

**Texas Municipal Retirement System**

**2016**

**Comprehensive Annual  
Financial Report**

**For the Years Ended  
December 31, 2016 and 2015**



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Texas Municipal Retirement System

TMRS®

P.O. Box 149153

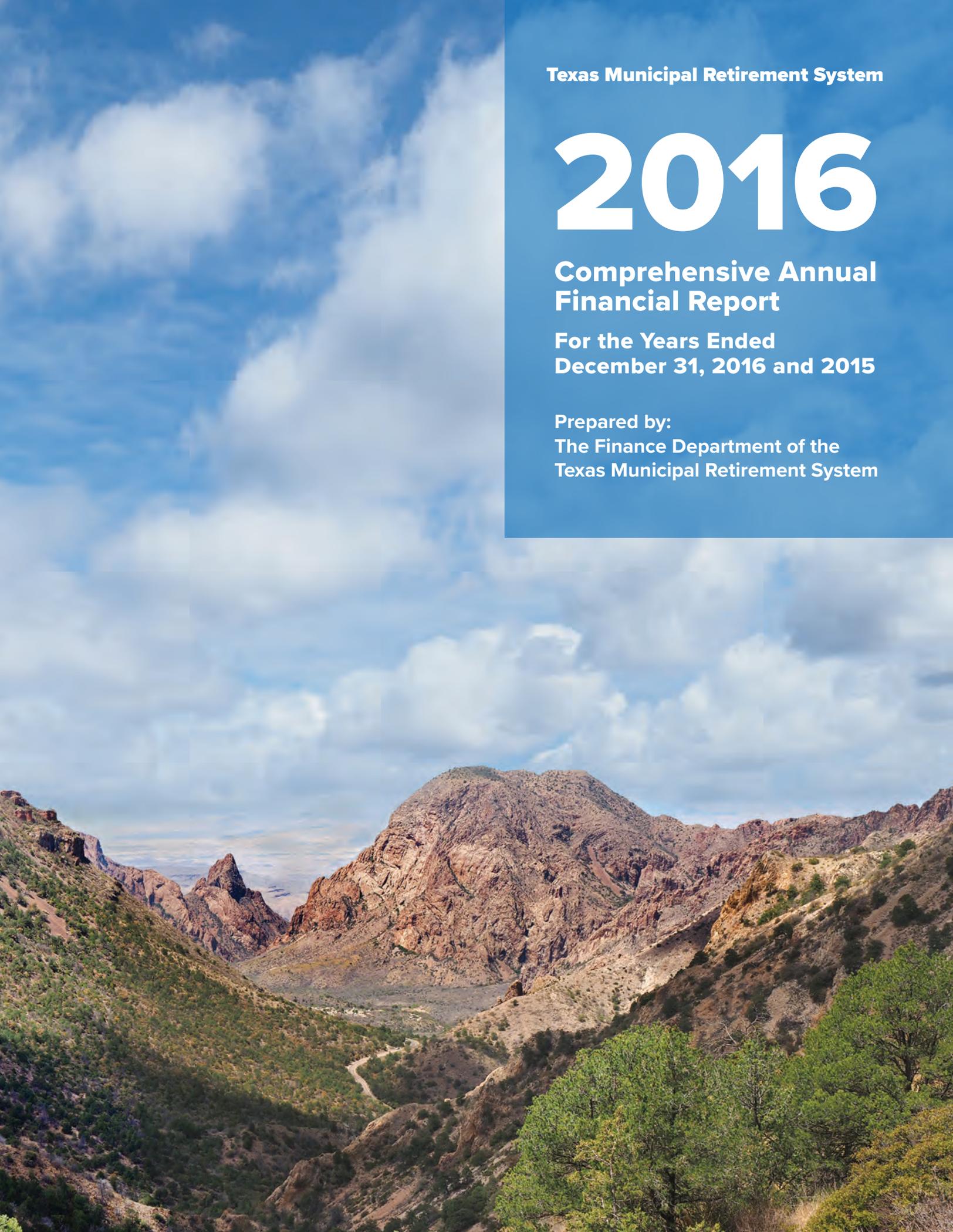
Austin, TX 78714-9153

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Website: [www.tmr.com](http://www.tmr.com)

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Financial Report**

**For the Years Ended  
December 31, 2016 and 2015**

**Prepared by:  
The Finance Department of the  
Texas Municipal Retirement System**

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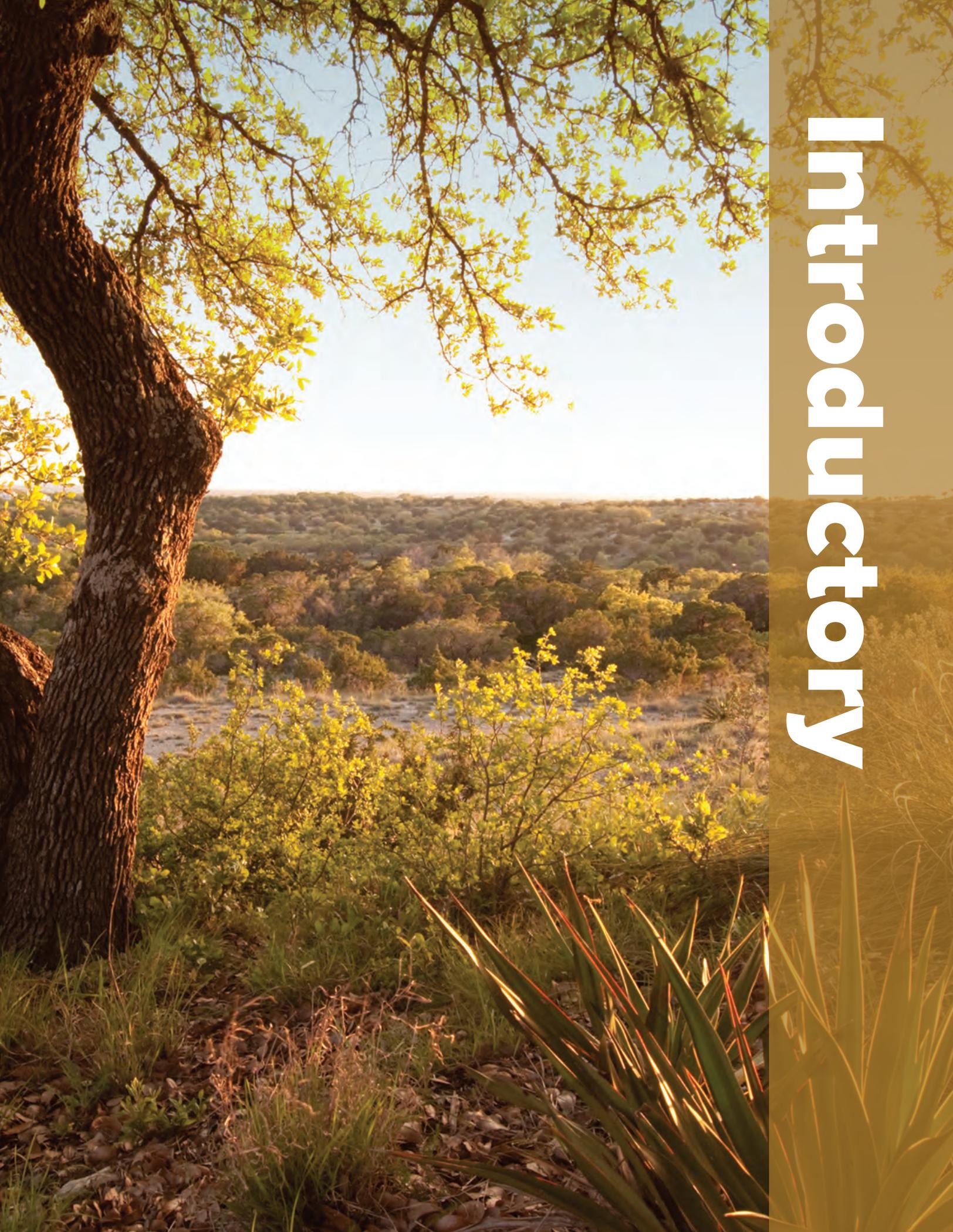
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# Introductory



Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

**Texas Municipal  
Retirement System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2015**

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2016***

Presented to

***Texas Municipal Retirement System***

In recognition of meeting professional standards for  
plan funding and 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



June 15, 2017

To: The Participants and Employers of the Texas Municipal Retirement System  
and the Readers of the *Comprehensive Annual Financial Report*

We are pleased to present the *Comprehensive Annual Financial Report (AFR)* of the Texas Municipal Retirement System (TMRS®, or the System) for the year ended December 31, 2016. We hope you will find this report informative.

The AFR is prepared by TMRS staff under the direction of the Board of Trustees. Management of TMRS assumes full responsibility for both the accuracy of the data and the completeness and fairness of its presentation, based on a comprehensive framework of internal control that it has established for this purpose. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatement. This report complies with generally accepted accounting principles as established by the Governmental Accounting Standards Board (GASB).

The TMRS Act requires that independent auditors perform an annual audit on the financial statements contained in this report. The Board selected KPMG LLP to perform the audit for the 2016 fiscal year. For information regarding the scope of the audit, please see the Independent Auditors' Report in the Financial Section. Management's Discussion and Analysis (MD&A) is found in the Financial Section immediately after the Independent Auditors' Report and provides an analysis of condensed financial information for the current and prior fiscal years. MD&A should be read in conjunction with this transmittal letter.

## About TMRS

TMRS is a statewide agent multiple-employer public employee retirement system created by law in 1947 to provide retirement, disability, and death benefits to employees of participating cities. As a hybrid defined benefit plan, TMRS members contribute at a designated rate toward their own retirement benefit. At retirement, the member's account balance (including credited interest) plus employer matching contributions is used to calculate the member's retirement benefit. As of December 31, 2016, TMRS had 872 member cities, 108,891 employee accounts, and 59,611 retirement accounts. TMRS paid \$1.16 billion in benefits in 2016, up from \$1.10 billion in 2015.

## Activity in 2016

The year 2016 presented significant challenges to all public retirement systems, in part due to concern over the sustainability of several high-profile plans in the United States. TMRS developed a variety of approaches to ensure that the strength and security of our benefit program is recognized by members, cities, elected officials, and the public. Telling the good story of TMRS' success in addressing funding, investment, and plan design issues continues to be a focus for TMRS staff.

In March 2017, the TMRS Board approved an approximate 6.73% interest credit to city accounts as of December 31, 2016, based on account balances as of January 1, 2016; member accounts were credited with 5%. The System's smoothing policy and deferred losses resulted in an actuarial return of 6.44%.

TMRS continues to develop **TMRSDirect**<sup>®</sup>, which provides online self-service for members through MyTMRS<sup>®</sup>, and allows cities to perform administrative functions through the City Portal. In 2016, almost 20,000 new users registered for MyTMRS and, following implementation of online enrollment in 2015, cities enrolled almost 3,200 new members during the year. New features available to members and retirees on MyTMRS in 2016 included communications preferences for newsletters and withholding changes for benefit payments. Beginning in 2017, members will be able to make beneficiary changes online. The number of cities using the City Portal and the number of members using MyTMRS continued to expand during 2016. This led to increased online retirement estimates, which grew to over 207,800, and those requested through the City Portal totaled approximately 6,570. By comparison, estimates requested from member services representatives totaled only 14,500 as compared to 22,500 in 2015. In addition to **TMRSDirect**, TMRS expanded the use of email newsletters for direct communication to members and retirees and enabled online registration for TMRS training and education events.

During 2016, the TMRS Advisory Committee on Benefit Design met to consider potential legislative issues for the 2017 Regular Session of the Texas Legislature. The Committee examined potential plan design changes to the current provisions governing return-to-work at the same city from which a member retired as well as possible changes to the cost-of-living adjustment options available to cities. Following the Committee's work, the Board of Trustees chose in December not to pursue legislation in the 2017 session.

Procedures and resources developed in 2015 to assist cities with their reporting requirements under GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27* (GASB 68), continued to be successfully used in 2016. TMRS completed its second annual SOC-1 Type 2 audit, covering the period of April 16, 2015 through April 30, 2016, and anticipates issuance of the third annual SOC audit report by June 2017. Use of the City Portal to provide cities with access to confidential information needed to meet the reporting requirements again proved an expeditious and secure method of distributing the data.

A strong demand for member and retirement services continues. Six new cities joined the System in 2016. Staff answered over 82,000 phone calls requesting assistance and over 8,000 emails. Staff processed 3,456 new retirements in 2016, representing a 4.7% increase over the previous year.

Staff provided a high level of support to cities in examining contribution rates and plan change requests. In support of this function and member education, the Travel Team made 312 trips to cities and visited with approximately 23,000 members in the field. In group training sessions, the Communications department prepared and presented 14 Regional Pre-Retirement Seminars, three City Correspondent Certification Courses, and an Annual Training Seminar in 2016. TMRS also inaugurated regional Executive Workshops, held in six cities around the state to provide more detailed education on funding and investment issues.

## Investments

TMRS administered \$25.8 billion in assets as of December 31, 2016. The Investments Department at TMRS follows these Total Portfolio Performance Objectives:

- Achieve a Total Rate of Return, over rolling five-year periods, consistent with the assumed long-term rate of return on TMRS assets established by the actuary (currently 6.75%)
- Exceed an appropriate benchmark reflective of asset class participation over rolling five-year periods (i.e., Policy Index)

Diversification has been, and continues to be, implemented through a deliberate multi-year process. The current asset allocation strategy is expected to meet the long-term total return objective of 6.75%, consistent with the actuarial interest rate assumption for the plan.

As described in the Investment Section of this AFR, the overall one-year gross rate of return for 2016 on the investment portfolio was 7.42%. The Investment Section of this AFR contains a detailed summary of investment operations during 2016, including performance of different asset classes and diversification progress.

## Funding and Actuarial Overview

As required by statute, TMRS obtains an annual actuarial valuation for each participating municipality. The actuarial results for the System as a whole are presented in the Actuarial Section of this AFR. After the completion of the annual actuarial valuation, TMRS provides a Rate Letter to each participating municipality, reconciling the city's rate from the prior valuation to the current valuation and explaining the components of the reconciling items. TMRS makes these Rate Letters available on our website.

The TMRS Board of Trustees has been working with the actuarial firm of Gabriel, Roeder, Smith & Company (GRS) since June 2008, and GRS completed its ninth actuarial valuation for the System for the fiscal year ended December 31, 2016. As certified by GRS, the calculations for funding are prepared in accordance with Actuarial Standards of Practice, GASB principles, and state law.

Each city has its own retirement program within the options offered by the plan. Each city's plan objective is to accumulate sufficient assets to pay benefits when they become due and to finance its long-term benefits through a contribution rate that is annually determined by the consulting actuary.

A member city's retirement contribution rate consists of the normal cost contribution rate and the prior service contribution rate, both of which are calculated to be a level percent of payroll from year to year. The normal cost contribution rate finances the portion of an active member's projected benefit allocated to the year immediately following the valuation date; the prior service contribution rate amortizes the unfunded (overfunded) actuarial liability (asset) over the applicable period for that city. Both the normal cost and prior service contribution rates include recognition of the projected impact of annually repeating benefits if adopted by a city — such as Updated Service Credit (USC) and Cost of Living Adjustments (COLAs) — as well as future increases in salary.

Conservative features of TMRS' plan include the 6.75% investment return assumption, and that each city's unfunded liability is amortized over a closed period of 25 or 30 years. As of December 31, 2016, TMRS as a whole was 86.3% funded; this funded ratio increased from 2015. Historical information relating to progress in meeting the actuarial funding objective is presented in the Schedule of Funding Progress included in the Actuarial Section of this AFR. TMRS has adopted an Actuarial Funding Policy, which is posted on the TMRS website.

## Professional Services

The Board of Trustees appoints consultants to perform services that are essential to the effective and efficient operation of TMRS. The Supplemental Schedules of the Financial Section contain information on professional services.

## Awards and Acknowledgments

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to TMRS for its *Comprehensive Annual*

# Letter of Transmittal

Continued

*Financial Report for the Year Ended December 31, 2015.* This was the 29th consecutive year that TMRS has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Comprehensive Annual Financial 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. TMRS believes that our current *Comprehensive Annual Financial Report* continues to meet the Certificate of Achievement Program's requirements, and is submitting it to the GFOA to determine its eligibility for another certificate.

TMRS also received the Public Pension Standards 2016 Award from the Public Pension Coordinating Council (PPCC) in recognition of meeting professional standards for plan design and administration as set forth in the Public Pension Standards.

This AFR is made available to all participating TMRS cities; their combined cooperation contributes significantly to the success of TMRS.

We would like to express our gratitude to the staff, advisors, and all who have contributed to the preparation of this report and to the continued success of the System.

Respectfully submitted,



Jim Parrish

Chair, Board of Trustees



David Gavia

Executive Director

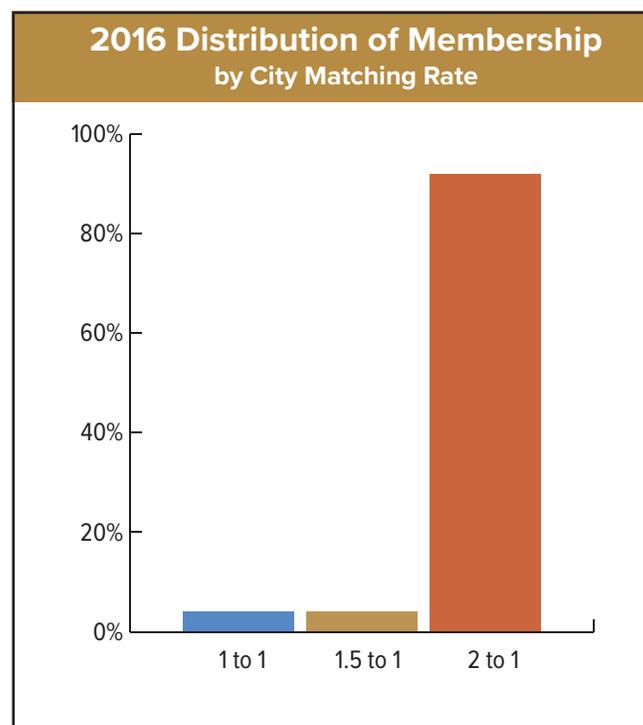
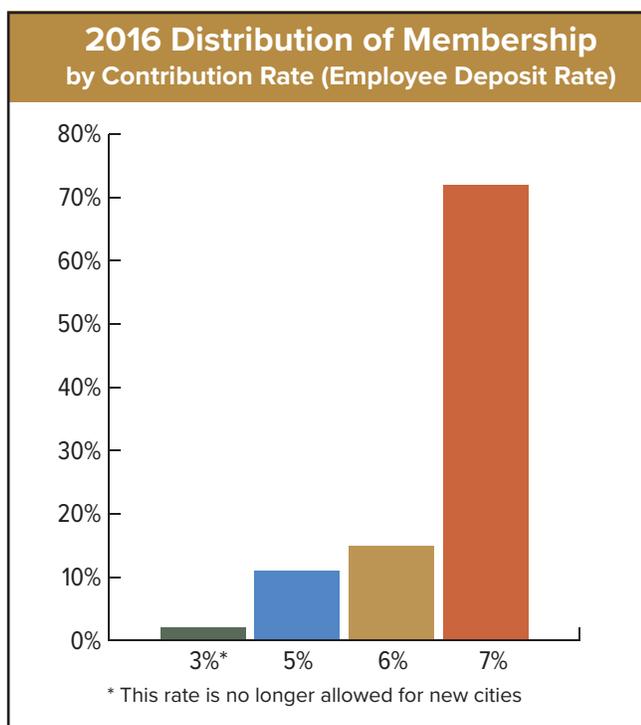


Rhonda H. Covarrubias

Director of Finance

|  | 2014        | 2015        | 2016        |
|--|-------------|-------------|-------------|
| Employer Contributions                     | \$719.9 mil | \$751.7 mil | \$768.3 mil |
| Employee Contributions                     | \$355.4 mil | \$376.1 mil | \$389.9 mil |
| Retirement Benefits                        | \$1.0 bil   | \$1.1 bil   | \$1.2 bil   |
| Terminated Member Refunds                  | \$58.7 mil  | \$57.0 mil  | \$54.2 mil  |
| Administrative Expenses                    | \$13.4 mil  | \$21.3 mil  | \$18.1 mil  |
| Investment Expenses*                       | \$21.2 mil  | \$36.8 mil  | \$61.2 mil  |
| Member Municipalities                      | 860         | 866         | 872         |
| New Member Municipalities                  | 10          | 7           | 6           |
| Retired Member Accounts                    | 53,455      | 56,481      | 59,611      |
| Active Plan Member Accounts                | 104,019     | 106,894     | 108,891     |
| Inactive Plan Member Accounts              | 45,054      | 50,707      | 53,721      |
| New Retirements                            | 3,675       | 3,302       | 3,456       |
| New Employee Members                       | 14,457      | 15,476      | 15,094      |
| Refunded Members                           | 7,735       | 7,145       | 6,971       |
| Investments, at Fair Value                 | \$23.9 bil  | \$24.3 bil  | \$25.8 bil  |
| Annual Total Return, Gross                 | 5.99%       | 0.34%       | 7.42%       |
| Interest Rate on Employee Deposits         | 5.0%        | 5.0%        | 5.0%        |
| Interest Rate on Municipality Deposits     | 5.68%       | 0.06%       | 6.73%       |
| Cities that:                               |             |             |             |
| Adopted Updated Service Credit (USC)       | 598         | 595         | 596         |
| Reduced percentage or rescinded USC        | -           | 2           | 1           |
| Adopted Annuity Increases to Retirees (AI) | 475         | 471         | 475         |
| Reduced or Rescinded AI                    | 2           | 3           | -           |
| Increased Employee Contribution Rate       | 9           | 13          | 11          |
| Increased City Matching Ratio              | 13          | 17          | 6           |
| Reduced City Matching Ratio                | -           | -           | -           |
| Adopted Supplemental Death Benefits        | -           | -           | -           |
| Rescinded Supplemental Death Benefits      | -           | 1           | -           |
| Adopted 5-Year Vesting                     | 2           | 1           | 2           |
| Adopted 20-Year, Any Age Retirement        | 6           | 4           | 10          |

\* Investment expenses do not include management and incentive fees that are paid directly out of the operations of the private investment funds.



# TMRS Board of Trustees



**Jim Parrish, 2016 Chair**  
Deputy City Manager – Administrative Services  
*Plano*  
Term expires: February 1, 2017



**David Landis**  
City Manager  
*Perryton*  
Term expires: February 1, 2021



**Bill Philibert, 2016 Vice Chair**  
Director of Human Resources and Risk Management  
*Deer Park*  
Term expires: February 1, 2019



**Julie Oakley, CPA**  
Assistant City Manager  
*Lakeway*  
Term expires: February 1, 2019



**James "Jim" Paul Jeffers**  
City Manager  
*Nacogdoches*  
Term expires: February 1, 2021



**Roel "Roy" Rodriguez, PE**  
City Manager  
*McAllen*  
Term expires: February 1, 2017

The TMRS Act provides that the administration of TMRS is entrusted to a six-member Board of Trustees, appointed by the Governor with the advice and consent of the Senate. Three Trustees are "Executive Trustees" (Landis, Philibert, and Rodriguez) who are the chief executive officer, chief finance officer, or other officer, executive, or department head of a participating municipality. Three Trustees are "Employee Trustees" (Jeffers, Oakley, and Parrish) who are employees of a participating municipality. Per the Texas Constitution, Trustees continue to perform the duties of their office until a successor has been duly qualified.

## TMRS Executive Director



**David Gavia**

**The TMRS Advisory Committee on Benefit Design** (“Advisory Committee”) is appointed by the TMRS Board of Trustees and serves at the pleasure of the Board. The Advisory Committee provides valuable assistance to the Board in considering benefit changes and improvements to the System, and acts as a voice for member, retiree, and city issues.

The Advisory Committee is a 19-member body composed of 9 “Individual Representatives” representing TMRS members, retirees, and elected officials; and 10 members representing associations and groups with an interest in the TMRS program, called “Group Representatives.” Group Representatives are chosen by their respective associations and approved by the Board. The following members were on the Committee as of December 31, 2016.

## Individual Representatives

- Michael Dane, Assistant City Manager/Chief Financial Officer, San Angelo
- Bryan Langley, Assistant City Manager/Chief Financial Officer, Denton
- Julie Masters, Mayor, Dickinson
- Charles Windwehen, TMRS Retiree

Note: Five individual representative positions were vacant as of December 31, 2016.

## Group Representatives

- Alex Cramer, Arlington Professional Fire Fighters
- Vacant, Service Employees International Union, San Antonio
- David Riggs, Texas State Association of Fire Fighters
- Bonita Hall, Texas Municipal Human Resources Association
- Kevin Lawrence, Texas Municipal Police Association
- Keith Dagen, Government Finance Officers Association of Texas
- Greg Shipley, Combined Law Enforcement Associations of Texas
- Lori Steward, City of San Antonio
- Greg Vick, Texas City Management Association
- J.J. Rocha, Texas Municipal League

The following members of the Advisory Committee served during calendar year 2016 but were not members at year-end: Victor Hernandez – City Councilmember, Lubbock; Tadd Phillips – Texas Municipal Human Resources Association; and David Russell – Texas Municipal Police Association.

# TMRS Professional Advisors

**Actuary**

Gabriel, Roeder, Smith & Company

**Custodian**

State Street Bank and Trust Company

**Depository Bank**

JPMorgan Chase Bank

**Economic Advisor**

A. Gary Shilling & Co.

**Fiduciary Counsel**

Robert D. Klausner

**Independent Auditor**

KPMG LLP

**Investment Consultants**

RVK  
Courtland Partners, Ltd.  
Albourne America LLC  
StepStone Group LP

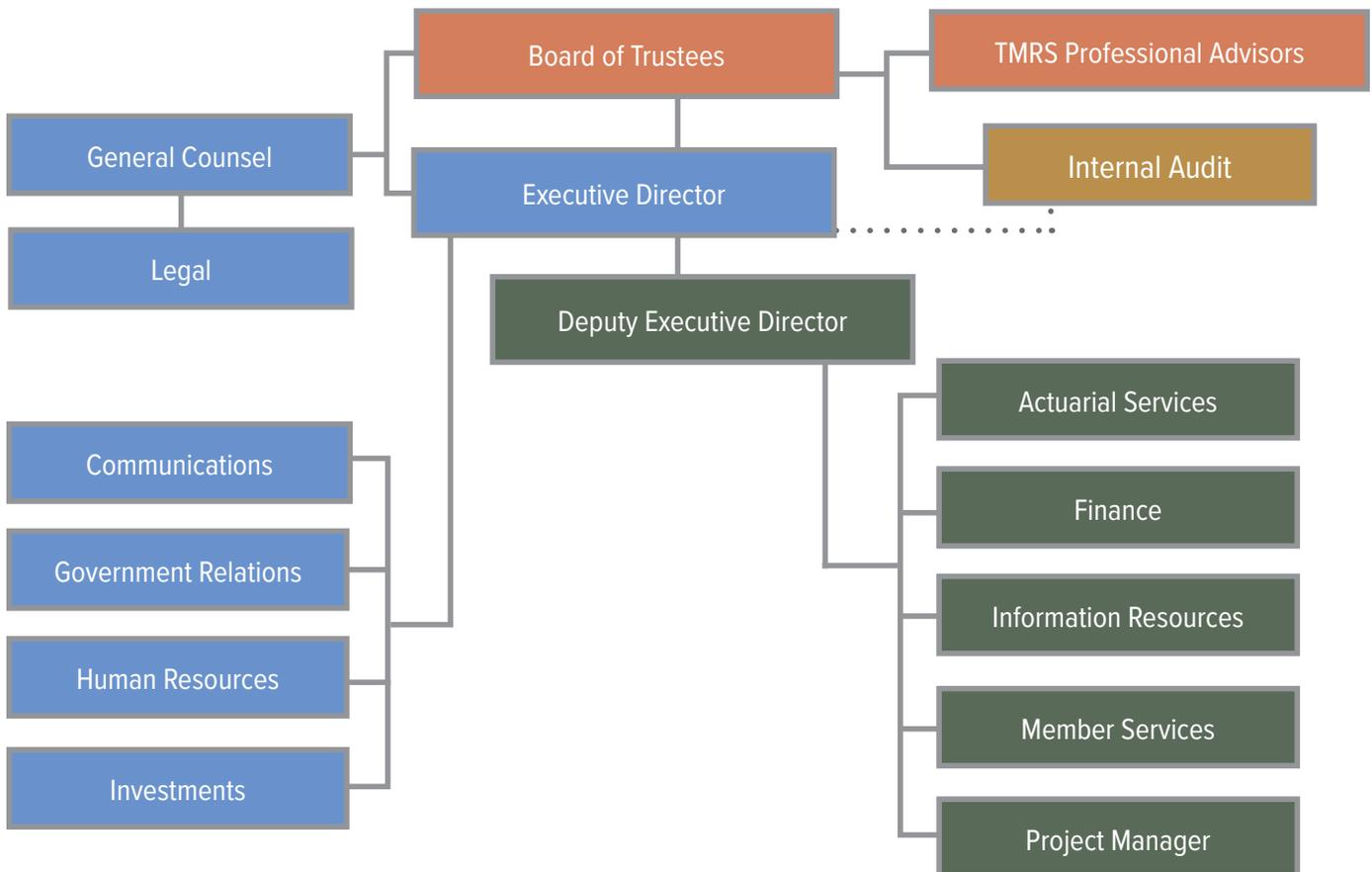
**Medical Board**

Ace H. Alsup III, MD  
John A. Genung, MD  
William P. Taylor, MD

Note:

A schedule of investment management fees, by asset class, is provided in the Investment Section of this report.

# TMRS Administrative Organization



## Executive/Administrative

David Gavia, Executive Director  
 Eric Davis, Deputy Executive Director  
 Leslee Hardy, Director of Actuarial Services  
 Leslie Ritter, Director of Human Resources  
 Sandra Vice, Director of Internal Audit  
 Dan Wattles, Director of Governmental Relations  
 Ariel Chou, Actuarial Analyst  
 Michael Dominkowitz, Facilities Technician  
 Andrea Focht-Williams, Senior Internal Auditor  
 Karen Jackson, Executive Assistant  
 Jesse Pittman, Senior Project Manager  
 LaShelle Ruiz, Administrative Assistant  
 Adrienne Strong, Human Resources Generalist  
 Stacy White, Executive Assistant

## Communications

Bill Wallace, Director of Communications  
 Angela Deats, Communications Analyst  
 Donna Neal, Communications Technology Design Specialist  
 Melanie Thomas, Process & Content Management Specialist

## Travel Team/City Services

Colin Davidson, Regional Manager II, City Services  
 Shannon Lucero, Regional Manager II, City Services  
 Anthony Mills, Senior Regional Manager, City Services  
 Lorraine Moreno, Regional Manager II, City Services  
 David Rodriguez, Senior Regional Manager, City Services  
 Sean Thompson, Regional Manager II, City Services

## Finance

Rhonda Covarrubias, Director of Finance  
 Josette Madry, Accounting Operations Supervisor  
 Candace Nolte, Controller  
 Nadia Ali, Accounting Specialist  
 Sherry Chapman, Investment Accountant  
 Paula Nguyen, Investment Accountant  
 Danielle Whitaker, Accountant

## Information Resources

Scott Willrich, Director of Information Resources

## Software Development

Pete Krnavek, Information Systems Manager  
 Martin Burke, Business Process Analyst  
 Ming Cheung, Senior Software Developer  
 Blanca DaCosta-Cruz, Quality Assurance Analyst  
 David Himawan, Database Administrator/Developer  
 Monica Kache, Systems Analyst  
 Steve Li, Database Administrator/Developer  
 Steven Lohmeyer, Senior Systems Analyst  
 Gretchen Meyer, Senior Systems Analyst  
 Tin-Sze Poon, Senior Software Developer  
 Kevin Wang, Senior Software Architect

## Network Operations

Brian Farrar, Network Operations Manager  
 Chris Gillis, Computer Support Specialist  
 Bryan Meche, Network/Systems Administrator  
 Nick Pappada, Network/Systems Administrator  
 Joseph Roberts, Network/Systems Administrator

## Records

Ricardo Zavala, Records Supervisor  
 Chyrlynne Crockett, Records Analyst

Emersun Frechette, Records Technician  
 Brittany Royal, Records Technician

## Investments

T.J. Carlson, Chief Investment Officer  
 Marc Leavitt, Director of Absolute Return  
 Tom Masthay, Director of Real Assets  
 Kristin Qualls, Director of Equities  
 Chris Schelling, Director of Private Equity  
 Dimitry Shishkoff, Director of Risk Management  
 Jason Weiner, Director of Fixed Income  
 Sally Case, Investment Operations Manager  
 Rachel Cleak, Investment Analyst  
 Ryan Connor, Data Analyst  
 Kurt Cressotti, Compliance Officer  
 Martha deLivron, Investment Analyst II  
 Debbie Farahmandi, Administrative Assistant  
 German Gaymer, Investment Analyst  
 Melissa Jerkins, Quantitative Analyst  
 Carol Leung, Investment Analyst II  
 Cindy Morse, Investment Support Analyst  
 Eddie Schultz, Investment Analyst II  
 Chris Tindell, Investment Analyst

## Legal

Christine Sweeney, General Counsel  
 Madison Jechow, Assistant General Counsel II  
 Michelle Mellon-Werch, Assistant General Counsel II  
 Nicholas O'Keefe, Assistant General Counsel III  
 Michael Schaff, Assistant General Counsel III  
 Tish Root, Legal Assistant

## Member Services

Debbie Muñoz, Director of Member Services  
 Jennifer Andrews, Member Services Manager  
 Chad Nichols, Member Services Manager  
 Vikki Vasquez, Member Services Manager  
 Jay Adams, Member Services Analyst II  
 Yolanda Alarcon, Member Services Analyst I  
 Debbie Davila, Member Services Analyst II  
 Vanessa De La Cruz, Member Services Analyst I  
 David Eastwood, Member Services Analyst II  
 Veronica Escobedo, Member Services Analyst I  
 Natalie Garza, Member Services Analyst Lead  
 Ida Gomez, Member Services Analyst II  
 Rhonda Green, Member Services Analyst II  
 April Hernandez, Member Services Analyst II  
 Karin Hicks, Member Services Analyst II  
 Peter Jeske, Business Process Analyst  
 Patricia King, Administrative Aide  
 Maryann Malave-Jaini, Member Services Analyst Lead  
 Pamela Morgan, Support Services Analyst  
 Richard Ramos, Member Services Analyst II  
 Jade Rangel, Member Services Analyst II  
 Shelley Ransom, Member Services Analyst Lead  
 Cris Rodriguez-Horn, Support Services Analyst  
 Anna Silva, Member Services Analyst II  
 Wade Slaton, Member Services Analyst II  
 Leslie Smith, Support Services Analyst  
 Tricia Solis, Support Services Analyst  
 Caroline Touchet, Member Services Analyst II

## Purpose

The Texas Municipal Retirement System (TMRS, or the System) is an entity created by the State of Texas and administered in accordance with the TMRS Act, Subtitle G, Title 8, Texas Government Code, as a retirement system for municipal employees in the State of Texas. TMRS is a public trust fund governed by a Board of Trustees with a professional staff responsible for administering the System in accordance with the TMRS Act. The System bears a fiduciary obligation to its members and their beneficiaries.

## Administration

The TMRS Act entrusts the administration of TMRS to a six-member Board of Trustees, appointed by the Governor with the advice and consent of the Senate. Three trustees are Executive Trustees, who must be a chief executive officer, chief finance officer, or other officer, executive, or department head of a participating municipality. Three trustees are Employee Trustees, who must be employees of a participating municipality.

The TMRS Act requires regular Board meetings in March, June, September, and December of each year. The Board of Trustees employs actuarial, legal, medical, and other experts for the efficient administration of the System. The Board also forms committees to serve in an advisory role as needed.

The Board appoints an Executive Director to manage TMRS under its supervision and direction.

## Membership

Cities choose to participate in TMRS. When a city joins TMRS, all of its eligible employees become members of the System. An employee in a position that normally requires at least 1,000 hours of work in a year, as determined by the city, is an eligible employee and is required to be a member of TMRS.

A person who leaves employment with all TMRS cities may withdraw all member deposits and interest from TMRS and cancel service credit with the System. A member may not refund his/her TMRS account unless there is a “bona fide” separation, and the employing city must certify that the employee has terminated employment.

## Service Credit

TMRS members earn a month of service credit for each month they are employed in an eligible position by a participating TMRS city and make the required contribution to the System. Members may also receive Prior Service Credit for periods of city employment before the employing city joined TMRS. Because TMRS is a statewide retirement system, service credit may be a combination of service with several member cities. Service credit may also include Military Service Credit, credit for previously refunded TMRS service that has been purchased, and other types of service credit allowed under the TMRS Act.

A participating municipality can also grant, by ordinance, Restricted Prior Service Credit to an employee for service performed as a full-time paid employee of:

- Any public authority or agency created by the United States
- Any state or territory of the U.S.
- Any political subdivision of any state in the U.S.

- Any public agency or authority created by a state or territory of the U.S.
- A Texas institution of higher education, if employment was as a commissioned law enforcement officer serving as a college campus security employee

Restricted Prior Service Credit also can be granted for credit previously forfeited under one of the following systems:

- Texas Municipal Retirement System
- Teacher Retirement System of Texas
- Employees Retirement System of Texas
- Texas County and District Retirement System
- Judicial Retirement System of Texas
- City of Austin Employees Retirement System

This restricted credit may only be used to satisfy length-of-service requirements for vesting and retirement eligibility, and has no monetary value under TMRS.

## Member Contributions

TMRS member cities designate, by ordinance, the rate of member contributions for their employees. This rate is 5%, 6%, or 7% of an employee's gross compensation. Three cities have a 3% rate, no longer available to cities under the TMRS Act. Compensation for retirement contribution purposes includes overtime pay, car allowances, uniform allowances, sick leave, vacation pay, and other payments if they are taxable.

All member contributions since 1984 are tax-deferred under the Internal Revenue Code, pursuant to Sections 401(a) and 414(h)(2). The member contribution rate may be increased by ordinance. However, the member contribution rate may only be reduced if the members in the city, by a 2/3 vote, consent to a reduction, and the city, by ordinance, provides for the reduction.

Interest is credited to member accounts annually on December 31 at a 5% rate, based on the balance in the account on January 1 of that year. In the year of retirement, interest will be prorated for the months of service in that year.

## Vesting and Retirement Eligibility

TMRS members vest after either 5 or 10 years of service, based on their city's plan. If a vested member leaves covered employment before reaching retirement eligibility, the member may leave his or her deposits with TMRS, earn interest on the deposits, and, upon reaching age 60, apply for and receive a monthly retirement payment.

A member becomes eligible for service retirement based on various combinations of age and service, depending on which provisions have been adopted by the employing municipality, including:

- Age 60 with 5 years of service
- Age 60 with 10 years of service
- Any age with 20 years of service
- Any age with 25 years of service

Before a city adopts the 20-year, any-age provision, the System must prepare an actuarial study to determine the provision's effect on the city's contribution rate, and the city must conduct a public hearing on the adoption.

Effective January 1, 2002, TMRS law was changed to give cities the option to choose 5-year vesting. Cities that did not opt out of that vesting provision before December 31, 2001, automatically changed from 10-year to 5-year vesting. Cities that chose to retain 10-year vesting may change to 5-year vesting at any time.

## City Contributions

Upon an employee's retirement, the employing city matches the accumulated employee contributions plus interest earned. Each city chooses a matching ratio: 1 to 1 (100%); 1.5 to 1 (150%); or 2 to 1 (200%). This match is funded with monthly contributions by the participating municipality at an annual, actuarially determined rate. A municipality may elect to increase or reduce its matching ratio effective January 1 of a calendar year.

## Updated Service Credit

Member cities, at their option, may elect to adopt Updated Service Credit, either annually or on an annually repeating basis, effective January 1 of a calendar year. Updated Service Credit improves retirement benefits by using a member's average monthly salary over a recent three-year period to recalculate the member's retirement credit as if the member had always earned that salary and made deposits to the System, matched by the city, on the basis of that average monthly salary. Updated Service Credit also takes into account any changes in the city's TMRS plan provisions that have been adopted, such as an increase in the member contribution rate or the city's matching ratio. If there is a difference between the recalculated amount and the actual account balance, a percentage (50%, 75%, or 100%) of this difference is granted to the employee, funded by the participating municipality, as the Updated Service Credit. A member must have at least 36 months of service credit as of the study date in the adopting city before becoming eligible to receive this credit. Interest on Updated Service Credit is prorated in the year of retirement.

## Retirement Payment Options

After applying for retirement, a TMRS member may choose one of seven optional monthly benefit payments. The member makes this choice before receipt of the first benefit payment, and the choice is irrevocable after the date the first payment becomes due. All options pay a monthly annuity for the life of the retiree.

The options include:

- A benefit for the retiree's lifetime only ("Retiree Life Only" option)
- Three guaranteed-term benefits that pay a benefit for the lifetime of the member and to a beneficiary for the balance of 5, 10, or 15 years if the member dies before the term is reached ("Guaranteed Term" options)
- Three options that pay a lifetime benefit to the member and, upon the member's death, a survivor lifetime benefit equal to 50%, 75%, or 100% of the member's benefit ("Survivor Lifetime" options)

As a minimum benefit, TMRS guarantees that an amount equal to at least the member's contributions and interest will be returned, either through payment of a monthly benefit or through a lump sum refund.

Each of the three survivor lifetime retirement options includes a “pop-up” feature. The “pop-up” feature provides that if the designated beneficiary dies before the retiree, the retiree’s benefit will “pop up” to the Retiree Life Only amount. Retirees who marry or remarry after retirement and who meet specific conditions also have a one-time option to change from a Retiree Life Only benefit to one that provides a survivor benefit.

Members who are eligible for service retirement may choose to receive a Partial Lump Sum Distribution, a portion of the member’s deposits and interest in cash, at the time of retirement. The Partial Lump Sum Distribution is equal to 12, 24, or 36 times the amount of the Retiree Life Only monthly benefit, but cannot exceed 75% of the member’s deposits and interest. The remaining member deposits are combined with the city’s funds to pay a lifetime benefit under the selected retirement option.

The Partial Lump Sum Distribution may be chosen with any of the retirement options and is paid in a lump sum with the first retirement payment. This amount may be subject to federal income tax and an additional 10% IRS tax penalty if not rolled over into a qualified plan.

Section 415(b) of the Internal Revenue Code limits the amount of an annual benefit that may be paid by a pension plan’s trust to a retiree. This provision is known as the Section 415 limit, which is set by Congress and can be periodically adjusted by the IRS. Any portion of a retiree’s annual benefit that exceeds the Section 415 limit cannot be paid from the TMRS trust fund. However, Internal Revenue Code Section 415(m) allows pension plans to create a separate fund, known as a qualified governmental excess benefit arrangement, to pay the benefits above the Section 415 limit. Accordingly, the TMRS Act established such an arrangement, which is referred to as the “Full Benefit Arrangement.” Additional details are made available to affected retirees if they will reach the Section 415 limit in any given year.

## **Annuity Increases (COLAs)**

A member city may elect to increase the annuities of its retirees (grant a cost-of-living adjustment, or COLA), either annually or on an annually repeating basis, effective January 1 of a calendar year. For cities that adopted annuity increases since January 1, 2000, the adjustment is either 30%, 50%, or 70% of the increase (if any) in the Consumer Price Index – All Urban Consumers (CPI-U) between the December preceding the member’s retirement date and the December 13 months before the effective date of the increase, applied to the original monthly annuity.

## **Survivor Benefits**

If a member dies before vesting, the member’s designated beneficiary is eligible to receive a lump sum refund of the member’s deposits and interest. For a vested member, a beneficiary who is the member’s spouse may select a monthly benefit payable immediately; withdraw the member’s deposits and interest in a lump sum; or leave the member’s deposits with TMRS, where they will earn interest until the date the member would have reached age 60, and then the beneficiary may receive a lifetime benefit. A beneficiary who is not the member’s spouse may select a monthly benefit payable immediately or withdraw the member’s deposits and interest in a lump sum.

## **Disability Retirement**

All active TMRS cities have adopted an Occupational Disability retirement benefit. If a member is judged by the TMRS Medical Board to be disabled to the extent that the member cannot perform his or her occupation,

and the disability is likely to be permanent, the member may retire with a lifetime benefit based on the total reserves as of the effective date of retirement. The Occupational Disability annuity will be reduced if the combined total of the Occupational Disability annuity and any wages earned exceeds the member's average monthly compensation for the highest 12 consecutive months during the three calendar years immediately before the year of retirement (indexed to the CPI-U). As the minimum disability benefit, the member's deposits and interest are guaranteed to be returned, either through payment of the monthly benefit, or upon termination of the annuity through a lump sum refund.

## Supplemental Death Benefits

Member cities may elect, by ordinance, to provide Supplemental Death Benefits for active members, including or not including retirees. The death benefit for active employees provides a lump sum payment approximately equal to the employee's annual salary, calculated based on the employee's actual earnings on which TMRS deposits are made, for the 12-month period preceding the month of death. The death benefit amount for retirees is \$7,500. This benefit is paid in addition to any other TMRS benefits the beneficiary might be entitled to receive. If an individual has multiple retirements, his/her beneficiary will receive only one Supplemental Death Benefit; the last employing city with this provision pays the benefit.

## Buyback of Service Credit

When a member terminates employment and chooses to take a refund of his or her deposits and interest, the member forfeits all service credit. If the member is reemployed by a TMRS member city, and if the employing city adopts the buyback provision by ordinance, the member may repay the amount of the refund plus a 5% per year withdrawal charge, in a lump sum, to reinstate the previously forfeited credit. A member must have 24 consecutive months of service with the reemploying city, and must be an employee of that city on the date the buyback ordinance is adopted to be eligible to buy back service credit.

## Military Service Credit

Members who leave employment with a TMRS city, serve in the military, and then return to city employment may establish credit for the time they spend in the military, up to 60 months. Members who meet the requirements of the federal Uniformed Services Employment and Reemployment Rights Act (USERRA) may make member contributions to TMRS as though they had been employed by the city for the period of their military service.

In cities that have adopted Military Service Credit, members who are not eligible for USERRA credit, or who choose not to make contributions, may establish service credit for up to 60 months of military time. A member must have five years of TMRS service credit to establish non-USERRA Military Service Credit.

Members with five years of TMRS service credit who were employed on December 31, 2003, by a city that had previously adopted Military Service Credit, may choose to purchase this credit at a cost of \$15 per month of credit sought (purchase amount would increase the member's account balance), or may use the no-cost time-only provision. ■

This discussion is an informal presentation of the TMRS Act. If any specific questions of fact or law should arise, the statutes will govern.

# Financiera





KPMG LLP  
Suite 1900  
111 Congress Avenue  
Austin, TX 78701-4091

## Independent Auditors' Report

The Board of Trustees  
Texas Municipal Retirement System:

We have audited the accompanying statements of fiduciary net position of the Texas Municipal Retirement System (TMRS), as of December 31, 2016 and 2015, and the related statements of changes in fiduciary net position for the years then ended and the related notes to the financial statements, which collectively comprise TMRS' basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

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

### Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

### Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Texas Municipal Retirement System as of December 31, 2016 and 2015, and the changes in fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.

### *Emphasis of Matters*

As discussed in note 1 to the financial statements, TMRS implemented the provisions of Government Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application*, for the year ended December 31, 2016. Our opinion is not modified with respect to this matter.



