number of Active Retirees | 0 | 26 | 23 | 28 | 32 | 78 | 24 |
| **Period 01/01/2014 to 12/31/2014** | | | | | | | |
| *Average Monthly Benefits | 0 | $770 | $1,492 | $2,251 | $4,146 | $5,800 | $6,047 |
| Average Final Salary | 0 | $49,262 | $48,382 | $53,096 | $69,814 | $83,750 | $76,030 |
| Number of Active Retirees | 0 | 36 | 20 | 26 | 22 | 75 | 22 |
| **Period 01/01/2015 to 12/31/2015** | | | | | | | |
| *Average Monthly Benefits | 0 | $864 | $1,602 | $2,263 | $3,261 | $5,679 | $6,312 |
| Average Final Salary | 0 | $58,356 | $55,376 | $54,451 | $58,034 | $80,967 | $72,302 |
| Number of Active Retirees | 0 | 29 | 20 | 39 | 26 | 74 | 13 |
| **Period 01/01/2016 to 12/31/2016** | | | | | | | |
| *Average Monthly Benefits | 0 | $760 | $1,744 | $2,297 | $3,551 | $5,941 | $6,909 |
| Average Final Salary | 0 | $45,589 | $61,381 | $60,057 | $65,422 | $83,454 | $85,556 |
| Number of Active Retirees | 0 | 26 | 29 | 29 | 33 | 108 | 24 |
| **Period 01/01/2017 to 12/31/2017** | | | | | | | |
| *Average Monthly Benefits | 0 | $1,099 | $1,184 | $2,302 | $3,903 | $6,110 | $6,576 |
| Average Final Salary | 0 | $54,331 | $47,988 | $57,059 | $70,913 | $90,146 | $80,756 |
| Number of Active Retirees | 0 | 10 | 30 | 37 | 41 | 83 | 16 |
| **Period 01/01/2018 to 12/31/2018** | | | | | | | |
| *Average Monthly Benefits | 0 | $777 | $1,518 | $2,240 | $3,538 | $6,584 | $7,198 |
| Average Final Salary | 0 | $52,255 | $59,151 | $58,463 | $63,532 | $91,902 | $88,223 |
| Number of Active Retirees | 0 | 27 | 28 | 45 | 47 | 90 | 21 |
| **Period 01/01/2019 to 12/31/2019** | | | | | | | |
| *Average Monthly Benefits | 0 | $1,071 | $1,393 | $2,683 | $3,516 | $5,977 | $7,845 |
| Average Final Salary | 0 | $64,210 | $55,938 | $63,321 | $67,818 | $87,347 | $95,520 |
| Number of Active Retirees | 0 | 26 | 37 | 28 | 33 | 65 | 12 |

*Continued on next page.*

## Schedule of Average Benefit Payments: City - cont.

| Retirement Effective Dates | Years of Credited Service | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |
| **Period 01/01/2020 to 12/31/2020** | | | | | | | |
| *Average Monthly Benefits | 0 | $961 | $1,437 | $2,771 | $4,114 | $6,220 | $7,087 |
| Average Final Salary | 0 | $70,079 | $51,620 | $69,111 | $77,107 | $94,672 | $85,742 |
| Number of Active Retirees | 0 | 27 | 32 | 39 | 47 | 65 | 12 |
| **Period 01/01/2021 to 12/31/2021** | | | | | | | |
| *Average Monthly Benefits | $250 | $1,006 | $1,301 | $2,692 | $3,989 | $6,544 | $7,203 |
| Average Final Salary | $14,737 | $67,831 | $48,931 | $66,523 | $75,160 | $99,755 | $87,542 |
| Number of Active Retirees | 1 | 20 | 22 | 34 | 40 | 75 | 25 |
| **Period 01/01/2022 to 12/31/2022** | | | | | | | |
| *Average Monthly Benefits | $0 | $916 | $1,696 | $2,348 | $4,725 | $6,937 | $8,094 |
| Average Final Salary | $0 | $65,176 | $61,902 | $62,463 | $85,202 | $105,294 | $93,104 |
| Number of Active Retirees | 0 | 31 | 36 | 41 | 51 | 79 | 4 |

* Monthly benefits are actual benefits received during first year of retirement. These benefits may be higher than initial benefit for those that received COLAs while in DROP or converted DROP balance to a monthly annuity. Balances may be reduced for those that took a lump sum actuarial equivalent or elected a survivor option at the time of retirement.