## Other Matters

### *Required Supplementary Information*

U.S. generally accepted accounting principles require that Management's Discussion and Analysis and Schedule of Investment Returns on pages 24-27 and 55 respectively be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### *Supplementary and Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise TMRS' basic financial statements. The Introductory Section on pages 6-20, Other Supplementary Information – Changes in Fiduciary Net Positions by Fund, Schedule of Administrative Expenses, Schedule of Professional Services, and Schedule of Investment Expenses on pages 56-60, the Investment Section on pages 61-74, the Actuarial Section on pages 75-104, and the Statistical Section on pages 105-158 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Other Supplementary Information – Changes in Fiduciary Net Position by Fund, Schedule of Administrative Expenses, Schedule of Professional Services, and Schedule of Investment Expenses are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Other Supplementary Information – Changes in Fiduciary Net Position by Fund, Schedule of Administrative Expenses, Schedule of Professional Services, and Schedule of Investment Expenses are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory, Actuarial, and Statistical Sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

**KPMG LLP**

Austin, Texas  
June 15, 2017

**M**anagement's Discussion and Analysis (MD&A) of the Texas Municipal Retirement System (TMRS, or the System) for the years ended December 31, 2016 and 2015, provides a summary of the financial position and performance of TMRS, including highlights and comparisons. The MD&A is presented as a narrative overview and analysis in conjunction with the Letter of Transmittal, which is included in the Introductory Section of the TMRS *Comprehensive Annual Financial Report* (AFR). For more detailed information regarding TMRS' financial activities, the reader should also review the actual financial statements, including the notes and supplementary schedules.

## Overview of the Financial Statements

This MD&A is intended to serve as an introduction to the TMRS basic financial statements, which comprise the following components:

- Fund Financial Statements
- Notes to Financial Statements

This report also contains Required Supplementary Information and other supplemental information in addition to the basic financial statements. Collectively, this information presents the fiduciary net position and the changes in fiduciary net position of TMRS as of December 31, 2016 and 2015. The information contained in each of these fiduciary components is summarized as follows:

**Fund Financial Statements.** Two statements, both containing financial information for the Pension Trust Fund and the Supplemental Death Benefits Fund (SDBF), are provided. These funds are presented as fiduciary funds of the System and reflect the resources available for benefits to members, retirees, and their beneficiaries (Pension Trust Fund) and other benefits (SDBF). The Statements of Fiduciary Net Position as of December 31, 2016 and 2015 reflect the financial position of TMRS at a point in time. The Statements of Changes in Fiduciary Net Position for the years ended December 31, 2016 and 2015 present the activities that occurred during the respective periods.

**Notes to Financial Statements.** The financial statement notes provide additional information that is essential to a full understanding of the data provided in the fund financial statements.

**Required Supplementary Information.** Required supplementary information includes the 2016, 2015, and 2014 investment returns on pension plan investments.

**Other Supplemental Schedules.** Supplemental schedules include additional information regarding fund activity, administrative expenses, professional services, and investment expenses.

## Financial Highlights

### Net Position Restricted for Pensions – Pension Trust Fund

The following table displays a summary of assets, liabilities, and net position for the TMRS Pension Trust Fund at December 31, 2016, 2015, and 2014 (in millions). The overall financial condition of the Pension Trust Fund reflects an increase in net position from 2014 to 2016.

|   | 2016               | 2015               | 2014               | 2016-2015         |               | 2015-2014        |                |
|---|--------------------|--------------------|--------------------|-------------------|---------------|------------------|----------------|
|   |                    |                    |                    | \$ Change         | % Change      | \$ Change        | % Change       |
| Investments, at fair value                  | \$ 25,830.2        | \$ 24,289.1        | \$ 23,896.1        | \$ 1,541.1        | 6.3 %         | \$ 393.0         | 1.6 %          |
| Invested securities lending collateral      | -                  | 864.1              | 1,030.8            | (864.1)           | (100.0)       | (166.7)          | (16.2)         |
| Cash, receivables and other                 | 1,331.0            | 1,465.8            | 1,602.6            | (134.8)           | (9.2)         | (136.8)          | (8.5)          |
| Capital assets, net                         | 9.8                | 9.9                | 7.9                | (0.1)             | (1.0)         | 2.0              | 25.3           |
| <b>Total assets</b>                         | <b>27,171.0</b>    | <b>26,628.9</b>    | <b>26,537.4</b>    | <b>542.1</b>      | <b>2.0</b>    | <b>91.5</b>      | <b>0.3</b>     |
| Securities lending collateral               | -                  | 866.8              | 1,033.5            | (866.8)           | (100.0)       | (166.7)          | (16.1)         |
| Other liabilities                           | 1,937.8            | 2,053.9            | 1,776.4            | (116.1)           | (5.7)         | 277.5            | 15.6           |
| <b>Total liabilities</b>                    | <b>1,937.8</b>     | <b>2,920.7</b>     | <b>2,809.9</b>     | <b>(982.9)</b>    | <b>(33.7)</b> | <b>110.8</b>     | <b>3.9</b>     |
| <b>Net Position Restricted for Pensions</b> | <b>\$ 25,233.2</b> | <b>\$ 23,708.2</b> | <b>\$ 23,727.5</b> | <b>\$ 1,525.0</b> | <b>6.4 %</b>  | <b>\$ (19.3)</b> | <b>(0.1) %</b> |

The increase in investments from 2014 to 2016 is due to the growth in the Trust Fund each year, primarily from investment returns and reinvestment of cash flows over the period. The fluctuation of receivables and other liabilities from year-to-year is due primarily to trade activity occurring near year-end, impacting the investment trade receivable and payable amounts reported. The increase in capital assets from 2014 to 2016 is due to the final phase of the finish-out of the TMRS building, which was completed in 2015. The fluctuation in securities lending collateral (both assets and liabilities) is due to the wind-down of the program during the period, with its termination in 2016.

# Management's Discussion and Analysis

Continued

A summary of the change in net position of the Pension Trust Fund for 2016, 2015, and 2014 is as follows (in millions):

|   | 2016               | 2015               | 2014               | 2016 - 2015       |              | 2015 - 2014      |               |
|---|--------------------|--------------------|--------------------|-------------------|--------------|------------------|---------------|
|   |                    |                    |                    | \$ Change         | % Change     | \$ Change        | % Change      |
| <b>Additions:</b>                       |                    |                    |                    |                   |              |                  |               |
| Employer contributions                  | \$ 768.3           | \$ 751.7           | \$ 719.9           | \$ 16.6           | 2.2 %        | \$ 31.8          | 4.4 %         |
| Plan member contributions               | 389.9              | 376.1              | 355.4              | 13.8              | 3.7          | 20.7             | 5.8           |
| Net investment income                   | 1,602.2            | 35.0               | 1,285.3            | 1,567.2           | 4,477.7*     | (1,250.3)        | (97.3)        |
| <b>Total additions</b>                  | <b>2,760.4</b>     | <b>1,162.8</b>     | <b>2,360.6</b>     | <b>1,597.6</b>    | <b>137.4</b> | <b>(1,197.8)</b> | <b>(50.7)</b> |
| <b>Deductions:</b>                      |                    |                    |                    |                   |              |                  |               |
| Retirement benefits                     | 1,162.1            | 1,102.8            | 1,028.5            | 59.3              | 5.4          | 74.3             | 7.2           |
| Refunds                                 | 54.2               | 57.0               | 58.7               | (2.8)             | (4.9)        | (1.7)            | (2.9)         |
| Administrative & other costs            | 19.1               | 22.3               | 14.5               | (3.2)             | (14.3)       | 7.8              | 53.8          |
| <b>Total deductions</b>                 | <b>1,235.4</b>     | <b>1,182.1</b>     | <b>1,101.7</b>     | <b>53.3</b>       | <b>4.5</b>   | <b>80.4</b>      | <b>7.3</b>    |
| Net increase/(decrease) in net position | 1,525.0            | (19.3)             | 1,258.9            | 1,544.3           | 8,001.6*     | (1,278.2)        | (101.5)       |
| Net position - beginning of year        | 23,708.2           | 23,727.5           | 22,468.6           | (19.3)            | (0.1)        | 1,258.9          | 5.6           |
| <b>Net position - end of year</b>       | <b>\$ 25,233.2</b> | <b>\$ 23,708.2</b> | <b>\$ 23,727.5</b> | <b>\$ 1,525.0</b> | <b>6.4 %</b> | <b>\$ (19.3)</b> | <b>(0.1)%</b> |

\* Not considered meaningful for analysis.

The increase in employer and plan member contributions from 2014 to 2016 is due to the increase in covered payroll (\$5.88 billion in 2016, \$5.68 billion in 2015, and \$5.37 billion in 2014). City membership also increased over the three-year period, totaling 872, 866, and 860 at December 31, 2016, 2015, and 2014, respectively.

Net investment income is presented after deduction of investment expenses and comprises interest and dividends, net appreciation in fair value of investments, and net income from securities lending activities. The changes in net investment income from 2014 to 2016 primarily result from the change in the net appreciation/(depreciation) in the fair value of investments during those periods (\$1.3 billion appreciation, \$284.6 million depreciation, and \$980.5 million appreciation during the years ended 2016, 2015, and 2014, respectively). During the three years ended December 31, 2016, TMRS' investment portfolio was impacted by the market volatility experienced during that period, primarily in the public equities asset class.

The increase in retirement benefits is due primarily to growth in the number of retirement accounts each year (59,611, 56,481, and 53,455 in 2016, 2015, and 2014, respectively), as well as annuity increases (COLA adjustments) that may be applied each year.

The fluctuation in administrative and other costs from 2014 to 2016 is due to the recognition of the System's net pension liability as of December 31, 2015.

## Net Position – Supplemental Death Benefits Fund

The following table displays a summary of net position and changes in net position for the Supplemental Death Benefits Fund at December 31, 2016, 2015, and 2014. The overall financial condition of the Supplemental Death Benefits Fund reflects a decrease in net position over the three-year period.

|                               | 2016          | 2015          | 2014         |
|-------------------------------|---------------|---------------|--------------|
| Total assets and net position | \$ 20,628,050 | \$ 21,129,830 | \$22,720,056 |

A summary of the change in net position of the Supplemental Death Benefits Fund for 2016, 2015, and 2014 is as follows (in thousands):

|                                   | 2016               | 2015               | 2014               | 2016 - 2015       |               | 2015 - 2014         |               |
|-----------------------------------|--------------------|--------------------|--------------------|-------------------|---------------|---------------------|---------------|
|                                   |                    |                    |                    | \$ Change         | % Change      | \$ Change           | % Change      |
| <b>Additions:</b>                 |                    |                    |                    |                   |               |                     |               |
| Employer contributions            | \$ 6,983.5         | \$ 6,507.3         | \$ 6,126.8         | \$ 476.2          | 7.3 %         | \$ 380.5            | 6.2 %         |
| Income allocation                 | 1,000.9            | 1,057.2            | 1,132.8            | (56.3)            | (5.3)         | (75.6)              | (6.7)         |
| <b>Total additions</b>            | <b>7,984.4</b>     | <b>7,564.5</b>     | <b>7,259.6</b>     | <b>419.9</b>      | <b>5.6</b>    | <b>304.9</b>        | <b>4.2</b>    |
| <b>Deductions:</b>                |                    |                    |                    |                   |               |                     |               |
| Supplemental death benefits       | 8,486.2            | 9,154.8            | 8,450.0            | (668.6)           | (7.3)         | 704.8               | 8.3           |
| <b>Total deductions</b>           | <b>8,486.2</b>     | <b>9,154.8</b>     | <b>8,450.0</b>     | <b>(668.6)</b>    | <b>(7.3)</b>  | <b>704.8</b>        | <b>8.3</b>    |
| Net decrease in net position      | (501.8)            | (1,590.3)          | (1,190.4)          | 1,088.5           | 68.4          | (399.9)             | (33.6)        |
| Net position - beginning of year  | 21,129.8           | 22,720.1           | 23,910.5           | (1,590.3)         | (7.0)         | (1,190.4)           | (5.0)         |
| <b>Net position - end of year</b> | <b>\$ 20,628.0</b> | <b>\$ 21,129.8</b> | <b>\$ 22,720.1</b> | <b>\$ (501.8)</b> | <b>(2.4)%</b> | <b>\$ (1,590.3)</b> | <b>(7.0)%</b> |

Employer contributions are based on the covered payroll of the participating municipalities at actuarially determined rates. The increase in contributions from 2014 to 2016 is due to the increase in covered payroll as well as increased rates as a result of the aging population. The fluctuation in supplemental death benefits over the three-year period is a result of the change in total numbers of claims as well as type of claims in those years (active vs. retired). The Supplemental Death Benefits Fund receives a 5% statutory interest allocation from the Pension Trust Fund based on the fund's average balance during the year.

## Requests for Information

This financial report is designed to provide a general overview of the Texas Municipal Retirement System's finances. Questions and requests for additional information should be addressed to the Finance Department of the Texas Municipal Retirement System, P.O. Box 149153, Austin, TX 78714-9153. ■

# Statements of Fiduciary Net Position

| As of December 31, 2016 and 2015  | 2016                     |                                  |                          | 2015                     |                                  |                          |
|---|--------------------------|----------------------------------|--------------------------|--------------------------|----------------------------------|--------------------------|
|   | Pension Trust Fund       | Supplemental Death Benefits Fund | Total                    | Pension Trust Fund       | Supplemental Death Benefits Fund | Total                    |
| <b>ASSETS</b>   |                          |                                  |                          |                          |                                  |                          |
| Cash  | \$ 27,225,142            | \$ -                             | \$ 27,225,142            | \$ 2,177,000             | \$ -                             | \$ 2,177,000             |
| Receivables   |                          |                                  |                          |                          |                                  |                          |
| Contributions   | 107,373,131              | 674,746                          | 108,047,877              | 108,309,944              | 639,119                          | 108,949,063              |
| Interest and dividends  | 45,489,778               | -                                | 45,489,778               | 50,793,656               | -                                | 50,793,656               |
| Securities lending income   | -                        | -                                | -                        | 259,809                  | -                                | 259,809                  |
| Investment trades   | 129,821,718              | -                                | 129,821,718              | 100,441,119              | -                                | 100,441,119              |
| Securities sold on a when-issued basis  | 1,020,688,455            | -                                | 1,020,688,455            | 1,203,617,112            | -                                | 1,203,617,112            |
| Total Receivables   | 1,303,373,082            | 674,746                          | 1,304,047,828            | 1,463,421,640            | 639,119                          | 1,464,060,759            |
| Investments, at fair value  |                          |                                  |                          |                          |                                  |                          |
| Short-term investments  | 1,069,322,539            | -                                | 1,069,322,539            | 1,403,300,204            | -                                | 1,403,300,204            |
| Derivative contracts  | 1,569,348                | -                                | 1,569,348                | (2,855,209)              | -                                | (2,855,209)              |
| Fixed income securities   | 6,161,634,182            | -                                | 6,161,634,182            | 8,610,840,995            | -                                | 8,610,840,995            |
| Equities  | 11,339,458,615           | -                                | 11,339,458,615           | 10,483,078,643           | -                                | 10,483,078,643           |
| Non-core fixed income funds   | 1,296,080,388            | -                                | 1,296,080,388            | 740,942,387              | -                                | 740,942,387              |
| Real return funds   | 913,479,737              | -                                | 913,479,737              | -                        | -                                | -                        |
| Absolute return funds   | 2,749,169,705            | -                                | 2,749,169,705            | 1,576,279,728            | -                                | 1,576,279,728            |
| Private equity funds  | 116,403,554              | -                                | 116,403,554              | 13,805,553               | -                                | 13,805,553               |
| Real estate funds   | 2,183,113,382            | -                                | 2,183,113,382            | 1,463,661,065            | -                                | 1,463,661,065            |
| Total investments   | 25,830,231,450           | -                                | 25,830,231,450           | 24,289,053,366           | -                                | 24,289,053,366           |
| Invested securities lending collateral  | -                        | -                                | -                        | 864,114,464              | -                                | 864,114,464              |
| Property and equipment, at cost, net of accumulated depreciation of \$18,093,381 and \$17,411,442 at December 31, 2016 and 2015, respectively | 9,766,674                | -                                | 9,766,674                | 9,909,170                | -                                | 9,909,170                |
| Funds held by Pension Trust Fund  | -                        | 19,953,304                       | 19,953,304               | -                        | 20,490,711                       | 20,490,711               |
| Other assets  | 368,307                  | -                                | 368,307                  | 222,581                  | -                                | 222,581                  |
| <b>TOTAL ASSETS</b>   | <b>27,170,964,655</b>    | <b>20,628,050</b>                | <b>27,191,592,705</b>    | <b>26,628,898,221</b>    | <b>21,129,830</b>                | <b>26,650,028,051</b>    |
| <b>LIABILITIES</b>  |                          |                                  |                          |                          |                                  |                          |
| Due to custodial and depository banks   | 5,602,640                | -                                | 5,602,640                | 5,370,041                | -                                | 5,370,041                |
| Accounts payable and other accrued liabilities  | 21,984,528               | -                                | 21,984,528               | 22,181,406               | -                                | 22,181,406               |
| Funds held for Supplemental Death Benefits Fund   | 19,953,304               | -                                | 19,953,304               | 20,490,711               | -                                | 20,490,711               |
| Securities lending fees payable   | -                        | -                                | -                        | 105,128                  | -                                | 105,128                  |
| Securities lending collateral   | -                        | -                                | -                        | 866,849,709              | -                                | 866,849,709              |
| Investment trades payable   | 709,770,385              | -                                | 709,770,385              | 689,120,035              | -                                | 689,120,035              |
| Securities purchased on a when-issued basis   | 1,180,448,025            | -                                | 1,180,448,025            | 1,316,618,611            | -                                | 1,316,618,611            |
| <b>TOTAL LIABILITIES</b>  | <b>1,937,758,882</b>     | <b>-</b>                         | <b>1,937,758,882</b>     | <b>2,920,735,641</b>     | <b>-</b>                         | <b>2,920,735,641</b>     |
| <b>FIDUCIARY NET POSITION</b>   |                          |                                  |                          |                          |                                  |                          |
| Net position restricted for pensions  | 25,233,205,773           | -                                | 25,233,205,773           | 23,708,162,580           | -                                | 23,708,162,580           |
| Fiduciary net position held in trust for other benefits   | -                        | 20,628,050                       | 20,628,050               | -                        | 21,129,830                       | 21,129,830               |
| <b>TOTAL FIDUCIARY NET POSITION</b>   | <b>\$ 25,233,205,773</b> | <b>\$ 20,628,050</b>             | <b>\$ 25,253,833,823</b> | <b>\$ 23,708,162,580</b> | <b>\$ 21,129,830</b>             | <b>\$ 23,729,292,410</b> |

See accompanying notes to financial statements.

# Statements of Changes in Fiduciary Net Position

| For the Years Ended<br>December 31, 2016 and 2015            | 2016                     |                                  |                          | 2015                     |                                  |                          |
|--|--------------------------|----------------------------------|--------------------------|--------------------------|----------------------------------|--------------------------|
|  | Pension Trust Fund       | Supplemental Death Benefits Fund | Total                    | Pension Trust Fund       | Supplemental Death Benefits Fund | Total                    |
| <b>ADDITIONS</b>   |                          |                                  |                          |                          |                                  |                          |
| Contributions  |                          |                                  |                          |                          |                                  |                          |
| Employer   | \$ 768,252,338           | \$ 6,983,501                     | \$ 775,235,839           | \$ 751,708,718           | \$ 6,507,371                     | \$ 758,216,089           |
| Plan member  | 389,919,391              | -                                | 389,919,391              | 376,103,505              | -                                | 376,103,505              |
| Total contributions  | 1,158,171,729            | 6,983,501                        | 1,165,155,230            | 1,127,812,223            | 6,507,371                        | 1,134,319,594            |
| Net investment income  |                          |                                  |                          |                          |                                  |                          |
| From investing activities                                    |                          |                                  |                          |                          |                                  |                          |
| Net appreciation/(depreciation) in fair value of investments | 1,317,283,876            | -                                | 1,317,283,876            | (284,634,170)            | -                                | (284,634,170)            |
| Interest and dividends                                       | 349,544,758              | -                                | 349,544,758              | 354,568,887              | -                                | 354,568,887              |
| Total investing activities income                            | 1,666,828,634            | -                                | 1,666,828,634            | 69,934,717               | -                                | 69,934,717               |
| Less investment activities expense                           | (61,177,837)             | -                                | (61,177,837)             | (36,782,602)             | -                                | (36,782,602)             |
| Net income from investing activities                         | 1,605,650,797            | -                                | 1,605,650,797            | 33,152,115               | -                                | 33,152,115               |
| From securities lending activities                           |                          |                                  |                          |                          |                                  |                          |
| Securities lending income                                    | 563,268                  | -                                | 563,268                  | 2,225,559                | -                                | 2,225,559                |
| Securities lending expenses                                  |                          |                                  |                          |                          |                                  |                          |
| Borrower rebates   | (184,211)                | -                                | (184,211)                | 39,406                   | -                                | 39,406                   |
| Agent fees   | (43,091)                 | -                                | (43,091)                 | (315,630)                | -                                | (315,630)                |
| Net depreciation in fair value of collateral pool            | (3,799,345)              | -                                | (3,799,345)              | (90,021)                 | -                                | (90,021)                 |
| Net income from securities lending activities                | (3,463,379)              | -                                | (3,463,379)              | 1,859,314                | -                                | 1,859,314                |
| Net investment income  | 1,602,187,418            | -                                | 1,602,187,418            | 35,011,429               | -                                | 35,011,429               |
| Other miscellaneous  | 25,956                   | -                                | 25,956                   | 3,900                    | -                                | 3,900                    |
| Income allocation from Pension Trust Fund                    | -                        | 1,000,892                        | 1,000,892                | -                        | 1,057,178                        | 1,057,178                |
| <b>TOTAL ADDITIONS</b>                                       | <b>2,760,385,103</b>     | <b>7,984,393</b>                 | <b>2,768,369,496</b>     | <b>1,162,827,552</b>     | <b>7,564,549</b>                 | <b>1,170,392,101</b>     |
| <b>DEDUCTIONS</b>  |                          |                                  |                          |                          |                                  |                          |
| Benefit payments   |                          |                                  |                          |                          |                                  |                          |
| Service retirement   | 1,005,485,139            | -                                | 1,005,485,139            | 937,848,878              | -                                | 937,848,878              |
| Disability retirement  | 17,019,188               | -                                | 17,019,188               | 16,775,098               | -                                | 16,775,098               |
| Partial lump sum distributions                               | 139,559,781              | -                                | 139,559,781              | 148,161,053              | -                                | 148,161,053              |
| Supplemental death benefits                                  | -                        | 8,486,173                        | 8,486,173                | -                        | 9,154,775                        | 9,154,775                |
| Total benefit payments                                       | 1,162,064,108            | 8,486,173                        | 1,170,550,281            | 1,102,785,029            | 9,154,775                        | 1,111,939,804            |
| Refunds of contributions                                     | 54,181,595               | -                                | 54,181,595               | 56,975,269               | -                                | 56,975,269               |
| Administrative expenses                                      | 18,095,315               | -                                | 18,095,315               | 21,325,422               | -                                | 21,325,422               |
| Income allocation to Supplemental Death Benefits Fund        | 1,000,892                | -                                | 1,000,892                | 1,057,178                | -                                | 1,057,178                |
| <b>TOTAL DEDUCTIONS</b>                                      | <b>1,235,341,910</b>     | <b>8,486,173</b>                 | <b>1,243,828,083</b>     | <b>1,182,142,898</b>     | <b>9,154,775</b>                 | <b>1,191,297,673</b>     |
| <b>NET INCREASE/(DECREASE) IN NET POSITION</b>               | <b>1,525,043,193</b>     | <b>(501,780)</b>                 | <b>1,524,541,413</b>     | <b>(19,315,346)</b>      | <b>(1,590,226)</b>               | <b>(20,905,572)</b>      |
| <b>FIDUCIARY NET POSITION</b>                                |                          |                                  |                          |                          |                                  |                          |
| Net position restricted for pensions                         |                          |                                  |                          |                          |                                  |                          |
| Beginning of year  | 23,708,162,580           | -                                | 23,708,162,580           | 23,727,477,926           | -                                | 23,727,477,926           |
| End of year  | 25,233,205,773           | -                                | 25,233,205,773           | 23,708,162,580           | -                                | 23,708,162,580           |
| Fiduciary net position held in trust for other benefits      |                          |                                  |                          |                          |                                  |                          |
| Beginning of year  | -                        | 21,129,830                       | 21,129,830               | -                        | 22,720,056                       | 22,720,056               |
| End of year  | -                        | 20,628,050                       | 20,628,050               | -                        | 21,129,830                       | 21,129,830               |
| <b>TOTAL FIDUCIARY NET POSITION</b>                          | <b>\$ 25,233,205,773</b> | <b>\$ 20,628,050</b>             | <b>\$ 25,253,833,823</b> | <b>\$ 23,708,162,580</b> | <b>\$ 21,129,830</b>             | <b>\$ 23,729,292,410</b> |

See accompanying notes to financial statements.

## 1. Summary of Significant Accounting Policies

### A. Background and Reporting Entity

The Texas Municipal Retirement System (TMRS, or the System) is an agency created by the State of Texas and administered in accordance with the Texas Municipal Retirement System Act, Subtitle G, Title 8, Texas Government Code (the TMRS Act) as an agent multiple-employer retirement and disability pension system for municipal employees in the State of Texas. As such, TMRS is a public trust fund that has the responsibility of administering the System in accordance with the TMRS Act and bears a fiduciary obligation to its members and their beneficiaries.

The System's financial statements have been prepared in accordance with generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). TMRS has no component units and is not a component unit of any other entity. The accompanying financial statements include only the operations of the System, which is comprised of two fiduciary trust funds — the Pension Trust Fund and the Supplemental Death Benefits Fund. The TMRS Act places the general administration and management of the System with a six-member Board of Trustees (the Board). Three Trustees are "Executive Trustees" who are either the chief executive officer, chief finance officer, or other officer, executive, or department head of a participating municipality. Three Trustees are "Employee Trustees" who are employees of a participating municipality. Although the Governor, with the advice and consent of the Senate, appoints the Board, TMRS is not fiscally dependent on the State of Texas.

### B. New Accounting Pronouncements

In February 2015, the GASB issued Statement No. 72, *Fair Value Measurement and Application*, which establishes standards for determining fair value for certain investments and provides guidance for disclosures related to all fair value measurements. The requirements of this Statement are effective for financial statements with reporting periods beginning after June 15, 2015. All applicable provisions have been included in the Plan's financial statements as of December 31, 2016.

In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*. The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. This Statement establishes criteria for identifying fiduciary activities of all state and local governments. Statement No. 84 is effective for the System's 2019 fiscal year, implementation of which is currently being evaluated.

In March 2017, the GASB issued Statement No. 85, *Omnibus 2017*. The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. Statement No. 85 is effective for the System's 2018 fiscal year, implementation of which is currently being evaluated.

### C. Basis of Accounting

The Pension Trust Fund and the Supplemental Death Benefits Fund are maintained on the accrual basis of accounting. Revenue is recorded when earned, and expenses are recorded when incurred,

regardless of when payment is made. Employer and employee contributions are recognized in the period that the employer reports compensation for the employee, which is when contributions are legally due. Participant benefits are recorded when payable in accordance with the System's plan terms. Refunds are recorded and paid upon receipt of an approved application for refund.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. The System utilizes various investment instruments. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term, and that any such changes could materially affect the amounts reported in the Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position.

## D. Basis of Presentation

The financial statements are organized on the basis of funds, as required by the TMRS Act, each of which is considered to be a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts. These accounts are segregated for the purpose of carrying out specific activities or attaining certain objectives in accordance with applicable statutory guidelines or restrictions.

Each of the System's funds is considered a fiduciary fund. The following is a brief description of each fund category.

### Fiduciary Fund — Pension Trust Fund

The Pension Trust Fund reports the resources held in trust for TMRS members and beneficiaries. The TMRS Act does not create legally required reserves, but establishes accounts that comprise the net position restricted for pensions as follows:

**Benefit Accumulation Fund** — The purpose of the Benefit Accumulation Fund (BAF) is to accumulate the activity impacting the balance of each municipality's reserve fund. The fund is increased by contributions made by employers and employee members, and decreased by benefit payments and refunds due to withdrawals and death. Effective each December 31, the Board of Trustees approves an interest credit to the BAF, allocated to each municipality in proportion to its BAF balance at January 1 of that year. The fund received an approximate 6.73% interest credit on December 31, 2016 and 0.06% on December 31, 2015.

**Full Benefit Arrangement Fund** — Section 415(b) of the Internal Revenue Code limits the amount of an annual benefit that may be paid by a tax-qualified pension plan trust to its retirees. This provision is known as the Section 415 limit, which is set by Congress and can be periodically adjusted by the IRS. Any portion of a retiree's annual benefit that exceeds the Section 415 limit cannot be paid from the TMRS pension trust fund. However, Internal Revenue Code Section 415(m) allows pension plans to create a separate fund, known as a qualified governmental excess benefit arrangement, to pay the benefits above the Section 415 limit.

Accordingly, the TMRS Act established such an arrangement, which is referred to as the “Full Benefit Arrangement.” The purpose of the fund is to record the contributions from employers as well as the benefits paid from such contribution.

**Supplemental Disability Benefits Fund** — The TMRS Board of Trustees initiated legislation to amend the TMRS Act in 1987, which terminated all cities’ participation in the Supplemental Disability Benefits Fund effective January 1, 1988. Consequently, there have been no contributions to this Fund since 1987. The fund continues to pay the remaining benefit payments that are obligations of the fund. Each December 31, the Supplemental Disability Benefits Fund receives a 5% interest credit on the mean balance of the fund during the year.

This fund will likely experience fluctuations in funding from year to year, as this is a small closed group; TMRS management will continue to annually monitor the balances and obligations of this fund.

**Endowment Fund** — The purpose of the Endowment Fund is to accumulate unallocated investment income (Interest Reserve Account), escheated accounts, and funds and assets accruing to the System that are not specifically required by the other funds.

**Expense Fund** — The purpose of the Expense Fund is to record the expenses incurred for the administration and maintenance of the System. The Board, as evidenced by a resolution of the Board and recorded in its minutes, may transfer from the Interest Reserve Account of the Endowment Fund to the Expense Fund the amount estimated to cover the System’s administrative costs for the year.

## **Fiduciary Fund — Supplemental Death Benefits Fund**

The Supplemental Death Benefits Fund (SDBF) reports the resources available to pay supplemental death claims for covered participants. Member cities may elect, by ordinance, to provide a Supplemental Death Benefit for their active members, including or not including retirees. The SDBF is a separate trust administered by the TMRS Board of Trustees. The TMRS Act requires the Pension Trust Fund to allocate a 5% interest credit to the SDBF each December 31 based on the mean balance in the SDBF during the year. Death benefit payments are payable only from this fund and are not an obligation of, or a claim against, the other funds of the System.

## **E. Investments**

Investments at December 31, 2016 and 2015 include investments in short-term custodian-managed funds, certificates of deposit, repurchase agreements, domestic and international fixed income securities, comingled equity funds, domestic and international equity securities, private real estate funds, non-core fixed income funds, real return funds, absolute return funds, and private equity funds. Investments are reported at fair value, and securities transactions are reported on a trade-date basis. Forward currency contracts and futures contracts are considered derivative financial instruments and are reported at fair value, with valuation changes reported as investment income. Fixed income securities, including TBA securities, are valued by pricing vendors that utilize quoted market prices, broker prices, or other valuation methodologies. Equity securities are valued by the custodian using the last trade date “quoted market price” supplied by various pricing data vendors. Fair values of the comingled equity funds are determined based on the funds’ net asset values at the date of valuation. Short-term investment funds and repurchase agreements are reported at cost, which approximates market value. Fair values of the investments in private real

estate funds, absolute return funds, non-core fixed income funds, real return funds, and private equity funds are reported at the net asset values as provided by the respective general partner, which are based on audited financial statements of the fund. Withdrawal from the private real estate, absolute return funds, non-core fixed income funds, real return funds, and private equity funds prior to liquidation is allowable, but is subject to certain constraints as defined in the respective Limited Partnership Agreement.

The TBA, or “to be announced,” securities market is a forward, or delayed delivery market for 30-year and 15-year fixed-rate single-family mortgage-backed securities (MBS) issued by Fannie Mae, Freddie Mac, and Ginnie Mae. A TBA trade represents a purchase or sale of single-family mortgage-backed securities to be delivered on a specified future date; however, the specific pools of mortgages that will be delivered are unknown at the time of the trade. Parties to a TBA trade agree upon the issuer, coupon, price, product type, amount of securities, and settlement date for delivery. Settlement for TBA trades is standardized to occur on one specific day each month. Notification date occurs 48 hours prior to settlement date, where the seller communicates to the buyer the exact details of the MBS pools that will be delivered. Securities must meet “good delivery guidelines.” Good delivery guidelines, notification, and settlement dates are established by the Securities Industry and Financial Markets Association (SIFMA). TBAs are an eligible security per the TMRS Investment Policy Statement. The policy requires purchases of TBAs to be backed by cash until settlement, and sales of TBAs to be backed by a deliverable security. The receivables and payables associated with the sale and purchase of TBAs are reflected in the accompanying statements of fiduciary net position as securities sold and purchased on a when-issued basis.

## F. Property and Equipment

Property and equipment consisting of building and improvements, furniture, software, equipment, and land are recorded at cost. It is the System’s policy to capitalize items that individually exceed \$5,000. Depreciation on furniture, equipment, and software is calculated on a straight-line basis over their estimated useful lives, which range from three to ten years; depreciation for building and improvements is calculated on a straight-line basis over forty years.

## G. Securities Lending

The Board of Trustees has authorized the System to participate in a securities lending program, whereby certain securities are loaned to an approved counterparty with a simultaneous agreement to return the collateral for the same securities. Collateral is in the form of cash or eligible securities and is initially equal to not less than 102% of the market value plus any accrued interest on the loaned securities, and is maintained at a minimum level of 100% of the market value plus any accrued interest. Securities received as collateral may not be pledged or sold without borrower default. The securities lending contract requires the securities lending agent to indemnify the System fully in the event a counterparty defaults on its obligations to the System.

The fair value of securities on loan totaled \$845,378,653 at December 31, 2015. At December 31, 2015, TMRS had no credit risk exposure to borrowers as the collateral amounts received exceeded amounts on loan. Additionally, TMRS did not experience any losses from default of a borrower or lending agent during 2016 or 2015.

Cash collateral received is invested by the securities lending agent. At December 31, 2015, the cost basis of the System's collateral holdings totaled \$866,849,709, which exceeded market values by \$2,735,245. The change in unrealized loss on securities lending collateral is reported as net appreciation/(depreciation) in fair value of collateral on the Statements of Changes in Fiduciary Net Position.

During 2016, the System terminated its securities lending program with its third-party agent.

## 2. Plan Description

### A. Pension Trust Fund

TMRS is a statewide agent multiple-employer public employee retirement system that administers 872 nontraditional, joint contributory, hybrid defined benefit plans covering all eligible employees of member cities in Texas. Membership in TMRS is summarized below as of December 31, 2016 and 2015:

|  | 2016          | 2015          |
|--|---------------|---------------|
| <b>Inactive plan member accounts (or beneficiaries) currently receiving benefits</b> | 59,611        | 56,481        |
| <b>Inactive plan member accounts entitled to but not yet receiving benefits</b>      |               |               |
| Vested   | 28,393        | 27,108        |
| Non-vested   | <u>25,328</u> | <u>23,599</u> |
| Total  | 53,721        | 50,707        |
| <b>Active plan member accounts</b>   |               |               |
| Vested   | 65,751        | 65,726        |
| Non-vested   | <u>43,140</u> | <u>41,168</u> |
| Total  | 108,891       | 106,894       |
| <b>Total member municipalities</b>   | 872           | 866           |

**Benefits** — Upon retirement, benefits depend on the sum of the employee's contributions, with interest, and the city-financed monetary credits, with interest. City-financed monetary credits are composed of three sources: prior service credits, current service credits, and updated service credits. Prior Service Credit, granted by each city joining TMRS, is a monetary credit equal to the accumulated value of the percentage of prior service credit adopted times an employee's deposits that would have been made, based on the average salary prior to participation, for the number of months the employee has been employed, accruing 3% annual interest, and including the matching ratio adopted by the city. Monetary credits for service since each plan began (or current service credits) are a percent (100%, 150%, or 200%) of the employee's accumulated contributions. In addition, each city can grant, either annually or on an annually repeating basis, another type of monetary credit referred to as Updated Service Credit. This monetary credit is determined by hypothetically re-computing the member's account balance by assuming that the current member deposit rate of the currently employing city (3%, 5%, 6%, or 7%) has always been in effect. The computation also assumes that the member's salary has always been the member's average salary — using a salary calculation based on the 36-month period ending a year before the effective date of calculation. This hypothetical account balance is increased by 3% each year (not the actual interest credited to the member's account in previous years), and increased by the city match currently in effect (100%, 150%, or 200%). The resulting sum is then compared to the

member's actual account balance increased by the actual city match and actual interest credited. If the hypothetical calculation exceeds the actual calculation, the member is granted a monetary credit (or Updated Service Credit) equal to the difference between the hypothetical calculation and the actual calculation times the percentage adopted.

At retirement, the benefit is calculated as if the sum of the employee's contributions with interest and the city-financed monetary credits with interest were used to purchase an annuity. Members may choose to receive their retirement benefit in one of seven payment options: retiree life only; one of three survivor lifetime options; or one of three guaranteed term options. Members may also choose to receive a portion of their benefit as a Partial Lump Sum Distribution (PLSD) in an amount equal to 12, 24, or 36 monthly payments under the retiree life only option, which cannot exceed 75% of the total member deposits and interest. A member city may elect to increase the annuities of its retirees, either annually or on an annually repeating basis, effective January 1 of a calendar year. Cities may adopt annuity increases at a rate equal to either 30%, 50%, or 70% of the increase (if any) in the Consumer Price Index – all Urban Consumers (CPI-U) between the December preceding the member's retirement date and the December one year before the effective date of the increase, minus any previously granted increases.

The plan provisions are adopted by the governing body of each city, within the options available in the state statutes governing TMRS. Members in most cities can retire at age 60 and above with 5 or more years of service or with 20 years of service regardless of age. Some cities have elected retirement eligibility with 25 years of service regardless of age. Most plans also provide death benefits, and all provide disability benefits. Effective January 1, 2002, members are vested after 5 years, unless a city opted to maintain 10-year vesting. Members may work for more than one TMRS city during their career. If an individual has become vested in one TMRS city, he or she is immediately vested upon employment with another TMRS city. Similarly, once a member has met the eligibility requirements for retirement in a TMRS city, he or she is eligible in other TMRS cities as well.

**Contributions** — The contribution rates for employees are either 5%, 6%, or 7% of employee gross earnings (three cities have a 3% rate, which is no longer allowed for new cities under the Act), and the city matching percentages are either 100%, 150%, or 200%, both as adopted by the governing body of each city. Under the state law governing TMRS, the contribution rate for each city is determined annually by the actuary, using the Entry Age Normal (EAN) actuarial cost method. This rate consists of the normal cost contribution rate and the prior service cost contribution rate, which is calculated to be a level percent of payroll from year to year. The normal cost contribution rate for an employee is the contribution rate which, if applied to a member's compensation throughout their period of anticipated covered service with the municipality, would be sufficient to meet all benefits payable on their behalf. The salary-weighted average of the individual rates is the total normal cost rate. The prior service contribution rate amortizes the unfunded (overfunded) actuarial liability (asset) over the applicable period for that city. Both the normal cost and prior service contribution rates include recognition of the projected impact of annually repeating benefits, such as Updated Service Credits and Annuity Increases. The employer contribution rate cannot exceed a statutory maximum rate, which is based on a combination of the employee contribution rate and the city matching percentage. There is an optional higher maximum that may be applied in certain circumstances if elected by the city, or a city may elect to remove the maximum rate. For example, with a 6% employee contribution rate and a city matching percentage of 200%, the maximum employer contribution rate is 12.5% (13.5% if the higher maximum is elected). The maximum does not apply at all for cities beginning participation on or after December 31, 1999.

Contributions are made monthly by both the employees and the member cities. Since each member city must know its contribution rate in advance for budgetary purposes, there is a one-year delay between the actuarial valuation that serves as the basis for the contribution rate and the calendar year when the rate goes into effect. Contributions totaling \$762.4 million and \$750.5 million were made in 2016 and 2015, respectively, by the member cities in accordance with the actuarially determined city contribution rates, based on the December 31, 2014 and 2013 actuarial valuations, respectively. In addition, effective January 1, 2008, member cities are allowed to make additional contributions to the Pension Trust Fund. During 2016 and 2015, thirteen cities contributed \$4.7 million and seven cities contributed \$266 thousand, respectively, in such additional contributions. If affected, a city may also pay contributions for the Full Benefit Arrangement (FBA). Such contributions totaled \$1.2 million and \$895 thousand in 2016 and 2015, respectively. Employees of the cities contributed \$389.9 million and \$376.1 million in 2016 and 2015 in accordance with the city-adopted employee contribution rate for each city.

**Investment Policy** — The pension plan’s policy in regard to the allocation of invested assets is established and may be amended by the TMRS Board of Trustees. Plan assets are managed on a total return basis with an emphasis on both capital appreciation as well as the production of income, in order to satisfy the short-term and long-term funding needs of TMRS. The Board’s adopted strategic asset allocation policy as of December 31, 2016 and 2015 is as follows:

| Asset Class            | Minimum % | Target % | Maximum % |
|------------------------|-----------|----------|-----------|
| U.S. Equities          | 12.5%     | 17.5%    | 22.5%     |
| International Equities | 12.5%     | 17.5%    | 22.5%     |
| Core Fixed Income      | 5.0%      | 10.0%    | 15.0%     |
| Non-Core Fixed Income  | 15.0%     | 20.0%    | 25.0%     |
| Real Estate            | 5.0%      | 10.0%    | 15.0%     |
| Real Return            | 5.0%      | 10.0%    | 15.0%     |
| Absolute Return        | 5.0%      | 10.0%    | 15.0%     |
| Private Equity         | 0.0%      | 5.0%     | 10.0%     |
| Cash Equivalents       | 0.0%      | 0.0%     | 10.0%     |

For the years ended December 31, 2016 and 2015, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 7.55% and .08%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

## B. Supplemental Death Benefits Fund

TMRS also administers a defined benefit group-term life insurance plan known as the Supplemental Death Benefits Fund (SDBF). This is a voluntary program in which participating member cities may elect, by ordinance, to provide group-term life insurance coverage (Supplemental Death Benefits) for their active members, including or not including retirees. Employers may terminate coverage under and discontinue participation in the SDBF by adopting an ordinance before November 1 of any year to be effective the following January 1.

Participation in the SDBF as of December 31, 2016 and 2015 is summarized as follows; these counts represent those eligible for the retiree death benefit only:

|  | 2016          | 2015          |
|--|---------------|---------------|
| <b>Annuitants eligible for benefits</b>                    | <b>26,864</b> | <b>25,819</b> |
| <b>Terminated vested employees</b>                         | 8,513         | 7,921         |
| <b>Current employee accounts</b>                           |               |               |
| Vested   | 43,247        | 43,074        |
| Non-vested   | 29,070        | 27,764        |
| Total  | 72,317        | 70,838        |
| <b>Number of municipalities providing retiree coverage</b> | 750           | 740           |

**Benefits** — Payments from this fund are similar to group-term life insurance benefits, and are paid to the designated beneficiaries upon the receipt of an approved application for payment. The death benefit for active employees provides a lump sum payment approximately equal to the employee's annual salary (calculated based on the employee's actual earnings for the 12-month period preceding the month of death). The death benefit for retirees is considered an other employment benefit and is a fixed amount of \$7,500. The obligations of this plan are payable only from the SDBF and are not an obligation of, or a claim against, the Pension Trust Fund.

**Contributions** — Contributions are made monthly based on the covered payroll of employee members of the participating member city. The contractually required contribution rate is determined annually for each city. The rate is based on the mortality and service experience of all employees covered by the SDBF and the demographics specific to the workforce of the city. There is a one-year delay between the actuarial valuation that serves as the basis for the employer contribution rate and the calendar year when the rate goes into effect. The contributions to the SDBF are pooled for investment purposes with those of the Pension Trust Fund. The TMRS Act requires the Pension Trust Fund to allocate investment income to the SDBF on an annual basis (see note 1-D). The funding policy of this plan is to assure that adequate resources are available to meet all death benefit payments for the upcoming year; the intent is not to prefund retiree term life insurance during employees' entire careers. As such, contributions are utilized to fund active member deaths on a pay-as-you-go basis; any excess contributions and investment income over payments then become net position available for benefits.

## C. TMRS as Employer

**Pension Trust Fund** — TMRS, as an employer, participates as one of the 872 plans in the statewide agent multiple-employer plan administered by the System, providing pension benefits for all of its eligible employees. The plan provisions that have been adopted by the TMRS Board of Trustees are within the options available in the TMRS Act. Employees can retire at age 60 and above with 5 or more years of service, or with 20 years of service regardless of age. The contribution rate for employees is 7% and the matching percentage for TMRS is 200%. TMRS, as an employer, has also adopted 100% Updated Service Credit (USC) on a repeating basis and annuity increases (AI) on a repeating basis, at 70% of the change in the CPI. Employees are vested after 5 years of service, but their accumulated deposits and interest must remain in the plan to receive any employer-financed benefits. At retirement, death, or disability, the benefit is calculated by converting the sum of the employee's personal account balance and the employer-financed monetary credits to a monthly annuity using annuity purchase rates prescribed by the TMRS Act. Members may choose to receive their retirement benefit in one of seven payment options. Members may also choose to receive a portion of their benefit as a PLSD (see section A of this note for a full description of the pension benefits).

TMRS' Net Pension Liability (NPL) of \$8,170,362 at December 31, 2016 and \$6,078,398 at December 31, 2015, was measured as of the December 31, 2015 and 2014 actuarial valuation, respectively.

**Supplemental Death Benefits Fund** — TMRS, as an employer, participates in the defined benefit group-term life insurance plan it operates known as the Supplemental Death Benefits Fund (SDBF). TMRS elected to provide group-term life insurance coverage to both current and retired employees. The death benefit for active employees provides a lump sum payment approximately equal to the employee's annual salary (calculated based on the employee's actual earnings, for the 12-month period preceding the month of death). Retired employees are insured for \$7,500.

TMRS contributes to the SDBF at a contractually required rate as determined by an annual actuarial valuation, which was 0.16% for 2016 and 2015, of which 0.02% represented the retiree-only portion for each year, as a percentage of annual covered payroll. The rate is equal to the cost of providing one-year term life insurance. The funding policy for the SDBF program is to assure that adequate resources are available to meet all death benefit payments for the upcoming year; the intent is not to prefund retiree term life insurance during employees' entire careers. As an employer, TMRS' contributions to the SDBF for the years ended December 31, 2016, 2015, and 2014 were \$15,678, \$14,347, and \$12,281, respectively, representing contributions for both active and retiree coverage, which equaled the required contributions each year.

See section B of this note for a full description of the SDBF.

**TMRS Insurance Plan** — TMRS, as an employer, also participates in the Employees Retirement System of Texas (ERS) Group Benefits Program (GBP). ERS provides health, life, disability, and dental insurance benefits through the GBP; the GBP is administered through a trust (irrevocable per statute – Texas Insurance Code, Section 1551.401), which is governed and managed by a Board of Trustees. The State Retiree Health Plan (SRHP) is a cost sharing multiple-employer postemployment healthcare plan that covers retired employees of the State and other entities as specified by the state legislature, including TMRS. The plan assets are legally protected from creditors of the State of Texas and ERS. The ERS issues a publicly available financial report that includes financial statements and required supplementary information for SRHP. That report may be obtained by writing to ERS, P.O. Box 13207, Austin, TX 78711-3207 or by calling 877-275-4377.

As a cost sharing plan, all assets and risks are pooled and the contribution rates are the same for each participating employer. Contribution requirements or "premiums" are established and may be amended by the Texas Legislature. TMRS remits monthly premium contributions to ERS to cover both active employees and TMRS retirees that are covered under the plan. TMRS' contributions to ERS for the years ended December 31, 2016, 2015, and 2014 were \$986,167, \$892,293, and \$837,716, respectively, for active employees and \$42,815, \$39,645, and \$36,309, respectively, for TMRS retirees, which equaled the required contributions each year.

TMRS provides health coverage to TMRS retirees based on a tenure schedule approved by the TMRS Board of Trustees through the annual budget process. The retiree, at his/her own expense, may elect spouse health coverage, as well as dental and life insurance offered through the plan.

### 3. Deposits and Investments

#### A. Cash in Bank and Deposits

Cash balances represent both demand deposit accounts, held by a local banking institution under terms of a written depository contract, and cash on deposit with the custodian.

Demand deposits totaled \$467,027 and \$781,752, with carrying amounts of (\$5,602,640) and (\$5,370,041) at December 31, 2016 and 2015, respectively. Securities pledged had a market value of \$10,260,960 and \$18,758,657 at December 31, 2016 and 2015, respectively. The account, Due to Custodial and Depository Banks on the Statements of Fiduciary Net Position, includes benefit checks outstanding at each year-end.

Cash on deposit with the custodian totaled \$27,225,142 and \$2,177,000 at December 31, 2016 and 2015, respectively.

#### B. Fair Value of Investments

The Plan categorizes its fair value measurements within the fair value hierarchy as established by generally accepted accounting principles. These principles recognize a three-tiered fair value hierarchy, as follows:

- Level 1: Investments with values based on quoted prices (unadjusted) for identical assets in active markets at the measurement date.
- Level 2: Investments with inputs – other than quoted prices included within Level 1 – that are observable for an asset, either directly or indirectly.
- Level 3: Investments classified as Level 3 have unobservable inputs for an asset and may require a degree of professional judgment.

# Notes to Financial Statements

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At December 31, 2016 and 2015, the Plan has the following recurring fair value measurements:

| <b>Investments and Derivative Instruments Measured at Fair Value</b> |                               |                      |                      |                    |
|--|-------------------------------|----------------------|----------------------|--------------------|
|  | Fair Value Measurements Using |                      |                      |                    |
|  | Fair Value at<br>12/31/2016   | Level 1              | Level 2              | Level 3            |
| <b>Investments by fair value level</b>                               |                               |                      |                      |                    |
| <b>Short-term investments</b>  |                               |                      |                      |                    |
| Short-term investment funds  | \$ 287,500,681                | \$ -                 | \$ 287,500,681       | \$ -               |
| Repurchase agreements  | 419,700,000                   | -                    | 419,700,000          | -                  |
|  | 707,200,681                   | -                    | 707,200,681          | -                  |
| <b>Fixed-income</b>  |                               |                      |                      |                    |
| U.S. Treasury bonds/notes  | 993,210,007                   | -                    | 993,210,007          | -                  |
| U.S. Treasury inflation-protected                                    | 381,688,084                   | -                    | 381,688,084          | -                  |
| U.S. government agency   | 106,551,152                   | -                    | 106,551,152          | -                  |
| Municipal  | 147,813,124                   | -                    | 147,813,124          | -                  |
| Corporate  | 1,869,419,084                 | -                    | 1,869,419,084        | -                  |
| Residential mortgage-backed  | 1,388,405,075                 | -                    | 1,388,405,075        | -                  |
| Commercial mortgage-backed   | 734,857,487                   | -                    | 734,857,487          | -                  |
| Other asset-backed   | 68,947,415                    | -                    | 68,947,415           | -                  |
| Foreign government   | 126,367,531                   | -                    | 126,367,531          | -                  |
| Foreign government inflation-linked                                  | 344,375,223                   | -                    | 344,375,223          | -                  |
|  | 6,161,634,182                 | -                    | 6,161,634,182        | -                  |
| <b>Equities</b>  |                               |                      |                      |                    |
| Equity commingled funds  | 598,912,573                   | -                    | 598,912,573          | -                  |
| Equity securities - domestic   | 1,775,502,236                 | 1,775,502,236        | -                    | -                  |
| Equity securities - international                                    | 1,376,209,643                 | 1,376,209,643        | -                    | -                  |
|  | 3,750,624,452                 | 3,151,711,879        | 598,912,573          | -                  |
| <b>Real return funds</b>   | 32,489,875                    | -                    | -                    | 32,489,875         |
| <b>Absolute return funds</b>   | 106,548,100                   | -                    | -                    | 106,548,100        |
| <b>Private real estate funds</b>                                     | 162,690,328                   | -                    | -                    | 162,690,328        |
| <b>Investment derivative instruments</b>                             |                               |                      |                      |                    |
| Foreign currency contracts   | 1,580,137                     | 1,580,137            | -                    | -                  |
| Futures contracts  | (10,789)                      | (10,789)             | -                    | -                  |
|  | 1,569,348                     | 1,569,348            | -                    | -                  |
| <b>Total investments by fair value level</b>                         | <b>10,922,756,966</b>         | <b>3,153,281,227</b> | <b>7,467,747,436</b> | <b>301,728,303</b> |
| <b>Investments measured at the net asset value (NAV)</b>             |                               |                      |                      |                    |
| Non-core fixed-income funds  | 1,296,080,388                 |                      |                      |                    |
| Real return funds  | 880,989,862                   |                      |                      |                    |
| Equity commingled funds  | 7,588,834,163                 |                      |                      |                    |
| Absolute return funds  | 2,642,621,605                 |                      |                      |                    |
| Private real estate funds  | 2,020,423,054                 |                      |                      |                    |
| Private equity funds   | 116,403,554                   |                      |                      |                    |
| <b>Total investments measured at the NAV</b>                         | <b>14,545,352,626</b>         |                      |                      |                    |
| <b>Other investments not at fair value level</b>                     |                               |                      |                      |                    |
| <b>Short-term investments</b>  |                               |                      |                      |                    |
| Certificates of deposit  | 360,677,858                   |                      |                      |                    |
| Broker collateral  | 1,444,000                     |                      |                      |                    |
| <b>Total other investments not at fair value level</b>               | <b>362,121,858</b>            |                      |                      |                    |
| <b>Total Investments</b>   | <b>\$ 25,830,231,450</b>      |                      |                      |                    |

| Investments and Derivative Instruments Measured at Fair Value |                               |                      |                       |                    |
|---|-------------------------------|----------------------|-----------------------|--------------------|
|   | Fair Value Measurements Using |                      |                       |                    |
|   | Fair Value at<br>12/31/2015   | Level 1              | Level 2               | Level 3            |
| <b>Investments by fair value level</b>                        |                               |                      |                       |                    |
| <b>Short-term investments</b>                                 |                               |                      |                       |                    |
| Short-term investment funds                                   | \$ 400,180,204                | \$ -                 | \$ 400,180,204        | \$ -               |
| Repurchase agreements   | 1,003,200,000                 | -                    | 1,003,200,000         | -                  |
|   | 1,403,380,204                 | -                    | 1,403,380,204         | -                  |
| <b>Fixed-income</b>   |                               |                      |                       |                    |
| U.S. Treasury bonds/notes                                     | 1,236,099,105                 | -                    | 1,236,099,105         | -                  |
| U.S. Treasury inflation-protected                             | 607,621,673                   | -                    | 607,621,673           | -                  |
| U.S. government agency  | 224,629,745                   | -                    | 224,629,745           | -                  |
| Municipal   | 159,151,287                   | -                    | 159,151,287           | -                  |
| Corporate   | 2,711,999,973                 | -                    | 2,711,999,973         | -                  |
| Residential mortgage-backed                                   | 1,913,683,259                 | -                    | 1,913,683,259         | -                  |
| Commercial mortgage-backed                                    | 878,576,781                   | -                    | 878,576,781           | -                  |
| Other asset-backed  | 93,246,404                    | -                    | 93,246,404            | -                  |
| Foreign government  | 438,636,889                   | -                    | 438,636,889           | -                  |
| Foreign government inflation-linked                           | 347,195,879                   | -                    | 347,195,879           | -                  |
|   | 8,610,840,995                 | -                    | 8,610,840,995         | -                  |
| <b>Equities</b>   |                               |                      |                       |                    |
| Equity commingled funds                                       | 562,468,291                   | -                    | 562,468,291           | -                  |
| Equity securities - domestic                                  | 1,248,341,263                 | 1,248,341,263        | -                     | -                  |
| Equity securities - international                             | 1,152,995,623                 | 1,152,995,623        | -                     | -                  |
|   | 2,963,805,177                 | 2,401,336,886        | 562,468,291           | -                  |
| <b>Private real estate funds</b>                              | 152,921,271                   | -                    | -                     | 152,921,271        |
| <b>Investment derivative instruments</b>                      |                               |                      |                       |                    |
| Foreign currency contracts                                    | (2,855,209)                   | (2,855,209)          | -                     | -                  |
|   | (2,855,209)                   | (2,855,209)          | -                     | -                  |
| <b>Total investments by fair value level</b>                  | <b>13,128,092,438</b>         | <b>2,398,481,677</b> | <b>10,576,689,490</b> | <b>152,921,271</b> |
| <b>Investments measured at the net asset value (NAV)</b>      |                               |                      |                       |                    |
| Non-core fixed-income funds                                   | 740,942,387                   |                      |                       |                    |
| Equity commingled funds                                       | 7,519,273,466                 |                      |                       |                    |
| Absolute return funds   | 1,576,279,728                 |                      |                       |                    |
| Private real estate funds                                     | 1,310,739,794                 |                      |                       |                    |
| Private equity funds  | 13,805,553                    |                      |                       |                    |
| <b>Total investments measured at the NAV</b>                  | <b>11,161,040,928</b>         |                      |                       |                    |
| <b>Other investments not at fair value level</b>              |                               |                      |                       |                    |
| Short-term investments  |                               |                      |                       |                    |
| Broker collateral   | (80,000)                      |                      |                       |                    |
| <b>Total other investments not at fair value level</b>        | <b>(80,000)</b>               |                      |                       |                    |
| <b>Total Investments</b>                                      | <b>\$ 24,289,053,366</b>      |                      |                       |                    |
| <b>Invested securities lending collateral</b>                 | <b>\$ 864,114,464</b>         | <b>-</b>             | <b>\$ 864,114,464</b> | <b>-</b>           |

Fixed income securities and securities lending collateral classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the

# Notes to Financial Statements

Continued

securities' relationship to benchmark quoted prices. Certain equity commingled funds and short-term investments classified in Level 2 of the fair value hierarchy are priced using published prices received from investment managers, based on the fair values of underlying investments. Equity securities and derivatives contracts classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those investments. Investments in certain real return funds, absolute return funds, and private real estate funds classified in Level 3 of the fair value hierarchy are valued at TMRS' percentage ownership of the net assets of the funds as of December 31, 2016 and 2015, as reported by the funds' audited financial statements. These funds do not meet the definition of net asset value (NAV) as a practical expedient.

Investments measured at the net asset value (NAV) per share (or its equivalent) generally do not have readily obtainable market values. TMRS values these investments based on the financial statements of the investment funds. The following table presents the unfunded commitments, redemption frequency (if currently eligible), and the redemption notice period for TMRS' alternative investments measured at NAV.

| Investments Measured at the Net Asset Value (NAV) | Fair Value at 12/31/2015 | Fair Value at 12/31/2016 | Unfunded Commitments    | Redemption Frequency | Redemption Notice Period |
|---|--------------------------|--------------------------|-------------------------|----------------------|--------------------------|
| <b>Equities</b>                                   |                          |                          |                         |                      |                          |
| U.S. commingled funds                             | \$ 4,984,891,970         | \$ 4,922,518,557         | \$ -                    | Daily                | 1 - 2 days               |
| International commingled funds                    | 2,534,381,496            | 2,666,315,606            | -                       | Daily                | 1 - 2 days               |
| <b>Non-core fixed income funds:</b>               |                          |                          |                         |                      |                          |
| Bank loan/collateralized loan obligation funds    | 740,942,387              | 816,230,250              | -                       | Quarterly            | 45 - 60 days             |
| Direct lending funds                              | -                        | 164,255,732              | 789,897,003             | Quarterly, N/A       | 30 - 90 days, N/A        |
| Opportunistic credit funds                        | -                        | 315,594,406              | 495,002,760             | N/A                  | N/A                      |
| <b>Real return funds</b>                          | -                        | 880,989,862              | 299,503,294             | N/A                  | N/A                      |
| <b>Absolute return funds</b>                      |                          |                          |                         |                      |                          |
| Fund of hedge funds                               | 1,576,279,728            | 1,512,598,825            | -                       | Quarterly            | 95 days                  |
| Equity hedge funds                                | -                        | 196,349,280              | -                       | Monthly, Quarterly   | 45 - 80 days             |
| Global macro hedge funds                          | -                        | 220,347,560              | -                       | Quarterly            | 30 - 90 days             |
| Multi strategy-opportunistic hedge funds          | -                        | 103,075,800              | -                       | Quarterly            | 60 days                  |
| Credit hedge funds                                | -                        | 332,359,870              | -                       | Quarterly, Annually  | 90 days                  |
| Relative value hedge funds                        | -                        | 222,929,610              | -                       | Monthly, Quarterly   | 25 - 90 days             |
| Event-driven hedge funds                          | -                        | 54,960,660               | -                       | Quarterly            | 90 days                  |
| <b>Private equity funds</b>                       | 13,805,553               | 116,403,554              | 579,224,021             | N/A                  | N/A                      |
| <b>Private real estate funds</b>                  |                          |                          |                         |                      |                          |
| Core real estate funds                            | 942,496,583              | 1,221,373,541            | 65,605,501              | Quarterly, N/A       | 45 - 90 days, N/A        |
| Opportunistic real estate funds                   | 50,768,529               | 124,922,275              | 346,035,577             | N/A                  | N/A                      |
| Value-added real estate funds                     | 317,474,682              | 674,127,238              | 373,181,377             | N/A                  | N/A                      |
| <b>Total Investments Measured at the NAV</b>      | <b>\$ 11,161,040,928</b> | <b>\$ 14,545,352,626</b> | <b>\$ 2,948,449,533</b> |                      |                          |

- **Equity commingled funds.** TMRS invests in six passively managed commingled fund structures that offer daily liquidity. TMRS commingled funds essentially have the same objective – to provide similar return and risk characteristics that approximate the overall performance of domestic and international securities included in the underlying index.
- **Absolute return funds:**
  - **Fund of hedge funds.** TMRS invests in a custom fund of hedge funds with the objective of pursuing capital appreciation by allocating assets among a variety of alternative investment strategies. The mandate seeks to decrease portfolio risk by providing attractive, risk-adjusted returns with low correlation to traditional asset classes. The fund allows for quarterly redemptions, with a notice period of 95 days.
  - **Equity hedge funds.** Equity hedge funds hold positions in equities on both the long and short side. Typically, managers will rely on fundamental bottom-up research in order to select stocks to go long or short, but managers may also incorporate technical analysis. Often managers will use a top-down approach looking at macro themes and trends to direct research and portfolio construction. Some managers will add a macro overlay in order to guide regional or country allocations. On occasion, managers may make use of non-equity instruments such as CDs, swaps, currency overlay, or even credit positions if valuations are compelling. Managers may define their regional exposure based on the domicile of the company that they are investing in or the operating markets of the company. One of the funds in this group is subject to gate provisions, limiting withdrawals to 25% of the NAV of each fund. One fund is subject to fees if investments are redeemed within the first 12 months after acquisition.
  - **Global macro hedge funds.** Global macro hedge funds take directional positions in currencies, bonds, equities, and commodities. Investment decisions are based on a manager's top-down view of the world: analysis of the economy, interest rates, inflation, government policy, and geopolitical factors. The relative valuations of financial instruments within or between asset classes can also play a role in investment decisions. Two of the funds in this group are subject to gate provisions, limiting withdrawals to 25% of the NAV of the fund. One fund is subject to fees if investments are redeemed within the first 12 months after acquisition.
  - **Multi-strategy-opportunistic hedge funds.** Multi-strategy hedge funds include hedge funds where capital is shifted on an opportunistic basis between a small number of hedge fund styles. One of the funds in this group is subject to gate provisions, limiting withdrawals to 16.6% of the NAV of the fund. One fund is subject to fees if investments are redeemed within the first 18 months after acquisition.
  - **Credit hedge funds.** Credit hedge funds may invest in a variety of fixed income strategies. While many invest in multiple strategies, others may focus on a single strategy less followed by most fixed income hedge funds. Areas of focus include municipal bonds, corporate bonds, and global fixed income securities. Each of the funds in this group is subject to gate provisions, limiting withdrawals from 25% to 30% of the NAV of each fund. One fund is subject to fees if investments are redeemed within the first 24 months after acquisition.
  - **Relative value hedge funds.** Relative value hedge funds attempt to take advantage of relative pricing discrepancies between instruments, including equities, debt, options, and futures. Managers may use mathematical, fundamental, or technical analysis to determine misvaluation. Securities may be mispriced relative to the underlying security, related securities, groups of securities, or the overall market. Many funds use leverage and seek opportunities globally. Arbitrage strategies include dividend arbitrage, pairs trading, options arbitrage, and yield curve trading. Three of the funds in this group are subject to gate

provisions, limiting withdrawals from 8.33% to 25% of the NAV of each fund. One fund is subject to fees if investments are redeemed within the first 12 months after acquisition.

- **Event-driven hedge funds.** This involves investing in opportunities created by significant transactional events, such as spin-offs, mergers and acquisitions, bankruptcy, reorganizations, recapitalizations, and share buybacks. The portfolio of some event-driven managers may shift in majority weighting between Risk Arbitrage and Distressed Securities, while others may take a broader scope. Instruments include long and short common and preferred stocks, as well as debt securities and options. Leverage may be used by some managers. Fund managers may hedge against market risk by purchasing S&P put options or put option spreads. One of the funds in this group is subject to gate provisions, limiting withdrawals to 12.5% of the NAV of the fund.
- **Private real estate funds.** Real estate funds generally invest primarily in U.S. and other global commercial real estate or similarly debt collateralized by commercial real estate. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. TMRS classifies its real estate investments into three fund strategies – Core, Value-Added, and Opportunistic – and are held in two structural categories: i) open end funds; and ii) closed end funds. TMRS invests in 7 open end funds, 5 of which TMRS may redeem capital on a quarterly basis with 45-90 day notice, 2 of which TMRS may redeem on an annual basis with 90-day notice, 4 of which are subject to initial lock-out periods, and all of which have provisions for administering limited liquidity and/or gated liquidity in any given period. TMRS invests in 20 closed end funds with average contractual vehicle lives of 8 – 12 years over which the funds will first purchase and subsequently dispose of assets. Distributions from each fund will be received as the underlying investments of the funds are liquidated. TMRS has invested in closed end real estate vehicles since calendar year 2012 and accordingly is receiving distributions from earlier vintage funds (i.e., capital is being returned to TMRS). TMRS has continued to invest in closed end funds in each calendar year since that time, resulting in net capital call activity (i.e. capital is being funded into these vehicles) for later vintage funds.
- **Real return funds.** Real return funds invest primarily in the capital structures of U.S. and other global hard assets such as infrastructure, minerals, agriculture, energy, timber, etc. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. TMRS' real return fund investments may be classified into two structural categories: i) open end vehicles; and ii) closed end funds. TMRS' invests in 1 open end vehicle, a commingled investment trust which invests in publicly tradable assets. TMRS has daily liquidity in this vehicle. TMRS invests in 4 closed end funds with average contractual vehicle lives of 6 – 14 years over which the funds will first purchase and subsequently dispose of assets. Distributions from each fund will be received as the underlying investments of the funds are liquidated. TMRS has invested in closed end real return vehicles since calendar year 2015. Accordingly, given the recent vintage profile, net capital call activity (i.e., capital is being funded into these vehicles) is currently occurring.
- **Non-core fixed income funds.** Non-core fixed income includes a wide variety of fixed income strategies, including emerging market debt, high yield, bank loans, CLO, direct lending, mortgage-backed securities, and asset-backed securities, among others. These investments are research-intensive based on fundamental bottom-up analysis. Generally, non-core fixed income seeks to capture both high income and price appreciation. Liquidity, volatility, expected return and investment horizon vary with each strategy.
- **Private equity funds.** Private equity funds generally invest primarily in non-publicly traded equity and debt securities in U.S. and other global companies. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. TMRS invests in 14 closed end funds with average contractual vehicle

lives of 10 – 14 years over which the funds will first purchase and subsequently dispose of assets. Distributions from each fund will be received as the underlying investments of the funds are liquidated. TMRS has invested in closed end real return vehicles since calendar year 2015. Accordingly, given the recent vintage profile, net capital call activity (i.e., capital is being funded into these vehicles) is currently occurring.

## C. Deposit and Investment Risk

State and local governments have deposits and investments that are subject to various risks. GASB Statement No. 40, *Deposit and Investment Risk Disclosures – an amendment of GASB Statement No. 3*, provides disclosure requirements related to deposit and investment risks: custodial credit risk, credit risk, concentrations of credit risk, interest rate risk, and foreign currency risk.

### Custodial Credit Risk – Deposits

Custodial credit risk is the risk that, in the event of a bank failure, the System's deposits might not be recovered. TMRS does not have a formal deposit policy for custodial credit risk of its deposits. Demand deposits held by the depository bank as of December 31, 2016 and 2015, to the extent not insured by the Federal Deposit Insurance Corporation, were collateralized by securities held by a third party independent custodian, in the System's name, under a joint custody agreement giving the System unconditional rights and claims to collateral. The current FDIC coverage limit is \$250,000 for deposits held in noninterest-bearing accounts. Deposits denominated in a foreign currency are neither collateralized nor insured as of December 31, 2016 and 2015.

### Custodial Credit Risk – Investments

Custodial credit risk is the risk that, in the event of failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The assets of the System may be held in the name of agents, nominees, depository trust companies, or other entities designated by the Board of Trustees. At December 31, 2016 and 2015, all investment securities were registered in the System's name or in the name of the System's custodian, which was established through a master trust custodial agreement, and are held by the custodian in the name of the System.

The System's investments in repurchase agreements of \$419,700,000 and \$1,003,200,000 at December 31, 2016 and 2015 were collateralized by U.S. Treasury notes, held in the System's name, with a total market value of \$427,224,000 and \$1,019,962,258, respectively.

### Credit Risk – Investments

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. According to TMRS investment policy as adopted by the TMRS Board of Trustees, credit default risk of the core fixed income portfolio is managed by requiring minimum credit ratings by sector and mandate as outlined below:

- (1) All securities must be rated at least B- by S&P or Fitch, or B3 by Moody's.
- (2) The portfolio shall maintain a minimum weighted average credit quality of A+.
- (3) Global U.S. dollar denominated – issue and national government of the country where the issuer's primary operations are located (if the issuer is not the national government itself) must be rated investment grade, at least BBB- by S&P or Fitch, or Baa3 by Moody's.
- (4) Securitized – the weighted average credit quality of securitized product must be AA.
- (5) Municipal – Municipal issues must be rated investment grade, at least BBB- by S&P or Fitch, or Baa3 by Moody's.
- (6) Non U.S. dollar denominated bonds – Both the issue and issuer's national government

(if the issuer is not the national government itself) must be rated at least A- by S&P or Fitch, or A3 by Moody's.

Investment guidelines established with the individual investment managers address the management of credit default risk for the Non-Core Fixed Income and Real Return portfolios. The System's long-term fixed income investments with exposure to credit risk as of December 31, 2016 and 2015 are presented on the following page by quality category:

|                                     | Fair Value at<br>12/31/16 | Fair Value at<br>12/31/15 | Rating |
|-------------------------------------|---------------------------|---------------------------|--------|
| U.S. government agency              | \$ 91,950,903             | \$ 13,793,123             | AAA    |
| U.S. government agency              | -                         | 156,606,378               | AA     |
| U.S. government agency              | 14,600,249                | 54,230,244                | NR     |
| Municipal                           | 11,524,900                | 31,386,708                | AAA    |
| Municipal                           | 70,188,871                | 96,687,782                | AA     |
| Municipal                           | 65,124,942                | 31,076,797                | A      |
| Municipal                           | 974,411                   | -                         | BBB    |
| Residential mortgage-backed         | 1,388,405,075             | 1,913,683,259             | NR     |
| Corporate                           | 84,553,456                | 132,635,855               | AAA    |
| Corporate                           | 90,232,892                | 235,862,823               | AA     |
| Corporate                           | 635,316,471               | 983,332,501               | A      |
| Corporate                           | 780,214,760               | 1,197,745,076             | BBB    |
| Corporate                           | 190,537,848               | 124,314,833               | BB     |
| Corporate                           | 73,872,129                | 33,437,187                | B      |
| Corporate                           | 9,771,896                 | 2,926,000                 | CCC    |
| Corporate                           | 4,919,632                 | 1,745,698                 | NR     |
| Other asset-backed                  | 9,928,870                 | 23,480,511                | AAA    |
| Other asset-backed                  | 27,801,908                | -                         | AA     |
| Other asset-backed                  | 7,905,311                 | 36,221,818                | A      |
| Other asset-backed                  | 671,242                   | -                         | BB     |
| Other asset-backed                  | 1,043,833                 | 1,682,614                 | B      |
| Other asset-backed                  | 7,719,742                 | 18,753,304                | CCC    |
| Other asset-backed                  | 6,199,813                 | -                         | CC     |
| Other asset-backed                  | -                         | 2,403,621                 | D      |
| Other asset-backed                  | 7,676,696                 | 10,704,536                | NR     |
| Commercial mortgage-backed          | 58,812,617                | 103,660,430               | AAA    |
| Commercial mortgage-backed          | 13,434,456                | 60,623,584                | AA     |
| Commercial mortgage-backed          | 1,150,250                 | -                         | A      |
| Commercial mortgage-backed          | 2,154,543                 | 16,585,676                | BBB    |
| Commercial mortgage-backed          | 157,085,181               | 45,164,876                | BB     |
| Commercial mortgage-backed          | 142,341,136               | 234,194,261               | B      |
| Commercial mortgage-backed          | 203,579,329               | 192,333,430               | CCC    |
| Commercial mortgage-backed          | 53,261,866                | 61,245,101                | CC     |
| Commercial mortgage-backed          | 5,323,436                 | -                         | C      |
| Commercial mortgage-backed          | 60,254,583                | 145,650,088               | D      |
| Commercial mortgage-backed          | 37,460,090                | 19,119,335                | NR     |
| Foreign government                  | 15,526,986                | 2,627,362                 | AAA    |
| Foreign government                  | 49,672,534                | 137,200,629               | AA     |
| Foreign government                  | 15,817,895                | 126,182,567               | A      |
| Foreign government                  | 38,492,689                | 103,869,151               | BBB    |
| Foreign government                  | -                         | 2,254,000                 | BB     |
| Foreign government                  | 6,857,427                 | 66,503,180                | NR     |
| Foreign government inflation-linked | 75,934,156                | 51,540,711                | AAA    |
| Foreign government inflation-linked | 204,182,512               | 251,415,318               | AA     |
| Foreign government inflation-linked | 64,258,555                | 44,239,850                | A      |
| Non-core fixed income funds         | 1,296,080,388             | 740,942,387               | NR     |
| <b>Total</b>                        | <b>\$ 6,082,816,479</b>   | <b>\$ 7,508,062,604</b>   |        |

## Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System's investment policy requires that issuer diversification limits be applied to the core fixed income portfolio as follows:

1. Investments in a single government related issuer (excluding U.S. Treasuries and U.S. government agencies) will not exceed 5% of the total market value of the Core Fixed Income and Manager mandates;
2. Investments in a single corporate issuer will not exceed 2% of the total market value of the Core Fixed Income and Manager mandates; and
3. For asset-backed, non-agency mortgage-backed, and commercial mortgage-backed securities, each separate trust (pool of assets) is defined as a separate issuer and shall not exceed 1.5% of the total market value of the Core Fixed Income and Manager mandates.

Investment guidelines established with the individual investment managers address the management of concentration of credit risk for the Non-Core Fixed Income and Real Return portfolios. As of December 31, 2016 and 2015, the System did not exceed any of the issuer diversification limits.

## Interest Rate Risk – Investments

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The System's investment policy states that interest rate risk of the Core Fixed Income portfolio will be controlled through duration management. Duration is a measure of the sensitivity of the price (the value of principal) of a fixed income investment to a change in interest rates, and is expressed as a number of years. TMRS' Investment Policy requires duration of the Core Fixed Income Portfolio be maintained within +/- 25% of the Barclay's U.S. Aggregate Bond Index.

Investment guidelines established with the individual investment managers address the management of interest rate risk for the Non-Core Fixed Income and Real Return portfolios. The following tables display the fair value and weighted-average effective duration as of December 31, 2016 and 2015 for TMRS' long-term fixed income securities.

|                                     | Fair Value at 12/31/2016 | Effective Duration |
|-------------------------------------|--------------------------|--------------------|
| U.S. Treasury bonds/notes           | \$993,210,007            | 8.27               |
| U.S. Treasury inflation-protected   | 381,688,084              | 10.65              |
| U.S. government agency              | 106,551,152              | 8.89               |
| Municipal                           | 147,813,124              | 9.43               |
| Corporate                           | 1,869,419,084            | 4.87               |
| Residential mortgage-backed         | 1,388,405,075            | 5.06               |
| Commercial mortgage-backed          | 734,857,487              | 2.50               |
| Other asset-backed                  | 68,947,415               | 3.25               |
| Foreign government                  | 126,367,531              | 4.12               |
| Foreign government inflation-linked | 344,375,223              | 9.75               |
| <b>TOTAL</b>                        | <b>\$6,161,634,182</b>   | <b>5.95</b>        |

|                                     | Fair Value at 12/31/2015 | Effective Duration |
|-------------------------------------|--------------------------|--------------------|
| U.S. Treasury bonds/notes           | \$1,236,099,105          | 6.49               |
| U.S. Treasury inflation-protected   | 607,621,673              | 9.41               |
| U.S. government agency              | 224,629,745              | 8.66               |
| Municipal                           | 159,151,287              | 10.06              |
| Corporate                           | 2,711,999,973            | 4.85               |
| Residential mortgage-backed         | 1,913,683,259            | 4.22               |
| Commercial mortgage-backed          | 878,576,781              | 2.02               |
| Other asset-backed                  | 93,246,404               | 2.81               |
| Foreign government                  | 438,636,889              | 8.48               |
| Foreign government inflation-linked | 347,195,879              | 10.53              |
| <b>TOTAL</b>                        | <b>\$8,610,840,995</b>   | <b>5.57</b>        |

Note 1: Mortgage-backed securities are sensitive to changes in prepayment rates, which impact duration.

Note 2: Excluded from the tables above are investments in non-core fixed income funds. While such investments are exposed to interest rate risk, duration information for these funds is not available.

### Foreign Currency Risk — Investments

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Currency risk is generally considered in the diversification benefits of foreign investments and so is not expected to be hedged except as specifically authorized by TMRS and according to the relevant asset class mandate guidelines. Otherwise, foreign securities managers may engage in forward currency transactions only to eliminate foreign currency risk in the settlement of trades. Foreign currency exposure of the Core Fixed Income asset class is addressed in the IPS, which allows for foreign currency be held for the purposes of settling a transaction and foreign currency forward contracts for purposes of hedging or settling a transaction. TMRS may invest in non-dollar denominated securities on a currency hedged or unhedged basis. TMRS' exposure to foreign currency risk (in U.S. dollars) as of December 31, 2016 and 2015, is presented as follows.

# Notes to Financial Statements

Continued

| Foreign Currency Exposure at December 31, 2016 |                     |                               |                            |                         |                        |                         |
|--|---------------------|-------------------------------|----------------------------|-------------------------|------------------------|-------------------------|
| Currency                                       | Cash<br>Equivalents | Foreign Currency<br>Contracts | Fixed Income<br>Securities | Equities                | Private Real<br>Estate | Total                   |
| Australian Dollar                              | \$ 8                | \$ 684,459                    | \$ 29,405,051              | \$ 79,253,661           | \$ -                   | \$ 109,343,179          |
| Brazilian Real                                 | 88,352              | -                             | -                          | 41,088,266              | -                      | 41,176,618              |
| Canadian Dollar                                | 90,494              | (39)                          | -                          | 80,436,794              | -                      | 80,527,249              |
| Chilean Peso                                   | -                   | -                             | -                          | 1,893,645               | -                      | 1,893,645               |
| Colombian Peso                                 | -                   | -                             | 6,857,427                  | -                       | -                      | 6,857,427               |
| Czech Krona                                    | 59,102              | -                             | -                          | 47,941                  | -                      | 107,043                 |
| Danish Krone                                   | -                   | -                             | -                          | 2,153,791               | -                      | 2,153,791               |
| Egyptian Pound                                 | -                   | -                             | -                          | 340,367                 | -                      | 340,367                 |
| Euro Currency                                  | 69,711              | (398)                         | 74,242,031                 | 245,133,685             | 4,954,374              | 324,399,403             |
| Hong Kong Dollar                               | 14,725              | -                             | -                          | 82,817,072              | -                      | 82,831,797              |
| Hungarian Forint                               | 18,852              | -                             | -                          | 2,020,940               | -                      | 2,039,792               |
| Indonesian Rupiah                              | 48,570              | -                             | -                          | 19,586,001              | -                      | 19,634,571              |
| Japanese Yen                                   | 105                 | 226,983                       | 21,807,099                 | 187,901,581             | -                      | 209,935,768             |
| Malaysian Ringgit                              | 48,367              | -                             | -                          | 8,594,507               | -                      | 8,642,874               |
| Mexican Peso                                   | 567,160             | (48,178)                      | 26,571,859                 | 14,875,191              | -                      | 41,966,032              |
| New Israeli Shequel                            | -                   | -                             | -                          | 2,998,558               | -                      | 2,998,558               |
| New Taiwan Dollar                              | -                   | -                             | -                          | 15,876,665              | -                      | 15,876,665              |
| New Zealand Dollar                             | 70,859              | 819,504                       | 54,658,344                 | 13,284,316              | -                      | 68,833,023              |
| Norwegian Krone                                | -                   | -                             | 643,083                    | 11,760,059              | -                      | 12,403,142              |
| Philippine Peso                                | 1,352               | (138)                         | -                          | 4,837,291               | -                      | 4,838,505               |
| Polish Zloty                                   | 1,833               | (102,164)                     | 15,879,598                 | 3,798,056               | -                      | 19,577,323              |
| Pound Sterling                                 | 25,830              | 14                            | 173,458,486                | 150,890,271             | 27,185,522             | 351,560,123             |
| Singapore Dollar                               | -                   | -                             | -                          | 27,226,518              | -                      | 27,226,518              |
| South African Rand                             | 2,798               | 94                            | -                          | 22,496,977              | -                      | 22,499,869              |
| South Korean Won                               | 99,340              | -                             | -                          | 68,913,303              | -                      | 69,012,643              |
| Swedish Krona                                  | -                   | -                             | 6,323,988                  | 13,187,100              | -                      | 19,511,088              |
| Swiss Franc                                    | -                   | -                             | -                          | 27,415,326              | -                      | 27,415,326              |
| Thailand Baht                                  | 1,896               | -                             | -                          | 25,720,632              | -                      | 25,722,528              |
| Turkish Lira                                   | 6,408               | -                             | -                          | 11,615,999              | -                      | 11,622,407              |
| UAE Dirham                                     | -                   | -                             | -                          | 1,642,791               | -                      | 1,642,791               |
| <b>Total</b>                                   | <b>\$ 1,215,762</b> | <b>\$ 1,580,137</b>           | <b>\$ 409,846,966</b>      | <b>\$ 1,167,807,304</b> | <b>\$ 32,139,896</b>   | <b>\$ 1,612,590,065</b> |

| <b>Foreign Currency Exposure at December 31, 2015</b> |                     |                            |                         |                       |                      |                         |
|---|---------------------|----------------------------|-------------------------|-----------------------|----------------------|-------------------------|
| Currency  | Cash Equivalents    | Foreign Currency Contracts | Fixed Income Securities | Equities              | Private Real Estate  | Total                   |
| Australian Dollar                                     | \$ -                | \$ 185,792                 | \$ 42,184,949           | \$ 37,836,609         | \$ -                 | \$ 80,207,350           |
| Brazilian Real  | 213,147             | 307,968                    | 39,869,823              | 22,314,621            | -                    | 62,705,559              |
| Canadian Dollar                                       | 50,702              | (3)                        | -                       | 14,975,756            | -                    | 15,026,455              |
| Czech Krona   | -                   | -                          | -                       | 830,359               | -                    | 830,359                 |
| Danish Krone  | -                   | -                          | -                       | 5,295,401             | -                    | 5,295,401               |
| Euro Currency   | 3,248               | (4)                        | 124,858,016             | 180,098,647           | 1,692,941            | 306,652,848             |
| Hong Kong Dollar                                      | 144,379             | -                          | -                       | 75,532,982            | -                    | 75,677,361              |
| Hungarian Forint                                      | -                   | -                          | -                       | 973,111               | -                    | 973,111                 |
| Indonesian Rupiah                                     | 1,184               | (2,386)                    | -                       | 10,351,193            | -                    | 10,349,991              |
| Japanese Yen  | 24,574              | (884,995)                  | 110,743,030             | 214,439,024           | -                    | 324,321,633             |
| Malaysian Ringgit                                     | 32,033              | -                          | -                       | -                     | -                    | 32,033                  |
| Mexican Peso  | 161,403             | (133,903)                  | 99,419,253              | -                     | -                    | 99,446,753              |
| New Israeli Shequel                                   | 149,142             | -                          | -                       | 4,747,341             | -                    | 4,896,483               |
| New Zealand Dollar                                    | 426,104             | (2,327,604)                | 74,715,339              | -                     | -                    | 72,813,839              |
| Philippine Peso                                       | 3,363               | -                          | -                       | -                     | -                    | 3,363                   |
| Polish Zloty  | 30,498              | -                          | 24,757,750              | -                     | -                    | 24,788,248              |
| Pound Sterling  | 2                   | (4)                        | 176,699,979             | 170,106,469           | 12,827,356           | 359,633,802             |
| South African Rand                                    | 230,973             | -                          | -                       | -                     | -                    | 230,973                 |
| South Korean Won                                      | -                   | (70)                       | -                       | -                     | -                    | (70)                    |
| Swiss Franc   | -                   | -                          | -                       | 37,757,830            | -                    | 37,757,830              |
| Swedish Krona   | -                   | -                          | 9,355,762               | -                     | -                    | 9,355,762               |
| Thailand Baht   | 1,757               | -                          | -                       | -                     | -                    | 1,757                   |
| UAE Dirham  | -                   | -                          | -                       | 3,538,486             | -                    | 3,538,486               |
| <b>Total</b>  | <b>\$ 1,472,509</b> | <b>\$ (2,855,209)</b>      | <b>\$ 702,603,901</b>   | <b>\$ 778,797,829</b> | <b>\$ 14,520,297</b> | <b>\$ 1,494,539,327</b> |

Note: Amounts in U.S. Dollars.

## Derivatives

Derivate instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indexes. They include forward currency contracts and futures contracts. TMRS' derivative instruments are considered investments and not hedges for accounting purposes. The notional values associated with the derivative contracts are generally not recorded on the financial statements; however, the exposure to forward currency contracts is recorded in the Statements of Fiduciary Net Position. The change in unrealized appreciation on futures contracts for the year is included as investment income in the Statements of Changes in Fiduciary Net Position.

# Notes to Financial Statements

Continued

Foreign currency managers may engage in forward currency transactions to eliminate foreign currency risk in the settlement of trades. The following table summarizes the foreign currency contracts in the portfolio as of December 31, 2016 and 2015.

| <b>Foreign Currency Contracts at December 31, 2016</b> |                                  |                 |
|--|----------------------------------|-----------------|
| <b>Currency</b>  | <b>Net Notional Long/(Short)</b> | <b>Exposure</b> |
| Australian Dollar                                      | \$ (26,200,531)                  | \$ 684,459      |
| Canadian Dollar  | (13,823)                         | (39)            |
| Euro Currency  | 932,976                          | (398)           |
| Japanese Yen   | (10,640,846)                     | 226,983         |
| Mexican Peso   | (10,990,753)                     | (48,178)        |
| New Zealand Dollar                                     | (53,108,254)                     | 819,504         |
| Philippine Peso  | (63,776)                         | (138)           |
| Polish Zloty   | (12,871,647)                     | (102,164)       |
| Pound Sterling   | 12,081                           | 14              |
| South African Rand                                     | 154,237                          | 94              |
| U.S. Dollar  | 114,370,473                      | -               |
| Total  | \$ 1,580,137                     | \$ 1,580,137    |

| <b>Foreign Currency Contracts at December 31, 2015</b> |                                  |                 |
|--|----------------------------------|-----------------|
| <b>Currency</b>  | <b>Net Notional Long/(Short)</b> | <b>Exposure</b> |
| Australian Dollar                                      | \$ (40,591,493)                  | \$ 185,792      |
| Brazilian Real   | (27,121,813)                     | 307,968         |
| Canadian Dollar  | (17,650)                         | (3)             |
| Hong Kong Dollar                                       | 967,432                          | (4)             |
| Indonesian Rupiah                                      | 297,866                          | (2,386)         |
| Japanese Yen   | (65,371,456)                     | (884,995)       |
| Mexican Peso   | (67,031,556)                     | (133,903)       |
| New Zealand Dollar                                     | (73,676,356)                     | (2,327,604)     |
| Pound Sterling   | (14,285)                         | (4)             |
| South Korean Won                                       | 72,625                           | (70)            |
| U.S. Dollar  | 269,631,477                      | -               |
| Total  | \$ (2,855,209)                   | \$ (2,855,209)  |

Note: Amounts in U.S. Dollars.

TMRS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. Currently, TMRS' counterparty exposure on its foreign currency contracts is limited to its custodian bank.

TMRS' investment managers may be allowed to invest in U.S. Treasury Note and U.S. Treasury Bond futures contracts, cleared on a U.S. futures exchange, with a maximum maturity of the

contract being no greater than 360 days. U.S. Treasury futures contracts that are used to gain nominal exposure in a portfolio must be fully backed by cash equivalents equaling the notional contract value. U.S. Treasury futures contracts used solely for risk management purposes do not need to be backed by cash equivalents.

The following table lists the open futures contracts at December 31, 2016. There were no open futures contracts at December 31, 2015.

| Futures Contracts at December 31, 2016 |                 |                |               |                          |
|--|-----------------|----------------|---------------|--------------------------|
| Futures Contract                       | Expiration Date | Notional Value | Notional Cost | Accumulated Gain /(Loss) |
| U.S. 2-Yr Treasury Note Futures        | 3/31/17         | \$26,002,500   | \$25,957,500  | \$45,000                 |
| U.S. 5-Yr Treasury Note Futures        | 3/31/17         | 18,120,266     | 18,160,078    | (39,812)                 |
| U.S. 10-Yr Treasury Note Futures       | 3/22/17         | 10,191,062     | 10,241,672    | (50,610)                 |
| U.S. 5-Yr Treasury Note Futures        | 3/31/17         | (21,061,867)   | (21,096,500)  | 34,633                   |
| Total                                  |                 | \$33,251,961   | \$33,262,750  | \$(10,789)               |

## 4. Property and Equipment

The following is a schedule of property and equipment balances as of December 31, 2016 and 2015, and changes to those account balances during the years then ended:

|  | Land              | Buildings and Improvements | Furniture, Software, and Equipment | Total               |
|--|-------------------|----------------------------|------------------------------------|---------------------|
| <b>Property and Equipment</b>          |                   |                            |                                    |                     |
| Balances, December 31, 2014            | \$ 254,388        | \$ 11,984,784              | \$ 12,440,388                      | \$ 24,679,560       |
| Additions                              | -                 | 1,625,114                  | 1,018,320                          | 2,643,434           |
| Retirements                            | -                 | -                          | (2,382)                            | (2,382)             |
| Balances, December 31, 2015            | 254,388           | 13,609,898                 | 13,456,326                         | 27,320,612          |
| Additions                              | -                 | 247,084                    | 294,367                            | 541,451             |
| Retirements                            | -                 | -                          | (2,008)                            | (2,008)             |
| Balances, December 31, 2016            | 254,388           | 13,856,982                 | 13,748,685                         | 27,860,055          |
| <b>Accumulated Depreciation</b>        |                   |                            |                                    |                     |
| Balances, December 31, 2014            | -                 | 4,582,311                  | 12,207,889                         | 16,790,200          |
| Additions                              | -                 | 401,092                    | 222,532                            | 623,624             |
| Retirements                            | -                 | -                          | (2,382)                            | (2,382)             |
| Balances, December 31, 2015            | -                 | 4,983,403                  | 12,428,039                         | 17,411,442          |
| Additions                              | -                 | 407,916                    | 276,031                            | 683,947             |
| Retirements                            | -                 | -                          | (2,008)                            | (2,008)             |
| Balances, December 31, 2016            | -                 | 5,391,319                  | 12,702,062                         | 18,093,381          |
| <b>Net balances, December 31, 2016</b> | <b>\$ 254,388</b> | <b>\$ 8,465,663</b>        | <b>\$ 1,046,623</b>                | <b>\$ 9,766,674</b> |

## 5. Commitments and Contingencies

As of December 31, 2016, TMRS had outstanding commitments to private investment funds of \$2.9 billion.

## 6. Risk Management

The System is exposed to various risks of loss related to torts; errors and omissions; violation of civil rights; theft of, damage to, and destruction of assets; and natural disasters. These risks, with the exception of pension and welfare fund fiduciary responsibility insurance, are covered by the System's participation in the Texas Municipal League Intergovernmental Risk Pool. This is a pooled arrangement whereby the participants pay experience-rated annual premiums that are designed to pay claims and build sufficient reserves so that the pool will be able to protect the participating entities with its own capital. The pool reinsures excess losses to preserve the capital base. Property physical damage is insured to replacement value with a \$1,000 deductible and a limit of coverage of \$16,700,000; automobile liability limits are set at \$1,000,000 for each occurrence and physical damage is insured to actual value with a \$10,000 deductible per occurrence; general liability is limited to \$1,000,000 per occurrence; sudden events involving pollution are limited to \$1,000,000 for each occurrence with an annual aggregate of \$2,000,000; workers' compensation coverage is in compliance with the workers' compensation laws of the State of Texas with no accident or aggregate deductibles.

The System maintains a pension and welfare fund fiduciary responsibility insurance policy with a commercial carrier. The policy has an aggregate limit of liability of \$1,000,000.

No significant reductions in insurance coverage occurred in the past year, and settled claims have not exceeded insurance coverage in any of the past three fiscal years. ■

## Pension Trust Fund

| <b>Schedule of Investment Returns<br/>Last 10 Fiscal Years*</b> |  |
|---|--|
|   | <b>Annual money-weighted rate of return,<br/>net of investment expense</b> |
| 2016  | 7.55%  |
| 2015  | 0.08%  |
| 2014  | 5.85%  |

\* Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.  
See accompanying Independent Auditors' Report.