** Final Average Salary not available for previous years, history will be built during future financial statements.

# Schedule of Average Benefit Payments by Years of Service & Final Avg. Salary: Staff

| Retirement Effective Dates | Years of Credited Service | | |
|---|---|---|---|
| | 0-4 | 5-15 | 16-25 |
| **Period 01/01/2018 to 12/31/2018** | | | |
| *Average Monthly Benefits | - | $ 356 | - |
| Average Final Salary | - | $ 19,410 | - |
| Number of Active Retirees | - | 1 | - |
| **Period 01/01/2019 to 12/31/2019** | | | |
| *Average Monthly Benefits | - | $ 4,816 | - |
| Average Final Salary | - | $ 146,515 | - |
| Number of Active Retirees | - | 3 | - |
| **Period 01/01/20 to 12/31/2020** | | | |
| *Average Monthly Benefits | - | - | - |
| Average Final Salary | - | - | - |
| Number of Active Retirees | - | - | - |
| **Period 01/01/21 to 12/31/2021** | | | |
| *Average Monthly Benefits | - | - | - |
| Average Final Salary | - | - | - |
| Number of Active Retirees | - | - | - |
| **Period 01/01/22 to 12/31/2022** | | | |
| *Average Monthly Benefits | - | $ 2,836 | - |
| Average Final Salary | - | $ 226,878 | - |
| Number of Active Retirees | - | 1 | - |

* Monthly benefits are actual benefits received during first year of retirement. These benefits may be higher than initial benefit for those that received COLAs while in DROP or converted DROP balance to a monthly annuity. Balances may be reduced for those that took a lump sum actuarial equivalent or elected a survivor option at the time of retirement.

Since the Staff Plan was separated from the City plan in 2007 some members are in both the City Plan and the Staff Plan. This represents only the years as part of the Staff Plan and the benefit paid by the Staff Plan. The portion attributed to the City Plan is counted under the amounts reported for the City Plan.

# Schedule of Benefits by Type

*As of September 30, 2022*

| Fiscal Year Ended | Retirement Benefits | Actuarial Equivalent | Disability Benefits | Survivor Benefits | DROP Payments | Total Benefits |
|---|---|---|---|---|---|---|
| **City Plan** | | | | | | |
| September 30, 2011 | $ 94,629,017 | $ 1,231,860 | $ 5,673,945 | $ 13,724,270 | $ 10,893,575 | $126,152,667 |
| September 30, 2012 | 102,819,849 | 1,022,189 | 5,648,866 | 14,190,329 | 14,108,183 | 137,789,416 |
| September 30, 2013 | 110,170,397 | 947,258 | 5,477,370 | 14,649,530 | 12,476,037 | 143,720,592 |
| September 30, 2014 | 118,458,335 | 3,260,271 | 5,320,505 | 15,282,876 | 13,745,000 | 156,066,987 |
| September 30, 2015 | 127,146,361 | 1,369,546 | 5,400,724 | 15,746,605 | 13,397,352 | 163,060,588 |
| September 30, 2016 | 136,814,999 | 1,524,938 | 5,349,863 | 16,447,307 | 21,903,824 | 182,040,931 |
| September 30, 2017 | 149,317,259 | 1,548,691 | 5,324,746 | 16,706,717 | 21,871,121 | 194,768,534 |
| September 30, 2018 | 160,170,170 | 875,608 | 5,285,218 | 17,231,458 | 28,978,582 | 212,541,036 |
| September 30, 2019 | 171,687,119 | 920,891 | 5,261,167 | 17,899,384 | 25,734,915 | 221,503,476 |
| September 30, 2020 | 178,887,438 | 724,957 | 5,191,272 | 19,151,120 | 23,236,549 | 227,191,336 |
| September 30, 2021 | 188,161,116 | 575,710 | 5,136,081 | 20,548,531 | 24,372,952 | 238,794,390 |
| September 30, 2022 | 197,964,463 | 734,241 | 5,076,806 | 21,929,298 | 33,667,321 | 259,372,129 |
| **Staff Plan** | | | | | | |
| September 30, 2018 | $ 1,780 | $ - | $ - | $ - | $ - | $ 1,780 |
| September 30, 2019 | 55,314 | - | - | - | 140,214 | 195,528 |
| September 30, 2020 | 179,160 | - | - | - | - | 179,160 |
| September 30, 2021 | 181,061 | - | - | - | - | 181,061 |
| September 30, 2022 | 199,979 | - | - | - | - | 199,979 |