# Supplemental Schedules

## Changes in Fiduciary Net Position — by Fund • Year Ended December 31, 2016

|  | Benefit Accumulation Fund | Full Benefit Arrangement | Supplemental Disability Benefits Fund | Endowment Fund  | Expense Fund | Total Pension Trust Fund | Supplemental Death Benefits Fund | Total             |
|--|---------------------------|--------------------------|---------------------------------------|-----------------|--------------|--------------------------|----------------------------------|-------------------|
| <b>ADDITIONS:</b>                        |                           |                          |                                       |                 |              |                          |                                  |                   |
| Employer contributions                   | \$ 767,061,890            | \$ 1,190,448             | \$ -                                  | \$ -            | \$ -         | \$ 768,252,338           | \$ 6,983,501                     | \$ 775,235,839    |
| Plan member contributions                | 389,919,391               | -                        | -                                     | -               | -            | 389,919,391              | -                                | 389,919,391       |
| Net investment income                    | -                         | -                        | -                                     | 1,609,522,712   | (7,335,294)  | 1,602,187,418            | -                                | 1,602,187,418     |
| Other miscellaneous                      | -                         | -                        | -                                     | 25,956          | -            | 25,956                   | -                                | 25,956            |
| <b>Total additions</b>                   | 1,156,981,281             | 1,190,448                | -                                     | 1,609,548,668   | (7,335,294)  | 2,760,385,103            | 6,983,501                        | 2,767,368,604     |
| <b>DEDUCTIONS:</b>                       |                           |                          |                                       |                 |              |                          |                                  |                   |
| Service retirement benefits              | 1,004,294,691             | 1,190,448                | -                                     | -               | -            | 1,005,485,139            | -                                | 1,005,485,139     |
| Disability retirement benefits           | 16,944,393                | -                        | 74,795                                | -               | -            | 17,019,188               | -                                | 17,019,188        |
| Partial lump sum distributions           | 139,559,781               | -                        | -                                     | -               | -            | 139,559,781              | -                                | 139,559,781       |
| Supplemental death benefits              | -                         | -                        | -                                     | -               | -            | -                        | 8,486,173                        | 8,486,173         |
| Refunds of contributions                 | 54,181,595                | -                        | -                                     | -               | -            | 54,181,595               | -                                | 54,181,595        |
| Administrative expenses                  | -                         | -                        | -                                     | -               | 18,095,315   | 18,095,315               | -                                | 18,095,315        |
| <b>Total deductions</b>                  | 1,214,980,460             | 1,190,448                | 74,795                                | -               | 18,095,315   | 1,234,341,018            | 8,486,173                        | 1,242,827,191     |
| <b>FUND TRANSFERS:</b>                   |                           |                          |                                       |                 |              |                          |                                  |                   |
| Operating budget transfer                | -                         | -                        | -                                     | (21,859,000)    | 21,859,000   | -                        | -                                | -                 |
| Income allocation                        | 1,587,612,937             | -                        | 24,672                                | (1,588,638,501) | -            | (1,000,892)              | 1,000,892                        | -                 |
| Escheated funds                          | (1,538,504)               | -                        | -                                     | 1,538,504       | -            | -                        | -                                | -                 |
| <b>Net Fund Transfers</b>                | 1,586,074,433             | -                        | 24,672                                | (1,608,958,997) | 21,859,000   | (1,000,892)              | 1,000,892                        | -                 |
| <b>Total Change in Plan Net Position</b> | 1,528,075,254             | -                        | (50,123)                              | 589,671         | (3,571,609)  | 1,525,043,193            | (501,780)                        | 1,524,541,413     |
| <b>Net Position, beginning of year</b>   | 23,577,523,671            | -                        | 530,830                               | 117,537,668     | 12,570,411   | 23,708,162,580           | 21,129,830                       | 23,729,292,410    |
| <b>Net Position, end of year</b>         | \$ 25,105,598,925         | \$ -                     | \$ 480,707                            | \$ 118,127,339  | \$ 8,998,802 | \$ 25,233,205,773        | \$ 20,628,050                    | \$ 25,253,833,823 |

See accompanying Independent Auditors' Report.

| <b>Schedule of Administrative Expenses<br/>Year ended December 31, 2016</b> |                      |
|---|----------------------|
| <b>Personnel services</b>   |                      |
| Staff salaries  | \$ 7,880,662         |
| Payroll taxes   | 519,319              |
| Retirement contributions  | 3,438,497            |
| Insurance   | 923,094              |
| Total personnel services  | 12,761,572           |
| <b>Professional services</b>  |                      |
| Consulting  | 491,884              |
| Actuarial   | 521,970              |
| Banking   | 43,692               |
| Legal   | 225,162              |
| Medical   | 20,900               |
| Audit   | 268,342              |
| Online Services   | 141,838              |
| Total professional services   | 1,713,788            |
| <b>Communication</b>  |                      |
| Printing  | 12,553               |
| Postage   | 272,702              |
| Travel  | 267,598              |
| Telephone   | 86,063               |
| Member education and mailings   | 349,807              |
| Total communication   | 988,723              |
| <b>Rentals/equipment maintenance</b>  |                      |
| Data processing   | 568,340              |
| Office equipment  | 117,763              |
| Offsite record storage  | 134,664              |
| Total rentals/equipment maintenance   | 820,767              |
| <b>Miscellaneous</b>  |                      |
| Dues, subscriptions, and training   | 250,241              |
| Utilities   | 184,064              |
| Supplies  | 149,017              |
| Building/grounds maintenance  | 174,097              |
| Building security   | 121,393              |
| Bonds and insurance   | 81,999               |
| Board and Advisory Committee expenses                                       | 119,741              |
| Depreciation  | 683,948              |
| Other administrative expenses   | 45,965               |
| Total miscellaneous   | 1,810,465            |
| <b>Total administrative expenses</b>  | <b>\$ 18,095,315</b> |
| See accompanying Independent Auditors' Report.                              |                      |

# Supplemental Schedules

Continued

## Schedule of Professional Services • Year ended December 31, 2016

|  |                     |
|--|---------------------|
| <b>Consulting</b>  |                     |
| City contribution/payroll workflow process reengineering | \$ 129,780          |
| Governance/strategic planning                            | 95,500              |
| Legislative  | 82,500              |
| Business continuity plan refresh                         | 42,700              |
| Content image conversion                                 | 40,000              |
| Human resources management                               | 23,526              |
| Disaster recovery  | 23,267              |
| Annuity mortality records and address research           | 22,997              |
| Bi-weekly payroll conversion                             | 21,051              |
| Information systems support                              | 4,163               |
| Internal audit consultant                                | 3,207               |
| Space planning/office expansion                          | 3,193               |
| <b>Total Consulting</b>                                  | <b>491,884</b>      |
| <b>Actuarial</b>   |                     |
| Gabriel, Roeder, Smith & Company (GRS)                   | 521,970             |
| <b>Banking</b>   |                     |
| JPMorgan Chase Bank                                      | 43,692              |
| <b>Legal</b>   |                     |
| Klausner, Kaufman, Jensen & Levinson                     | 143,102             |
| Groom Law Group  | 71,203              |
| Norton Rose Fulbright                                    | 5,266               |
| Graves, Dougherty, Hearon & Moody                        | 4,466               |
| Bickerstaff Health Delgado Acosta LLP                    | 1,125               |
| <b>Total Legal</b>                                       | <b>225,162</b>      |
| <b>Medical</b>   |                     |
| Ace Alsup, III, M.D.                                     | 4,800               |
| Marvin Cressman, M.D.                                    | 1,700               |
| John A. Genung, M.D.                                     | 7,400               |
| William E. McCarron, M.D.                                | 3,000               |
| William P. Taylor, M.D.                                  | 4,000               |
| <b>Total Medical</b>                                     | <b>20,900</b>       |
| <b>Audit</b>   |                     |
| KPMG LLP - annual financial audit                        | 97,200              |
| KPMG LLP - Service Organization Controls Report          | 86,500              |
| Weaver and Tidwell, LLP - co-source internal audits      | 84,642              |
| <b>Total Audit</b>                                       | <b>268,342</b>      |
| <b>Online Services</b>                                   |                     |
| Bloomberg Finance  | 43,588              |
| Paycom - payroll processing services                     | 37,870              |
| Lexis Nexis - online tracking services                   | 29,019              |
| Alert Logic - log monitoring services                    | 28,254              |
| Other misc. online services                              | 3,107               |
| <b>Total Online Services</b>                             | <b>141,838</b>      |
| <b>Total Professional Services</b>                       | <b>\$ 1,713,788</b> |

**Note:**

The members of the Board of Trustees serve without compensation; they are reimbursed for actual expenses incurred.

See accompanying Independent Auditors' Report.

| <b>Schedule of Investment Expenses</b>                   |                      |
|--|----------------------|
| <b>Year ended December 31, 2016</b>                      |                      |
| <b>Internal operating expenses</b>                       |                      |
| Staff salaries   | \$ 2,236,072         |
| Payroll taxes  | 137,833              |
| Retirement contributions                                 | 376,051              |
| Insurance  | 206,667              |
| Online services  | 1,115,573            |
| Travel   | 130,078              |
| Dues, subscriptions, and training                        | 46,670               |
| Other administrative expenses                            | 3,189                |
| <b>Total</b>   | <b>4,252,133</b>     |
| <b>Investment management and other external expenses</b> |                      |
| Investment management                                    | 53,842,543           |
| Custodial services                                       | 626,843              |
| Consulting   | 1,786,200            |
| Legal  | 670,118              |
| <b>Total</b>   | <b>56,925,704</b>    |
| <b>Total investment expenses</b>                         | <b>\$ 61,177,837</b> |
| See accompanying Independent Auditors' Report.           |                      |





# Investment

May 2, 2017

Board of Trustees  
Texas Municipal Retirement System  
c/o Mr. David Gavia  
Executive Director  
P.O. Box 149153  
Austin, Texas 78714-9153



Dear Board Members,

During the past year, the U.S. economy largely delivered positive performance. In 2016, U.S. Real Gross Domestic Product grew by 2.1%.<sup>1</sup> The U.S. economy added approximately 2,179,000 jobs to nonfarm payrolls and the unemployment rate declined from 5.0% to 4.7%.<sup>2</sup> Inflation, as measured by the Consumer Price Index, was 0.7% during the year.<sup>3</sup> The Federal Reserve increased policy rates by 25 basis points, with the target range of Fed Funds ending the year at 0.50% to 0.75%. Treasury yields also traded higher at the end of the year as a result of expectations for U.S. monetary policy, but also amidst the surprising results of the presidential election and the likelihood of future fiscal stimulus.

During 2016, global equity markets traded higher, with the broad U.S. equity market returning 12.74% and broad international equity market returning 4.41%, as measured by the Russell 3000 Index and MSCI All Country World excluding U.S. Investable Market Index. Emerging markets rebounded notably from 2015, returning 11.19%, while fixed income securities returned 2.65% (Barclays U.S. Aggregate Bond Index). Most traditional domestic bond index sectors were positive for the year, including credit and TIPS.

The market value of the Texas Municipal Retirement System's (the "System") investments was \$25.1 billion as of December 31, 2016.<sup>4</sup> The System's current actuarial assumed rate of return is 6.75%, which represents the System's long-term return goal. The System's overall gross of fees investment return over the past year was 7.42% and the three-year annualized return was 4.54%. The five-year annualized return was 6.65%, and ten-year annualized return was 6.09%.

The System's portfolio continued to be diversified over the year, amidst the ongoing process of implementing the long-term strategic asset allocation. The portfolio is invested across major segments of the U.S. and international equity markets (both developed and emerging), and the fixed income portfolio consists of core and non-core investments. The

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Chicago, Illinois 60602  
MAIN 312.445.3100

**NEW YORK OFFICE**  
1 Penn Plaza  
Suite 2128  
New York, New York 10119  
MAIN 646.805.7075

<sup>1</sup> Based on data provided by the U.S. Department of Commerce, Bureau of Economic Analysis.

<sup>2</sup> Based on data provided by the U.S. Department of Labor, Bureau of Labor Statistics.

<sup>3</sup> Ibid.

<sup>4</sup> As reported by TMRS' custodian State Street Bank & Trust. Market value includes accruals and is adjusted for open trades.



System also invests in real return assets, absolute return strategies, private equity, and real estate. We believe these investment allocations are consistent with both Investment Policy guidelines and unique legal statutes that govern TMRS.

Over the past year, more specifically, TMRS made measured progress in further diversifying its assets through the continued implementation of its long-term Strategic Target Allocation. Indeed, diversification within the non-core fixed income markets progressed, with the funding of direct lending and private credit managers.

As an additional component of the System's deliberate diversification strategy and schedule, the Board previously hired specialty consultants for expertise in selecting and monitoring private equity, hedge fund, and real asset investments. Across these segments allocations continued towards targets, with the funding of a number of real return, real estate, absolute return, and private equity managers over 2016. Commitments to these alternative asset classes, broadly, are close to relative targets. The one exception is private equity; however, the Board is actively engaged with staff and consultants to ensure the target is diligently reached.

We believe that the actions taken over recent years, and the future plans under consideration by the Board to diversify the System's investments, will continue to enhance future portfolio returns with a commensurate, yet moderate, increase in risk. The System's investment policies, goals, and objectives, as well as the performance of its assets and transaction costs are regularly monitored and evaluated by TMRS Staff, the Board, and RVK, Inc. These evaluations include analysis of the investment management firms and the custodial bank that serve the System.

The System's publicly traded assets managed through separate accounts are held in custody at State Street Bank, with the majority of equity investments held at Northern Trust through commingled funds. Absolute return, private real estate, and private equity fund assets are held by their respective general partners. Market values and returns referenced above are based upon statements prepared by State Street Bank. Their statements are, to the best of our knowledge, reliable and accurate. Investment performance is calculated using a time-weighted rate of return methodology (gross of fees) based upon market values and cash flows.

Maintaining focus on the long-term strategy is critical to the growth and sustainability of the assets entrusted to the Board's care by the System's employee participants. We expect the Board's continued high standard of care for these assets and commitment to diversification to allow the System to meet its long-term goals and objectives.

Sincerely,

*Rebecca Gratsinger, CFA*  
*Chief Executive Officer*

# Outline of Investment Policies

The TMRS Board of Trustees approves the Investment Policy Statement (IPS), which governs the investment of assets for TMRS and is established to provide a framework for the management of those assets. It sets forth the Board's investment objectives and tolerance for investment risk. The IPS outlines objectives, benchmarks, restrictions and responsibilities so that members of the Board, TMRS staff, investment managers, consultants, and TMRS stakeholders clearly understand the policies, goals and objectives, and risks connected with the TMRS investment program.

## Investment Objectives

The overall objective of TMRS' investment program is to ensure that members, retirees, and beneficiaries are provided with the benefits they have been promised by their employers at a reasonable and predictable cost to the employers. Assets will be invested for total return with appropriate consideration for portfolio volatility (risk) and liquidity. Emphasis is on both capital appreciation as well as the production of income in order to satisfy the short-term and long-term funding needs of TMRS. Total return includes dividends, interest, and realized and unrealized capital appreciation.

## General Investment Policies

**A. Standard of Prudence Applicable.** All participants in the investment process will act responsibly. The standard of prudence to be applied by the Board and investment staff is as follows:

1. In satisfying this standard, the Board and staff shall exercise the degree of judgment and care, under the circumstances that persons of prudence, discretion, and intelligence exercise in the management of their own affairs, considering the probable income from the securities and probable safety of their capital and in consideration of the purposes, terms, distribution requirements, and other circumstances of the trust.
2. Investment and management decisions respecting individual assets will be evaluated not in isolation but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust.

**B. Conflict of Interest Prohibited.** Members of the Board of Trustees, investment staff, investment managers, and consultants involved in the investment of TMRS assets will refrain from personal business activity that could conflict with the proper execution and management of the TMRS investment program, or that could impair their ability to make impartial recommendations and decisions. These parties are required to reveal all relationships that could create or appear to create a conflict of interest in their unbiased involvement in the investment process.

## Portfolio Management

The Board of Trustees recognizes that the most important determinant of long-term return and risk is the asset allocation decision. The Board's strategic target allocation is intended to reflect, and be consistent with, the return objective and risk tolerance expressed in the IPS. It is designed to provide the highest probability of meeting or exceeding the Board's objectives at a controlled level of risk and liquidity that is acceptable to the Board. In establishing its risk tolerance, the Board considers its ability to withstand short and intermediate-term volatility in investment performance and fluctuations in the financial condition of the fund.

The strategic target allocation and acceptable ranges as determined by the Board to facilitate the achievement of long-term investment objectives within acceptable risk parameters are as follows:

**Asset Allocation Table • Strategic Targets**

| <b>Asset Class</b>     | <b>Minimum %</b> | <b>Target %</b> | <b>Maximum %</b> |
|------------------------|------------------|-----------------|------------------|
| U.S. Equities          | 12.5%            | 17.5%           | 22.5%            |
| International Equities | 12.5%            | 17.5%           | 22.5%            |
| Core Fixed Income      | 5.0%             | 10.0%           | 15.0%            |
| Non-Core Fixed Income  | 15.0%            | 20.0%           | 25.0%            |
| Real Estate            | 5.0%             | 10.0%           | 15.0%            |
| Real Return            | 5.0%             | 10.0%           | 15.0%            |
| Absolute Return        | 5.0%             | 10.0%           | 15.0%            |
| Private Equity         | 0.0%             | 5.0%            | 10.0%            |
| Cash Equivalents       | 0.0%             | 0.0%            | 10.0%            |

The Board will authorize implementation to this strategic target allocation in stages. During the transition toward the strategic target allocation, certain asset classes will exceed maximum limits and will serve as either the funding source for new strategies or portfolios, or as a proxy pending implementation of certain allocations.

To ensure that the risk tolerance remains appropriate, the strategic target allocation will be reviewed at least annually for reasonableness relative to significant economic and market changes or to changes in the Board's long-term goals and objectives. A formal asset allocation study will be conducted at least every three years to verify or amend the targets, and a formal pension financial (asset-liability) study will be conducted at least every five years.

The Board has chosen to adopt a rebalancing policy that is governed by allocation ranges rather than time periods. The ranges, specified in the table above, are a function of the volatility of each asset class and the proportion of the total fund allocated to the asset class. The goal of the rebalancing policy is to ensure that the integrity of the Strategic Target Allocation is preserved through a disciplined process that allows investment staff the flexibility to rebalance the portfolio between managers within an asset class and between asset classes, within the Board approved ranges, to adjust for market movements and consider current market conditions, or valuations, in portfolio allocations.

Performance measurement will be based on total rate of return and will be monitored over a sufficient time period to reflect the investment expertise of the manager(s) over one full market cycle, or five years, whichever is less. Performance results and evaluation relative to objectives will be reported to the Board on a quarterly basis. Specific performance objectives include, but may not be limited to, the following:

- a. Achieve a total rate of return over rolling 5-year periods meeting or exceeding the Actuarial Return Assumption.
- b. Exceed an appropriate benchmark reflective of asset class participation over rolling 5-year periods (i.e., actual allocation index during the implementation period and policy index once fully implemented).

# Outline of Investment Policies

Continued

The Board has selected the following Policy Benchmarks and Policy Index:

| Asset Class            | Policy Benchmark   | Asset Class Goal          | Policy Index |
|------------------------|--|---------------------------|--------------|
| U.S. Equities          | Russell 3000 Index   | Benchmark                 | 17.5%        |
| International Equities | MSCI ACW-ex US IMI (USD), net  | Benchmark                 | 17.5%        |
| Core Fixed Income      | Barclays US Aggregate Bond Index   | Benchmark                 | 10.0%        |
| Non-Core Fixed Income  | 50% Barclays US Corporate High Yield Index; 25% J.P. Morgan GBI Emerging Markets Global Diversified (\$) Index; 25% J.P. Morgan CEMBI Broad Diversified Index (\$) | Benchmark                 | 20.0%        |
| Real Estate            | NCREIF - ODCE Index  | Benchmark                 | 10.0%        |
| Real Return            | Barclays World Government Inflation Linked Bond Index  | CPI + 4%                  | 10.0%        |
| Absolute Return        | HFRI Fund of Funds Diversified Index   | Cash (3-month Libor) + 5% | 10.0%        |
| Private Equity         | Russell 3000 Index + 3%  | Benchmark                 | 5.0%         |
| Cash Equivalents       | 30 Day T-Bill  | Benchmark                 | 0.0%         |

## Securities Lending

The IPS allows for the System's participation in a securities lending program, the objective of which is to generate incremental income from overnight and certain term loans of securities held, utilizing a high-quality and reasonably conservative cash collateral reinvestment program that safeguards the return of principal and maintains adequate daily liquidity to support trade settlement activity and portfolio restructuring activities.

The securities lending agent must:

- a. Be experienced in the operation of a fully secured securities lending program;
- b. Indemnify the System against any loss resulting from borrower default or from its own failure to properly execute its responsibilities under the lending agreement;
- c. Maintain a favorable report of the controls at a service organization (SOC report) in accordance with the standards established by the AICPA or ISAE 3402, reflecting appropriate risk controls;
- d. Be rated at least "A" by two of the following nationally recognized rating services: Moody's Investors Service, Standard and Poor's Corporation, and Fitch Ratings; and
- e. Maintain Tier 1 and Total Capital Ratios of 7% and 10%, respectively.

The securities lending agent is responsible for in-depth ongoing credit review of borrowers, independent of the agent's securities lending decision-makers. The lending agent cannot make loans to borrowers who do not appear on TMRS' approved borrower list. The market value of TMRS' securities loans outstanding to an approved borrower at the end of each business day should be no greater than 25% of the total market value of TMRS' securities on loan.

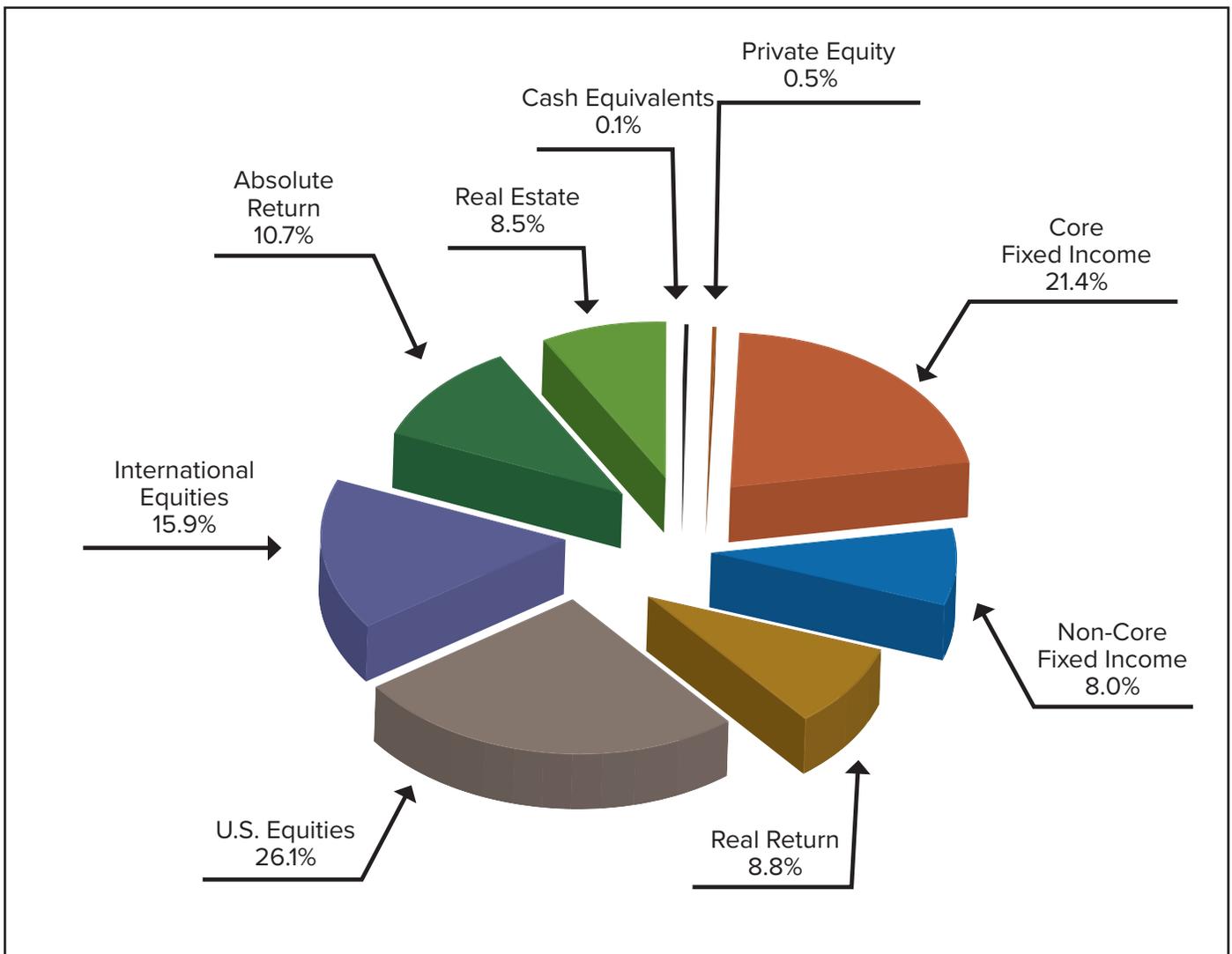
The securities lending agent shall collect and maintain proper overcollateralization as follows:

- a. Domestic (U.S. domiciled and Non-U.S. domiciled issued in U.S. dollars) securities: Initial margin of 102%
- b. International (non-U.S. domiciled) securities: Initial margin of 105%

Collateral may be in the form of either cash (U.S. dollars) or U.S. government securities. Cash collateral may be reinvested through a pooled fund managed by the Securities Lending Agent or through a separately managed account structure.

As of December 31, 2016, TMRS did not have an active securities lending program.

## 2016 Asset Allocation



# Summary of Investments

|                                   | As of December 31, 2016 |                             | As of December 31, 2015 |                             |
|-----------------------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|
|                                   | Fair Value              | Percent of Total Fair Value | Fair Value              | Percent of Total Fair Value |
| <b>Cash Equivalents</b>           |                         |                             |                         |                             |
| Short-term investment funds       | \$ 29,042,008           | 0.1 %                       | \$ 41,487,387           | 0.2 %                       |
| Total cash equivalents            | 29,042,008              | 0.1                         | 41,487,387              | 0.2                         |
| <b>Core Fixed Income</b>          |                         |                             |                         |                             |
| Short-term Investments            |                         |                             |                         |                             |
| Short-term investment funds       | 74,195,712              | 0.3                         | 233,119,741             | 0.9                         |
| Certificates of Deposit           | 360,677,858             | 1.4                         | -                       | -                           |
| Repurchase agreements             | 419,700,000             | 1.6                         | 1,003,200,000           | 4.1                         |
| Broker collateral                 | 1,444,000               | -                           | (80,000)                | (0.0)                       |
| Fixed-income securities:          |                         |                             |                         |                             |
| U.S. Treasury bonds/notes         | 993,210,007             | 3.8                         | 1,236,099,105           | 5.1                         |
| U.S. Treasury inflation-protected | 140,064,225             | 0.5                         | 255,446,410             | 1.1                         |
| U.S. government agency            | 106,551,152             | 0.4                         | 224,629,745             | 0.9                         |
| Municipal                         | 147,813,124             | 0.6                         | 159,151,287             | 0.6                         |
| Corporate                         | 1,703,778,974           | 6.6                         | 2,711,999,973           | 11.2                        |
| Residential mortgage-backed       | 1,388,405,075           | 5.4                         | 1,913,683,259           | 7.9                         |
| Commercial mortgage-backed        | 79,168,912              | 0.3                         | 186,401,800             | 0.8                         |
| Other asset-backed                | 39,642,433              | 0.2                         | 71,081,032              | 0.3                         |
| Foreign government                | 80,088,122              | 0.3                         | 210,314,692             | 0.9                         |
| Derivatives contracts             | (45,422)                | -                           | (1,255,929)             | (0.0)                       |
| Total core fixed income           | 5,534,694,172           | 21.4                        | 8,203,791,115           | 33.8                        |
| <b>Non-Core Fixed Income</b>      |                         |                             |                         |                             |
| Short-term investment funds       | 99,300,232              | 0.4                         | 45,513,725              | 0.2                         |
| Fixed-income securities:          |                         |                             |                         |                             |
| Commercial mortgage-backed        | 655,688,575             | 2.5                         | 692,174,981             | 2.8                         |
| Other asset-backed                | 29,304,982              | 0.1                         | 22,165,372              | 0.1                         |
| Non-core fixed income funds       | 1,296,080,388           | 5.0                         | 740,942,387             | 3.1                         |
| Total non-core fixed income       | 2,080,374,177           | 8.0                         | 1,500,796,465           | 6.2                         |
| <b>Real Return</b>                |                         |                             |                         |                             |
| Short-term investment funds       | 16,781,293              | 0.1                         | 9,164,398               | -                           |

|                                     |                          |                |                          |                |
|-------------------------------------|--------------------------|----------------|--------------------------|----------------|
| <b>Fixed-income securities:</b>     |                          |                |                          |                |
| U.S. Treasury inflation-protected   | 241,623,859              | 1.0            | 352,175,263              | 1.5            |
| Corporate                           | 165,640,110              | 0.6            | -                        | -              |
| Foreign government                  | 46,279,409               | 0.2            | 228,322,197              | 0.9            |
| Foreign government inflation-linked | 344,375,223              | 1.3            | 347,195,879              | 1.4            |
| Equity securities - domestic        | 345,782,291              | 1.3            | -                        | -              |
| Equity securities - international   | 205,917,380              | 0.8            | -                        | -              |
| Real return funds                   | 913,479,737              | 3.5            | -                        | -              |
| Derivatives contracts               | 1,617,663                | -              | (1,599,546)              | -              |
| <b>Total real return</b>            | <b>2,281,496,965</b>     | <b>8.8</b>     | <b>935,258,191</b>       | <b>3.8</b>     |
| <b>U.S. Equities</b>                |                          |                |                          |                |
| Short-term investment funds         | 37,766,870               | 0.1            | 25,600,746               | 0.1            |
| Equity securities                   | 1,429,719,945            | 5.6            | 1,248,341,263            | 5.1            |
| Commingled funds                    | 5,261,523,838            | 20.4           | 5,291,545,570            | 21.8           |
| <b>Total U.S. equities</b>          | <b>6,729,010,653</b>     | <b>26.1</b>    | <b>6,565,487,579</b>     | <b>27.0</b>    |
| <b>International Equities</b>       |                          |                |                          |                |
| Short-term investment funds         | 30,412,023               | 0.1            | 45,293,579               | 0.2            |
| Equity securities                   | 1,170,292,263            | 4.5            | 1,152,995,623            | 4.7            |
| Commingled funds                    | 2,926,222,898            | 11.3           | 2,790,196,187            | 11.5           |
| Derivatives contracts               | (2,893)                  | -              | 266                      | 0.0            |
| <b>Total international equities</b> | <b>4,126,924,291</b>     | <b>15.9</b>    | <b>3,988,485,655</b>     | <b>16.4</b>    |
| <b>Absolute Return</b>              |                          |                |                          |                |
| Direct hedge funds                  | 1,236,570,850            | 4.8            | -                        | -              |
| Hedge fund-of-funds                 | 1,512,598,855            | 5.9            | 1,576,279,728            | 6.5            |
| <b>Total absolute return</b>        | <b>2,749,169,705</b>     | <b>10.7</b>    | <b>1,576,279,728</b>     | <b>6.5</b>     |
| <b>Real Estate</b>                  |                          |                |                          |                |
| Short-term investment funds         | 2,543                    | -              | 628                      | -              |
| Private real estate funds           | 2,183,113,382            | 8.5            | 1,463,661,065            | 6.0            |
| <b>Total real estate</b>            | <b>2,183,115,925</b>     | <b>8.5</b>     | <b>1,463,661,693</b>     | <b>6.0</b>     |
| <b>Private Equity</b>               |                          |                |                          |                |
| Private equity funds                | 116,403,554              | 0.5            | 13,805,553               | 0.1            |
| <b>Total private equity</b>         | <b>116,403,554</b>       | <b>0.5</b>     | <b>13,805,553</b>        | <b>0.1</b>     |
| <b>TOTAL INVESTMENTS</b>            | <b>\$ 25,830,231,450</b> | <b>100.0 %</b> | <b>\$ 24,289,053,366</b> | <b>100.0 %</b> |

Note: The above table reflects investment assets in categories consistent with the strategic target allocation, and therefore may differ from the presentation within the Notes to the Financial Statements.

## Largest Holdings (by Fair Value)

| Fixed Income Securities • As of December 31, 2016 |   |             |
|---|---|-------------|
| Par Value   | Description                                       | Fair Value  |
| \$ 173,800,000                                    | FNMA TBA: 3.0% , due 02/47                        | 172,393,939 |
| 111,930,000                                       | US Treasury N/B: 2.125%, due 11/23                | 111,186,673 |
| 95,390,000  | US Treasury N/B: 1.0%, due 06/21                  | 92,323,402  |
| 74,913,892  | U.S. Treasury Inflation Index: 0.75%, due 02/42   | 70,922,480  |
| 66,328,000  | GNMA II TBA: 3.50%, due 01/47                     | 68,948,732  |
| 36,541,310  | Treasury Inflation Linked GILT: 1.250%; due 11/27 | 62,136,811  |
| 59,030,000  | US Treasury N/B: 1.75%, due 11/21                 | 58,589,577  |
| 58,331,400  | US Treasury N/B: 0.125%, due 07/24                | 57,304,767  |
| 41,405,619  | US Treasury Inflation Index: 3.875%; due 04/29    | 56,609,763  |
| 38,000,000  | Federal Farm Credit Bank: 7.350%; due 05/30       | 55,945,120  |

| Equities • As of December 31, 2016 |   |               |
|------------------------------------|---|---------------|
| Shares/Units                       | Description   | Fair Value    |
| 142,285,347.99                     | NTGI - QM Collective Daily Russell 3000 Index Fund - Non Lending                | 4,590,409,897 |
| 19,155,455.39                      | NTGI - QM Collective Daily All Country World Ex US IMI Index Fund - Non Lending | 2,435,213,888 |
| 1,999,204.35                       | UBS U.S. Equity Minimum Volatility Index Collective Fund                        | 339,005,281   |
| 19,992,093.72                      | SSGA Russell Fundamental US Index Fund  | 332,108,661   |
| 1,998,659.59                       | UBS World (Ex-U.S.) Equity Minimum Volatility Index Collective Fund             | 259,907,291   |
| 19,975,945.93                      | SSGA Russell Fundamental Global Ex-US Index Fund                                | 231,101,719   |
| 2,948,466.74                       | Lazard Emerging Markets Equity  | 47,057,529    |
| 1,108,102.00                       | Ishares MSCI India ETF  | 29,708,215    |
| 933,367.00                         | Ishares MSCI Taiwan ETF   | 27,412,989    |
| 15,474.00                          | Samsung Electronics Co Ltd  | 23,086,726    |

Note: Space and cost restrictions make it impractical to print a detailed listing of the investment portfolio in this report; however, a portfolio listing is available and will be mailed upon request.

## 2016 Investment Results

|   | 1 Year | 3 Years | 5 Years | 10 Years |
|---|--------|---------|---------|----------|
| TMRS Total Fund Return  | 7.42%  | 4.54%   | 6.65%   | 6.09%    |
| Total Fund Active Weighted Benchmark                                  | 6.84%  | 4.00%   | 6.19%   | 5.73%    |
| TMRS Core Fixed Income Return   | 2.98%  | 3.16%   | 2.47%   | 4.29%    |
| Fixed Income Benchmark  | 2.65%  | 3.03%   | 2.23%   | 4.05%    |
| TMRS Non-Core Fixed Income Return <sup>(1)</sup>                      | 7.96%  | -       | -       | -        |
| Non-Core Fixed Income Benchmark <sup>(1)</sup>                        | 13.56% | -       | -       | -        |
| TMRS Real Return <sup>(2)</sup>                                       | 6.95%  | 1.80%   | 2.32%   | -        |
| Barclay's World Government Inflation-Linked Bond Index <sup>(2)</sup> | 4.02%  | 1.05%   | 0.98%   | -        |
| TMRS Domestic Equity Return <sup>(3)</sup>                            | 13.33% | 8.35%   | 14.54%  | -        |
| Russell 3000 Index <sup>(3)</sup>                                     | 12.74% | 8.43%   | 14.67%  | -        |
| TMRS International Equity Return <sup>(4)</sup>                       | 3.72%  | -0.95%  | 5.79%   | -        |
| International Equity Active Weighted Index <sup>(4)</sup>             | 4.41%  | -1.44%  | 5.35%   | -        |
| TMRS Absolute Return <sup>(5)</sup>                                   | 2.97%  | -       | -       | -        |
| HFRI Fund of Funds Diversified Index <sup>(5)</sup>                   | 0.26%  | -       | -       | -        |
| TMRS Real Estate Return <sup>(6)</sup>                                | 14.76% | 16.76%  | 13.68%  | -        |
| NCREIF-ODCE 1 Quarter Lag <sup>(6)</sup>                              | 9.98%  | 12.44%  | 12.39%  | -        |
| TMRS Private Equity <sup>(7)</sup>                                    | 1.68%  | -       | -       | -        |
| Russell 3000 +3% <sup>(7)</sup>                                       | 16.08% | -       | -       | -        |

(1) The inception date of this portfolio is 10/1/2014, and therefore three-year, five-year, and ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were 4.33% and 2.18% for TMRS' return and the benchmark, respectively.

(2) The inception date of this portfolio is 2/1/2011, and therefore ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were 3.15% and 2.47% for TMRS' Real Return and the Barclays World Government Inflation-Linked Index, respectively. The policy benchmark for the Real Return asset class is the CPI + 4%; however, until further diversification within the asset class occurs, the portfolio benchmark for global inflation-linked bonds is used.

(3) The inception date of this portfolio is 1/4/2008, and therefore ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were 7.73% and 7.79% for TMRS' Domestic Equity return and the Russell 3000 Index, respectively.

(4) The inception date of this portfolio is 1/4/2008, and therefore ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were -0.53% and -0.87% for TMRS' International Equity return and the International Equity Active Weighted Index, respectively.

(5) The inception date of this portfolio is 8/1/2014, and therefore three-year, five-year, and ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were 2.99% and 0.88% for TMRS' return and the benchmark, respectively.

(6) The inception date of this portfolio is 11/1/2011, and therefore ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were 13.21% and 12.72% for TMRS' Real Estate return and the NCREIF ODCE 1 Quarter Lag Index, respectively. Privately held real estate fund returns are one-quarter lagged.

(7) The inception date of this portfolio is 12/1/2015, and therefore three-year, five-year, and ten-year returns are not provided. As of 12/31/2016, inception-to-date returns were 1.55% and 14.74% for TMRS' return and the benchmark, respectively. Private equity fund returns are one-quarter lagged.

Note: Rates of return presented are calculated using a time-weighted rate of return methodology based upon market values, and are presented gross of investment management fees to the extent such information is available. Therefore, in some instances, a combination of gross and net returns are presented.

# 2016 Investment Results

Continued

**Barclays Capital U.S. Aggregate Bond Index** – This index covers the U.S. investment-grade fixed rate bond market, including government and corporate securities, agency mortgage pass-through securities, and asset-backed securities. To be included in the index, these securities must meet certain criteria. Major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

**Barclays Capital U.S. Long Government/Credit Index** – This index measures the investment return of all medium and larger public issues of U.S. Treasury, agency, investment-grade corporate, and investment-grade international dollar-denominated bonds with maturities longer than 10 years.

**Barclay's World Government Inflation-Linked Index** – This index includes only government issuers of inflation-linked bonds in the following major markets: Australia, Canada, France, Germany, Italy, Japan, Sweden, U.K., and the U.S.

**CPI** – The Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care. The CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them; the goods are weighted according to their importance. Changes in CPI are used to assess price changes associated with the cost of living.

**Fixed Income Benchmark** – The Fixed Income Benchmark is weighted by the average balance of fixed income funds and is comprised of 100% Barclays Capital US Aggregate Bond Index beginning July 1, 2009, and 100% Barclays Capital Long Government/Credit Index prior to July 1, 2009.

**HFRI Fund of Funds Diversified Index** – The HFRI Monthly Indices (“HFRI”) are a series of benchmarks designed to reflect hedge fund industry performance by constructing equally weighted composites of constituent funds, as reported by the hedge fund managers listed within the HFR Database. The Diversified Fund of Funds Composite Index is composed of Fund of Funds which exhibit one or more of the following characteristics: invests in a variety of strategies among multiple managers; historical annual return and/or a standard deviation generally similar to the HFRI Fund of Fund Composite index; demonstrates generally close performance and returns distribution correlation to the HFRI Fund of Fund Composite Index.

**International Equity Active Weighted Index** – The International Equity Active Weighted Index is weighted by the average balance of international funds applied to each corresponding benchmark (MSCI EAFE and MSCI All Country World – ex U.S. Investable Market Index) return.

**MSCI EAFE Index** – This is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. & Canada.

**MSCI All Country World – ex U.S. Investable Market Index** – This is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the U.S.

**NCREIF-ODCE** – The National Council of Real Estate Fiduciaries - Open End Diversified Core Equity (NCREIF-ODCE) is a capitalization-weighted index of investment returns reporting on both a historical and current basis the results of 28 open end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s.

**Non-Core Fixed Income Benchmark** – This index is comprised of 50% Barclays Corporate High Yield Index, 25% JPM GBI-EM Global Diversified Index, and 25% JPM CEMBI Broad Diversified Index.

**Russell 3000 Index** – This index measures the performance of 3,000 publicly held U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. market.

**Total Fund Active Weighted Benchmark** – The Total Fund Active Weighted Benchmark is weighted by the average balance of all funds and is comprised of asset class composite benchmarks associated with each fund.

Presented below is the 5-Year Risk-Adjusted Return of the TMRS Total Return in comparison to that of the Total Fund Active Weighted Benchmark. The Sharpe Ratio is used, which measures excess return per unit of total risk. It is calculated by taking the excess return over the risk-free rate, divided by the standard deviation of the excess return; the higher the value, the better the historical risk-adjusted performance.

| As of December 31, 2016     | TMRS | Total Fund Active Weighted Benchmark |
|-----------------------------|------|--------------------------------------|
| 5-Year Risk-Adjusted Return | 1.22 | 1.14                                 |

## Schedule of Investment Expenses

| For the Year ended December 31, 2016                     |                      |
|--|----------------------|
| <b>Internal operating expenses</b>                       |                      |
| Staff salaries   | \$ 2,236,072         |
| Payroll taxes  | 137,833              |
| Retirement contributions                                 | 376,051              |
| Insurance  | 206,667              |
| Online services  | 1,115,573            |
| Travel   | 130,078              |
| Dues, subscriptions, and training                        | 46,670               |
| Other administrative expenses                            | <u>3,189</u>         |
| <b>Total internal operating expenses</b>                 | <b>4,252,133</b>     |
| <b>Investment management and other external expenses</b> |                      |
| Investment management                                    | 53,842,543           |
| Custodial services                                       | 626,843              |
| Consulting   | 1,786,200            |
| Legal  | <u>670,118</u>       |
|  | 56,925,704           |
| <b>Total investment expenses</b>                         | <b>\$ 61,177,837</b> |

# Schedule of Investment Expenses

Continued

| <b>Investment Management Fees<br/>For the Year Ended December 31, 2016</b> |   |  |                      |   |  |
|--|---|--|----------------------|---|--|
| <b>Asset Class</b>   | <b>Fees Paid Directly<br/>From the<br/>Pension Trust Fund</b> | <b>Fees Paid<br/>From<br/>Investment Funds</b> | <b>Total Fees</b>    | <b>Management<br/>Fees Allocated<br/>Against the<br/>Fair Values of<br/>Investment<br/>Funds*</b> | <b>Fair Value at<br/>Dec. 31, 2016</b> |
| Cash Equivalents   | \$ -  | \$ -   | \$ -                 | \$ -  | \$ 29,042,008                          |
| Core Fixed Income  | 5,372,209   | -  | 5,372,209            | -   | 5,534,694,172                          |
| Non-Core Fixed Income  | 2,237,653   | 7,265,899                                      | 9,503,552            | -   | 2,080,374,177                          |
| Real Return  | 3,975,925   | 151,901  | 4,127,826            | -   | 2,281,496,965                          |
| U.S. Equities  | 9,154,989   | -  | 9,154,989            | -   | 6,729,010,653                          |
| International Equities   | 9,198,370   | -  | 9,198,370            | -   | 4,126,924,291                          |
| Absolute Return  | -   | 16,485,597                                     | 16,485,597           | -   | 2,749,169,705                          |
| Real Estate  | -   | -  | -                    | 32,057,863  | 2,183,115,925                          |
| Private Equity   | -   | -  | -                    | 8,265,733   | 116,403,554                            |
| <b>Totals</b>  | <b>\$ 29,939,146</b>  | <b>\$ 23,903,397</b>                           | <b>\$ 53,842,543</b> | <b>\$ 40,323,596</b>  | <b>\$ 25,830,231,450</b>               |

\* Management fees for private real estate and private equity investments are not separately reflected in the System's financial statements; these fees are instead netted against the assets' fair values.

# Actuarial





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May 19, 2017

Board of Trustees  
Texas Municipal Retirement System ("TMRS" or the "System")  
Austin, Texas

Dear Trustees:

In accordance with the Texas Municipal Retirement System ("TMRS") Act, the annual actuarial valuation of the assets and liabilities of the TMRS Pension Trust Fund was completed as of December 31, 2016.

Except for healthy post-retirement mortality and the mortality assumption used to develop the Annuity Purchase Rates (APRs), the current actuarial assumptions were developed from the actuarial investigation of the experience of TMRS over the four year period from December 31, 2010 to December 31, 2014. These assumptions were adopted in 2015 and were first used in the December 31, 2015 valuation. Healthy post-retirement mortality rates and the APRs used to annuitize members' account balances at retirement were updated based on the mortality experience investigation study dated December 31, 2013. In addition, in conjunction with these changes made for the December 31, 2013 valuation, the Board adopted a change in the actuarial cost method from Projected Unit Credit (PUC) to Entry Age Normal (EAN) and a one-time change to the amortization policy. The change to EAN was made to decrease the rate volatility compared to PUC and to align the assumptions and methods used for funding purposes and financial reporting. The assumptions and methods used in this valuation are summarized in the Actuarial Section of the Comprehensive Annual Financial Report (AFR). There were no changes in the actuarial assumptions or methods since the prior valuation.

The results of the actuarial valuation are dependent on 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.

It is our opinion that the recommended assumptions and methods are internally consistent and are reasonably based on past and anticipated future experience of the System and comply with the parameters for disclosure as set forth in Governmental Accounting Standards Board Statement No. 67. We prepared all of the supporting schedules in the Actuarial Section.

The financing objective for each TMRS plan is to provide retirement, death and disability benefits for a member city's employees financed by an employer contribution rate. This rate is determined annually and is expected to remain approximately level as a percentage of the employer's covered payroll. In TMRS, a city's actuarially determined contribution rate consists of two components: the employer normal cost contribution rate and the prior service contribution rate. Both rates are determined as a level percentage of payroll. The normal cost contribution rate finances the portion of an active member's projected retirement benefit allocated annually. The prior service contribution rate amortizes the unfunded actuarial accrued liability ("UAAL") over the applicable period for that city. Both the normal

Board of Trustees

May 19, 2017

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cost and prior service contribution rates include recognition of the projected impact of annually repeating updated service credits and annuity increases.

The employer contribution rates for the municipalities participating in TMRS are certified annually by the Board of Trustees which is responsible for establishing and maintaining the funding policy. These rates are actuarially determined and are based upon the plan provisions in effect as of April 1, 2017 and the actuarial assumptions and methodology adopted by the Board. The Board's current policy is that the contribution rates determined by a given actuarial valuation become effective one (1) year after the valuation date. For example, the rates determined by the December 31, 2016 actuarial valuation will be applicable for the calendar year beginning January 1, 2018 and ending December 31, 2018.

To test how well the financing objective for each plan is being achieved, annual actuarial valuations are made. These actuarial valuations recognize differences in the past year between the actuarial assumptions and the actual experience, and any benefit changes for each plan. A separate actuarial valuation for each participating municipality was made based upon the plan of benefits in effect as of April 1, 2017.

The TMRS staff supplied all of the data for retired, active and inactive members as of December 31, 2016. We did not audit this data, but we did apply a number of tests to the data and we concluded that it was reasonable and consistent with the prior year's data. The TMRS staff also supplied all of the asset data and financial information as of December 31, 2016. The amounts of the assets in the actuarial valuations agree with the amounts as reported by TMRS.

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

The undersigned are independent actuaries and consultants. Both are Members of the American Academy of Actuaries, both meet all of the Qualification Standards of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems.

Respectfully submitted,



Mark R. Randall, MAAA, FCA, EA  
Chief Executive Officer



Joseph P. Newton, MAAA, FSA, EA  
Senior Consultant

**T**hese actuarial assumptions were developed primarily from the actuarial investigation of the experience of TMRS over the four-year period from December 31, 2010 to December 31, 2014. They were adopted in 2015 and first used in the December 31, 2015 actuarial valuation. The post-retirement mortality assumption for healthy annuitants and Annuity Purchase Rate (APRs) are based on the Mortality Experience Investigation Study covering 2009 through 2011 and dated December 31, 2013. In conjunction with these changes first used in the December 31, 2013 valuation, the System adopted the Entry Age Normal actuarial cost method and a one-time change to the amortization policy.

### I. Economic Assumptions

**A. General Inflation** — General inflation is assumed to be 2.50% per year.

**B. Discount/Crediting Rates**

1. System-wide Investment Return Assumption: 6.75% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.25% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses. This is the discount rate used to value the liabilities of the individual employers.
2. Assumed discount/crediting rate for Supplemental Disability Benefits Fund and individual employee accounts: an annual rate of 5.00% for (1) accumulating prior service credit and updated service credit after the valuation date, (2) accumulating the employee current service balances, (3) determining the amount of the monthly benefit at future dates of retirement or disability, and (4) calculating the actuarial liability of the System-wide Supplemental Disability Benefits Fund.

**C. Overall Payroll Growth** — 3.00% per year, which is used to calculate the contribution rates for the retirement plan of each participating city as a level percentage of payroll. This represents the expected increase in total payroll. This increase rate is solely due to the effect of wage inflation on salaries, with no allowance for future membership growth. However, for cities with a decrease in the number of contributing members from 2005 to 2014, the payroll growth is decreased by half the annual percentage decrease in the count capped at a 1.0% decrease per year and rounded down to the nearest 0.1%.

**D. Individual Salary Increases** — Salary increases are assumed to occur once a year, on January 1. Therefore, the pay used for the period year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. Salaries are assumed to increase by the following graduated service-based scale.

| Years of Service | Rate(%) |
|------------------|---------|
| 1                | 10.50%  |
| 2                | 7.50%   |
| 3                | 7.00%   |
| 4                | 6.50%   |
| 5                | 6.00%   |
| 6                | 5.50%   |
| 7                | 5.25%   |
| 8 - 10           | 4.75%   |
| 11               | 4.50%   |
| 12 - 13          | 4.25%   |
| 14 - 16          | 4.00%   |
| 17 - 24          | 3.75%   |
| 25 +             | 3.50%   |

**E. Annuity Increases** — The Consumer Price Index (CPI) is assumed to be 2.50% per year prospectively. Annuity Increases, when applicable, are 30%, 50%, or 70% of CPI, according to the provisions adopted by each city. The actual future COLA assumptions are as follows: 0.87% per year for the 30% CPI provision, 1.38% per year for the 50% CPI provision, and 1.86% per year for the 70% CPI provision.

## II. Demographic Assumptions

### A. Termination Rates

1. For the first 10 years of service, the base table rates vary by gender, entry age, and length of service. For each city, the base table is then multiplied by a factor from 75% to 125% based on the experience of the individual city in comparison to the group as a whole. A further multiplier is applied depending on an employee's classification: 1) Fire – 63%, 2) Police – 88%, or 3) Other – 108%. A sample of the base rates follows:

| Males |        | Years of Service |        |        |        |        |        |        |        |        |  |
|-------|--------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| Age   | 0      | 1                | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |  |
| 20    | 0.2920 | 0.2623           | 0.2186 | 0.1932 | 0.1850 | 0.1673 | 0.1529 | 0.1243 | 0.1022 | 0.0816 |  |
| 25    | 0.2653 | 0.2269           | 0.1812 | 0.1554 | 0.1429 | 0.1267 | 0.1148 | 0.1006 | 0.0926 | 0.0757 |  |
| 30    | 0.2451 | 0.2052           | 0.1610 | 0.1322 | 0.1079 | 0.0998 | 0.0896 | 0.0774 | 0.0744 | 0.0621 |  |
| 35    | 0.2505 | 0.2070           | 0.1577 | 0.1265 | 0.1050 | 0.0994 | 0.0848 | 0.0719 | 0.0621 | 0.0567 |  |
| 40    | 0.2467 | 0.2060           | 0.1561 | 0.1213 | 0.1046 | 0.0943 | 0.0805 | 0.0710 | 0.0601 | 0.0577 |  |
| 45    | 0.2268 | 0.1934           | 0.1556 | 0.1220 | 0.1053 | 0.0926 | 0.0813 | 0.0711 | 0.0605 | 0.0575 |  |
| 50    | 0.2078 | 0.1731           | 0.1412 | 0.1149 | 0.1016 | 0.0887 | 0.0807 | 0.0716 | 0.0604 | 0.0578 |  |
| 55    | 0.2003 | 0.1668           | 0.1265 | 0.1074 | 0.0861 | 0.0864 | 0.0771 | 0.0682 | 0.0609 | 0.0560 |  |
| 60    | 0.1999 | 0.1542           | 0.1231 | 0.1060 | 0.0790 | 0.0868 | 0.0753 | 0.0683 | 0.0571 | 0.0549 |  |
| 65    | 0.2000 | 0.1463           | 0.1238 | 0.1063 | 0.0803 | 0.0867 | 0.0757 | 0.0700 | 0.0547 | 0.0551 |  |
| 70    | 0.2000 | 0.1477           | 0.1237 | 0.1063 | 0.0802 | 0.0867 | 0.0756 | 0.0697 | 0.0551 | 0.0551 |  |

| Females |        | Years of Service |        |        |        |        |        |        |        |        |  |
|---------|--------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| Age     | 0      | 1                | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |  |
| 20      | 0.3030 | 0.2790           | 0.2221 | 0.2098 | 0.1997 | 0.2021 | 0.1536 | 0.1539 | 0.1564 | 0.1574 |  |
| 25      | 0.2782 | 0.2409           | 0.2067 | 0.1962 | 0.1710 | 0.1663 | 0.1369 | 0.1352 | 0.1186 | 0.1125 |  |
| 30      | 0.2574 | 0.2188           | 0.1949 | 0.1762 | 0.1347 | 0.1348 | 0.1276 | 0.1126 | 0.0973 | 0.0804 |  |
| 35      | 0.2424 | 0.2118           | 0.1805 | 0.1438 | 0.1273 | 0.1238 | 0.1112 | 0.1085 | 0.1000 | 0.0769 |  |
| 40      | 0.2244 | 0.1993           | 0.1614 | 0.1342 | 0.1295 | 0.1097 | 0.1023 | 0.0924 | 0.0834 | 0.0733 |  |
| 45      | 0.2191 | 0.1853           | 0.1427 | 0.1337 | 0.1054 | 0.1017 | 0.0894 | 0.0784 | 0.0705 | 0.0725 |  |
| 50      | 0.2201 | 0.1793           | 0.1347 | 0.1229 | 0.0886 | 0.0881 | 0.0823 | 0.0723 | 0.0675 | 0.0617 |  |
| 55      | 0.2200 | 0.1738           | 0.1350 | 0.1199 | 0.0834 | 0.0806 | 0.0713 | 0.0705 | 0.0685 | 0.0551 |  |
| 60      | 0.2200 | 0.1523           | 0.1350 | 0.1172 | 0.0798 | 0.0843 | 0.0646 | 0.0639 | 0.0429 | 0.0379 |  |
| 65      | 0.2200 | 0.1431           | 0.1350 | 0.1150 | 0.0800 | 0.0857 | 0.0667 | 0.0593 | 0.0276 | 0.0280 |  |
| 70      | 0.2200 | 0.1447           | 0.1350 | 0.1154 | 0.0800 | 0.0854 | 0.0664 | 0.0601 | 0.0303 | 0.0298 |  |

2. After 10 years of service, base termination rates vary by gender and by the number of years remaining until first retirement eligibility. For each city, the base table is then multiplied by a factor from 75% to 125% based on the experience of the individual city in comparison to the group as a whole (same factor as above). A further multiplier is applied depending on an employee's classification: 1) Fire – 52%, 2) Police – 79%, or 3) Other – 115%. A sample of the base rates follows:

| Years From Retirement | Males | Females |
|-----------------------|-------|---------|
| 1                     | .0172 | .0220   |
| 2                     | .0229 | .0297   |
| 3                     | .0271 | .0354   |
| 4                     | .0306 | .0401   |
| 5                     | .0335 | .0441   |
| 6                     | .0361 | .0477   |
| 7                     | .0385 | .0510   |
| 8                     | .0407 | .0540   |
| 9                     | .0428 | .0568   |
| 10                    | .0447 | .0594   |
| 11                    | .0465 | .0619   |
| 12                    | .0482 | .0643   |
| 13                    | .0498 | .0666   |
| 14                    | .0514 | .0687   |
| 15                    | .0529 | .0708   |

Termination rates end at first eligibility for retirement.

**B. Forfeiture Rates** (withdrawal of member deposits from TMRS)

Rates for vested members vary by age and employer match, and they are expressed as a percentage of the termination rates shown in (A). The withdrawal rates for cities with a 2-to-1 match are shown below. 4% is added to the rates for 1½-to-1 cities, and 8% is added for 1-to-1 cities.

| Age | Percent of Terminating Employees Choosing to Take a Refund |
|-----|--|
| 25  | 41.2%  |
| 30  | 41.2%  |
| 35  | 41.2%  |
| 40  | 38.0%  |
| 45  | 32.6%  |
| 50  | 27.1%  |
| 55  | 21.7%  |

Forfeiture rates end at first eligibility for retirement.

# Summary of Actuarial Assumptions (Pension Trust Fund)

Continued

## C. Service Retirees and Beneficiary Mortality Rates

For calculating the actuarial liability and the retirement contribution rates, the Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.

## D. Disabled Annuitant Mortality Rates

For calculating the actuarial liability and the retirement contribution rates, the Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103% with a three-year set-forward for both males and females. In addition, a 3% minimum mortality rate will be applied to reflect the impairment for younger members who become disabled. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements subject to the 3% floor.

## E. Annuity Purchase Rates

For determining the amount of the monthly benefit at the time of retirement for both healthy and disabled annuitants, the annuity purchase rates (APRs) for 2014 were based on the UP-1984 Table with an age setback of two years for retirees and eight years for beneficiaries. Beginning in 2027 the APRs will be based on a unisex blend of the RP-2000 Combined Healthy Mortality Tables with Blue Collar Adjustment for males and females with both male and female rates multiplied by 107.5% and projected on a fully generational basis with Scale BB. For members, a unisex blend of 70% of the males table and 30% of the female table is used, while 30% of the male table and 70% of the female table is used for beneficiaries. From 2015 through 2026, the fully generational APRs will be phased in.

## F. Pre-Retirement Mortality Rates

For calculating the actuarial liability and the retirement contribution rates, the Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 54.5% and female rates multiplied by 51.5%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.

## G. Disability Rates

| Age | Males & Females |
|-----|-----------------|
| 20  | 0.000004        |
| 25  | 0.000025        |
| 30  | 0.000099        |
| 35  | 0.000259        |
| 40  | 0.000494        |
| 45  | 0.000804        |
| 50  | 0.001188        |
| 55  | 0.001647        |
| 60  | 0.002180        |
| 65  | 0.002787        |

## H. Service Retirement Rates (applied to both active and inactive members)

The base table rates vary by gender, entry age group, and age. For retirees under the age of 62, the rates for active members are then multiplied by 2 factors based on 1) employee contribution rate and employer match and 2) if the city has a recurring COLA.

| Age         | Males             |            |                  | Females           |            |                  |
|-------------|-------------------|------------|------------------|-------------------|------------|------------------|
|             | Entry Age Groups  |            |                  | Entry Age Groups  |            |                  |
|             | Ages 32 and under | Ages 33-47 | Ages 48 and over | Ages 32 and under | Ages 33-47 | Ages 48 and over |
| 40-44       | 0.06              | -          | -                | 0.06              | -          | -                |
| 45-49       | 0.06              | -          | -                | 0.06              | -          | -                |
| 50-52       | 0.08              | -          | -                | 0.08              | -          | -                |
| 53          | 0.08              | 0.10       | -                | 0.08              | 0.10       | -                |
| 54          | 0.08              | 0.10       | -                | 0.11              | 0.10       | -                |
| 55-59       | 0.14              | 0.10       | -                | 0.11              | 0.10       | -                |
| 60          | 0.20              | 0.15       | 0.10             | 0.14              | 0.15       | 0.10             |
| 61          | 0.25              | 0.30       | 0.20             | 0.28              | 0.26       | 0.20             |
| 62          | 0.32              | 0.25       | 0.12             | 0.28              | 0.17       | 0.12             |
| 63          | 0.32              | 0.23       | 0.12             | 0.28              | 0.17       | 0.12             |
| 64          | 0.32              | 0.35       | 0.20             | 0.28              | 0.22       | 0.20             |
| 65          | 0.32              | 0.32       | 0.20             | 0.28              | 0.27       | 0.20             |
| 66-69       | 0.22              | 0.22       | 0.17             | 0.22              | 0.22       | 0.17             |
| 70-74       | 0.20              | 0.22       | 0.25             | 0.22              | 0.22       | 0.25             |
| 75 and over | 1.00              | 1.00       | 1.00             | 1.00              | 1.00       | 1.00             |

Note: For cities without a 20-year/any age retirement provision, the active employee rates for entry ages 32 and under are loaded by 20% for ages below 60.

Plan design factors applied to base retirement rates are as follows:

| Employer Match | Employee Contribution Rate |      |      |
|----------------|----------------------------|------|------|
|                | 5%                         | 6%   | 7%   |
| 1 - 1          | 0.75                       | 0.80 | 0.84 |
| 1.5 - 1        | 0.81                       | 0.86 | 0.92 |
| 2 - 1          | 0.86                       | 0.93 | 1.00 |

Recurring COLA: 1.00  
 No Recurring COLA: 0.90

## III. Methods and Assumptions

- A. Valuation of Assets** — The actuarial value of assets is based on the market value of assets with a ten-year phase-in of actual investment return 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 continue to be recognized on their original timeframe. The actuarial value of assets is further adjusted by 33% of any difference between the initial value and a 15% corridor around the market value of assets, if necessary.
- B. Actuarial Cost Method** — The actuarial cost method being used is known as the Entry Age Normal actuarial cost method. The Entry Age Normal actuarial cost method develops the annual cost of the Plan in two parts: that attributable to benefits accruing in the current year, known as the normal cost, and that due to service earned prior to the current year, known as the amortization of the unfunded actuarial accrued liability. The normal cost and the actuarial accrued liability are calculated individually for each member. The normal cost rate for an employee is the contribution rate which, if applied to a member's compensation throughout their period of anticipated covered service with the municipality, would be sufficient to meet all benefits payable on their behalf. The normal cost is calculated using an entry age based on benefit service with the current city. If a member has additional time-only vesting service through service with other TMRS cities or other public agencies, they retain this for determination of benefit eligibility and decrement rates. The salary-weighted average of these rates is the total normal cost rate. The unfunded actuarial accrued liability reflects the difference between the portion of projected benefits attributable to service credited prior to the valuation date and assets already accumulated. The unfunded actuarial accrued liability is paid off in accordance with a specified amortization procedure outlined in C below.
- C. Amortization Policy** — For “underfunded” cities with twenty or more employees, the amortization as of the valuation date is a level percentage of payroll over a closed period using the process of “laddering.” Bases that existed prior to this valuation continue to be amortized on their original schedule. Beginning January 1, 2016, all new experience losses are amortized over individual periods of not more than 25 years. Previously, some cities amortized their losses over a 30-year period. New gains (including lump sum contributions) are offset against and amortized over the same period as the current largest outstanding loss base for the specific city, which in turn decreases contribution rate volatility.

Once a city reaches an overfunded status, all prior non-ad hoc bases are erased and the surplus for overfunded cities is amortized over a 25-year open period.

Ad hoc benefit enhancements are amortized over individual periods using a level dollar policy. The period will be based on the minimum of 15 years or the current life expectancy of the covered group.

For the December 31, 2013 actuarial valuation, there was a one-time change in the amortization policy for underfunded cities implemented in conjunction with the changes to the assumptions and cost method to minimize rate volatility associated with these changes. An initial Annual Required Contribution (ARC) was developed using the methodology described above. For cities with a decrease in the rate compared to the rate calculated prior to changes, the amortization period for all non-ad hoc bases was shortened enough to keep the rates stable (if possible). Cities

with an increase of more than 0.50% were allowed to extend the amortization periods for non-ad hoc bases up to 30 years to keep the full contribution rate from increasing. For cities with an increase of 0.50% or less, the amortization periods for all non-ad hoc bases could be extended to 25 years to keep the rate from increasing. The amortization period calculated in the prior steps was then rounded up to the nearest integer to calculate the final full contribution rate.

- D. Small City Methodology** — For cities with fewer than twenty employees, more conservative methods and assumptions are used. First, lower termination rates are used for smaller cities, with maximum multipliers of 75% for employers with less than 6 members, 85% for employers with 6 to 10 members, 100% for employers with 11 to 15 members, and 115% for employers with less than 100 members.

There is also a load on the life expectancy for employers with less than 15 active members. The life expectancy will be loaded by decreasing the mortality rates by 1% for every active member less than 15. For example, an employer with 5 active members will have the baseline mortality tables multiplied by 90% (10 active members times 1%).

For underfunded plans, the maximum amortization period for amortizing gains and losses is decreased from current levels by one year for each active member less than the 20-member threshold. For example, an employer with 8 active members and a current maximum amortization period of 25 will use  $(25 - (20 - 8)) = 13$  year amortization period for the gain or loss in that year's valuation. Under this policy, the lowest amortization period will be  $25 - (20 - 1) = 6$  years. Once the plan is overfunded, the amortization period will revert back to the standard 25 years.

## IV. Other Assumptions

1. Valuation payroll (used for determining the amortization contribution rate): An exponential average of the actual salaries paid during the prior fiscal years, with 33% weight given to the most recent year and 67% weight given to the expected payroll for the previous fiscal year, moved forward with one year's payroll growth rate and adjusted for changes in population.
2. Individual salaries used to project benefits: For members with more than three years of service, actual salaries from the past three fiscal years are used to determine the USC final average salary as of the valuation date. For future salaries, this three-year average is projected forward with two years of salary scale to create the salary for the year following the valuation. This value is then projected with normal salary scales.
3. Timing of benefit payments: Benefit payments are assumed to be made in the middle of the month. Although TMRS benefits are paid at the end of the month, eligibility for that payment is determined at the beginning of the month. A middle of month payment approximates the impact of the combination of eligibility determination and actual payment timing.
4. Percent married: 100% of the employees are assumed to be married.
5. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
6. Optional Forms: Healthy members are assumed to choose a life only benefit when they retire.

## Summary of Actuarial Assumptions (Pension Trust Fund)

Continued

Disabled members are assumed to select a 50% joint and survivor option when they retire.

- 7.** Percent electing annuity on death (when eligible): For vested members not eligible for retirement, 75% of the spouses of male members and 70% of the spouses of female members are assumed to commence an immediate benefit in lieu of a deferred annuity or a refund. Those not electing an immediate benefit are assumed to take a refund. All of the spouses of married participants who die after becoming eligible for a retirement benefit are assumed to elect an annuity that commences immediately.
- 8.** Partial Lump Sum utilization: It is assumed that each member at retirement will withdraw 40% of his/her eligible account balance.
- 9.** Inactive Population: All non-vested members of a city are assumed to take an immediate refund if they are not contributing members in another city. Vested members not contributing in another city are assumed to take a deferred retirement benefit, except for those who have terminated in the past 12 months for whom one year of forfeiture probability is assumed. The forfeiture rates for inactive members of a city who are contributing members in another city are equal to the probability of termination multiplied by the forfeiture rates shown in II(A) and II(B) respectively. These rates are applied each year until retirement eligibility. Once a member is retirement eligible, he or she is assumed to commence benefits based on the service retirement rates shown in II(H).
- 10.** There will be no recoveries once disabled.
- 11.** No surviving spouse will remarry and there will be no children's benefit.
- 12.** Decrement timing: Decrements of all types are assumed to occur mid-year.
- 13.** Eligibility testing: Eligibility for benefits is determined based upon the age at nearest birthday and service at nearest whole year on the date the decrement is assumed to occur.
- 14.** Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
- 15.** Incidence of contributions: Contributions are assumed to be received continuously throughout the year based on the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
- 16.** Benefit service: All members are assumed to accrue one year of eligibility service each year.
- 17.** The decrement rates for service-related decrements are based on total TMRS eligibility service.

1. **Actuarial gain (loss)** — A measure of the difference between actual experience and that expected based upon the actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with the actuarial cost method used.
2. **Actuarial accrued liability** — The actuarial present value of benefits attributable to all periods prior to the valuation date.
3. **Actuarial present value** — The value of an amount or series of amounts payable or receivable at various times, determined as of a given date (the valuation date) by the application of the actuarial assumptions.
4. **Actuarial value of assets** — The value of cash, investments, and other property belonging to a pension plan, as used by the actuary for the purpose of an actuarial valuation.
5. **Amortization period** — The period over which the existing unfunded or overfunded actuarial accrued liability is projected to be paid off, as a level percentage of payroll.
6. **Actuarially Determined Employer Contribution (ADEC)** — The employer's periodic required contributions to the defined benefit pension plan, calculated in accordance with current TMRS funding policy.
7. **Average age of contributing members** — The average attained age as of the valuation date.
8. **Average length of service of contributing members** — The average length of total credited service in TMRS as of the valuation date.
9. **Current service benefits** — Benefits attributable to the member's accumulated deposits and an amount provided by the municipality at retirement to match the accumulated deposits at the matching ratio in effect when the deposits were made.
10. **Entry Age Normal actuarial cost method** — The Entry Age Normal actuarial cost method develops the annual cost of the plan in two parts: that attributable to benefits accruing in the current year, known as the normal cost, and that due to service earned prior to the current year, known as the amortization of the unfunded actuarial accrued liability. The normal cost and the actuarial accrued liability are calculated individually for each member. The normal cost rate for an employee is the contribution rate which, if applied to a member's compensation throughout their period of anticipated covered service, would be sufficient to meet all benefits payable on their behalf. The salary-weighted average of these rates is the total normal cost rate. The actuarial accrued liability is based on the portion of benefits attributable to service credited prior to the valuation date. Actuarial gains (losses), as they occur, reduce (increase) the unfunded actuarial accrued liability.
11. **Funded ratio** — The actuarial value of assets expressed as a percentage of the actuarial accrued liability.
12. **Funding policy** — The program for the amounts and timing of contributions to be made by plan members and employers to provide the benefits specified by a pension plan.
13. **Normal cost contribution rate** — The actuarial present value of benefits allocated to a valuation year by the actuarial cost method, expressed as a percentage of the covered payroll. It is equal to the sum of the actuarial present value of benefits allocated to the year following the valuation date divided by the compensation expected to be received during the next year for the closed group of members as of the valuation date.

## Definitions (Pension Trust Fund)

Continued

- 14. Overfunded actuarial accrued liability** — The excess of the actuarial value of assets over the actuarial accrued liability.
- 15. Phase-in rate** — The minimum required contribution rate to TMRS, which reflects the portion of the full rate being phased in due to the changes in actuarial assumptions and methods.
- 16. Prior service benefits** — Benefits other than current service benefits. These include all benefits arising from prior service credits, special prior service credits, antecedent service credits, updated service credits, and increases in monthly benefit payments to annuitants — also referred to as Annuity Increases (AI) or cost-of-living adjustments (COLAs).
- 17. Prior service contribution rate** — The level percentage of payroll required to amortize the unfunded or overfunded actuarial liability over a specified amortization period. If the rate is negative, it is offset against the normal cost contribution rate, with the limitation that the sum of the two rates cannot be negative.
- 18. Projected Unit Credit actuarial cost method** — A method under which the benefits of each individual included in the valuation are allocated by a consistent formula to valuation years based on years of service. Benefits are allocated equally to each year of service over the individual's career from hire to retirement. Normal costs are based on the portion of the benefit allocated to the year following the valuation year. Accrued liabilities are based on benefits allocated to the time preceding the date of the actuarial valuation. Under this method, actuarial gains (losses), as they occur, reduce (increase) the unfunded actuarial liability.
- 19. Retirement contribution rate** — The sum of the normal cost contribution rate and the prior service contribution rate.
- 20. Unfunded actuarial accrued liability** — The excess of the actuarial accrued liability over the actuarial value of assets.

## Participating Employers and Active Members (Pension Trust Fund)

| Contributing Members |                         |         |                  |                    |                             |
|----------------------|-------------------------|---------|------------------|--------------------|-----------------------------|
| Valuation Date       | Number of Active Cities | Number  | Annual Payroll   | Average Annual Pay | Percent Increase In Average |
| 12/31/2007           | 823                     | 98,440  | \$ 4,221,290,731 | \$ 43,513          | 4.3 %                       |
| 12/31/2008           | 829                     | 100,459 | 4,529,989,369    | 45,551             | 4.7                         |
| 12/31/2009           | 833                     | 102,419 | 4,769,041,587    | 47,014             | 3.2                         |
| 12/31/2010           | 837                     | 101,240 | 4,797,903,131    | 47,117             | 0.2                         |
| 12/31/2011           | 842                     | 101,151 | 4,853,135,055    | 47,958             | 1.8                         |
| 12/31/2012           | 844                     | 101,827 | 4,961,671,305    | 48,889             | 1.9                         |
| 12/31/2013           | 844                     | 102,870 | 5,142,446,602    | 50,244             | 2.8                         |
| 12/31/2014           | 853                     | 104,019 | 5,374,536,634    | 51,956             | 3.4                         |
| 12/31/2015           | 859                     | 106,894 | 5,683,846,845    | 53,898             | 3.7                         |
| 12/31/2016           | 864                     | 108,891 | 5,884,788,962    | 54,543             | 1.2                         |

As of December 31, 2016, there were seven cities with no contributing members and no city contributions due. In addition, one privatized hospital had no contributing members, but paid a dollar contribution amount to TMRS that is calculated annually by the actuary. Thus, there were 872 total city plans, with 864 of them active.

The average annual pay was calculated by dividing the annual payroll by the average of the number of contributing members at the beginning and the end of the year.

## Retiree and Beneficiary Data (Pension Trust Fund)

| Year Ended | Added to Rolls     |                | Removed from Rolls |                | End of Year        |                | %     | Average Annual Benefit |
|------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|-------|------------------------|
|            | Number of Accounts | Annual Benefit | Number of Accounts | Annual Benefit | Number of Accounts | Annual Benefit |       |                        |
| 12/31/2007 | 2,933              | \$ 44,549,919  | 598                | \$ 6,241,842   | 34,510             | \$ 523,995,541 | 9.7 % | \$ 15,184              |
| 12/31/2008 | 2,962              | 59,560,238     | 609                | 6,232,194      | 36,863             | 577,323,585    | 10.2  | 15,656                 |
| 12/31/2009 | 2,750              | 43,466,305     | 633                | 7,356,347      | 38,980             | 613,433,543    | 6.3   | 15,737                 |
| 12/31/2010 | 3,193              | 61,116,748     | 714                | 8,750,654      | 41,459             | 665,799,637    | 8.5   | 16,059                 |
| 12/31/2011 | 3,390              | 58,001,287     | 782                | 4,399,586      | 44,067             | 719,401,338    | 8.1   | 16,325                 |
| 12/31/2012 | 3,545              | 72,731,553     | 710                | 8,898,201      | 46,902             | 783,234,690    | 8.9   | 16,699                 |
| 12/31/2013 | 3,890              | 72,535,316     | 823                | 11,113,993     | 49,969             | 844,656,013    | 7.8   | 16,904                 |
| 12/31/2014 | 4,319              | 92,940,036     | 833                | 11,533,222     | 53,455             | 926,062,827    | 9.6   | 17,324                 |
| 12/31/2015 | 3,916              | 76,796,719     | 890                | 12,357,106     | 56,481             | 990,502,440    | 7.0   | 17,537                 |
| 12/31/2016 | 4,073              | 82,664,225     | 943                | 13,821,624     | 59,611             | 1,059,345,041  | 7.0   | 17,771                 |

The number of retirement accounts is greater than the number of people who retired, as some retirees worked for more than one city in TMRS and retired with a separate benefit from each city. As of December 31, 2016, there were 6,589 more retirement accounts than people who retired. In addition, this schedule excludes 813 retirees with a “cash-out” in lieu of a monthly benefit. These individuals are still entitled to supplemental death benefits.

The annual benefit is 12 times the amount payable in January following the valuation date, including any annuity increase, if applicable.

# Summary of Actuarial Liabilities and Funding Progress (Pension Trust Fund)

**(Amounts in Millions of Dollars)**

| Annual Report Year | Actuarial Value of Assets | Actuarial Accrued Liability (AAL) | Funded Ratio (1) / (2) | Unfunded AAL (UAAAL) (2) - (1) | Covered Payroll | UAAAL as a Percentage of Covered Payroll (4) / (5) | City Contributions | Average City Rate (7) / (5) |
|--------------------|---------------------------|-----------------------------------|------------------------|--------------------------------|-----------------|--|--------------------|-----------------------------|
|                    | (1)                       | (2)                               | (3)                    | (4)                            | (5)             | (6)  | (7)                | (8)                         |
| 2007*              | \$ 14,203.3               | \$ 19,278.8                       | 73.7 %                 | \$ 5,075.5                     | \$ 4,221.3      | 120.2 %  | \$ 512.9           | 12.2 %                      |
| 2008               | 15,149.7                  | 20,360.8                          | 74.4                   | 5,211.1                        | 4,530.0         | 115.0  | 567.2              | 12.5                        |
| 2009               | 16,305.7                  | 21,525.1                          | 75.8                   | 5,219.4                        | 4,769.0         | 109.4  | 641.7              | 13.5                        |
| 2010**             | 16,986.0                  | 20,481.5                          | 82.9                   | 3,495.5                        | 4,797.9         | 72.9   | 679.3              | 14.2                        |
| 2011               | 18,347.0                  | 21,563.3                          | 85.1                   | 3,216.4                        | 4,853.3         | 66.3   | 703.8              | 14.5                        |
| 2012               | 19,784.8                  | 22,683.8                          | 87.2                   | 2,899.0                        | 4,961.7         | 58.4   | 664.4              | 13.4                        |
| 2013***            | 21,293.6                  | 25,320.7                          | 84.1                   | 4,027.1                        | 5,142.4         | 78.3   | 680.8              | 13.2                        |
| 2014               | 22,861.0                  | 26,647.5                          | 85.8                   | 3,786.5                        | 5,374.5         | 70.5   | 719.2              | 13.4                        |
| 2015****           | 24,347.7                  | 28,378.9                          | 85.8                   | 4,031.2                        | 5,683.9         | 70.9   | 750.8              | 13.2                        |
| 2016               | 25,844.0                  | 29,963.3                          | 86.3                   | 4,119.3                        | 5,884.8         | 70.0   | 767.1              | 13.0                        |

\* With the December 31, 2007 valuation, the actuarial cost method changed from the Unit Credit actuarial cost method to the Projected Unit Credit actuarial cost method to pre-fund for annually repeating updated service credits and annuity increases.

\*\* Actuarial assumptions were modified with the December 31, 2010 valuation, along with a change in the funding structure of TMRS that resulted from the passage of Senate Bill 350 (combined separate employee, employer, and annuity funds into one Benefit Accumulation Fund). This more efficient funding structure reduced year-to-year volatility in city contribution rates, resulted in lower contribution rates for most cities, and improved actuarial funding ratios for most cities. The most significant assumption changes from the prior valuation involved altering the structure of the retirement assumption to reflect a city's plan provisions and generally decreasing the turnover and forfeiture assumptions.

\*\*\* The healthy annuitant mortality assumption and Annuity Purchase Rates were modified with the December 31, 2013 valuation, along with a change in the actuarial cost method from Projected Unit Credit to Entry Age Normal.

\*\*\*\* Actuarial assumptions were modified as of the December 31, 2015 valuation.

Each city participating in TMRS is financially responsible for its own plan. Therefore, the aggregate numbers shown on the above chart reflect only the aggregate condition of TMRS and do not indicate the status of any one plan.

Columns (1) and (2) on the chart also include the assets and liabilities of the Supplemental Disability Benefits Fund, and for 2007 through 2009 also include the assets and liabilities of the former Current Service Annuity Reserve Fund.

## Funded Portion of Actuarial Liabilities by Type (Pension Trust Fund)

| <b>(Amounts in Millions of Dollars)</b> |                                     |                                   |  |  |   |            |            |
|---|-------------------------------------|-----------------------------------|--|--|---|------------|------------|
| <b>Valuation Date</b>                   | <b>Actuarial Liabilities for</b>    |                                   |  | <b>Net Assets Available for Benefits</b> | <b>Portion of Actuarial Liabilities Covered by Net Assets</b> |            |            |
|   | <b>(1)</b>                          | <b>(2)</b>                        | <b>(3)</b>   |  | <b>(1)</b>  | <b>(2)</b> | <b>(3)</b> |
|   | <b>Current Member Contributions</b> | <b>Retirees and Beneficiaries</b> | <b>Current Members (Employer-Financed Portion)</b> |  |   |            |            |
| 12/31/2007                              | \$ 3,784.2                          | \$ 7,201.5                        | \$ 8,293.1   | \$ 14,203.3                              | 100.0 %   | 100.0 %    | 38.8 %     |
| 12/31/2008                              | 3,968.0                             | 7,550.3                           | 8,842.5  | 15,149.7                                 | 100.0   | 100.0      | 41.1       |
| 12/31/2009                              | 4,203.9                             | 7,941.6                           | 9,379.6  | 16,305.7                                 | 100.0   | 100.0      | 44.4       |
| 12/31/2010                              | 4,403.9                             | 7,598.6                           | 8,479.0  | 16,986.0                                 | 100.0   | 100.0      | 58.8       |
| 12/31/2011                              | 4,589.5                             | 8,188.0                           | 8,785.9  | 18,347.0                                 | 100.0   | 100.0      | 63.4       |
| 12/31/2012                              | 4,775.2                             | 8,832.0                           | 9,076.6  | 19,784.8                                 | 100.0   | 100.0      | 68.1       |
| 12/31/2013                              | 4,956.7                             | 9,861.5                           | 10,502.5   | 21,293.6                                 | 100.0   | 100.0      | 61.7       |
| 12/31/2014                              | 5,088.2                             | 10,768.5                          | 10,790.8   | 22,861.0                                 | 100.0   | 100.0      | 64.9       |
| 12/31/2015                              | 5,312.3                             | 11,615.5                          | 11,451.1   | 24,347.7                                 | 100.0   | 100.0      | 64.8       |
| 12/31/2016                              | 5,530.0                             | 12,478.4                          | 11,954.9   | 25,844.0                                 | 100.0   | 100.0      | 65.5       |

The financing objective for each TMRS plan is to finance long-term benefit promises through contributions that remain approximately level from year to year as a percentage of the city's payroll. If the contributions to each plan are level in concept and soundly executed, each plan will pay all promised benefits when due — the ultimate test of financial soundness. Testing for level contribution rates is the long-term test.

Presented above is one short-term means of checking a system's progress under its funding program. The present assets are compared with: (1) current member contributions on deposit; (2) the liabilities for future benefits to present retired lives; and (3) the employer-financed portion of the liabilities for service already rendered by current members. In a system that has been following the discipline of level percentage of payroll financing, the liabilities for current member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the employer-financed portion of liabilities for service already rendered by current members (liability 3) will be at least partially covered by the remainder of present assets. Generally, if a system has been using level cost financing, and if there are no changes in the plans of benefits, actuarial assumptions, or methods, the funded portion of liability 3 will increase over time, although it is uncommon for it to be fully funded.

Each city participating in TMRS is financially responsible for its own plan. Therefore, the aggregate numbers shown above reflect only the aggregate condition of TMRS and do not indicate the status of any one plan.





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May 19, 2017

Board of Trustees  
Texas Municipal Retirement System ("TMRS" or the "System")  
Austin, Texas

Dear Trustees:

Gabriel Roeder Smith & Company ("GRS") has performed an actuarial valuation as of December 31, 2016 for the Supplemental Death Benefits Fund which is administered by the Texas Municipal Retirement System ("TMRS") for the purposes of complying with Governmental Accounting Standards Board ("GASB") Statement No. 43. Except for healthy annuitant mortality rates, the current actuarial assumptions were developed from the actuarial investigation of the experience of TMRS over the four year period from December 31, 2010 to December 31, 2014. These assumptions were adopted in 2015 and were first used in the December 31, 2015 valuation. Healthy post-retirement mortality rates were updated based on the Mortality Experience Investigation study covering 2009 through 2011 and dated December 31, 2013 and first used in the December 31, 2013 actuarial valuation. In addition, in conjunction with this change effective December 31, 2013, the Board adopted a change in the actuarial cost method from Projected Unit Credit to Entry Age Normal. The assumptions and methods used in this valuation are summarized in the Actuarial Section of the Comprehensive Annual Financial Report (AFR). There were no changes in the actuarial assumptions or methods since the prior valuation.

It is our opinion that the recommended assumptions and methods are internally consistent and are reasonably based upon the past and anticipated long-term future experience of the System. Assumptions and methods were modified as needed for accounting purposes to conform to the requirements for disclosure as set forth in GASB Statement No. 43. We prepared all of the supporting schedules in the Actuarial Section, the Required Supplementary Information in the Financial Section including the Schedule of Funding Progress, the Schedule of Employer Contributions and the Notes to Trend Data, as well as the applicable notes to these schedules in the Financial Section of the AFR.

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 and calculated contribution rates.

The TMRS Supplemental Death Benefits Fund is an optional cost-sharing multiple-employer defined benefit group life insurance plan. It provides death benefits to both active and retired members. Each participating municipality can elect to cover just active members, or active and retired members. A supplemental death contribution rate is determined annually for each participating municipality as a percentage of that city's covered payroll. The contribution rate finances the expected benefit payments each year on a pay-as-you-go basis. However, this method does not meet the parameters under GASB

Board of Trustees

May 19, 2017

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Statements No. 43 and 45. Therefore, for purposes of meeting the GASB financial reporting requirements, retiree benefits are evaluated using the Entry Age Normal actuarial cost method for determining the Other Post-Employment Benefits ("OPEB") cost. Note, however, that the same actuarial assumptions are used for both funding and financial reporting purposes. To the extent that experience differs from what is expected, the pooled assets of the Supplemental Death Benefits Fund act as a reserve. Since the benefit from this Fund is a flat dollar amount, not subject to inflationary factors, and since the asset reserve is adequate to cover adverse experience, we believe that the pay-as-you-go funding approach is reasonable and appropriate.

The employer contribution rates for the municipalities participating in the TMRS Supplemental Death Benefits Fund are certified annually by the Board of Trustees which is responsible for establishing and maintaining the funding policy. These rates are determined actuarially, based on the plan provisions in effect as of April 1, 2017 and the actuarial assumptions and methodology adopted by the Board. The Board's current policy is that the contribution rates determined by a given actuarial valuation become effective one (1) year after the valuation date. For example, the rates determined by the December 31, 2016 actuarial valuation will be applicable for the calendar year beginning January 1, 2018 and ending December 31, 2018.

The TMRS staff supplied all of the member data and annuitant data for active and retired members as of December 31, 2016. We did not audit this data, but we did apply a number of tests to the data and we concluded that it was reasonable and consistent with the prior year's data. The TMRS staff also supplied all of the asset data and financial information as of December 31, 2016. The amounts of the assets in the actuarial valuations agree with the amounts as reported by TMRS.

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

The undersigned are independent actuaries and consultants. Both are Members of the American Academy of Actuaries, both meet all of the Qualification Standards of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems.

Respectfully submitted,



Mark R. Randall, MAAA, FCA, EA  
Chief Executive Officer



Joseph P. Newton, MAAA, FSA, EA  
Senior Consultant

**T**hese actuarial assumptions were developed primarily from the actuarial investigation of the experience of TMRS over the four-year period from December 31, 2010 to December 31, 2014. They were adopted in 2015 and first used in the December 31, 2015 actuarial valuation. The post-retirement mortality assumption for healthy annuitants is based on the Mortality Experience Investigation Study covering 2009 through 2011 and dated December 31, 2013. In conjunction with this change first used in the December 31, 2013 valuation, the System adopted the Entry Age Normal actuarial cost method.

## I. Economic Assumptions

- A. General Inflation** — General inflation is assumed to be 2.50% per year.
- B. Discount/Crediting Rates** — 4.25% per year, compounded annually, and derived as a blend of 5.00% for the portion of the benefits financed by advance funding contributions and a short-term interest rate for the portion of the benefits financed by current contributions.
- C. Overall Payroll Growth** — 3.00% per year, which is used to calculate the contribution rates for the retirement plan of each participating city as a level percentage of payroll. This represents the expected increase in total payroll. This increase rate is solely due to the effect of wage inflation on salaries, with no allowance for future membership growth.
- D. Individual Salary Increases** — Salary increases are assumed to occur once a year, on January 1. Therefore, the pay used for the period year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. Salaries are assumed to increase by the following graduated service-based scale.

| Years of Service | Rate(%) |
|------------------|---------|
| 1                | 10.50%  |
| 2                | 7.50%   |
| 3                | 7.00%   |
| 4                | 6.50%   |
| 5                | 6.00%   |
| 6                | 5.50%   |
| 7                | 5.25%   |
| 8 - 10           | 4.75%   |
| 11               | 4.50%   |
| 12 - 13          | 4.25%   |
| 14 - 16          | 4.00%   |
| 17 - 24          | 3.75%   |
| 25 +             | 3.50%   |

## II. Demographic Assumptions

### A. Termination Rates

- For the first 10 years of service, the base table rates vary by gender, entry age, and length of service. For each city, the base table is then multiplied by a factor from 75% to 125% based on the experience of the individual city in comparison to the group as a whole. A further multiplier is applied depending on an employee's classification: 1) Fire: 63%, 2) Police: 88%, or 3) Other: 108%. A sample of the base rates follows:

| Males |        | Years of Service |        |        |        |        |        |        |        |        |  |
|-------|--------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| Age   | 0      | 1                | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |  |
| 20    | 0.2920 | 0.2623           | 0.2186 | 0.1932 | 0.1850 | 0.1673 | 0.1529 | 0.1243 | 0.1022 | 0.0816 |  |
| 25    | 0.2653 | 0.2269           | 0.1812 | 0.1554 | 0.1429 | 0.1267 | 0.1148 | 0.1006 | 0.0926 | 0.0757 |  |
| 30    | 0.2451 | 0.2052           | 0.1610 | 0.1322 | 0.1079 | 0.0998 | 0.0896 | 0.0774 | 0.0744 | 0.0621 |  |
| 35    | 0.2505 | 0.2070           | 0.1577 | 0.1265 | 0.1050 | 0.0994 | 0.0848 | 0.0719 | 0.0621 | 0.0567 |  |
| 40    | 0.2467 | 0.2060           | 0.1561 | 0.1213 | 0.1046 | 0.0943 | 0.0805 | 0.0710 | 0.0601 | 0.0577 |  |
| 45    | 0.2268 | 0.1934           | 0.1556 | 0.1220 | 0.1053 | 0.0926 | 0.0813 | 0.0711 | 0.0605 | 0.0575 |  |
| 50    | 0.2078 | 0.1731           | 0.1412 | 0.1149 | 0.1016 | 0.0887 | 0.0807 | 0.0716 | 0.0604 | 0.0578 |  |
| 55    | 0.2003 | 0.1668           | 0.1265 | 0.1074 | 0.0861 | 0.0864 | 0.0771 | 0.0682 | 0.0609 | 0.0560 |  |
| 60    | 0.1999 | 0.1542           | 0.1231 | 0.1060 | 0.0790 | 0.0868 | 0.0753 | 0.0683 | 0.0571 | 0.0549 |  |
| 65    | 0.2000 | 0.1463           | 0.1238 | 0.1063 | 0.0803 | 0.0867 | 0.0757 | 0.0700 | 0.0547 | 0.0551 |  |
| 70    | 0.2000 | 0.1477           | 0.1237 | 0.1063 | 0.0802 | 0.0867 | 0.0756 | 0.0697 | 0.0551 | 0.0551 |  |

| Females |        | Years of Service |        |        |        |        |        |        |        |        |  |
|---------|--------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| Age     | 0      | 1                | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |  |
| 20      | 0.3030 | 0.2790           | 0.2221 | 0.2098 | 0.1997 | 0.2021 | 0.1536 | 0.1539 | 0.1564 | 0.1574 |  |
| 25      | 0.2782 | 0.2409           | 0.2067 | 0.1962 | 0.1710 | 0.1663 | 0.1369 | 0.1352 | 0.1186 | 0.1125 |  |
| 30      | 0.2574 | 0.2188           | 0.1949 | 0.1762 | 0.1347 | 0.1348 | 0.1276 | 0.1126 | 0.0973 | 0.0804 |  |
| 35      | 0.2424 | 0.2118           | 0.1805 | 0.1438 | 0.1273 | 0.1238 | 0.1112 | 0.1085 | 0.1000 | 0.0769 |  |
| 40      | 0.2244 | 0.1993           | 0.1614 | 0.1342 | 0.1295 | 0.1097 | 0.1023 | 0.0924 | 0.0834 | 0.0733 |  |
| 45      | 0.2191 | 0.1853           | 0.1427 | 0.1337 | 0.1054 | 0.1017 | 0.0894 | 0.0784 | 0.0705 | 0.0725 |  |
| 50      | 0.2201 | 0.1793           | 0.1347 | 0.1229 | 0.0886 | 0.0881 | 0.0823 | 0.0723 | 0.0675 | 0.0617 |  |
| 55      | 0.2200 | 0.1738           | 0.1350 | 0.1199 | 0.0834 | 0.0806 | 0.0713 | 0.0705 | 0.0685 | 0.0551 |  |
| 60      | 0.2200 | 0.1523           | 0.1350 | 0.1172 | 0.0798 | 0.0843 | 0.0646 | 0.0639 | 0.0429 | 0.0379 |  |
| 65      | 0.2200 | 0.1431           | 0.1350 | 0.1150 | 0.0800 | 0.0857 | 0.0667 | 0.0593 | 0.0276 | 0.0280 |  |
| 70      | 0.2200 | 0.1447           | 0.1350 | 0.1154 | 0.0800 | 0.0854 | 0.0664 | 0.0601 | 0.0303 | 0.0298 |  |

- After 10 years of service, base termination rates vary by gender and by the number of years remaining until first retirement eligibility. For each city, the base table is then multiplied by a factor from 75% to 125% based on the experience of the individual city in comparison to the group as a whole (same factor as above). A further multiplier is applied depending on an

# Summary of Actuarial Assumptions (Supplemental Death Benefits Fund)

Continued

employee's classification: 1) Fire: 52%, 2) Police: 79%, or 3) Other: 115%. A sample of the base rates follows:

| Years From Retirement | Males | Females |
|-----------------------|-------|---------|
| 1                     | .0172 | .0220   |
| 2                     | .0229 | .0297   |
| 3                     | .0271 | .0354   |
| 4                     | .0306 | .0401   |
| 5                     | .0335 | .0441   |
| 6                     | .0361 | .0477   |
| 7                     | .0385 | .0510   |
| 8                     | .0407 | .0540   |
| 9                     | .0428 | .0568   |
| 10                    | .0447 | .0594   |
| 11                    | .0465 | .0619   |
| 12                    | .0482 | .0643   |
| 13                    | .0498 | .0666   |
| 14                    | .0514 | .0687   |
| 15                    | .0529 | .0708   |

Termination rates end at first eligibility for retirement.