# Schedule of Average Benefit Payment Amounts

*As of September 30, 2022*

| Year | Number of Retirees | Benefits Paid During the Year | Average Monthly |
|---|---|---|---|
| **City Plan** | | | |
| 2011 | 3,517 | $ 126,152,667 | $ 2,989 |
| 2012 | 3,636 | 137,789,416 | 3,158 |
| 2013 | 3,706 | 143,720,592 | 3,232 |
| 2014 | 3,820 | 156,066,987 | 3,405 |
| 2015 | 3,906 | 163,060,588 | 3,479 |
| 2016 | 4,042 | 182,040,931 | 3,753 |
| 2017 | 4,252 | 194,768,534 | 3,817 |
| 2018 | 4,391 | 212,541,036 | 4,034 |
| 2019 | 4,583 | 221,503,476 | 4,028 |
| 2020 | 4,679 | 227,191,336 | 4,046 |
| 2021 | 4,829 | 238,794,390 | 4,121 |
| 2022 | 4,906 | 259,372,129 | 4,406 |
| **Staff Plan** | | | |
| 2018 | 1 | $ 1,780 | $ 356 |
| 2019 | 4 | 195,528 | 4,074 |
| 2020 | 4 | 179,160 | 3,733 |
| 2021 | 4 | 181,061 | 3,772 |
| 2022 | 4 | 199,979 | 4,166 |

# Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on Audit of Financial Statements Performed in Accordance with *Governmental Auditing* Standards

**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
Employees' Retirement Fund of the
City of Fort Worth, Texas

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the combined financial statements of the Fort Worth Employee's Retirement Fund (the Fund), a fiduciary fund of the City of Fort Worth, as of and for the year ended September 30, 2022, and the related notes to the financial statements, which collectively comprise the Fund' basic financial statements, and have issued our report thereon dated December 20, 2022.

***Report on Internal Control over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the Fund's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control. Accordingly, we do not express an opinion on the effectiveness of the Fund's internal control.

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 or significant deficiencies may exist that have not been identified.

**Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the Fund's financial statements 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 financial statements. 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.

Eide Bailly LLP

Boise, Idaho
December 20, 2022

# Everything Just Clicked

For this year's publication, our theme was "My Corner of Cowtown." We asked Trustees and staff to tell us about their favorite spots in Fort Worth, and as you can see on this page, they had a lot of fun with the project. Starting at right: **1)** Staff members Joanna White (left) and Desireé Negrete had no difficulty picking their ideal location, because they are regulars at **Velvet Taco**. **2)** Administrative Assistant Sudie Sherrard is passionate about square dancing, so she was happy to show off her favorite venue—and a great dress—outside **Swingtime Center** (tip: lessons are available). **3)** For our photo of Trustee Loraine Coleman at the **Wedgwood Branch Library**, we were grateful to have the skills of the **Fort Worth Library's** talented media services specialist, Kris Rowberry. **4)** Communications Specialist Jeff Rodriguez looks for the right angle to photograph staff members Brad Duckworth and Toccara Oxford while shooting photos of the mural on the side of **Pouring Glory**. **5)** After the project was finally complete, Toccara wanted to take one last photo by the mural, just for fun. So we did.







City of Fort Worth Employees' Retirement Fund
3801 Hulen St.   Fort Worth, TX  76107
fwretirement.org