## B. Forfeiture Rates (withdrawal of member deposits from TMRS)

Rates for vested members vary by age and employer match, and they are expressed as a percentage of the termination rates shown in (A). The withdrawal rates for cities with a 2-to-1 match are shown below. 4% is added to the rates for 1½-to-1 cities, and 8% is added for 1-to-1 cities.

| Age | Percent of Terminating Employees Choosing to Take a Refund |
|-----|--|
| 25  | 41.2%  |
| 30  | 41.2%  |
| 35  | 41.2%  |
| 40  | 38.0%  |
| 45  | 32.6%  |
| 50  | 27.1%  |
| 55  | 21.7%  |

Forfeiture rates end at first eligibility for retirement.

## C. Service Retirees and Beneficiary Mortality Rates

For calculating the actuarial liability and the supplemental death contribution rates, the Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103%. The rates are projected on a fully generational basis by Scale BB to account for future mortality improvements.

## D. Disabled Annuitant Mortality Rates

For calculating the actuarial liability and the supplemental death contribution rates, the Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103% with a 3-year set-forward for both males and females. In addition, a 3% minimum mortality rate will be applied to reflect the impairment for younger members who become disabled. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements subject to the 3% floor.

**E. Pre-Retirement Mortality Rates** — For calculating the actuarial liability and the supplemental death contribution rates, the Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 54.5% and female rates multiplied by 51.5%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.

## F. Disability Rates

| Age | Males & Females |
|-----|-----------------|
| 20  | 0.000004        |
| 25  | 0.000025        |
| 30  | 0.000099        |
| 35  | 0.000259        |
| 40  | 0.000494        |
| 45  | 0.000804        |
| 50  | 0.001188        |
| 55  | 0.001647        |
| 60  | 0.002180        |
| 65  | 0.002787        |

# Summary of Actuarial Assumptions (Supplemental Death Benefits Fund)

Continued

## G. Service Retirement Rates (applied to both Active and Inactive Members)

The base table rates vary by gender, entry age group, and age. For retirees under the age of 62, the rates for active members are then multiplied by 2 factors based on 1) employee contribution rate and employer match and 2) if the city has a recurring COLA.

| Age         | Males             |            |                  | Females           |            |                  |
|-------------|-------------------|------------|------------------|-------------------|------------|------------------|
|             | Entry Age Groups  |            |                  | Entry Age Groups  |            |                  |
|             | Ages 32 and under | Ages 33-47 | Ages 48 and over | Ages 32 and under | Ages 33-47 | Ages 48 and over |
| 40-44       | 0.06              | -          | -                | 0.06              | -          | -                |
| 45-49       | 0.06              | -          | -                | 0.06              | -          | -                |
| 50-52       | 0.08              | -          | -                | 0.08              | -          | -                |
| 53          | 0.08              | 0.10       | -                | 0.08              | 0.10       | -                |
| 54          | 0.08              | 0.10       | -                | 0.11              | 0.10       | -                |
| 55-59       | 0.14              | 0.10       | -                | 0.11              | 0.10       | -                |
| 60          | 0.20              | 0.15       | 0.10             | 0.14              | 0.15       | 0.10             |
| 61          | 0.25              | 0.30       | 0.20             | 0.28              | 0.26       | 0.20             |
| 62          | 0.32              | 0.25       | 0.12             | 0.28              | 0.17       | 0.12             |
| 63          | 0.32              | 0.23       | 0.12             | 0.28              | 0.17       | 0.12             |
| 64          | 0.32              | 0.35       | 0.20             | 0.28              | 0.22       | 0.20             |
| 65          | 0.32              | 0.32       | 0.20             | 0.28              | 0.27       | 0.20             |
| 66-69       | 0.22              | 0.22       | 0.17             | 0.22              | 0.22       | 0.17             |
| 70-74       | 0.20              | 0.22       | 0.25             | 0.22              | 0.22       | 0.25             |
| 75 and over | 1.00              | 1.00       | 1.00             | 1.00              | 1.00       | 1.00             |

Note: For cities without a 20-year/any age retirement provision, the active employee rates for entry ages 32 and under are loaded by 20% for ages below 60.

Plan design factors applied to base retirement rates are as follows:

| Employer Match | Employee Contribution Rate |      |      |
|----------------|----------------------------|------|------|
|                | 5%                         | 6%   | 7%   |
| 1 - 1          | 0.75                       | 0.80 | 0.84 |
| 1.5 - 1        | 0.81                       | 0.86 | 0.92 |
| 2 - 1          | 0.86                       | 0.93 | 1.00 |

Recurring COLA: 1.00  
 No Recurring COLA: 0.90

### III. Methods and Assumptions

- A. Valuation of Assets** – For purposes of actuarial valuation, assets of the Supplemental Death Benefits Fund are valued at “fund value” (or fund balance), as these assets are pooled with those of the Pension Trust Fund under the provisions of the TMRS Act.
- B. Actuarial Cost Method** – For the Supplemental Death Benefit Fund for GASB purposes, the actuarial cost method used is the Entry Age Normal actuarial cost method. The Entry Age Normal actuarial cost method develops the annual cost of the plan in two parts: that attributable to benefits accruing in the current year, known as the normal cost, and that due to service earned prior to the current year, known as the amortization of the unfunded actuarial accrued liability. The normal cost and the actuarial accrued liability are calculated individually for each member. The normal cost rate for an employee is the contribution rate which, if applied to a member’s compensation throughout their period of anticipated covered service with the municipality, would be sufficient to meet all benefits payable on their behalf. The normal cost is calculated using an entry age based on benefit service with the current city. If a member has additional time-only vesting service through service with other TMRS cities or other public agencies, they retain this for determination of benefit eligibility and decrement rates. The unfunded actuarial accrued liability reflects the difference between the portion of projected benefits attributable to service credited prior to the valuation date and assets already accumulated.

The funding policy of this plan is to assure that adequate resources are available to meet all death benefit payments for the upcoming year; the intent is not to prefund retiree term life insurance during employees’ entire careers. As such, contributions are utilized to fund active member deaths on a pay-as-you-go basis; any excess contributions and investment income over payments then become net assets available for OPEB.

### IV. Other Assumptions

1. Inactive Population: All non-vested members of a city are assumed to take an immediate refund if they are not contributing members in another city. Vested members not contributing in another city are assumed to take a deferred retirement benefit, except for those who have terminated in the past 12 months for whom one year of forfeiture probability is assumed. The forfeiture rates for inactive members of a city who are contributing members in another city are equal to the probability of termination multiplied by the forfeiture rates shown in II(A) and II(B), respectively. These rates are applied each year until retirement eligibility. Once a member is retirement eligible, he or she is assumed to commence benefits based on the service retirement rates shown in II(G).
2. There will be no recoveries once disabled.
3. Decrement timing: Decrements of all types are assumed to occur mid-year.
4. Eligibility testing: Eligibility for benefits is determined based upon the age at the nearest birthday and service at the nearest whole year on the date the decrement is assumed to occur.
5. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

## Summary of Actuarial Assumptions (Supplemental Death Benefits Fund)

Continued

- 6.** Incidence of contributions: Contributions are assumed to be received continuously throughout the year.
- 7.** Benefit service: All members are assumed to accrue one year of eligibility service each year.
- 8.** The decrement rates for service-related decrements are based on total TMRS eligibility service.

- 1. Actuarial gain (loss)** — A measure of the difference between actual experience and that expected based upon the actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with the actuarial cost method used.
- 2. Actuarial accrued liability** — The actuarial present value of benefits attributable to all periods prior to the valuation date.
- 3. Actuarial present value** — The value of an amount or series of amounts payable or receivable at various times, determined as of a given date (the valuation date) by the application of the actuarial assumptions.
- 4. Actuarial value of assets** — The value of cash, investments, and other property belonging to the plan, as used by the actuary for the purpose of an actuarial valuation. For this OPEB plan, assets are valued at “fund value” (or fund balance) as these assets are pooled with those of the TMRS Pension Trust Fund, under the provisions of the TMRS Act.
- 5. Annual required contributions (ARC)** — The employer’s periodic required contributions to the OPEB plan, calculated in accordance with GASB parameters under Statement 43.
- 6. Entry Age Normal actuarial cost method** — The Entry Age Normal actuarial cost method develops the annual cost of the plan in two parts: that attributable to benefits accruing in the current year, known as the normal cost, and that due to service earned prior to the current year, known as the amortization of the unfunded actuarial accrued liability. The normal cost and the actuarial accrued liability are calculated individually for each member. The normal cost rate for an employee is the contribution rate which, if applied to a member’s compensation throughout their period of anticipated covered service, would be sufficient to meet all benefits payable on their behalf. The salary-weighted average of these rates is the total normal cost rate. The actuarial accrued liability is based on the portion of benefits attributable to service credited prior to the valuation date. Actuarial gains (losses), as they occur, reduce (increase) the unfunded actuarial accrued liability.
- 7. Funded ratio** — The actuarial value of assets expressed as a percentage of the actuarial accrued liability.
- 8. Funding policy** — The program for the amounts and timing of contributions to be made by plan members and employers to provide the benefits specified by an OPEB plan.
- 9. Other post-employment benefits (OPEB)** — Post-employment benefits other than pension benefits. Specifically, for TMRS, the OPEB is the \$7,500 Supplemental Death Benefit payable to the retirees of municipalities that have elected to offer this benefit.
- 10. Projected Unit Credit actuarial cost method** — A method under which the benefits of each individual included in the valuation are allocated by a consistent formula to valuation years based on years of service. Benefits are allocated equally to each year of service over the individual’s career from hire to retirement. Normal costs are based on the portion of the benefit allocated to the year following the valuation year. Accrued liabilities are based on benefits allocated to the time preceding the date of the actuarial valuation. Under this method, actuarial gains (losses), as they occur, reduce (increase) the unfunded actuarial accrued liability.
- 11. Supplemental death contribution rate** — The actuarial present value of Supplemental Death Benefits expected to be paid during the coming year, expressed as a percentage of the covered payroll. The benefits include those payable to both active and retired participants after retirement, under the provisions adopted by each municipality.
- 12. Unfunded actuarial accrued liability** — The excess of the actuarial accrued liability over the actuarial value of assets.

## Summary of Actuarial Liabilities and Funding Progress (Supplemental Death Benefits Fund)

(Amounts in Millions of Dollars)

| Annual Report Year | Actuarial Value of Assets | Actuarial Accrued Liability (AAL) | Funded Ratio (1) / (2) | Unfunded AAL (UAAL) (2) - (1) | Covered Payroll | UAAL as a Percentage of Covered Payroll (4) / (5) |
|--------------------|---------------------------|-----------------------------------|------------------------|-------------------------------|-----------------|---|
|                    | (1)                       | (2)                               | (3)                    | (4)                           | (5)             | (6)   |
| 2011               | \$ 27.7                   | \$ 139.2                          | 19.9 %                 | \$ 111.5                      | \$ 3,129.2      | 3.6 %   |
| 2012               | 25.7                      | 147.9                             | 17.4                   | 122.2                         | 3,233.4         | 3.8   |
| 2013*              | 23.9                      | 130.0                             | 18.4                   | 106.1                         | 3,363.3         | 3.2   |
| 2014               | 22.7                      | 145.4                             | 15.6                   | 122.7                         | 3,526.1         | 3.5   |
| 2015**             | 21.1                      | 154.7                             | 13.6                   | 133.6                         | 3,707.7         | 3.6   |
| 2016               | 20.6                      | 160.4                             | 12.8                   | 139.8                         | 3,887.2         | 3.6   |

Each city participating in TMRS may elect, by ordinance, to offer supplemental death benefits for their active employees, including or not including retirees. The aggregate numbers shown above reflect the aggregate condition of TMRS OPEB benefits.

\* The healthy annuitant mortality assumption was modified with the December 31, 2013 valuation, along with a change in the actuarial cost method from Projected Unit Credit to Entry Age Normal.

\*\* Actuarial assumptions were modified as of the December 31, 2015 valuation.

# Statistical



Information in this section is presented consistent with the provisions of GASB Statement No. 44, *Economic Condition Reporting: The Statistical Section*. The objective of the Statistical Section is to provide statement users with additional historical perspective, context, and detail to assist in using the information in the Financial Statements, Notes to Financial Statements, and Required Supplementary Information to understand and assess a government's economic condition.

The Schedule of Changes in Fiduciary Net Position is presented for the ten-year period ending December 31, 2016. Trend information presented in this schedule is extracted from the Statements of Changes in Fiduciary Net Position located in the Financial Section of this report.

The Schedule of Average Benefit Payments over the last ten years provides information on the average monthly benefit and number of retired members categorized in five-year increments of credited service.

The Schedule of Retired Members by Type of Benefit presents data about the major plan options selected by current retired members. Numbers of retired members are organized by ranges of benefit levels and by major plan features or options.

For multiple-employer plans, a Schedule of Principal Participating Employers for the current period and nine years prior is required. This schedule shows each employer's number of covered employees and each employer's percentage of total covered employees for the top ten participating employers.

The Plan Provisions for Participating Municipalities presents a summary of provisions in effect as of December 31, 2016 for each participating municipality.

# Schedule of Changes in Fiduciary Net Position

## Pension Trust Fund • Schedule of Changes in Fiduciary Net Position • Last Ten Fiscal Years For the Year Ended December 31

|   | 2007                    | 2008                 | 2009                    | 2010                    | 2011                  | 2012                    | 2013                    | 2014                    | 2015                   | 2016                    |
|---|-------------------------|----------------------|-------------------------|-------------------------|-----------------------|-------------------------|-------------------------|-------------------------|------------------------|-------------------------|
| <b>Additions to net position by source</b>            |                         |                      |                         |                         |                       |                         |                         |                         |                        |                         |
| Employer contributions                                | \$ 512,946,909          | \$ 567,236,252       | \$ 641,747,222          | \$ 679,270,766          | \$ 703,778,739        | \$ 664,852,429          | \$ 681,469,222          | \$ 719,904,310          | \$ 751,708,718         | \$ 768,252,338          |
| Member contributions                                  | 275,982,103             | 297,953,970          | 313,475,829             | 315,643,308             | 318,986,168           | 327,363,043             | 339,906,924             | 355,413,935             | 376,103,505            | 389,919,391             |
| Net investment income (loss)                          | 1,079,627,010           | (261,043,208)        | 1,483,308,952           | 1,496,328,020           | 434,765,653           | 1,863,280,541           | 1,974,888,477           | 1,285,344,179           | 35,011,429             | 1,602,187,418           |
| Other   | -                       | -                    | -                       | 32,109                  | 24,289                | 13,962                  | 17,961                  | 29,491                  | 3,900                  | 25,956                  |
| <b>Total additions to net position</b>                | <b>1,868,556,022</b>    | <b>604,147,014</b>   | <b>2,438,532,003</b>    | <b>2,491,274,203</b>    | <b>1,457,554,849</b>  | <b>2,855,509,975</b>    | <b>2,996,282,584</b>    | <b>2,360,691,915</b>    | <b>1,162,827,552</b>   | <b>2,760,385,103</b>    |
| <b>Deductions from plan net position by type</b>      |                         |                      |                         |                         |                       |                         |                         |                         |                        |                         |
| Benefit payments                                      | 482,329,053             | 530,045,818          | 580,156,863             | 619,236,211             | 675,504,722           | 729,636,554             | 794,458,670             | 861,959,010             | 937,848,878            | 1,005,485,139           |
| Service retirements                                   | 14,449,226              | 14,806,934           | 15,394,675              | 15,469,400              | 15,923,372            | 16,049,912              | 16,469,149              | 16,873,699              | 16,775,098             | 17,019,188              |
| Disability retirements                                | 99,394,156              | 103,177,637          | 90,140,135              | 108,761,489             | 118,889,171           | 119,250,573             | 135,568,703             | 149,739,411             | 148,161,053            | 139,559,781             |
| Partial lump sum distributions                        | 596,172,435             | 648,030,389          | 685,691,673             | 743,467,100             | 810,317,265           | 864,937,039             | 946,496,522             | 1,028,572,120           | 1,102,785,029          | 1,162,064,108           |
| Total benefit payments                                | 50,722,429              | 48,205,272           | 43,917,853              | 48,385,106              | 55,050,211            | 56,756,327              | 56,856,706              | 58,174,242              | 55,742,784             | 52,935,465              |
| Refunds   | 1,899,514               | 881,547              | 1,389,635               | 656,521                 | 616,077               | 1,086,396               | 870,968                 | 548,881                 | 1,232,485              | 1,246,130               |
| Withdrawal/Ineligibility                              | 52,621,943              | 49,086,819           | 45,307,488              | 49,041,627              | 55,666,288            | 57,842,723              | 57,727,674              | 58,723,123              | 56,975,269             | 54,181,595              |
| Death   | 11,504,442              | 11,672,174           | 10,509,869              | 10,634,956              | 11,439,672            | 12,114,375              | 12,821,721              | 13,419,567              | 21,325,422             | 18,095,315              |
| Total refunds   | 1,168,506               | 1,229,567            | 1,304,784               | 1,312,293               | 1,331,570             | 1,310,740               | 1,202,065               | 1,132,803               | 1,057,178              | 1,000,892               |
| Administrative expenses                               | 67,161                  | 27,675               | 4,317                   | -                       | -                     | -                       | -                       | -                       | -                      | -                       |
| Income allocation to Supplemental Death Benefits Fund | 661,534,487             | 710,046,624          | 742,818,131             | 804,455,976             | 878,754,795           | 936,204,877             | 1,018,247,982           | 1,101,847,613           | 1,182,142,898          | 1,235,341,910           |
| Other   |                         |                      |                         |                         |                       |                         |                         |                         |                        |                         |
| <b>Total deductions from net position</b>             | <b>\$ 1,207,021,535</b> | <b>(105,899,610)</b> | <b>\$ 1,695,713,872</b> | <b>\$ 1,686,818,227</b> | <b>\$ 578,800,054</b> | <b>\$ 1,919,305,098</b> | <b>\$ 1,978,034,602</b> | <b>\$ 1,258,844,302</b> | <b>\$ (19,315,346)</b> | <b>\$ 1,525,043,193</b> |
| <b>Net increase/(decrease) in net position</b>        |                         |                      |                         |                         |                       |                         |                         |                         |                        |                         |

# Schedule of Changes in Fiduciary Net Position

Continued

## Supplemental Death Benefits Fund Schedule of Changes in Fiduciary Net Position • Last Ten Fiscal Years For the Year Ended December 31

|   | 2007        | 2008        | 2009        | 2010        | 2011        | 2012          | 2013          | 2014          | 2015          | 2016        |
|---|-------------|-------------|-------------|-------------|-------------|---------------|---------------|---------------|---------------|-------------|
| Additions to net position by source       |             |             |             |             |             |               |               |               |               |             |
| Employer contributions                    | \$7,397,969 | \$8,143,084 | \$7,066,638 | \$6,465,510 | \$6,978,502 | \$5,248,375   | \$5,673,095   | \$6,126,769   | \$6,507,371   | \$6,983,501 |
| Income allocation from Pension Trust Fund | 1,168,506   | 1,229,567   | 1,304,784   | 1,312,293   | 1,331,570   | 1,310,740     | 1,202,065     | 1,132,803     | 1,057,178     | 1,000,892   |
| Total additions to net position           | 8,566,475   | 9,372,651   | 8,371,422   | 7,777,803   | 8,310,072   | 6,559,115     | 6,875,160     | 7,259,572     | 7,564,549     | 7,984,393   |
| Deductions from net position by type      |             |             |             |             |             |               |               |               |               |             |
| Supplemental death benefits - active      | 3,842,128   | 4,676,623   | 4,103,254   | 4,230,688   | 4,063,675   | 5,001,559     | 4,462,634     | 4,164,899     | 4,964,631     | 3,759,923   |
| Supplemental death benefits - retiree     | 3,002,500   | 3,268,402   | 3,223,750   | 3,652,500   | 3,562,500   | 3,618,125     | 4,187,500     | 4,285,094     | 4,190,144     | 4,726,250   |
| Total deductions from net position        | 6,844,628   | 7,945,025   | 7,327,004   | 7,883,188   | 7,626,175   | 8,619,684     | 8,650,134     | 8,449,993     | 9,154,775     | 8,486,173   |
| Net increase/(decrease) in net position   | \$1,721,847 | \$1,427,626 | \$1,044,418 | \$(105,385) | \$683,897   | \$(2,060,569) | \$(1,774,974) | \$(1,190,421) | \$(1,590,226) | \$(501,780) |

# Schedule of Average Benefit Payments

## Retirement Effective Dates • Jan. 1, 2007 — Dec. 31, 2016

| For Year Ended December 31: | Years Credited Service |          |            |            |            |            |            |
|-----------------------------|------------------------|----------|------------|------------|------------|------------|------------|
|                             | 0-<5                   | 5-<10    | 10-<15     | 15-<20     | 20-<25     | 25-<30     | 30 +       |
| <b>2007</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$159.32               | \$310.85 | \$704.23   | \$978.74   | \$1,376.86 | \$1,992.61 | \$2,976.80 |
| Number of Active Retirees   | 56                     | 257      | 288        | 310        | 654        | 488        | 412        |
| <b>2008</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$165.91               | \$320.16 | \$777.41   | \$1,078.26 | \$1,303.02 | \$2,089.79 | \$3,246.20 |
| Number of Active Retirees   | 73                     | 250      | 325        | 283        | 639        | 484        | 445        |
| <b>2009</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$155.89               | \$365.77 | \$699.60   | \$1,117.62 | \$1,399.44 | \$2,101.03 | \$3,256.80 |
| Number of Active Retirees   | 68                     | 244      | 301        | 303        | 574        | 438        | 382        |
| <b>2010</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$179.95               | \$374.28 | \$775.66   | \$1,086.18 | \$1,414.72 | \$2,086.73 | \$3,402.20 |
| Number of Active Retirees   | 87                     | 296      | 365        | 321        | 614        | 483        | 527        |
| <b>2011</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$192.08               | \$364.59 | \$773.29   | \$1,144.72 | \$1,438.07 | \$2,191.75 | \$3,634.16 |
| Number of Active Retirees   | 85                     | 337      | 337        | 335        | 658        | 519        | 540        |
| <b>2012</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$209.76               | \$370.74 | \$837.42   | \$1,253.33 | \$1,525.77 | \$2,267.20 | \$3,598.25 |
| Number of Active Retirees   | 102                    | 353      | 406        | 319        | 641        | 488        | 634        |
| <b>2013</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$218.94               | \$402.34 | \$837.41   | \$1,226.22 | \$1,535.92 | \$2,246.41 | \$3,463.35 |
| Number of Active Retirees   | 88                     | 426      | 455        | 370        | 675        | 577        | 656        |
| <b>2014</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$223.90               | \$429.36 | \$860.37   | \$1,340.43 | \$1,597.50 | \$2,386.99 | \$3,940.89 |
| Number of Active Retirees   | 111                    | 427      | 471        | 385        | 770        | 619        | 812        |
| <b>2015</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$198.34               | \$427.51 | \$979.05   | \$1,231.53 | \$1,531.45 | \$2,411.38 | \$4,030.21 |
| Number of Active Retirees   | 104                    | 407      | 425        | 430        | 646        | 541        | 672        |
| <b>2016</b>                 |                        |          |            |            |            |            |            |
| Average Monthly Benefit     | \$203.35               | \$444.09 | \$1,005.40 | \$1,298.39 | \$1,628.25 | \$2,482.32 | \$4,124.83 |
| Number of Active Retirees*  | 103                    | 443      | 460        | 442        | 680        | 528        | 717        |

\* Excludes 83 retirees in 2016 electing a “cash out” in lieu of a monthly benefit.

Note: The above schedule does not include information about the average final average salary. Such information is not relevant to TMRS as the annuity payment is not based on the individual’s final salary.

## Schedule of Retired Members by Type of Benefit

| Amount of Monthly Benefit | Annuity Recipients |             | Type of Benefit |            | Life Only |           | Survivor Lifetime Options |       |       |       | Guaranteed Term Options |        |        |        |
|---------------------------|--------------------|-------------|-----------------|------------|-----------|-----------|---------------------------|-------|-------|-------|-------------------------|--------|--------|--------|
|                           | Retirees           | Beneficiary | Service         | Disability | Retiree   | Alternate | 100%                      | 75%   | 50%   | 2/3   | 5 yrs                   | 10 yrs | 15 yrs |        |
| \$ 0 - 100                | 759                | 132         | 808             | 83         | 195       | 144       | 378                       | 21    | 61    | 11    | 26                      | 17     | 38     |        |
| \$ 101- 500               | 8,139              | 1,874       | 9,380           | 633        | 2,652     | 767       | 3,419                     | 318   | 1,098 | 178   | 451                     | 351    | 779    |        |
| \$ 501-1,000              | 9,448              | 1,815       | 10,767          | 496        | 2,743     | 347       | 3,768                     | 520   | 1,563 | 275   | 712                     | 448    | 887    |        |
| \$ 1,001-1,500            | 7,915              | 1,187       | 8,879           | 223        | 2,173     | 148       | 3,052                     | 530   | 1,409 | 259   | 550                     | 296    | 685    |        |
| \$ 1,501- 2,000           | 5,591              | 641         | 6,156           | 76         | 1,503     | 51        | 1,969                     | 411   | 987   | 235   | 401                     | 238    | 437    |        |
| \$ 2,001- 2,500           | 4,023              | 415         | 4,404           | 34         | 1,107     | 28        | 1,322                     | 307   | 751   | 187   | 298                     | 144    | 294    |        |
| \$ 2,501- 3,000           | 2,874              | 264         | 3,131           | 7          | 781       | 14        | 885                       | 233   | 581   | 131   | 228                     | 97     | 188    |        |
| \$ 3,001- 3,500           | 2,130              | 176         | 2,302           | 4          | 573       | 8         | 608                       | 199   | 453   | 83    | 181                     | 66     | 135    |        |
| \$ 3,501- 4,000           | 1,447              | 100         | 1,542           | 5          | 418       | 4         | 360                       | 145   | 288   | 62    | 128                     | 63     | 79     |        |
| \$ 4,001 & Over           | 3,933              | 159         | 4,091           | 1          | 1,124     | 4         | 857                       | 530   | 865   | 124   | 264                     | 123    | 201    |        |
| Subtotals                 | 46,259             | 6,763       | 51,460          | 1,562      | 13,269    | 1,515     | 16,618                    | 3,214 | 8,056 | 1,545 | 3,239                   | 1,843  | 3,723  |        |
| Totals                    | 53,022             |             | 53,022          |            |           |           |                           |       |       |       |                         |        |        | 53,022 |

Note: Excluded from this schedule are 813 retirees who retired with a “cash out” in lieu of a monthly annuity, and who remain eligible for the retiree supplemental death benefit.

**Retiree Life Only** — A retirement annuity payable monthly as long as the retiree lives. Upon the retiree’s death, all payments will cease even though the retiree may have received only one monthly payment.\*

**Retiree Life – 100% Survivor Benefit** — A retirement annuity payable throughout the life of the retiree. Upon the death of the retiree, the same amount is payable throughout the life of the designated beneficiary. If the beneficiary dies before the retiree, the monthly payments the retiree will receive after that will be increased to the amount that would have been payable throughout the retiree’s lifetime only (Retiree Life Only).\*

**Retiree Life – 75% Survivor Benefit** — A retirement annuity payable throughout the life of the retiree. Upon the death of the retiree,  $\frac{3}{4}$  the amount is payable throughout the life of the designated beneficiary. If the beneficiary dies before the retiree, the monthly payments the retiree will receive after that will be increased to the amount that would have been payable throughout the retiree’s lifetime only (Retiree Life Only).\*

**Retiree Life – 50% Survivor Benefit** — A retirement annuity payable throughout the life of the retiree. Upon the death of the retiree,  $\frac{1}{2}$  the amount is payable throughout the life of the designated beneficiary. If the beneficiary dies before the retiree, the monthly payments the retiree will receive after that will be increased to the amount that would have been payable throughout the retiree’s lifetime only (Retiree Life Only).\*

**Retiree Life – 2/3 Survivor Benefit (no longer available)** — A retirement annuity payable throughout the life of the retiree. Upon the death of the retiree,  $\frac{2}{3}$  the amount is payable throughout the life of the designated beneficiary. If the beneficiary dies before the retiree, the monthly payments the retiree will receive after that will be increased to the amount that would have been payable throughout the retiree’s lifetime only (Retiree Life Only).\*

**Retiree Life – 5 Years Guaranteed** — A retirement annuity payable throughout the life of the retiree. If the retiree dies before the expiration of a 5-year period after the date of retirement, the designated beneficiary, or if one does not exist, the retiree’s estate, will receive the same amount for the balance of the 5-year period, and then all payments cease.\*

**Retiree Life – 10 Years Guaranteed** — A retirement annuity payable throughout the life of the retiree. If the retiree dies before the expiration of a 10-year period after the date of retirement, the designated beneficiary, or if one does not exist, the retiree’s estate, will receive the same amount for the balance of the 10-year period, and then all payments cease.\*

**Retiree Life – 15 Years Guaranteed** — A retirement annuity payable throughout the life of the retiree. If the retiree dies before the expiration of a 15-year period after the date of retirement, the designated beneficiary, or if one does not exist, the retiree’s estate, will receive the same amount for the balance of the 15-year period, and then all payments cease.\*

\* If all eligible recipients die before receiving benefits at least equal to the member deposits and interest in the retiree’s account at the time of retirement, the remaining balance will be paid to the retiree’s estate or beneficiary. If the retiree elected to receive a partial lump sum distribution, the amount of that distribution will reduce the member deposits and interest used for this calculation.

# Schedule of Principal Participating Employers

## Pension Trust Fund Current Year and Nine Years Ago

| Participating Municipality | 2016 |                           |                     | 2007 |                           |                     |
|----------------------------|------|---------------------------|---------------------|------|---------------------------|---------------------|
|                            | Rank | Current Employee Accounts | Percentage of Total | Rank | Current Employee Accounts | Percentage of Total |
| San Antonio                | 1    | 6,797                     | 6.2 %               | 1    | 6,336                     | 6.4 %               |
| Arlington                  | 2    | 2,462                     | 2.3                 | 3    | 2,393                     | 2.4                 |
| Corpus Christi             | 3    | 2,358                     | 2.2                 | 2    | 2,543                     | 2.6                 |
| Plano                      | 4    | 2,270                     | 2.1                 | 4    | 2,213                     | 2.2                 |
| Laredo                     | 5    | 2,134                     | 2.0                 | 6    | 1,936                     | 2.0                 |
| Garland                    | 6    | 1,967                     | 1.8                 | 5    | 2,003                     | 2.0                 |
| Amarillo                   | 7    | 1,809                     | 1.7                 | 9    | 1,599                     | 1.6                 |
| Lubbock                    | 8    | 1,743                     | 1.6                 | 7    | 1,631                     | 1.7                 |
| San Antonio Water System   | 9    | 1,648                     | 1.5                 | 8    | 1,604                     | 1.6                 |
| McAllen                    | 10   | 1,579                     | 1.4                 | 12   | 1,376                     | 1.4                 |
| All other                  |      | 84,124                    | 77.2                |      | 75,181                    | 76.1                |
| <b>Total</b>               |      | <b>108,891</b>            | <b>100.0 %</b>      |      | <b>98,815</b>             | <b>100.0 %</b>      |

## Supplemental Death Benefits Fund Current Year and Nine Years Ago

| Participating Municipality | 2016 |                           |                    |                |                     | 2007 |                           |                    |                |                     |
|----------------------------|------|---------------------------|--------------------|----------------|---------------------|------|---------------------------|--------------------|----------------|---------------------|
|                            | Rank | Current Employee Accounts | Annuitant Accounts | Total Accounts | Percentage of Total | Rank | Current Employee Accounts | Annuitant Accounts | Total Accounts | Percentage of Total |
| Arlington                  | 1    | 2,462                     | 1,325              | 3,787          | 3.8 %               | 1    | 2,344                     | 828                | 3,172          | 3.8 %               |
| Garland                    | 2    | 1,967                     | 1,036              | 3,003          | 3.0                 | 2    | 1,981                     | 658                | 2,639          | 3.2                 |
| Laredo                     | 3    | 2,134                     | 719                | 2,853          | 2.9                 | 3    | 1,929                     | 473                | 2,402          | 2.9                 |
| Irving                     | 4    | 1,421                     | 731                | 2,152          | 2.2                 | 4    | 1,448                     | 419                | 1,867          | 2.3                 |
| Grand Prairie              | 5    | 1,283                     | 531                | 1,814          | 1.8                 | 7    | 1,137                     | 273                | 1,410          | 1.7                 |
| Abilene                    | 6    | 1,023                     | 645                | 1,668          | 1.7                 | 5    | 986                       | 444                | 1,430          | 1.7                 |
| Denton                     | 7    | 1,245                     | 398                | 1,643          | 1.6                 | 10   | 980                       | 252                | 1,232          | 1.5                 |
| Brownsville                | 8    | 1,158                     | 435                | 1,593          | 1.6                 | 8    | 1,089                     | 233                | 1,322          | 1.6                 |
| Pasadena                   | 9    | 980                       | 573                | 1,553          | 1.5                 | 6    | 971                       | 454                | 1,425          | 1.7                 |
| Killeen                    | 10   | 1,004                     | 392                | 1,396          | 1.4                 | 12   | 816                       | 199                | 1,015          | 1.2                 |
| All other                  |      | 57,639                    | 20,648             | 78,287         | 78.5                |      | 52,642                    | 12,302             | 64,944         | 78.4                |
| <b>Total</b>               |      | <b>72,316</b>             | <b>27,433</b>      | <b>99,749</b>  | <b>100.0 %</b>      |      | <b>66,323</b>             | <b>16,535</b>      | <b>82,858</b>  | <b>100.0 %</b>      |

# Plan Provisions For Participating Municipalities

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>Ⓣ</sup> (%)          | Year Effective |  |                        |
| Abernathy                  | 5%                    | 1-1                              | 100 T                  | 1995R          | 30                             | 1995R          |  |                        |
| Abilene                    | 7%                    | 2-1                              | 100 T                  | 2004R          | 50                             | 2012           | 1-90                                   |                        |
| Addison                    | 7%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 2015           | 12-88                                  | 11-09-88               |
| Alamo                      | 5%                    | 1.5-1                            | 100 T                  | 2007R          | 70                             | 2007R          |  | 12-17-02               |
| Alamo Heights              | 6%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 1-99                                   |                        |
| Alba                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Albany                     | 5%                    | 1.5-1                            | 100 T                  | 2014R          |                                |                | 9-98                                   |                        |
| Aledo                      | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Alice                      | 5%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          |  |                        |
| Allen                      | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 1-88                                   | 5-11-04                |
| Alpine                     | 5%                    | 2-1                              | 100                    | 1988           | 70                             | 1988           |  |                        |
| Alto                       | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          |  |                        |
| Alton                      | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  | 8-15-00                |
| Alvarado                   | 6%                    | 2-1                              |                        |                |                                |                |  |                        |
| Alvin                      | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 10-87                                  | 10-01-92               |
| Alvord                     | 5%                    | 2-1                              | 100                    | 2008           |                                |                |  |                        |
| Amarillo                   | 7%                    | 2-1                              | 100                    | 2013R          | 70                             | 2010           | 1-86                                   | 9-19-06                |
| Amherst                    | 5%                    | 1-1                              | 100                    | 2001R          | 70                             | 2001R          |  |                        |
| Anahuac                    | 5%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 10-06                                  |                        |
| Andrews                    | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 10-02                                  |                        |
| Angleton                   | 6%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 1-04                                   | 8-17-93                |
| Anna                       | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| Annetta                    | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Anson                      | 5%                    | 1-1                              |                        |                |                                |                |  | 6-27-16                |
| Anthony                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Aransas Pass               | 6%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 10-89                                  |                        |
| Arcola                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Archer City                | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Argyle                     | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 12-02                                  | 6-28-05                |
| Arlington                  | 7%                    | 2-1                              | 100 T                  | 1998R          | 50                             | 2011R          | 1-89                                   | 3-13-01                |
| Arp                        | 5%                    | 1-1                              | 100                    | 1994R          |                                |                |  |                        |
| Aspermont                  | 5%                    | 1-1                              | 100                    | 1989           |                                |                |  |                        |
| Athens                     | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 6-84                                   | 12-26-89               |
| Atlanta                    | 5%                    | 1-1                              | 100 T                  | 1994R          | 70                             | 1999R          |  |                        |
| Aubrey                     | 7%                    | 1.5-1                            | 100                    | 1990           |                                |                |  |                        |
| Avinger                    | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Azle                       | 6%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Baird                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Balch Springs              | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 4-99                                   |                        |
| Balcones Heights           | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 11-93                                  | 2-14-94                |

# Plan Provisions For Participating Municipalities

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-02   | X                           | X        | 7.50%                 | Abernathy                  | 00004       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-95   | X                           | X        | REMOVED               | Abilene                    | 00006       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-92   | X                           | X        | 15.50%                | Addison                    | 00007       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-03   | X                           | X        | 9.50%                 | Alamo                      | 00010       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-99   | X                           | X        | REMOVED               | Alamo Heights              | 00012       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Alba                       | 00014       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 9-98   | X                           | X        | 9.50%                 | Albany                     | 00016       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Aledo                      | 00017       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   |                             |          | 11.50%                | Alice                      | 00018       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-96   | X                           | X        | REMOVED               | Allen                      | 00019       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-99   | X                           | X        | 11.50%                | Alpine                     | 00020       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-09   | X                           | X        | 13.50%                | Alto                       | 00022       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 4-99   | X                           | X        | 13.50%                | Alton                      | 00023       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Alvarado                   | 00024       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-92   | X                           | X        | REMOVED               | Alvin                      | 00026       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Alvord                     | 00028       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   |                             |          | REMOVED               | Amarillo                   | 00030       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-00   |                             |          | REMOVED               | Amherst                    | 00032       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-06  | X                           | X        | REMOVED               | Anahuac                    | 00034       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  |                             |          | REMOVED               | Andrews                    | 00036       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    |  | X                           | X        | 12.50%                | Angleton                   | 00038       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Anna                       | 00040       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Annetta                    | 00041       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Anson                      | 00044       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-05  | X                           | X        | REMOVED               | Anthony                    | 00045       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 10-91  | X                           | X        | REMOVED               | Aransas Pass               | 00048       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Arcola                     | 00049       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Archer City                | 00050       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-02  |                             |          | REMOVED               | Argyle                     | 00051       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-93   | X                           | X        | REMOVED               | Arlington                  | 00052       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-92   | X                           | X        | 7.50%                 | Arp                        | 00054       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Aspermont                  | 00060       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-00   | X                           | X        | REMOVED               | Athens                     | 00062       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-09   | X                           | X        | 7.50%                 | Atlanta                    | 00064       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Aubrey                     | 00066       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Avinger                    | 00074       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-96   | X                           | X        | 12.50%                | Azle                       | 00075       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Baird                      | 00077       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Balch Springs              | 00078       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-95  | X                           | X        | REMOVED               | Balcones Heights           | 00079       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Ballinger                  | 5%                    | 1-1                              | 100 T                  | 1993R          | 70                             | 1993R          |  | 3-05-07                |
| Balморhea                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Bandera                    | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Bangs                      | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          |  |                        |
| Bartlett                   | 7%                    | 1.5-1                            | 100 T                  | 2014R          | 70                             | 2014R          |  |                        |
| Bartonville                | 7%                    | 2-1                              | 100 T                  | 2012           | 70                             | 2012           |  | 12-20-05               |
| Bastrop                    | 6%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          |  |                        |
| Bay City                   | 5%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-84                                   |                        |
| Bayou Vista                | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Baytown                    | 7%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          | 11-84                                  | 1-28-88                |
| Beaumont                   | 7%                    | 2-1                              | 100 T                  | 2012R          | 70                             | 2012R          | 1-89                                   | 9-12-95                |
| Bedford                    | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Bee Cave                   | 7%                    | 2-1                              | 100 T                  | 2001R          |                                |                |  |                        |
| Beeville                   | 5%                    | 2-1                              | 30                     | 1991           |                                |                |  |                        |
| Bellaire                   | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Bellmead                   | 6%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          |  |                        |
| Bells                      | 5%                    | 1-1                              | 100                    | 1993           |                                |                |  |                        |
| Bellville                  | 5%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 1-90                                   | 9-19-94                |
| Belton                     | 5%                    | 2-1                              | 100 T                  | 2004R          | 30                             | 2004R          | 9-91                                   |                        |
| Benbrook                   | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Berryville                 | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Bertram                    | 5%                    | 1-1                              |                        |                |                                |                | 10-01                                  |                        |
| Big Lake                   | 7%                    | 2-1                              | 100 T                  | 2014R          | 70                             | 2014R          |  |                        |
| Big Sandy                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Big Spring                 | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 1-90                                   | 7-10-01                |
| Bishop                     | 5%                    | 1-1                              | 100 T                  | 2010R          | 70                             | 2010R          |  |                        |
| Blanco                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Blooming Grove             | 5%                    | 2-1                              | 100 T                  | 2002R          |                                |                |  |                        |
| Blossom                    | 5%                    | 2-1                              | 100 T                  | 1996R          |                                |                |  |                        |
| Blue Mound                 | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Blue Ridge                 | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Boerne                     | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 12-02                                  | 11-26-02               |
| Bogata                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Bonham                     | 6%                    | 1.5-1                            | 100 T                  | 2008R          | 50                             | 1976           |  | 5-06-96                |
| Booker                     | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Borger                     | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 2005R          | 5-99                                   | 1-04-88                |
| Bovina                     | 5%                    | 1-1                              | 50                     | 1990           |                                |                |  |                        |
| Bowie                      | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          | 10-00                                  |                        |
| Boyd                       | 7%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Brady                      | 6%                    | 2-1                              | 100 T                  | 2012R          | 70                             | 2012R          |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Ballinger                  | 00080       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Balmorhea                  | 00082       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Bandera                    | 00083       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Bangs                      | 00084       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Bartlett                   | 00090       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Bartonville                | 00091       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-01  | X                           | X        | 12.50%                | Bastrop                    | 00092       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 12-05  | X                           | X        | 11.50%                | Bay City                   | 00094       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Bayou Vista                | 00093       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-96   | X                           | X        | REMOVED               | Baytown                    | 00096       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-96  |                             |          | REMOVED               | Beaumont                   | 00098       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | REMOVED               | Bedford                    | 00100       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-99  | X                           | X        | 13.50%                | Bee Cave                   | 00101       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-12   |                             |          | 11.50%                | Beeville                   | 00102       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-00   | X                           | X        | REMOVED               | Bellaire                   | 00106       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 12-11  | X                           | X        | 12.50%                | Bellmead                   | 00109       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Bells                      | 00110       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-92   | X                           | X        | REMOVED               | Bellville                  | 00112       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | 11.50%                | Belton                     | 00114       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Benbrook                   | 00118       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Berryville                 | 00121       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-01  |                             |          | 7.50%                 | Bertram                    | 00123       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 9-97   | X                           | X        | REMOVED               | Big Lake                   | 00124       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-09   | X                           | X        | 7.50%                 | Big Sandy                  | 00126       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Big Spring                 | 00128       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-07   | X                           | X        | 11.50%                | Bishop                     | 00132       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-05  | X                           | X        | 7.50%                 | Blanco                     | 00134       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-17   | X                           | X        | 11.50%                | Blooming Grove             | 00140       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-00  | X                           | X        | 11.50%                | Blossom                    | 00142       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-10  | X                           | X        | REMOVED               | Blue Mound                 | 00143       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-02   | X                           | X        | REMOVED               | Blue Ridge                 | 00144       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Boerne                     | 00148       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Bogata                     | 00150       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-96   |                             |          | 10.50%                | Bonham                     | 00152       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Booker                     | 00154       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-98   | X                           | X        | REMOVED               | Borger                     | 00156       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 12-09  | X                           | X        | 7.50%                 | Bovina                     | 00158       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-02   | X                           | X        | 11.50%                | Bowie                      | 00160       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 11.50%                | Boyd                       | 00162       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-01   | X                           | X        | 12.50%                | Brady                      | 00166       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality  | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|-----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                             |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Brazoria                    | 5%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          |  |                        |
| Breckenridge                | 5%                    | 1.5-1                            | 100 T                  | 1993R          | 70                             | 1993R          |  |                        |
| Bremond                     | 7%                    | 2-1                              | 100                    | 2014           |                                |                |  |                        |
| Brenham                     | 5%                    | 2-1                              | 100 T                  | 2017R          | 70                             | 2017           |  |                        |
| Bridge City                 | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          |  | 12-04-90               |
| Bridgeport                  | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 11-03                                  |                        |
| Bronte                      | 6%                    | 1-1                              | 50 T                   | 2012R          |                                |                |  |                        |
| Brookshire                  | 5%                    | 2-1                              | 100                    | 1992R          | 30                             | 2013R          | 10-87                                  |                        |
| Brownfield                  | 5%                    | 2-1                              | 100 T                  | 1992R          | 50                             | 1992R          | 1-82                                   | 12-01-05               |
| Brownsville                 | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 10-89                                  |                        |
| Brownsville PUB             | 7%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 2016R          | 1-87                                   |                        |
| Brownwood                   | 7%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 1994R          |  | 2-27-01                |
| Brownwood Health Department | 7%                    | 2-1                              | 70 T                   | 1994R          |                                |                |  |                        |
| Brownwood Public Library    | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Bruceville-Eddy             | 7%                    | 1.5-1                            | 100 T                  | 2000R          |                                |                |  |                        |
| Bryan                       | 7%                    | 2-1                              | 100 T                  | 2002R          | 50                             | 2013R          | 12-89                                  | 8-23-05                |
| Bryson                      | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Buda                        | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| Buffalo                     | 5%                    | 2-1                              |                        |                |                                |                |  | 2-14-00                |
| Bullard                     | 5%                    | 2-1                              | 100                    | 2009R          |                                |                |  | 8-11-05                |
| Bulverde                    | 6%                    | 2-1                              | 100 T                  | 2005R          |                                |                |  |                        |
| Bunker Hill Village         | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 2009           |  |                        |
| Burkburnett                 | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2008           | 9-89                                   | 8-21-89                |
| Burleson                    | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 1-90                                   |                        |
| Burnet                      | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 6-90                                   |                        |
| Burton                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Cactus                      | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Caddo Mills                 | 6%                    | 2-1                              |                        |                |                                |                |  |                        |
| Caldwell                    | 5%                    | 2-1                              | 100 T                  | 2000R          | 50                             | 2000R          | 2-04                                   |                        |
| Calvert                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Cameron                     | 5%                    | 1.5-1                            | 100 T                  | 2013R          | 70                             | 2013R          | 5-93                                   |                        |
| Campbell                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Canadian                    | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Caney City                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Canton                      | 7%                    | 2-1                              | 100 T                  | 2011R          | 30                             | 2011R          | 10-92                                  |                        |
| Canyon                      | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 9-87                                   | 8-23-99                |
| Carmine                     | 5%                    | 1-1                              | 100 T                  | 1993R          | 70                             | 1993R          |  |                        |
| Carrizo Springs             | 5%                    | 1.5-1                            | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Carrollton                  | 7%                    | 2-1                              | 75                     | 2009R          | 50                             | 2010R          |  |                        |
| Carthage                    | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1993R          | 2-01                                   | 5-08-06                |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality  | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|-----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                             |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-03   | X                           | X        | 11.50%                | Brazoria                    | 00170       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Breckenridge                | 00172       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Bremond                     | 00174       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   |                             |          | 11.50%                | Brenham                     | 00176       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 3-95   | X                           | X        | REMOVED               | Bridge City                 | 00177       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-03  | X                           | X        | 13.50%                | Bridgeport                  | 00178       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Bronte                      | 00180       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Brookshire                  | 00182       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-06   |                             |          | REMOVED               | Brownfield                  | 00184       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-99   | X                           | X        | REMOVED               | Brownsville                 | 10188       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-96   | X                           | X        | REMOVED               | Brownsville PUB             | 20188       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-98   |                             |          | REMOVED               | Brownwood                   | 10190       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-09   |                             |          | REMOVED               | Brownwood Health Department | 30190       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-15  |                             |          | 11.50%                | Brownwood Public Library    | 20190       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Bruceville-Eddy             | 00195       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-95   |                             |          | REMOVED               | Bryan                       | 00192       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 9.50%                 | Bryson                      | 00193       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-03   | X                           | X        | 13.50%                | Buda                        | 00194       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Buffalo                     | 00196       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Bullard                     | 00198       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-06  | X                           | X        | REMOVED               | Bulverde                    | 00203       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-94  | X                           | X        | REMOVED               | Bunker Hill Village         | 00199       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-03   | X                           | X        | REMOVED               | Burkburnett                 | 00200       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | REMOVED               | Burleson                    | 00202       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 6-00   | X                           | X        | 13.50%                | Burnet                      | 00204       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Burton                      | 00206       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Cactus                      | 00207       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Caddo Mills                 | 00208       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    |  | X                           | X        | 11.50%                | Caldwell                    | 00210       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Calvert                     | 00212       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-95   | X                           | X        | REMOVED               | Cameron                     | 00214       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Campbell                    | 00216       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 10-96  | X                           | X        | REMOVED               | Canadian                    | 00220       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Caney City                  | 00221       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-97   | X                           | X        | REMOVED               | Canton                      | 00222       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Canyon                      | 00224       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Carmine                     | 00227       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | 9.50%                 | Carrizo Springs             | 00228       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-91  |                             |          | REMOVED               | Carrollton                  | 00230       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-98   | X                           | X        | REMOVED               | Carthage                    | 00232       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Castle Hills               | 7%                    | 1.5-1                            | 100 T                  | 2001R          | 70                             | 2001R          | 1-91                                   |                        |
| Castroville                | 5%                    | 2-1                              | 100                    | 1994R          | 70                             | 1994R          |  |                        |
| Cedar Hill                 | 7%                    | 2-1                              | 100 T                  | 2000R          | 50                             | 2013R          | 1-91                                   | 10-13-92               |
| Cedar Park                 | 7%                    | 2-1                              | 100 T                  | 2002R          | 30                             | 2016R          |  |                        |
| Celeste                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Celina                     | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Center                     | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Centerville                | 7%                    | 2-1                              | 50 T                   | 2015           |                                |                |  |                        |
| Chandler                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Charlotte                  | 3%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          |  |                        |
| Chester                    | 6%                    | 2-1                              | 100                    | 1988           | 70                             | 1988           |  |                        |
| Chico                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Childress                  | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 10-96                                  |                        |
| Chillicothe                | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Chireno                    | 7%                    | 2-1                              | 100                    | 2000R          | 70                             | 2000R          | 7-89                                   |                        |
| Christine                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Cibolo                     | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Cisco                      | 5%                    | 1.5-1                            | 100 T                  | 1999R          | 50                             | 2000R          | 8-97                                   | 3-13-03                |
| Clarendon                  | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Clarksville                | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  | 4-18-00                |
| Clarksville City           | 7%                    | 2-1                              | 100                    | 2015           |                                |                |  |                        |
| Clear Lake Shores          | 6%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Cleburne                   | 7%                    | 2-1                              | 50                     | 2017R          | 50                             | 2017R          | 1-83                                   | 5-27-14                |
| Cleveland                  | 5%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Clifton                    | 5%                    | 1-1                              | 100 T                  | 1992R          |                                |                |  |                        |
| Clute                      | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 11-02                                  | 7-22-04                |
| Clyde                      | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |
| Coahoma                    | 5%                    | 2-1                              | 100 T                  | 1992R          |                                |                | 6-91                                   |                        |
| Cockrell Hill              | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 6-97                                   | 12-18-01               |
| Coleman                    | 7%                    | 2-1                              | 100 T                  | 2003R          | 50                             | 2003R          |  |                        |
| College Station            | 7%                    | 2-1                              | 75 T                   | 2013R          | 50                             | 2013R          | 1-89                                   | 6-08-06                |
| Colleyville                | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2011           | 1-86                                   |                        |
| Collinsville               | 6%                    | 2-1                              |                        |                |                                |                |  |                        |
| Colmesneil                 | 5%                    | 2-1                              | 50                     | 2013           |                                |                |  |                        |
| Colorado City              | 6%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 9-93                                   |                        |
| Columbus                   | 6%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Comanche                   | 5%                    | 1-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Commerce                   | 5%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          |  |                        |
| Conroe                     | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  | 6-02-88                |
| Converse                   | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 5-94                                   |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-98   | X                           | X        | REMOVED               | Castle Hills               | 00231       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-97   | X                           | X        | 11.50%                | Castroville                | 00234       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-96   | X                           | X        | REMOVED               | Cedar Hill                 | 00238       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-94   | X                           | X        | 13.50%                | Cedar Park                 | 00239       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Celeste                    | 00240       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Celina                     | 00242       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-06   | X                           | X        | REMOVED               | Center                     | 00244       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | REMOVED               | Centerville                | 00246       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-08  | X                           | X        | REMOVED               | Chandler                   | 00247       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Charlotte                  | 00248       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Chester                    | 00249       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Chico                      | 00245       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-96  | X                           | X        | REMOVED               | Childress                  | 00250       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Chillicothe                | 00251       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Chireno                    | 00253       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | REMOVED               | Christine                  | 00254       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-98   | X                           | X        | 13.50%                | Cibolo                     | 00255       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           |          | 9.50%                 | Cisco                      | 00256       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Clarendon                  | 00258       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Clarksville                | 00259       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Clarksville City           | 00260       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 12.50%                | Clear Lake Shores          | 00263       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-05   | X                           | X        | REMOVED               | Cleburne                   | 00264       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-96   | X                           | X        | 11.50%                | Cleveland                  | 00266       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-96   | X                           | X        | 7.50%                 | Clifton                    | 00268       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-91  | X                           | X        | 13.50%                | Clute                      | 00271       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-12   | X                           | X        | 13.50%                | Clyde                      | 00272       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Coahoma                    | 00274       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-98   | X                           | X        | 13.50%                | Cockrell Hill              | 00276       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-98   |                             |          | REMOVED               | Coleman                    | 00278       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   |                             |          | REMOVED               | College Station            | 00280       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-97  | X                           | X        | 13.50%                | Colleyville                | 00281       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | 12.50%                | Collinsville               | 00282       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Colmesneil                 | 00283       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-91  | X                           | X        | 12.50%                | Colorado City              | 00284       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-98   | X                           | X        | REMOVED               | Columbus                   | 00286       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Comanche                   | 00288       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | 11.50%                | Commerce                   | 00290       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-02   |                             |          | REMOVED               | Conroe                     | 00294       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Converse                   | 00295       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>Ⓣ</sup> (%)          | Year Effective |  |                        |
| Cooper                     | 6%                    | 1-1                              | 100                    | 2008R          |                                |                |  |                        |
| Coppell                    | 7%                    | 2-1                              | 100 T                  | 1995R          | 70                             | 1995R          | 5-93                                   | 12-14-04               |
| Copper Canyon              | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Copperas Cove              | 6%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 11-93                                  | 10-05-93               |
| Corinth                    | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  | 3-02-06                |
| Corpus Christi             | 6%                    | 2-1                              | 100                    | 2017           | 70                             | 2017           | 1-85                                   |                        |
| Corrigan                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Corsicana                  | 7%                    | 2-1                              | 50 T                   | 2011R          | 50                             | 2011R          | 10-89                                  |                        |
| Cotulla                    | 5%                    | 2-1                              | 80 T                   | 2014R          |                                |                |  |                        |
| Crandall                   | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2008R          |  |                        |
| Covington                  | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Crane                      | 7%                    | 2-1                              | 100 T                  | 1992R          | 40                             | 1992R          |  | 7-15-87                |
| Crawford                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Crockett                   | 5%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          | 10-89                                  |                        |
| Crosbyton                  | 6%                    | 1.5-1                            | 100                    | 1992R          | 40                             | 1982           |  |                        |
| Cross Plains               | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Cross Roads                | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Crowley                    | 6%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 1-96                                   | 1-20-94                |
| Crystal Beach <sup>Ⓣ</sup> | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Crystal City               | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Cuero                      | 5%                    | 2-1                              | 100 T                  | 2010R          | 70                             | 2010R          | 1-99                                   |                        |
| Cumby                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Daingerfield               | 5%                    | 1.5-1                            | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Daisetta                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Dalhart                    | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1985           |  |                        |
| Dalworthington Gardens     | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 11-05                                  |                        |
| Danbury                    | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Darrrouzett                | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Dayton                     | 7%                    | 2-1                              | 100 T                  | 2011           | 70                             | 2011           |  |                        |
| De Leon                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Decatur                    | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 3-01                                   |                        |
| Deer Park                  | 7%                    | 2-1                              | 100 T                  | 2003R          | 50                             | 2003R          | 2-82                                   |                        |
| Dekalb                     | 7%                    | 1-1                              | 100                    | 2016R          |                                |                |  |                        |
| Del Rio                    | 5%                    | 2-1                              |                        |                |                                |                | 10-05                                  |                        |
| Dell City                  | 5%                    | 2-1                              | 100 T                  | 1999R          |                                |                |  |                        |
| Denison                    | 7%                    | 2-1                              | 100 T                  | 1994R          | 30                             | 2012R          |  | 9-19-88                |
| Denton                     | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 1-94                                   | 9-04-01                |
| Denver City                | 5%                    | 2-1                              | 100                    | 1999R          | 70                             | 1999R          | 11-86                                  | 11-03-86               |
| Deport                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| DeSoto                     | 7%                    | 2-1                              | 100 T                  | 2015R          | 30                             | 2015R          | 1-90                                   |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities          | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|---|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |   |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | 8.50%                 | Cooper                     | 00298       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 5-93   | X                           | X        | REMOVED               | Coppell                    | 00299       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | REMOVED               | Copper Canyon              | 00297       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 1-92   | X                           | X        | REMOVED               | Copperas Cove              | 00300       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 5-96   | X                           | X        | REMOVED               | Corinth                    | 00301       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 11-95  |                             |          | REMOVED               | Corpus Christi             | 00302       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              | 11-14  | X                           | X        | 7.50%                 | Corrigan                   | 00304       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 1-96   | X                           | X        | REMOVED               | Corsicana                  | 00306       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              | 8-04   | X                           | X        | 11.50%                | Cotulla                    | 00308       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 6-07   | X                           | X        | 13.50%                | Crandall                   | 00310       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | REMOVED               | Covington                  | 00311       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 12-95  | X                           | X        | 15.50%                | Crane                      | 00312       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  |                             |          | 7.50%                 | Crawford                   | 00314       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 8-97   | X                           | X        | 11.50%                | Crockett                   | 00316       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | 10.50%                | Crosbyton                  | 00318       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | 9.50%                 | Cross Plains               | 00320       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | REMOVED               | Cross Roads                | 00321       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 1-94   | X                           | X        | 12.50%                | Crowley                    | 00323       |
| 5 yrs   | 5 yrs/age 60, 28 yrs/any age <sup>ⓐ</sup> |  | X                           | X        | 11.50%                | Crystal Beach <sup>ⓑ</sup> | 00325       |
| 10 yrs  | 5 yrs/age 60, 28 yrs/any age              | 7-00   |                             |          | 13.50%                | Crystal City               | 00324       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 7-96   | X                           | X        | 11.50%                | Cuero                      | 00326       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 12-15  | X                           | X        | REMOVED               | Cumby                      | 00328       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 9-97   |                             |          | 9.50%                 | Daingerfield               | 00332       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | REMOVED               | Daisetta                   | 00334       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | 11.50%                | Dalhart                    | 00336       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 1-07   | X                           | X        | REMOVED               | Dalworthington Gardens     | 00339       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | REMOVED               | Danbury                    | 00340       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | REMOVED               | Darrouzett                 | 00341       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 1-99   | X                           | X        | 13.50%                | Dayton                     | 00344       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              | 5-98   | X                           | X        | 7.50%                 | De Leon                    | 00352       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 11-99  | X                           | X        | REMOVED               | Decatur                    | 00346       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 8-97   | X                           | X        | REMOVED               | Deer Park                  | 00348       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              | 10-91  | X                           | X        | 9.50%                 | Dekalb                     | 00350       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              |  | X                           | X        | REMOVED               | Del Rio                    | 00354       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | REMOVED               | Dell City                  | 00353       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 10-93  |                             |          | REMOVED               | Denison                    | 00356       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 1-94   | X                           | X        | REMOVED               | Denton                     | 00358       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | REMOVED               | Denver City                | 00360       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age              |  | X                           | X        | REMOVED               | Deport                     | 00362       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age              | 12-91  | X                           | X        | REMOVED               | DeSoto                     | 10366       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Devine                     | 6%                    | 1.5-1                            | 100 T                  | 2017R          | 70                             | 2017R          |  |                        |
| Diboll                     | 7%                    | 2-1                              | 100 T                  | 1995R          | 70                             | 1995R          | 1-90                                   |                        |
| Dickens                    | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Dickinson                  | 7%                    | 2-1                              | 100 T                  | 2004R          |                                |                | 10-89                                  |                        |
| Dilley                     | 5%                    | 2-1                              | 100 T                  | 2014R          |                                |                |  |                        |
| Dimmitt                    | 6%                    | 2-1                              | 100 T                  | 1998R          | 30                             | 1998R          |  |                        |
| Donna                      | 6%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 2015           |  | 10-21-15               |
| Double Oak                 | 5%                    | 2-1                              |                        |                |                                |                | 2-10                                   |                        |
| Driscoll                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Dripping Springs           | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Dublin                     | 7%                    | 2-1                              | 100 T                  | 2012R          | 70                             | 2012R          |  |                        |
| Dumas                      | 5%                    | 1.5-1                            | 100 T                  | 1997R          | 70                             | 1997R          | 6-97                                   | 10-07-91               |
| Duncanville                | 7%                    | 2-1                              | 100 T                  | 2017           | 50                             | 2017           | 9-90                                   | 9-04-01                |
| Eagle Lake                 | 6%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          |  |                        |
| Eagle Pass                 | 5%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 3-97                                   | 2-04-97                |
| Early                      | 5%                    | 1.5-1                            | 100 T                  | 2007R          |                                |                |  |                        |
| Earth                      | 5%                    | 1-1                              | 100                    | 2007           |                                |                |  |                        |
| East Bernard               | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| East Mountain              | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| East Tawakoni              | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Eastland                   | 5%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          |  |                        |
| Ector                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Eden                       | 5%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          |  | 6-12-84                |
| Edgewood                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Edinburg                   | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 1-85                                   |                        |
| Edna                       | 5%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 10-89                                  | 11-05-92               |
| El Campo                   | 6%                    | 1.5-1                            | 100 T                  | 2014R          | 70                             | 2014R          | 10-90                                  | 11-07-77               |
| Eldorado                   | 6%                    | 1.5-1                            | 100 T                  | 2009R          | 70                             | 2009R          | 12-02                                  |                        |
| Electra                    | 5%                    | 1-1                              |                        |                |                                |                |  | 5-11-99                |
| Elgin                      | 7%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 2016R          | 11-89                                  | 10-01-83               |
| Elkhart                    | 5%                    | 1-1                              | 100 T                  | 2003R          | 70                             | 2003R          |  |                        |
| Elmendorf                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Emory                      | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Ennis                      | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 2001R          |  |                        |
| Eules                      | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 9-82                                   | 1-12-93                |
| Eustace                    | 7%                    | 2-1                              | 100                    | 2016           |                                |                |  |                        |
| Everman                    | 5%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  | 1-01-91                |
| Fair Oaks Ranch            | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2008R          |  |                        |
| Fairfield                  | 7%                    | 2-1                              | 100 T                  | 2017R          |                                |                | 10-88                                  |                        |
| Fairview                   | 7%                    | 2-1                              | 100 T                  | 2011R          |                                |                |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-04   | X                           | X        | REMOVED               | Devine                     | 00370       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-99   | X                           | X        | REMOVED               | Diboll                     | 00371       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-07  | X                           | X        | REMOVED               | Dickens                    | 00372       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 4-97   | X                           | X        | 13.50%                | Dickinson                  | 00373       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-95   | X                           | X        | 11.50%                | Dilley                     | 00374       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-00   |                             |          | 12.50%                | Dimmitt                    | 00376       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 12.50%                | Donna                      | 00382       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-10   | X                           | X        | REMOVED               | Double Oak                 | 00379       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Driscoll                   | 00385       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Dripping Springs           | 00383       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-03   | X                           | X        | REMOVED               | Dublin                     | 00384       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-08  | X                           | X        | 9.50%                 | Dumas                      | 00386       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  |                             |          | REMOVED               | Duncanville                | 00388       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 6-99   | X                           | X        | 12.50%                | Eagle Lake                 | 00394       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-98   | X                           | X        | 11.50%                | Eagle Pass                 | 00396       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Early                      | 00397       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-07   | X                           | X        | REMOVED               | Earth                      | 00399       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | East Bernard               | 00393       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-02  | X                           | X        | REMOVED               | East Mountain              | 00401       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | REMOVED               | East Tawakoni              | 00395       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-96   | X                           | X        | 11.50%                | Eastland                   | 00398       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-08  | X                           | X        | REMOVED               | Ector                      | 00402       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Eden                       | 00406       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-03  | X                           | X        | REMOVED               | Edgewood                   | 00408       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-94   | X                           | X        | REMOVED               | Edinburg                   | 00410       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-99   | X                           | X        | REMOVED               | Edna                       | 00412       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-94   | X                           | X        | REMOVED               | El Campo                   | 00414       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 10.50%                | Eldorado                   | 00416       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-95   | X                           | X        | 7.50%                 | Electra                    | 00418       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-94   | X                           | X        | REMOVED               | Elgin                      | 00420       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | REMOVED               | Elkhart                    | 00422       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Elmendorf                  | 00427       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-97   | X                           | X        | 11.50%                | Emory                      | 00432       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-93   | X                           | X        | REMOVED               | Ennis                      | 00436       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   |                             |          | REMOVED               | Eules                      | 00439       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Eustace                    | 00440       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-07   | X                           | X        | 11.50%                | Everman                    | 00441       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Fair Oaks Ranch            | 00443       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Fairfield                  | 00442       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-03   | X                           | X        | REMOVED               | Fairview                   | 00445       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Falfurrias                 | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Falls City                 | 6%                    | 1-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Farmers Branch             | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 10-01                                  | 9-15-15                |
| Farmersville               | 5%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  | 7-14-92                |
| Farwell                    | 6%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          |  |                        |
| Fate                       | 7%                    | 2-1                              | 100 T                  | 2010R          |                                |                |  |                        |
| Fayetteville               | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Ferris                     | 5%                    | 1.5-1                            | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Flatonia                   | 7%                    | 2-1                              | 100                    | 2003R          | 70                             | 2003R          |  |                        |
| Florence                   | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Floresville                | 5%                    | 2-1                              | 100                    | 2007R          | 70                             | 2007R          | 10-02                                  | 3-22-07                |
| Flower Mound               | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2007           | 1-95                                   | 11-06-00               |
| Floydada                   | 5%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 2016R          | 10-99                                  |                        |
| Forest Hill                | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 1-92                                   | 10-03-06               |
| Forney                     | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| Fort Stockton              | 5%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          | 1-90                                   |                        |
| Franklin                   | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Frankston                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Fredericksburg             | 5%                    | 2-1                              | 50 T                   | 2014R          | 50                             | 2014R          | 5-90                                   |                        |
| Freeport                   | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 7-90                                   | 11-17-80               |
| Freer                      | 5%                    | 1-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Friendswood                | 7%                    | 2-1                              | 100 T                  | 1999R          | 50                             | 2012R          | 2-85                                   | 1-21-85                |
| Friona                     | 5%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Frisco                     | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 6-02                                   | 12-06-11               |
| Fritch                     | 7%                    | 2-1                              | 100 T                  | 2005R          | 10                             | 1981           | 2-86                                   |                        |
| Frost                      | 5%                    | 1-1                              | 100                    | 1997R          |                                |                |  |                        |
| Fulshear                   | 5%                    | 2-1                              | 100 T                  | 2014           |                                |                |  |                        |
| Fulton                     | 6%                    | 2-1                              |                        |                |                                |                |  |                        |
| Gainesville                | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          | 10-97                                  | 8-16-94                |
| Galena Park                | 7%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 1994R          | 4-93                                   | 1-18-94                |
| Ganado                     | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Garden Ridge               | 5%                    | 2-1                              | 100 T                  | 2009R          |                                |                | 3-02                                   |                        |
| Garland                    | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 2008           | 1-90                                   | 1-16-90                |
| Garrison                   | 6%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Gary                       | 5%                    | 1-1                              | 100 T                  | 1999R          | 70                             | 1999R          |  |                        |
| Gatesville                 | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          |  | 4-13-04                |
| George West                | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Georgetown                 | 7%                    | 2-1                              | 100                    | 2010R          | 30                             | 2010R          | 1-12                                   | 7-27-76                |
| Giddings                   | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 12-94                                  | 8-20-07                |
| Gilmer                     | 6%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 2-15   | X                           | X        | 9.50%                 | Falfurrias                 | 20444       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Falls City                 | 00446       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           |          | REMOVED               | Farmers Branch             | 00448       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-97  | X                           | X        | REMOVED               | Farmersville               | 00450       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Farwell                    | 00451       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-15  | X                           | X        | REMOVED               | Fate                       | 00452       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | REMOVED               | Fayetteville               | 00454       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-01   | X                           | X        | 9.50%                 | Ferris                     | 00456       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-01   | X                           | X        | REMOVED               | Flatonia                   | 00458       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Florence                   | 00460       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-07   |                             |          | 11.50%                | Floresville                | 20462       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-95   | X                           | X        | 13.50%                | Flower Mound               | 00463       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Floydada                   | 00464       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | 13.50%                | Forest Hill                | 00468       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-97   | X                           | X        | REMOVED               | Forney                     | 00470       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-96   | X                           | X        | 11.50%                | Fort Stockton              | 00472       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 11.50%                | Franklin                   | 00476       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Frankston                  | 00478       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   | X                           | X        | 11.50%                | Fredericksburg             | 00480       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-97   | X                           | X        | REMOVED               | Freeport                   | 00482       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Freer                      | 00481       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-91  | X                           | X        | REMOVED               | Friendswood                | 00483       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-03   | X                           | X        | REMOVED               | Frona                      | 00484       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-97   | X                           | X        | REMOVED               | Frisco                     | 00486       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Fritch                     | 00487       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  |                             |          | 7.50%                 | Frost                      | 00488       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Fulshear                   | 00491       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Fulton                     | 00493       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-97  | X                           | X        | REMOVED               | Gainesville                | 00492       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-93  | X                           | X        | REMOVED               | Galena Park                | 00494       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Ganado                     | 00498       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-97   | X                           | X        | 11.50%                | Garden Ridge               | 00499       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Garland                    | 00500       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Garrison                   | 00502       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Gary                       | 00503       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-91   | X                           | X        | REMOVED               | Gatesville                 | 00504       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-06   | X                           | X        | REMOVED               | George West                | 00505       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-12   | X                           | X        | 13.50%                | Georgetown                 | 00506       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-97  | X                           | X        | REMOVED               | Giddings                   | 00510       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-98  | X                           | X        | REMOVED               | Gilmer                     | 00512       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality     | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|--------------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                                |                       |                                  | Rate (%)               | Year Effective | Rate <sup>Ⓣ</sup> (%)          | Year Effective |  |                        |
| Gladewater                     | 5%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Glen Rose                      | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |
| Glenn Heights                  | 6%                    | 1-1                              | 100 T                  | 2011R          | 70                             | 2011R          | 1-97                                   |                        |
| Godley                         | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Goldsmith                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Goldthwaite                    | 7%                    | 2-1                              | 100                    | 2000R          | 70                             | 2000R          |  |                        |
| Goliad                         | 5%                    | 2-1                              | 100 T                  | 2002           | 50                             | 2002           |  |                        |
| Gonzales                       | 5%                    | 2-1                              | 100                    | 1999R          | 70                             | 1999R          | 4-96                                   |                        |
| Graford                        | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Graham                         | 5%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          | 2-97                                   | 2-21-02                |
| Graham Regional Medical Center | 5%                    | 2-1                              | 75                     | 2014           | 70                             | 1989           |  |                        |
| Granbury                       | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 1-90                                   | 10-02-07               |
| Grand Prairie                  | 7%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          | 1-89                                   | 12-13-16               |
| Grand Saline                   | 7%                    | 1-1                              | 100 T                  | 2001R          | 70                             | 2001R          | 1-90                                   |                        |
| Grandview                      | 7%                    | 1.5-1                            | 100 T                  | 1998R          | 70                             | 1988           |  |                        |
| Granger                        | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Granite Shoals                 | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Grapeland                      | 5%                    | 1-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Grapevine                      | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 10-88                                  | 10-19-99               |
| Greenville                     | 7%                    | 2-1                              | 100 T                  | 1995R          | 70                             | 2009           | 1-88                                   | 2-10-04                |
| Gregory                        | 5%                    | 1.5-1                            | 100 T                  | 1992R          | 70                             | 1998R          |  |                        |
| Grey Forest Utilities          | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          | 1-90                                   |                        |
| Groesbeck                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Groom                          | 5%                    | 1-1                              | 100                    | 1992R          |                                |                |  |                        |
| Groves                         | 6%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 1989           | 10-86                                  | 9-08-86                |
| Groveton                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Gruver                         | 6%                    | 2-1                              | 100 T                  | 1998R          |                                |                |  |                        |
| Gun Barrel City                | 5%                    | 2-1                              | 100 T                  | 1998R          |                                |                |  |                        |
| Gunter                         | 5%                    | 2-1                              |                        |                |                                |                | 10-04                                  |                        |
| Hale Center                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Hallettsville                  | 5%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 12-03                                  | 9-11-00                |
| Hallsville                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Haltom City                    | 7%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 2007R          | 2-83                                   | 1-08-01                |
| Hamilton                       | 7%                    | 2-1                              | 100 T                  | 2011R          | 70                             | 2011R          |  |                        |
| Hamlin                         | 6%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          | 1-84                                   |                        |
| Happy                          | 7%                    | 1.5-1                            | 100 T                  | 1999R          | 70                             | 1999R          |  |                        |
| Harker Heights                 | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          |  | 10-11-05               |
| Harlingen                      | 7%                    | 2-1                              | 100 T                  | 2006           | 70                             | 2006           | 10-89                                  | 9-05-01                |
| Harlingen Waterworks System    | 7%                    | 1-1                              | 100 T                  | 2005           | 70                             | 2005           | 4-97                                   | 8-12-02                |
| Hart                           | 5%                    | 1-1                              |                        |                |                                |                |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality     | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|--------------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                                |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-97  | X                           | X        | 7.50%                 | Gladewater                     | 00514       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-99   | X                           | X        | REMOVED               | Glen Rose                      | 00516       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-95   | X                           | X        | 12.50%                | Glenn Heights                  | 00517       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-12  | X                           | X        | 8.50%                 | Godley                         | 00518       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Goldsmith                      | 00519       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Goldthwaite                    | 00520       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-01   | X                           | X        | REMOVED               | Goliad                         | 00522       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-96   | X                           | X        | REMOVED               | Gonzales                       | 00524       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Graford                        | 00532       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Graham                         | 10534       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Graham Regional Medical Center | 20534       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-96   | X                           | X        | REMOVED               | Granbury                       | 00536       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Grand Prairie                  | 00540       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-05   | X                           | X        | 9.50%                 | Grand Saline                   | 00542       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | 11.50%                | Grandview                      | 00544       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-10  |                             |          | 7.50%                 | Granger                        | 00546       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Granite Shoals                 | 00547       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Grapeland                      | 00548       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-92   |                             |          | REMOVED               | Grapevine                      | 00550       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-93   | X                           | X        | REMOVED               | Greenville                     | 00552       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Gregory                        | 00551       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Grey Forest Utilities          | 00553       |
| 5 yrs   | 5 yrs/age 60, 20 yrs any age     | 5-15   | X                           | X        | REMOVED               | Groesbeck                      | 00556       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Groom                          | 00558       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-01   |                             |          | REMOVED               | Groves                         | 00559       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Groveton                       | 00560       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 12.50%                | Gruver                         | 00562       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-94   | X                           | X        | 11.50%                | Gun Barrel City                | 00563       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-08   | X                           | X        | REMOVED               | Gunter                         | 00564       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hale Center                    | 00568       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-00  | X                           | X        | REMOVED               | Hallettsville                  | 00570       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hallsville                     | 00572       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-94   | X                           | X        | REMOVED               | Haltom City                    | 00574       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hamilton                       | 00576       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-05   | X                           | X        | REMOVED               | Hamlin                         | 00578       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Happy                          | 00580       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-97  | X                           | X        | REMOVED               | Harker Heights                 | 00581       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-93   | X                           | X        | 15.50%                | Harlingen                      | 10582       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-97   | X                           | X        | 9.50%                 | Harlingen Waterworks System    | 20582       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | REMOVED               | Hart                           | 00583       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Haskell                    | 7%                    | 1-1                              |                        |                |                                |                | 9-89                                   |                        |
| Haslet                     | 7%                    | 2-1                              | 100 T                  | 2002R          |                                |                |  |                        |
| Hawkins                    | 7%                    | 2-1                              | 100                    | 2015R          | 70                             | 1988           |  | 2-17-14                |
| Hays                       | 7%                    | 2-1                              | 100 T                  | 2004R          |                                |                |  |                        |
| Hearne                     | 7%                    | 2-1                              | 100 T                  | 2011R          | 70                             | 2011R          | 10-85                                  | 10-01-85               |
| Heath                      | 7%                    | 2-1                              | 100 T                  | 2005R          |                                |                |  |                        |
| Hedley                     | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Hedwig Village             | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Helotes                    | 6%                    | 2-1                              | 100 T                  | 2013           | 70                             | 2013           | 3-01                                   |                        |
| Hemphill                   | 5%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 1992           | 5-95                                   |                        |
| Hempstead                  | 5%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 11-89                                  | 11-21-16               |
| Henderson                  | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 9-98                                   | 10-20-81               |
| Henrietta                  | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 12-03                                  | 11-10-03               |
| Hereford                   | 5%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          |  |                        |
| Hewitt                     | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 12-91                                  | 2-18-02                |
| Hickory Creek              | 7%                    | 2-1                              | 100 T                  | 2013R          | 70                             | 2013R          |  | 8-21-07                |
| Hico                       | 5%                    | 2-1                              | 100                    | 2002R          |                                |                |  |                        |
| Hidalgo                    | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          |  |                        |
| Higgins                    | 5%                    | 1-1                              | 100                    | 1999R          | 70                             | 1999R          |  |                        |
| Highland Park              | 7%                    | 2-1                              | 100                    | 2008           | 50                             | 2008           | 11-89                                  |                        |
| Highland Village           | 7%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 1994R          |  |                        |
| Hill Country Village       | 5%                    | 2-1                              | 100 T                  | 2005           |                                |                |  |                        |
| Hillsboro                  | 5%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Hilshire Village           | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Hitchcock                  | 5%                    | 2-1                              | 50 T                   | 2014           |                                |                |  |                        |
| Holland                    | 6%                    | 1.5-1                            | 100 T                  | 1999R          |                                |                |  |                        |
| Holliday                   | 5%                    | 1.5-1                            | 100                    | 2007           |                                |                |  |                        |
| Hollywood Park             | 6%                    | 1.5-1                            | 100 T                  | 2003R          | 70                             | 2003R          | 5-89                                   |                        |
| Hondo                      | 5%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          |  |                        |
| Honey Grove                | 5%                    | 1.5-1                            | 100 T                  | 1993R          | 70                             | 1993R          |  |                        |
| Hooks                      | 7%                    | 2-1                              | 100                    | 2016R          |                                |                |  |                        |
| Howe                       | 5%                    | 2-1                              | 100                    | 1992R          |                                |                | 3-12                                   |                        |
| Hubbard                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Hudson                     | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Hudson Oaks                | 7%                    | 2-1                              | 100 T                  | 2012R          | 70                             | 2012R          |  |                        |
| Hughes Springs             | 7%                    | 2-1                              | 100                    | 1998R          | 70                             | 1998R          |  |                        |
| Humble                     | 7%                    | 2-1                              | 50 T                   | 2016R          | 70                             | 2016R          | 2-85                                   |                        |
| Hunters Creek Village      | 7%                    | 2-1                              | 100 T                  | 2008R          |                                |                |  |                        |
| Huntington                 | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 7-99                                   |                        |
| Huntsville                 | 7%                    | 2-1                              | 50 T                   | 2014R          | 50                             | 2014R          | 10-89                                  | 1-01-99                |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Haskell                    | 00586       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-99   | X                           | X        | 15.50%                | Haslet                     | 00587       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-00  | X                           | X        | REMOVED               | Hawkins                    | 00588       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hays                       | 00585       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-95  | X                           | X        | REMOVED               | Hearne                     | 00590       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-98   | X                           | X        | 13.50%                | Heath                      | 00591       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | 11.50%                | Hedley                     | 00592       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hedwig Village             | 00595       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-01   | X                           | X        | 12.50%                | Helotes                    | 00593       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-98   | X                           | X        | 11.50%                | Hemphill                   | 00594       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-92   | X                           | X        | REMOVED               | Hempstead                  | 00596       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-98   | X                           | X        | REMOVED               | Henderson                  | 00598       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-94   | X                           | X        | REMOVED               | Henrietta                  | 00600       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-96   | X                           | X        | 11.50%                | Hereford                   | 00602       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-91  | X                           | X        | REMOVED               | Hewitt                     | 00605       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-07   | X                           | X        | 13.50%                | Hickory Creek              | 00609       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Hico                       | 00606       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-14   |                             |          | 13.50%                | Hidalgo                    | 00607       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Higgins                    | 00608       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   |                             |          | REMOVED               | Highland Park              | 00610       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Highland Village           | 00611       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 2-00   | X                           | X        | 11.50%                | Hill Country Village       | 00613       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-96   |                             |          | REMOVED               | Hillsboro                  | 00612       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hilshire Village           | 00619       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-98   | X                           | X        | 11.50%                | Hitchcock                  | 00614       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 10.50%                | Holland                    | 00615       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | 9.50%                 | Holiday                    | 00616       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-95   | X                           | X        | 10.50%                | Hollywood Park             | 00617       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-97   | X                           | X        | 11.50%                | Hondo                      | 00618       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-01   | X                           | X        | 9.50%                 | Honey Grove                | 00620       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 12-99  | X                           | X        | 13.50%                | Hooks                      | 00622       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-04  | X                           | X        | 11.50%                | Howe                       | 00626       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hubbard                    | 00627       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 4-01   | X                           | X        | REMOVED               | Hudson                     | 00628       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-98   | X                           | X        | 13.50%                | Hudson Oaks                | 00629       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Hughes Springs             | 00630       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-96   | X                           | X        | REMOVED               | Humble                     | 00632       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-98   | X                           | X        | REMOVED               | Hunters Creek Village      | 00633       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Huntington                 | 00634       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Huntsville                 | 00636       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>Ⓣ</sup> (%)          | Year Effective |  |                        |
| Hurst                      | 7%                    | 2-1                              | 100                    | 2009R          | 30                             | 2017           | 4-87                                   | 3-24-87                |
| Hutchins                   | 7%                    | 1.5-1                            | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Hutto                      | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Huxley                     | 5%                    | 1.5-1                            | 50                     | 2014           | 30                             | 2014           |  |                        |
| Idalou                     | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Ingleside                  | 5%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Ingram                     | 5%                    | 1.5-1                            | 100 T                  | 1998R          |                                |                |  |                        |
| Iowa Colony                | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Iowa Park                  | 6%                    | 2-1                              | 100 T                  | 2010R          | 70                             | 2010R          | 12-10                                  |                        |
| Iraan                      | 7%                    | 2-1                              | 100 T                  | 2009           | 70                             | 2009           |  | 7-21-04                |
| Irving                     | 7%                    | 2-1                              | 100 T                  | 1992R          | 30                             | 2015R          | 1-87                                   | 6-29-06                |
| Italy                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Itasca                     | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 1-92                                   |                        |
| Jacinto City               | 5%                    | 1.5-1                            | 100 T                  | 1992R          | 70                             | 1992R          |  | 9-24-81                |
| Jacksboro                  | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 6-98                                   | 8-14-90                |
| Jacksonville               | 6%                    | 2-1                              | 100 T                  | 2008R          | 50                             | 2011R          | 4-91                                   |                        |
| Jasper                     | 7%                    | 2-1                              | 100                    | 2013           | 70                             | 2013           | 1-82                                   | 10-17-83               |
| Jefferson                  | 5%                    | 1-1                              | 100 T                  | 2001R          |                                |                |  |                        |
| Jersey Village             | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 10-95                                  |                        |
| Jewett                     | 7%                    | 1-1                              | 100 T                  | 1994R          | 70                             | 1994R          |  |                        |
| Joaquin                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Johnson City               | 6%                    | 1.5-1                            | 100 T                  | 2012R          | 70                             | 2012R          |  | 8-08-05                |
| Jones Creek                | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Jonestown                  | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Josephine                  | 6%                    | 1.5-1                            | 100 T                  | 2007R          |                                |                |  |                        |
| Joshua                     | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Jourdanton                 | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          |  | 8-18-14                |
| Junction                   | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          |  |                        |
| Justin                     | 5%                    | 1-1                              | 100                    | 1998R          |                                |                |  |                        |
| Karnes City                | 5%                    | 1-1                              | 100 T                  | 1999R          | 70                             | 1999R          |  |                        |
| Katy                       | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 11-85                                  |                        |
| Kaufman                    | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2017           | 10-01                                  |                        |
| Keene                      | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Keller                     | 7%                    | 2-1                              | 100 T                  | 2002R          | 50                             | 2012R          | 1-97                                   | 12-20-05               |
| Kemah                      | 7%                    | 2-1                              |                        |                |                                |                | 8-99                                   |                        |
| Kemp                       | 5%                    | 2-1                              | 100 T                  | 2016R          |                                |                |  | 10-27-15               |
| Kenedy                     | 5%                    | 1-1                              | 100 T                  | 1994R          | 70                             | 1994R          |  |                        |
| Kennedale                  | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 9-01                                   | 8-09-01                |
| Kerens                     | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Kermit                     | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          |  | 9-18-08                |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-92   |                             |          | REMOVED               | Hurst                      | 00637       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Hutchins                   | 00638       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-01   | X                           | X        | REMOVED               | Hutto                      | 00640       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Huxley                     | 00641       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Idalou                     | 00642       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-00   | X                           | X        | 11.50%                | Ingleside                  | 00643       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-96  |                             |          | 9.50%                 | Ingram                     | 00646       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Iowa Colony                | 00647       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Iowa Park                  | 00644       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-97   | X                           | X        | REMOVED               | Iraan                      | 00645       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-93   | X                           | X        | REMOVED               | Irving                     | 00648       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-06  | X                           | X        | REMOVED               | Italy                      | 00650       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | 13.50%                | Itasca                     | 00652       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Jacinto City               | 00654       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  | X                           | X        | REMOVED               | Jacksboro                  | 00656       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-96   | X                           | X        | REMOVED               | Jacksonville               | 00658       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | 15.50%                | Jasper                     | 00660       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Jefferson                  | 00664       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-95   | X                           | X        | REMOVED               | Jersey Village             | 00665       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Jewett                     | 00666       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Joaquin                    | 00668       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-02   | X                           | X        | 10.50%                | Johnson City               | 00670       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 2-13   | X                           | X        | REMOVED               | Jones Creek                | 00673       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Jonestown                  | 00675       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-11   | X                           | X        | REMOVED               | Josephine                  | 00677       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-16   | X                           | X        | 13.50%                | Joshua                     | 00671       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-14   | X                           | X        | 9.50%                 | Jourdanton                 | 00672       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | REMOVED               | Junction                   | 00674       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-08   |                             |          | 7.50%                 | Justin                     | 00676       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-16  | X                           | X        | REMOVED               | Karnes City                | 00678       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-96   | X                           | X        | REMOVED               | Katy                       | 00680       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-97   | X                           | X        | REMOVED               | Kaufman                    | 00682       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-93   | X                           | X        | REMOVED               | Keene                      | 00683       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | REMOVED               | Keller                     | 00681       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-99   | X                           | X        | REMOVED               | Kemah                      | 00685       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-96   |                             |          | 11.50%                | Kemp                       | 00684       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-95  | X                           | X        | 7.50%                 | Kenedy                     | 00686       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-01   | X                           | X        | REMOVED               | Kennedale                  | 00688       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Kerens                     | 00690       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-01   | X                           | X        | REMOVED               | Kermit                     | 00692       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Kerrville                  | 7%                    | 2-1                              | 100 T                  | 2012R          | 50                             | 2010           | 6-90                                   |                        |
| Kerrville PUB              | 7%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 2007R          |  |                        |
| Kilgore                    | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  | 4-10-07                |
| Killeen                    | 7%                    | 2-1                              | 100 T                  | 2016           | 70                             | 2015           | 1-01                                   | 2-28-89                |
| Kingsville                 | 7%                    | 1.5-1                            | 100 T                  | 2000R          | 70                             | 2000R          | 3-85                                   |                        |
| Kirby                      | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 3-99                                   |                        |
| Kirbyville                 | 5%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Knox City                  | 5%                    | 1.5-1                            | 100                    | 1991           | 70                             | 1991           |  |                        |
| Kountze                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Kress                      | 7%                    | 1-1                              | 100                    | 1995R          |                                |                |  |                        |
| Krugerville                | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Krum                       | 6%                    | 2-1                              | 100                    | 1997           |                                |                |  |                        |
| Kyle                       | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 2000R          |  |                        |
| La Coste                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| La Feria                   | 7%                    | 1-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 10-03                                  | 8-28-03                |
| La Grange                  | 7%                    | 2-1                              | 100 T                  | 2012R          | 50                             | 2014R          | 10-89                                  |                        |
| La Grulla                  | 5%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| La Joya                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| La Marque                  | 7%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 2016R          | 1-97                                   | 4-24-06                |
| La Porte                   | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 1-83                                   | 12-22-97               |
| La Vernia                  | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Lacy-Lakeview              | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 10-89                                  |                        |
| Ladonia                    | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Lago Vista                 | 6%                    | 2-1                              | 100 T                  | 2003R          |                                |                | 11-95                                  | 10-01-90               |
| Laguna Vista               | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Lake Dallas                | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Lake Jackson               | 6%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 10-93                                  |                        |
| Lake Worth                 | 6%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 10-98                                  | 10-10-00               |
| Lakeport                   | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Lakeside                   | 6%                    | 2-1                              | 100                    | 2014R          |                                |                |  |                        |
| Lakeside City              | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Lakeway                    | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| Lamesa                     | 7%                    | 1.5-1                            | 100 T                  | 2010R          | 70                             | 2009           | 1-90                                   |                        |
| Lampasas                   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 11-00                                  | 9-08-14                |
| Lancaster                  | 7%                    | 2-1                              | 100 T                  | 1998R          | 50                             | 2012R          | 10-89                                  |                        |
| Laredo                     | 7%                    | 2-1                              | 100                    | 2007R          | 70                             | 2007R          | 10-89                                  | 1-20-97                |
| Lavon                      | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Lefors                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| League City                | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          | 5-93                                   | 2-08-90                |
| Leander                    | 7%                    | 2-1                              | 100                    | 2013R          | 50                             | 2014R          | 11-87                                  | 10-11-16               |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-92   | X                           | X        | 15.50%                | Kerrville                  | 10694       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-93  | X                           | X        | REMOVED               | Kerrville PUB              | 20694       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-97   | X                           | X        | REMOVED               | Kilgore                    | 10696       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | 13.50%                | Killeen                    | 00698       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-00   |                             |          | REMOVED               | Kingsville                 | 00700       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-08  | X                           | X        | REMOVED               | Kirby                      | 00701       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-91  | X                           | X        | 7.50%                 | Kirbyville                 | 00702       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Knox City                  | 00704       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-12   | X                           | X        | REMOVED               | Kountze                    | 00708       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  |                             |          | REMOVED               | Kress                      | 00709       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Krugerville                | 00699       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-06   | X                           | X        | 12.50%                | Krum                       | 00707       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-00   | X                           | X        | 13.50%                | Kyle                       | 00710       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | La Coste                   | 00725       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-03  | X                           | X        | REMOVED               | La Feria                   | 00714       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | La Grange                  | 00716       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-03  | X                           | X        | 11.50%                | La Grulla                  | 00723       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | La Joya                    | 00732       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-99  | X                           | X        | REMOVED               | La Marque                  | 00721       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-97   | X                           | X        | REMOVED               | La Porte                   | 00728       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | La Vernia                  | 00731       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-97  | X                           | X        | REMOVED               | Lacy-Lakeview              | 00711       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Ladonia                    | 00712       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-97   | X                           | X        | 12.50%                | Lago Vista                 | 00713       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-16  | X                           | X        | REMOVED               | Laguna Vista               | 00705       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-01   | X                           | X        | 13.50%                | Lake Dallas                | 00717       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-98   | X                           | X        | REMOVED               | Lake Jackson               | 00718       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-98  | X                           | X        | REMOVED               | Lake Worth                 | 00719       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Lakeport                   | 00727       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-99  | X                           | X        | 12.50%                | Lakeside                   | 00715       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Lakeside City              | 00729       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-03   | X                           | X        | 13.50%                | Lakeway                    | 00720       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-94   |                             |          | 13.50%                | Lamesa                     | 00722       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Lampasas                   | 00724       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-97   | X                           | X        | REMOVED               | Lancaster                  | 00726       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-93   | X                           | X        | REMOVED               | Laredo                     | 00730       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-12  | X                           | X        | REMOVED               | Lavon                      | 00733       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Lefors                     | 00735       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-99   | X                           | X        | 15.50%                | League City                | 00736       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-02  | X                           | X        | 13.50%                | Leander                    | 00737       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Leon Valley                | 6%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 10-88                                  | 9-20-88                |
| Leonard                    | 7%                    | 1-1                              |                        |                |                                |                | 1-03                                   |                        |
| Levelland                  | 6%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  | 12-09-13               |
| Lewisville                 | 7%                    | 2-1                              | 75 T                   | 2013R          | 70                             | 2013R          | 11-89                                  | 5-05-97                |
| Lexington                  | 6%                    | 1.5-1                            | 100 T                  | 2000R          | 70                             | 2000R          | 9-01                                   |                        |
| Liberty                    | 7%                    | 2-1                              | 100 T                  | 2015           |                                |                |  |                        |
| Liberty Hill               | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Lindale                    | 6%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Linden                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Lipan                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Little Elm                 | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          | 11-03                                  | 11-20-07               |
| Littlefield                | 5%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 1994R          | 6-98                                   |                        |
| Live Oak                   | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 1-95                                   |                        |
| Liverpool                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Livingston                 | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 8-92                                   |                        |
| Llano                      | 7%                    | 2-1                              | 100 T                  | 2016R          | 70                             | 1999           |  |                        |
| Lockhart                   | 6%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 11-90                                  | 1-06-98                |
| Lockney                    | 5%                    | 1-1                              | 100 T                  | 2001R          | 50                             | 1981           |  |                        |
| Lone Star                  | 5%                    | 1-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  | 9-08-81                |
| Longview                   | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2012           | 1-88                                   | 2-11-93                |
| Lorraine                   | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Lorena                     | 6%                    | 1.5-1                            | 100 T                  | 2006R          | 70                             | 2006R          |  |                        |
| Lorenzo                    | 5%                    | 1.5-1                            | 100 T                  | 1995R          | 70                             | 1995R          |  |                        |
| Los Fresnos                | 5%                    | 1.5-1                            | 10                     | 1996R          |                                |                |  |                        |
| Lott                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Lovelady                   | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Lubbock                    | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 2001R          | 1-90                                   |                        |
| Lucas                      | 7%                    | 2-1                              | 100                    | 2006R          | 70                             | 2015R          |  |                        |
| Lufkin                     | 7%                    | 2-1                              | 100 T                  | 1998R          | 50                             | 2012R          | 12-89                                  | 10-01-00               |
| Luling                     | 5%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Lumberton                  | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Lyford                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Lytle                      | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Madisonville               | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Magnolia                   | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Malakoff                   | 7%                    | 2-1                              | 100 T                  | 1993           |                                |                |  |                        |
| Manor                      | 5%                    | 2-1                              |                        |                |                                |                |  | 7-19-06                |
| Mansfield                  | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-89                                   |                        |
| Manvel                     | 7%                    | 2-1                              | 100 T                  | 2017           | 70                             | 2017           |  |                        |
| Marble Falls               | 7%                    | 2-1                              | 100 T                  | 1996           |                                |                | 7-03                                   | 5-23-90                |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 10-91  | X                           | X        | REMOVED               | Leon Valley                | 00739       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-03   | X                           | X        | 9.50%                 | Leonard                    | 00738       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-14   | X                           | X        | REMOVED               | Levelland                  | 00740       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-92   |                             |          | REMOVED               | Lewisville                 | 00742       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 8-09   |                             |          | REMOVED               | Lexington                  | 00744       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | REMOVED               | Liberty                    | 00746       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-09   | X                           | X        | REMOVED               | Liberty Hill               | 00745       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-07   |                             |          | REMOVED               | Lindale                    | 00748       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Linden                     | 00750       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Lipan                      | 00755       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-03  | X                           | X        | 13.50%                | Little Elm                 | 00751       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-98   | X                           | X        | 11.50%                | Littlefield                | 00752       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-95   | X                           | X        | REMOVED               | Live Oak                   | 00753       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Liverpool                  | 00757       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 3-98   | X                           | X        | REMOVED               | Livingston                 | 00754       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-99   | X                           | X        | REMOVED               | Llano                      | 00756       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | REMOVED               | Lockhart                   | 00758       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Lockney                    | 00760       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-01   | X                           | X        | 7.50%                 | Lone Star                  | 00765       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-93   | X                           | X        | 15.50%                | Longview                   | 00766       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Loraine                    | 00768       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-04   | X                           | X        | 10.50%                | Lorena                     | 00769       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 8-03   |                             |          | 9.50%                 | Lorenzo                    | 00770       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-08   | X                           | X        | 9.50%                 | Los Fresnos                | 00771       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Lott                       | 00773       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Lovelady                   | 00774       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-95  |                             |          | REMOVED               | Lubbock                    | 00778       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-07   | X                           | X        | 15.50%                | Lucas                      | 00779       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-97   | X                           | X        | REMOVED               | Lufkin                     | 00782       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 9-95   | X                           | X        | 11.50%                | Luling                     | 00784       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-95   | X                           | X        | REMOVED               | Lumberton                  | 00785       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | REMOVED               | Lyford                     | 00786       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Lytle                      | 00787       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-93   | X                           | X        | 11.50%                | Madisonville               | 00790       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 4-98   | X                           | X        | 8.50%                 | Magnolia                   | 00791       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-07   | X                           | X        | 13.50%                | Malakoff                   | 00792       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-14   | X                           | X        | REMOVED               | Manor                      | 00796       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-92   | X                           | X        | REMOVED               | Mansfield                  | 00798       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Manvel                     | 00799       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-96   | X                           | X        | 13.50%                | Marble Falls               | 00800       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Marfa                      | 5%                    | 2-1                              | 100                    | 1990           | 70                             | 1990           |  |                        |
| Marion                     | 5%                    | 2-1                              | 100 T                  | 2008R          |                                |                |  |                        |
| Marlin                     | 5%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Marshall                   | 7%                    | 2-1                              | 100 T                  | 1998R          | 50                             | 2013R          | 1-90                                   | 6-09-88                |
| Mart                       | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Martindale                 | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Mason                      | 5%                    | 1.5-1                            | 100                    | 2010R          | 70                             | 2010R          |  | 2-13-89                |
| Matador                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Mathis                     | 7%                    | 2-1                              | 100                    | 1991           | 70                             | 1991           | 11-03                                  |                        |
| Maud                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Maypearl                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| McAllen                    | 7%                    | 2-1                              | 100 T                  | 2016           |                                |                |  | 12-27-07               |
| McCamey                    | 7%                    | 1-1                              | 100                    | 1997R          | 70                             | 2009           |  |                        |
| McGregor                   | 6%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          |  |                        |
| McKinney                   | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 2003R          |  |                        |
| McLean                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Meadowlakes                | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| McLendon-Chisholm          | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Meadow                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Meadows Place              | 7%                    | 2-1                              | 100                    | 2017           | 70                             | 2017           |  |                        |
| Melissa                    | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Memorial Villages P.D.     | 7%                    | 2-1                              | 100 T                  | 2009           | 70                             | 2009           |  |                        |
| Memphis                    | 5%                    | 1.5-1                            | 100                    | 1998R          | 70                             | 1998R          |  |                        |
| Menard                     | 5%                    | 1-1                              | 100                    | 2009R          | 70                             | 2009R          |  |                        |
| Mercedes                   | 7%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          | 4-97                                   | 7-06-99                |
| Meridian                   | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Merkel                     | 6%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 4-02                                   |                        |
| Mertzson                   | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Mesquite                   | 7%                    | 2-1                              | 100 T                  | 2017           | 50                             | 2017           | 1-84                                   | 9-16-91                |
| Mexia                      | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 2-84                                   |                        |
| Midland                    | 7%                    | 2-1                              | 100 T                  | 1992R          | 50                             | 1992R          | 11-83                                  |                        |
| Midlothian                 | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 10-88                                  | 9-13-88                |
| Milano                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Miles                      | 5%                    | 1-1                              | 100                    | 1990           |                                |                |  |                        |
| Milford                    | 7%                    | 1-1                              | 100 T                  | 2002R          |                                |                |  |                        |
| Mineola                    | 5%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 1988           | 2-99                                   |                        |
| Mineral Wells              | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          | 12-90                                  | 10-18-88               |
| Mission                    | 6%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2010           |  |                        |
| Missouri City              | 7%                    | 2-1                              | 100 T                  | 2017           | 70                             | 2017           | 3-93                                   | 8-06-01                |
| Monahans                   | 5%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 11-94                                  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-05   | X                           | X        | 11.50%                | Marfa                      | 00802       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-15  | X                           | X        | 11.50%                | Marion                     | 00804       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-16   | X                           | X        | 11.50%                | Marlin                     | 00806       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | REMOVED               | Marshall                   | 00810       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Mart                       | 00812       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Martindale                 | 00813       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-97   | X                           | X        | 9.50%                 | Mason                      | 00814       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Matador                    | 00816       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-99   | X                           | X        | 13.50%                | Mathis                     | 00818       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Maud                       | 00820       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-12   | X                           | X        | 7.50%                 | Maypearl                   | 00822       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 7-99   |                             |          | 13.50%                | McAllen                    | 00824       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | 9.50%                 | McCamey                    | 00826       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-96   | X                           | X        | 12.50%                | McGregor                   | 00828       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | McKinney                   | 00830       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | McLean                     | 00832       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Meadowlakes                | 00831       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | McLendon-Chisholm          | 00833       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Meadow                     | 00834       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-97  | X                           | X        | 13.50%                | Meadows Place              | 00835       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-03   | X                           | X        | REMOVED               | Melissa                    | 00837       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-96   | X                           | X        | REMOVED               | Memorial Villages P.D.     | 01501       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Memphis                    | 00840       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | REMOVED               | Menard                     | 00842       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-00   | X                           | X        | REMOVED               | Mercedes                   | 00844       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Meridian                   | 00846       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-01   | X                           | X        | REMOVED               | Merkel                     | 00848       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Mertzon                    | 00852       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   |                             |          | REMOVED               | Mesquite                   | 00854       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-91   | X                           | X        | 13.50%                | Mexia                      | 00856       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-94   | X                           | X        | REMOVED               | Midland                    | 00860       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-91  | X                           | X        | REMOVED               | Midlothian                 | 00862       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Milano                     | 00863       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Miles                      | 00864       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Milford                    | 00865       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-91  | X                           | X        | 11.50%                | Mineola                    | 00868       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | 11.50%                | Mineral Wells              | 00870       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-98   | X                           | X        | 12.50%                | Mission                    | 00874       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-93   | X                           | X        | 15.50%                | Missouri City              | 00875       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 11-95  | X                           | X        | REMOVED               | Monahans                   | 00876       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality             | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|--|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|  |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Mont Belvieu                           | 7%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2015R          |  | 5-29-79                |
| Montgomery                             | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Moody                                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Morgan's Point                         | 7%                    | 2-1                              | 50 T                   | 2013R          | 30                             | 2013R          |  |                        |
| Morgan's Point Resort                  | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2003R          | 1-90                                   |                        |
| Morton                                 | 5%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          |  |                        |
| Moulton                                | 6%                    | 1-1                              | 100 T                  | 2013R          | 70                             | 2013R          | 12-97                                  |                        |
| Mount Enterprise                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Mt. Pleasant                           | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Mt. Vernon                             | 7%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  | 1-13-98                |
| Muenster                               | 5%                    | 2-1                              | 100                    | 1981           | 20                             | 1981           |  |                        |
| Muleshoe                               | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 2-96                                   | 10-18-83               |
| Munday                                 | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Murphy                                 | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |
| Nacogdoches                            | 7%                    | 2-1                              | 100 T                  | 2000R          | 30                             | 2012R          | 11-89                                  | 3-09-99                |
| Nacogdoches Mem. Hospital <sup>③</sup> | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Naples                                 | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Nash                                   | 7%                    | 2-1                              | 100 T                  | 2017R          | 70                             | 2017R          |  |                        |
| Nassau Bay                             | 7%                    | 2-1                              | 50                     | 2012R          | 70                             | 2012R          | 9-02                                   | 7-08-02                |
| Natalia                                | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Navasota                               | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  | 5-08-89                |
| Nederland                              | 7%                    | 2-1                              | 100                    | 2000R          | 30                             | 1984           | 3-82                                   | 12-13-83               |
| Needville                              | 7%                    | 1-1                              | 100 T                  | 1996R          | 70                             | 1989           |  |                        |
| Newark                                 | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| New Boston                             | 5%                    | 1-1                              | 100 T                  | 1993R          | 70                             | 1993R          |  |                        |
| New Braunfels                          | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 1-90                                   | 1-11-93                |
| New Braunfels Utilities                | 7%                    | 1.5-1                            | 100 T                  | 2002R          | 70                             | 2002R          | 4-04                                   |                        |
| New Deal                               | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| New Fairview                           | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| New London                             | 5%                    | 1-1                              | 100 T                  | 1997R          | 70                             | 1997R          |  |                        |
| New Summerfield                        | 7%                    | 2-1                              | 100                    | 2016R          |                                |                |  | 5-22-07                |
| New Waverly                            | 5%                    | 1.5-1                            | 100                    | 2004R          |                                |                |  |                        |
| Newton                                 | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  | 12-10-91               |
| Nixon                                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Nocona                                 | 5%                    | 2-1                              | 100                    | 2008R          | 70                             | 2008R          |  |                        |
| Nolanville                             | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Normangee                              | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| North Richland Hills                   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-90                                   | 12-12-88               |
| Northlake                              | 7%                    | 2-1                              | 100 T                  | 2011R          |                                |                |  |                        |
| Oak Point                              | 7%                    | 2-1                              | 100                    | 2010           |                                |                |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality             | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|--|-------------|
|         |                                  |  | Employees                   | Retirees |                       |  |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-95  | X                           | X        | REMOVED               | Mont Belvieu                           | 00887       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | 13.50%                | Montgomery                             | 00877       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Moody                                  | 00878       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           |          | REMOVED               | Morgan's Point                         | 00883       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-03   | X                           | X        | 13.50%                | Morgan's Point Resort                  | 00882       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Morton                                 | 00884       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-97  | X                           | X        | REMOVED               | Moulton                                | 00886       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Mount Enterprise                       | 00890       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-96   | X                           | X        | REMOVED               | Mt. Pleasant                           | 00892       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Mt. Vernon                             | 00894       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 11.50%                | Muenster                               | 00896       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-96   | X                           | X        | REMOVED               | Muleshoe                               | 00898       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Munday                                 | 00901       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-05   | X                           | X        | 13.50%                | Murphy                                 | 00903       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Nacogdoches                            | 10904       |
| 5 yrs   | 5 yrs/age 60, 28 yrs/any age     |  |                             |          | 7.50%                 | Nacogdoches Mem. Hospital <sup>®</sup> | 20904       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Naples                                 | 00906       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-96   | X                           | X        | REMOVED               | Nash                                   | 00907       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-07   | X                           | X        | REMOVED               | Nassau Bay                             | 00905       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-09  | X                           | X        | REMOVED               | Natalia                                | 00909       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Navasota                               | 00908       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-00   |                             |          | REMOVED               | Nederland                              | 00910       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-98   | X                           | X        | 9.50%                 | Needville                              | 00912       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Newark                                 | 00913       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | New Boston                             | 00914       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | New Braunfels                          | 10916       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | New Braunfels Utilities                | 20916       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | New Deal                               | 00915       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | New Fairview                           | 00923       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | 7.50%                 | New London                             | 00918       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 13.50%                | New Summerfield                        | 00919       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | New Waverly                            | 00917       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-10   | X                           | X        | REMOVED               | Newton                                 | 00920       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Nixon                                  | 00922       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Nocona                                 | 00924       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Nolanville                             | 00925       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Normangee                              | 00928       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-92   |                             |          | REMOVED               | North Richland Hills                   | 00931       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Northlake                              | 00930       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-03   | X                           | X        | REMOVED               | Oak Point                              | 00936       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Oak Ridge North            | 7%                    | 2-1                              | 100                    | 2007R          | 70                             | 2009R          |  |                        |
| Odem                       | 6%                    | 2-1                              |                        |                |                                |                |  |                        |
| Odessa                     | 7%                    | 2-1                              | 100 T                  | 2011R          | 50                             | 2011R          | 10-89                                  | 2-28-12                |
| O'Donnell                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Oglesby                    | 5%                    | 1-1                              |                        |                |                                |                | 12-03                                  |                        |
| Old River-Winfree          | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Olmos Park                 | 5%                    | 2-1                              | 100 T                  | 2005           | 70                             | 1998           |  |                        |
| Olney                      | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Omaha                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Onalaska                   | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Orange                     | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 1-88                                   |                        |
| Orange Grove               | 5%                    | 1.5-1                            | 100                    | 1992R          | 50                             | 1992R          |  | 8-18-10                |
| Ore City                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Overton                    | 5%                    | 2-1                              | 100 T                  | 1993           | 70                             | 1993           |  |                        |
| Ovilla                     | 7%                    | 2-1                              | 100 T                  | 2012R          |                                |                |  | 11-12-07               |
| Oyster Creek               | 7%                    | 2-1                              | 100 T                  | 2009R          |                                |                |  |                        |
| Paducah                    | 5%                    | 1.5-1                            | 100                    | 1998R          |                                |                |  |                        |
| Palacios                   | 7%                    | 2-1                              | 100 T                  | 2012R          | 70                             | 2012R          |  |                        |
| Palestine                  | 6%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 12-03                                  | 6-27-78                |
| Palmer                     | 5%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |
| Palmhurst                  | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Palmview                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Pampa                      | 7%                    | 2-1                              | 100 T                  | 2012R          | 70                             | 2012R          | 10-88                                  | 12-08-87               |
| Panhandle                  | 5%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2015R          |  | 8-26-93                |
| Panorama Village           | 6%                    | 2-1                              | 100                    | 1990           |                                |                |  |                        |
| Pantego                    | 7%                    | 2-1                              | 100 T                  | 1998R          | 50                             | 2014R          | 1-93                                   |                        |
| Paris                      | 6%                    | 2-1                              | 100 T                  | 2008           | 70                             | 2008           | 9-88                                   | 10-09-95               |
| Parker                     | 6%                    | 2-1                              | 100 T                  | 1998R          |                                |                |  |                        |
| Pasadena                   | 7%                    | 2-1                              | 100 T                  | 1993R          | 40                             | 1993R          | 1-82                                   | 9-29-09                |
| Pearland                   | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 10-89                                  | 2-11-91                |
| Pearsall                   | 5%                    | 1-1                              | 100 T                  | 2011R          | 70                             | 2011R          |  |                        |
| Pecos City                 | 5%                    | 2-1                              | 100 T                  | 1992R          | 30                             | 1992R          | 11-90                                  | 8-08-96                |
| Penitas                    | 6%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Perryton                   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 10-84                                  | 10-01-02               |
| Pflugerville               | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 9-89                                   |                        |
| Pharr                      | 7%                    | 2-1                              | 100 T                  | 2008           | 70                             | 2008           | 4-84                                   | 11-19-02               |
| Pilot Point                | 5%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 2-00                                   |                        |
| Pinehurst                  | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 4-03                                   | 3-08-90                |
| Pineland                   | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          | 8-94                                   | 8-20-91                |
| Piney Point Village        | 5%                    | 2-1                              | 100                    | 1999           |                                |                |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-99   | X                           | X        | REMOVED               | Oak Ridge North            | 00937       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | REMOVED               | Odem                       | 00942       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-93  | X                           | X        | REMOVED               | Odessa                     | 00944       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | O'Donnell                  | 00935       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Oglesby                    | 00945       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Old River-Winfree          | 00949       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 11.50%                | Olmos Park                 | 00950       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Olney                      | 00951       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Omaha                      | 00953       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 4-04   | X                           | X        | 9.50%                 | Onalaska                   | 00954       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 3-96   |                             |          | REMOVED               | Orange                     | 00958       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-10   | X                           | X        | 9.50%                 | Orange Grove               | 00960       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-01  | X                           | X        | 7.50%                 | Ore City                   | 00959       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-96   | X                           | X        | 11.50%                | Overton                    | 00962       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | 13.50%                | Ovilla                     | 00961       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Oyster Creek               | 00963       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Paducah                    | 00964       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Palacios                   | 00966       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-01  | X                           | X        | REMOVED               | Palestine                  | 00968       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Palmer                     | 00970       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Palmhurst                  | 00969       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Palmview                   | 00971       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-96   | X                           | X        | REMOVED               | Pampa                      | 00972       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | REMOVED               | Panhandle                  | 00974       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | 12.50%                | Panorama Village           | 00973       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-94   | X                           | X        | REMOVED               | Pantego                    | 00975       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  | X                           | X        | REMOVED               | Paris                      | 00976       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Parker                     | 00977       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-94   | X                           | X        | REMOVED               | Pasadena                   | 00978       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-95   | X                           | X        | 15.50%                | Pearland                   | 00983       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 2-04   | X                           | X        | 7.50%                 | Pearsall                   | 00984       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-95   | X                           | X        | 11.50%                | Pecos City                 | 00988       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Penitas                    | 00991       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 2-97   | X                           | X        | REMOVED               | Perryton                   | 00994       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-95   | X                           | X        | REMOVED               | Pflugerville               | 01000       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-99  | X                           | X        | REMOVED               | Pharr                      | 01002       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-96   | X                           | X        | 11.50%                | Pilot Point                | 01004       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-92  | X                           | X        | REMOVED               | Pinehurst                  | 01005       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-05   | X                           | X        | REMOVED               | Pineland                   | 01003       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Piney Point Village        | 01001       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Pittsburg                  | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          |  | 9-08-88                |
| Plains                     | 7%                    | 1.5-1                            | 100 T                  | 1996R          |                                |                |  |                        |
| Plainview                  | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 9-95                                   | 12-13-77               |
| Plano                      | 7%                    | 2-1                              | 100 T                  | 1994R          | 70                             | 1994R          | 1-92                                   | 12-27-93               |
| Pleasanton                 | 7%                    | 2-1                              | 100 T                  | 2013R          | 70                             | 2013R          | 5-91                                   | 9-21-87                |
| Point                      | 7%                    | 2-1                              | 100 T                  | 2016R          | 50                             | 2016R          |  |                        |
| Ponder                     | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Port Aransas               | 6%                    | 2-1                              | 100 T                  | 2014R          | 70                             | 2014R          | 2-00                                   |                        |
| Port Arthur                | 5%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 10-85                                  | 9-27-79                |
| Port Isabel                | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Port Lavaca                | 5%                    | 1.5-1                            | 100 T                  | 2003R          | 70                             | 2003R          |  |                        |
| Port Neches                | 7%                    | 2-1                              | 100 T                  | 2001R          | 30                             | 2017           | 12-87                                  | 11-19-87               |
| Portland                   | 6%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 5-91                                   |                        |
| Post                       | 5%                    | 2-1                              | 50 T                   | 2004R          |                                |                |  |                        |
| Poteet                     | 5%                    | 1.5-1                            | 100                    | 2007R          |                                |                |  |                        |
| Poth                       | 7%                    | 1-1                              | 100                    | 2004           |                                |                |  |                        |
| Pottsboro                  | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Premont                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Presidio                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Primera                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Princeton                  | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-90                                   |                        |
| Prosper                    | 7%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          |  |                        |
| Providence Village         | 5%                    | 2-1                              |                        |                |                                |                |  |                        |
| Quanah                     | 5%                    | 1.5-1                            | 100 T                  | 1995R          | 70                             | 1995R          |  |                        |
| Queen City                 | 5%                    | 1-1                              | 100 T                  | 2000R          |                                |                |  | 5-11-06                |
| Quinlan                    | 6%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2015R          |  |                        |
| Quintana                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Quitaque                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Quitman                    | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Ralls                      | 5%                    | 1.5-1                            | 100 T                  | 1997R          | 70                             | 1997R          |  |                        |
| Rancho Viejo               | 7%                    | 1.5-1                            | 100                    | 1999R          |                                |                |  | 11-13-01               |
| Ranger                     | 6%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Rankin                     | 5%                    | 1-1                              | 100 T                  | 1993           |                                |                | 1-90                                   |                        |
| Ransom Canyon              | 6%                    | 1.5-1                            | 100 T                  | 2014R          |                                |                | 8-09                                   |                        |
| Raymondville               | 7%                    | 2-1                              | 90 T                   | 1988           | 70                             | 1988           | 1-86                                   |                        |
| Red Oak                    | 6%                    | 2-1                              | 100 T                  | 2009           | 70                             | 2009           |  |                        |
| Redwater                   | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Refugio                    | 5%                    | 1-1                              | 100                    | 1991           |                                |                |  |                        |
| Reklaw                     | 7%                    | 1.5-1                            | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Reno (Lamar County)        | 5%                    | 2-1                              | 100                    | 1994R          |                                |                |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-94   | X                           | X        | REMOVED               | Pittsburg                  | 01006       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-00  | X                           | X        | REMOVED               | Plains                     | 01007       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-92   |                             |          | REMOVED               | Plainview                  | 01008       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   |                             |          | REMOVED               | Plano                      | 01010       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-96  | X                           | X        | REMOVED               | Pleasanton                 | 01012       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-10  |                             |          | 13.50%                | Point                      | 01013       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Ponder                     | 01017       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-00   | X                           | X        | 12.50%                | Port Aransas               | 01014       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-92   | X                           | X        | REMOVED               | Port Arthur                | 11016       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Port Isabel                | 01018       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Port Lavaca                | 01020       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 3-97   |                             |          | REMOVED               | Port Neches                | 01022       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    |  | X                           | X        | REMOVED               | Portland                   | 01019       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 1-97   | X                           | X        | REMOVED               | Post                       | 01024       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Poteet                     | 01026       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Poth                       | 01028       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Pottsboro                  | 01030       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Premont                    | 01032       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Presidio                   | 01029       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Primera                    | 01033       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-02   | X                           | X        | 13.50%                | Princeton                  | 01034       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | 13.50%                | Prosper                    | 01036       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Providence Village         | 01037       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Quanah                     | 01042       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-01  | X                           | X        | 7.50%                 | Queen City                 | 01045       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 8-97   | X                           | X        | 12.50%                | Quinlan                    | 01044       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Quintana                   | 01047       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Quitaque                   | 01046       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Quitman                    | 01048       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Ralls                      | 01050       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Rancho Viejo               | 01051       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  |                             |          | 12.50%                | Ranger                     | 01052       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Rankin                     | 01054       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Ransom Canyon              | 01055       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 15.50%                | Raymondville               | 01058       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-08  | X                           | X        | 12.50%                | Red Oak                    | 01061       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Redwater                   | 01062       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Refugio                    | 01064       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Reklaw                     | 01065       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-01   | X                           | X        | 11.50%                | Reno (Lamar County)        | 01066       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Reno (Parker County)       | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Rhome                      | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Rice                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Richardson                 | 7%                    | 2-1                              | 50                     | 2011R          | 50                             | 2011R          | 1-87                                   | 9-28-87                |
| Richland Hills             | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-90                                   | 12-10-91               |
| Richland Springs           | 5%                    | 2-1                              | 20                     | 1997           |                                |                |  |                        |
| Richmond                   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-90                                   | 4-18-05                |
| Richwood                   | 5%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 4-90                                   |                        |
| Riesel                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Rio Grande City            | 6%                    | 1.5-1                            | 100 T                  | 2007R          | 70                             | 2007R          |  | 9-07-06                |
| Rio Vista                  | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Rising Star                | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| River Oaks                 | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 8-88                                   |                        |
| Roanoke                    | 7%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          |  |                        |
| Robert Lee                 | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Robinson                   | 7%                    | 2-1                              | 100 T                  | 2009R          | 30                             | 2009R          |  |                        |
| Robstown                   | 5%                    | 1.5-1                            | 100                    | 2004R          | 70                             | 2004R          |  |                        |
| Robstown Utility System    | 5%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 11-03                                  | 3-07-91                |
| Roby                       | 7%                    | 2-1                              | 100                    | 1994           | 70                             | 1994           |  |                        |
| Rockdale                   | 5%                    | 2-1                              | 100                    | 2004R          | 70                             | 2004R          |  |                        |
| Rockport                   | 7%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          | 6-92                                   |                        |
| Rocksprings                | 7%                    | 1-1                              |                        |                |                                |                |  |                        |
| Rockwall                   | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          | 7-93                                   | 8-02-83                |
| Rogers                     | 7%                    | 1-1                              | 100 T                  | 2010R          |                                |                |  |                        |
| Rollingwood                | 6%                    | 2-1                              | 100 T                  | 2002R          |                                |                |  |                        |
| Roma                       | 5%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          |  |                        |
| Roscoe                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Rosebud                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Rosenberg                  | 6%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 2-91                                   | 5-18-99                |
| Rotan                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Round Rock                 | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 1-90                                   | 6-08-06                |
| Rowlett                    | 7%                    | 2-1                              | 100 T                  | 1999R          | 50                             | 2012R          | 1-90                                   |                        |
| Roy H. Laird Mem. Hospital | 5%                    | 2-1                              | 100                    | 2009           | 70                             | 2009           |  |                        |
| Royse City                 | 7%                    | 2-1                              | 100 T                  | 2009R          | 30                             | 2012R          |  |                        |
| Rule                       | 7%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Runaway Bay                | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Runge                      | 7%                    | 1-1                              | 100 T                  | 2003R          | 70                             | 2003R          |  |                        |
| Rusk                       | 6%                    | 1.5-1                            | 100 T                  | 2004R          | 70                             | 2004R          | 2-12                                   | 12-19-02               |
| Sabinal                    | 3%                    | 2-1                              | 100 T                  | 1996R          |                                |                | 4-95                                   |                        |
| Sachse                     | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Reno (Parker County)       | 01069       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-02  | X                           | X        | 13.50%                | Rhome                      | 01067       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Rice                       | 01068       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-91  |                             |          | REMOVED               | Richardson                 | 01070       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Richland Hills             | 01073       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Richland Springs           | 01074       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Richmond                   | 01076       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Richwood                   | 01077       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Riesel                     | 01072       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-07   | X                           | X        | REMOVED               | Rio Grande City            | 01075       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Rio Vista                  | 01079       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Rising Star                | 01080       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  | X                           | X        | REMOVED               | River Oaks                 | 01082       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-97  |                             |          | REMOVED               | Roanoke                    | 01084       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Robert Lee                 | 01088       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-97  | X                           | X        | REMOVED               | Robinson                   | 01089       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | 9.50%                 | Robstown                   | 21090       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-97  | X                           | X        | REMOVED               | Robstown Utility System    | 11090       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Roby                       | 01092       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-01   | X                           | X        | 11.50%                | Rockdale                   | 01096       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-97   | X                           | X        | REMOVED               | Rockport                   | 01098       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | REMOVED               | Rocksprings                | 01100       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  | X                           | X        | REMOVED               | Rockwall                   | 01102       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 8-09   |                             |          | REMOVED               | Rogers                     | 01104       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-07   | X                           | X        | 12.50%                | Rollingwood                | 01105       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-02   | X                           | X        | 11.50%                | Roma                       | 01106       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Roscoe                     | 01109       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-05  | X                           | X        | REMOVED               | Rosebud                    | 01112       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-96  | X                           | X        | REMOVED               | Rosenberg                  | 01114       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Rotan                      | 01116       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-96   | X                           | X        | REMOVED               | Round Rock                 | 01118       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-94   |                             |          | REMOVED               | Rowlett                    | 01119       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Roy H. Laird Mem. Hospital | 20696       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-92   | X                           | X        | 13.50%                | Royse City                 | 01120       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Rule                       | 01122       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Runaway Bay                | 01123       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Runge                      | 01124       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-12   | X                           | X        | 10.50%                | Rusk                       | 01126       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Sabinal                    | 01128       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-95   | X                           | X        | REMOVED               | Sachse                     | 01129       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Saginaw                    | 6%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Saint Jo                   | 6%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1998R          |  |                        |
| Salado                     | 5%                    | 2-1                              | 100 T                  | 2005R          |                                |                | 7-02                                   |                        |
| San Angelo                 | 7%                    | 2-1                              | 100 T                  | 1995R          | 50                             | 2010R          | 1-82                                   | 11-13-79               |
| San Antonio                | 6%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2017           | 10-96                                  | 1-01-00                |
| San Antonio Water System   | 3%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          | 9-89                                   |                        |
| San Augustine              | 7%                    | 2-1                              | 100 T                  | 1995R          | 70                             | 1995R          | 9-99                                   | 3-14-00                |
| San Benito                 | 5%                    | 2-1                              | 100 T                  | 2001           |                                |                | 6-98                                   |                        |
| San Felipe                 | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| San Juan                   | 6%                    | 1.5-1                            |                        |                |                                |                | 4-01                                   |                        |
| San Marcos                 | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 4-84                                   | 7-09-01                |
| San Saba                   | 6%                    | 1.5-1                            | 100 T                  | 2011R          | 70                             | 2011R          |  | 7-11-78                |
| Sanger                     | 6%                    | 2-1                              | 100                    | 2007R          |                                |                | 12-95                                  | 8-20-07                |
| Sansom Park                | 7%                    | 1.5-1                            | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Santa Anna                 | 5%                    | 1.5-1                            | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Santa Fe                   | 7%                    | 1.5-1                            | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Savoy                      | 6%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Schertz                    | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          | 9-94                                   | 8-16-94                |
| Schulenburg                | 7%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  | 3-09-89                |
| Seabrook                   | 7%                    | 2-1                              | 100 T                  | 2005R          | 30                             | 2014R          | 1-88                                   | 3-05-13                |
| Seadrift                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Seagoville                 | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 1988           |  |                        |
| Seagraves                  | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Sealy                      | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 1-90                                   |                        |
| Seguin                     | 7%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2017           | 2-96                                   |                        |
| Selma                      | 7%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1996R          | 7-95                                   |                        |
| Seminole                   | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 7-96                                   | 3-23-92                |
| Seven Points               | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          |  |                        |
| Seymour                    | 6%                    | 1-1                              | 100 T                  | 1995R          | 70                             | 1995R          | 9-89                                   |                        |
| Shady Shores               | 7%                    | 2-1                              | 100 T                  | 2017           |                                |                |  |                        |
| Shallowater                | 5%                    | 1.5-1                            | 100 T                  | 1999R          |                                |                |  |                        |
| Shamrock                   | 5%                    | 1-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Shavano Park               | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          |  |                        |
| Shenandoah                 | 7%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          |  | 11-28-07               |
| Shepherd                   | 7%                    | 1.5-1                            | 100                    | 1998           |                                |                |  |                        |
| Sherman                    | 7%                    | 2-1                              | 100 T                  | 2007R          | 30                             | 2007R          | 1-91                                   | 10-01-00               |
| Shiner                     | 5%                    | 1-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Shoreacres                 | 5%                    | 1.5-1                            | 100 T                  | 1993R          | 70                             | 1993R          |  | 3-26-01                |
| Silsbee                    | 7%                    | 2-1                              | 100                    | 1996R          | 70                             | 1996R          | 10-89                                  | 11-08-83               |
| Silverton                  | 6%                    | 1.5-1                            | 75                     | 2012R          | 50                             | 2012R          |  |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-97  | X                           | X        | REMOVED               | Saginaw                    | 01131       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 10.50%                | Saint Jo                   | 01130       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-11   | X                           | X        | REMOVED               | Salado                     | 01133       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-94  |                             |          | REMOVED               | San Angelo                 | 01132       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-96  |                             |          | REMOVED               | San Antonio                | 21136       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-97   |                             |          | 5.50%                 | San Antonio Water System   | 11136       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 9-99   | X                           | X        | 13.50%                | San Augustine              | 01138       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-98   | X                           | X        | 11.50%                | San Benito                 | 01140       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | San Felipe                 | 01144       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 12-00  | X                           | X        | 10.50%                | San Juan                   | 01148       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-96   | X                           | X        | REMOVED               | San Marcos                 | 01150       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-08  | X                           | X        | 10.50%                | San Saba                   | 01152       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-99   | X                           | X        | 12.50%                | Sanger                     | 01146       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 11.50%                | Sansom Park                | 01153       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-92   | X                           | X        | 9.50%                 | Santa Anna                 | 01154       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 2-97   |                             |          | REMOVED               | Santa Fe                   | 01155       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 10.50%                | Savoy                      | 01158       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-93   | X                           | X        | REMOVED               | Schertz                    | 01159       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-01   | X                           | X        | REMOVED               | Schulenburg                | 01160       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-94  | X                           | X        | REMOVED               | Seabrook                   | 01161       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Seadrift                   | 01162       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  | X                           | X        | 13.50%                | Seagoville                 | 01164       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Seagraves                  | 01166       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-05   | X                           | X        | REMOVED               | Sealy                      | 01167       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   | X                           | X        | REMOVED               | Seguin                     | 01168       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | REMOVED               | Selma                      | 01169       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-96   | X                           | X        | REMOVED               | Seminole                   | 01170       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 5-00   | X                           | X        | 13.50%                | Seven Points               | 01171       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-98   | X                           | X        | 8.50%                 | Seymour                    | 01172       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Shady Shores               | 01165       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Shallowater                | 01177       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Shamrock                   | 01174       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Shavano Park               | 01173       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-08   | X                           | X        | REMOVED               | Shenandoah                 | 01175       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 7-00   | X                           | X        | 11.50%                | Shepherd                   | 01181       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-00  | X                           | X        | REMOVED               | Sherman                    | 01176       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Shiner                     | 01178       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-93  | X                           | X        | 9.50%                 | Shoreacres                 | 01179       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-98   |                             |          | REMOVED               | Silsbee                    | 01180       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Silverton                  | 01182       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Sinton                     | 7%                    | 2-1                              | 100                    | 2012R          | 70                             | 2012R          | 5-88                                   |                        |
| Skellytown                 | 7%                    | 1-1                              | 100                    | 2012R          |                                |                |  |                        |
| Slaton                     | 6%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1996           |  |                        |
| Smithville                 | 5%                    | 1.5-1                            | 100 T                  | 2001R          | 70                             | 2001R          | 12-95                                  | 4-11-94                |
| Smyer                      | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Snyder                     | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  |                        |
| Somerset                   | 5%                    | 1.5-1                            | 100 T                  | 2011           | 70                             | 2011           |  |                        |
| Somerville                 | 5%                    | 1.5-1                            | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Sonora                     | 5%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          |  | 11-18-08               |
| Sour Lake                  | 7%                    | 2-1                              |                        |                |                                |                | 5-11                                   |                        |
| South Houston              | 5%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          | 12-91                                  |                        |
| South Padre Island         | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          | 1-90                                   | 7-01-78                |
| Southlake                  | 7%                    | 2-1                              | 100                    | 2010R          | 50                             | 2010R          | 1-95                                   | 6-20-00                |
| Southmayd                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Southside Place            | 7%                    | 2-1                              | 100 T                  | 2011R          | 70                             | 1988           | 1-03                                   |                        |
| Spearman                   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          |  | 12-16-86               |
| Spring Valley              | 7%                    | 2-1                              | 100 T                  | 2009           | 70                             | 2009           |  |                        |
| Springtown                 | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| Spur                       | 5%                    | 1-1                              | 100 T                  | 2013R          | 70                             | 2017           |  |                        |
| Stafford                   | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Stamford                   | 5%                    | 1.5-1                            | 100 T                  | 1994R          | 70                             | 1994R          | 2-89                                   |                        |
| Stanton                    | 5%                    | 1.5-1                            | 100                    | 1992R          | 70                             | 1992R          | 5-89                                   |                        |
| Star Harbor                | 5%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          | 9-82                                   |                        |
| Stephenville               | 6%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 10-89                                  | 12-04-01               |
| Sterling City              | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Stinnett                   | 5%                    | 1.5-1                            | 100                    | 1995           | 60                             | 1995           |  | 3-18-02                |
| Stockdale                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Stratford                  | 5%                    | 1.5-1                            | 100 T                  | 2006R          | 70                             | 2006R          | 1-00                                   |                        |
| Sudan                      | 5%                    | 1-1                              | 100 T                  | 2017           | 70                             | 2017           |  |                        |
| Sugar Land                 | 7%                    | 2-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |
| Sulphur Springs            | 6%                    | 2-1                              | 100 T                  | 2017           | 50                             | 2007           |  |                        |
| Sundown                    | 7%                    | 2-1                              | 100 T                  | 2010R          | 50                             | 1996           |  |                        |
| Sunnyvale                  | 6%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 5-04                                   |                        |
| Sunray                     | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          | 2-99                                   |                        |
| Sunrise Beach Village      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Sunset Valley              | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2004R          | 7-01                                   |                        |
| Surfside Beach             | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Sweeny                     | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Sweetwater                 | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  | 9-10-91                |
| TMRS                       | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 2000R          | 1-82                                   | 12-06-13               |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 11-91  | X                           | X        | REMOVED               | Sinton                     | 01184       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Skellytown                 | 01185       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 12.50%                | Slaton                     | 01186       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | 9.50%                 | Smithville                 | 01188       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Smyer                      | 01189       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Snyder                     | 01190       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-01  | X                           | X        | 9.50%                 | Somerset                   | 01191       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Somerville                 | 01192       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-00   | X                           | X        | REMOVED               | Sonora                     | 01194       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-12   | X                           | X        | 13.50%                | Sour Lake                  | 01196       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | South Houston              | 01198       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | 13.50%                | South Padre Island         | 01199       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-95   | X                           | X        | 13.50%                | Southlake                  | 01197       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Southmayd                  | 01200       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-03   | X                           | X        | REMOVED               | Southside Place            | 01202       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 13.50%                | Spearman                   | 01204       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 4-97   | X                           | X        | REMOVED               | Spring Valley              | 01205       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-04  | X                           | X        | 13.50%                | Springtown                 | 01203       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Spur                       | 01206       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Stafford                   | 01207       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-96   | X                           | X        | 9.50%                 | Stamford                   | 01208       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-99  | X                           | X        | 9.50%                 | Stanton                    | 01210       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Star Harbor                | 01211       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-91  | X                           | X        | REMOVED               | Stephenville               | 01212       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Sterling City              | 01213       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-98   | X                           | X        | 9.50%                 | Stinnett                   | 01214       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Stockdale                  | 01216       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-00   | X                           | X        | REMOVED               | Stratford                  | 01218       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-99  |                             |          | 7.50%                 | Sudan                      | 01224       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 7-98   | X                           | X        | REMOVED               | Sugar Land                 | 01225       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-95  | X                           | X        | REMOVED               | Sulphur Springs            | 01226       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-00   | X                           | X        | REMOVED               | Sundown                    | 01228       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Sunnyvale                  | 01229       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-99   | X                           | X        | REMOVED               | Sunray                     | 01230       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 4-11   | X                           | X        | 7.50%                 | Sunrise Beach Village      | 01227       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-06   | X                           | X        | 13.50%                | Sunset Valley              | 01231       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 8.50%                 | Surfside Beach             | 01233       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-11  | X                           | X        | REMOVED               | Sweeny                     | 01232       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-96   | X                           | X        | REMOVED               | Sweetwater                 | 01234       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-97   | X                           | X        | REMOVED               | TMRS                       | 01264       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality  | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|-----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                             |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Taft                        | 7%                    | 2-1                              | 100 T                  | 2013R          | 30                             | 2013R          | 11-94                                  | 6-12-12                |
| Tahoka                      | 5%                    | 2-1                              | 100                    | 2017           | 50                             | 1976           | 12-03                                  |                        |
| Tatum                       | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Taylor                      | 7%                    | 1.5-1                            | 100 T                  | 2007R          | 70                             | 2007R          | 2-92                                   |                        |
| Teague                      | 7%                    | 2-1                              | 100 T                  | 2007R          | 70                             | 2007R          |  |                        |
| Temple                      | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-90                                   |                        |
| Tenaha                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Terrell                     | 7%                    | 2-1                              | 100 T                  | 1996R          | 70                             | 1996R          | 1-96                                   |                        |
| Terrell Hills               | 6%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 3-02                                   |                        |
| Texarkana                   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 10-88                                  |                        |
| Texarkana Police Department | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 10-88                                  |                        |
| Texarkana Water Utilities   | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 10-88                                  |                        |
| Texas City                  | 7%                    | 2-1                              | 100 T                  | 2003R          | 70                             | 2003R          | 6-90                                   | 1-01-03                |
| Texas Municipal League      | 6%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 11-91                                  |                        |
| Texas Municipal League IEBP | 6%                    | 2-1                              | 100                    | 2017           |                                |                |  |                        |
| Texas Municipal League IRP  | 7%                    | 2-1                              | 100T                   | 2016R          | 70                             | 2016R          | 3-92                                   | 10-19-02               |
| Texhoma                     | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| The Colony                  | 7%                    | 2-1                              | 100 T                  | 2011R          | 30                             | 2011R          | 10-93                                  |                        |
| Thompsons                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Thorndale                   | 5%                    | 1.5-1                            | 100 T                  | 2013R          | 70                             | 2013R          |  |                        |
| Thrall                      | 5%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Three Rivers                | 5%                    | 2-1                              | 100                    | 2017R          | 70                             | 2017R          |  |                        |
| Throckmorton                | 5%                    | 1.5-1                            | 100                    | 2004R          | 70                             | 2004R          |  | 12-08-87               |
| Tiki Island                 | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Timpson                     | 5%                    | 1-1                              | 100                    | 1996R          |                                |                |  |                        |
| Tioga                       | 6%                    | 1-1                              |                        |                |                                |                |  |                        |
| Tolar                       | 7%                    | 2-1                              |                        |                |                                |                |  |                        |
| Tom Bean                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Tomball                     | 7%                    | 2-1                              | 100 T                  | 1995R          | 70                             | 1995R          | 11-89                                  | 6-20-88                |
| Trent                       | 7%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Trenton                     | 5%                    | 1.5-1                            | 100 T                  | 1998R          |                                |                |  | 4-07-94                |
| Trinidad                    | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Trinity                     | 5%                    | 2-1                              | 100                    | 2014R          | 70                             | 2014R          |  |                        |
| Trophy Club                 | 7%                    | 2-1                              | 100 T                  | 2001R          | 30                             | 2015R          |  |                        |
| Troup                       | 5%                    | 1.5-1                            | 100 T                  | 2011R          | 70                             | 2011R          |  |                        |
| Troy                        | 7%                    | 2-1                              | 100                    | 2016R          |                                |                |  |                        |
| Tulia                       | 6%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          |  | 5-05-87                |
| Turkey                      | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Tye                         | 7%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Tyler                       | 7%                    | 2-1                              | 100 T                  | 2005R          | 70                             | 2005R          | 2-94                                   | 5-24-00                |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality  | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|-----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                             |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-16   | X                           | X        | 13.50%                | Taft                        | 01236       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-04   | X                           | X        | 11.50%                | Tahoka                      | 01238       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Tatum                       | 01241       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-91  | X                           | X        | REMOVED               | Taylor                      | 01246       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Teague                      | 01248       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | REMOVED               | Temple                      | 01252       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Tenaha                      | 01254       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-96   | X                           | X        | REMOVED               | Terrell                     | 01256       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-97   | X                           | X        | REMOVED               | Terrell Hills               | 01258       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   |                             |          | REMOVED               | Texarkana                   | 21260       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   |                             |          | REMOVED               | Texarkana Police Department | 11260       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-95   |                             |          | REMOVED               | Texarkana Water Utilities   | 31260       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-16  |                             |          | REMOVED               | Texas City                  | 01262       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 11-91  | X                           | X        | REMOVED               | Texas Municipal League      | 11263       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 1-99   | X                           | X        | 12.50%                | Texas Municipal League IEBP | 31263       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 3-92   | X                           | X        | REMOVED               | Texas Municipal League IRP  | 21263       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Texhoma                     | 01265       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-96   | X                           | X        | REMOVED               | The Colony                  | 01267       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Thompsons                   | 01269       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-99   | X                           | X        | 9.50%                 | Thorndale                   | 01268       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Thrall                      | 01272       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-16   | X                           | X        | REMOVED               | Three Rivers                | 01274       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Throckmorton                | 01276       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Tiki Island                 | 01277       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Timpson                     | 01278       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 8.50%                 | Tioga                       | 01280       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 9-12   | X                           | X        | REMOVED               | Tolar                       | 01283       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Tom Bean                    | 01286       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-94   | X                           | X        | REMOVED               | Tomball                     | 01284       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 11.50%                | Trent                       | 01290       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Trenton                     | 01292       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-96  | X                           | X        | 7.50%                 | Trinidad                    | 01293       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-06   | X                           | X        | 11.50%                | Trinity                     | 01294       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-01   | X                           | X        | REMOVED               | Trophy Club                 | 01295       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 9.50%                 | Troup                       | 01296       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-98   | X                           | X        | 13.50%                | Troy                        | 01297       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 12-96  | X                           | X        | REMOVED               | Tulia                       | 01298       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Turkey                      | 01299       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Tye                         | 01301       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-94   | X                           | X        | REMOVED               | Tyler                       | 01304       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Universal City             | 7%                    | 2-1                              | 100 T                  | 2014R          | 70                             | 2014R          | 3-94                                   |                        |
| University Park            | 7%                    | 2-1                              | 100                    | 2013           | 70                             | 2013           |  |                        |
| Uvalde                     | 5%                    | 1.5-1                            | 100 T                  | 2012R          | 70                             | 2012R          | 6-90                                   |                        |
| Valley Mills               | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Valley View                | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Van                        | 6%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 1990           | 3-11                                   |                        |
| Van Alstyne                | 6%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Van Horn                   | 5%                    | 1.5-1                            | 100                    | 1994R          | 70                             | 1994R          |  | 12-10-96               |
| Vega                       | 7%                    | 2-1                              | 100 T                  | 2008R          | 70                             | 2008R          |  |                        |
| Venus                      | 7%                    | 2-1                              | 100                    | 2007R          | 70                             | 2010R          |  |                        |
| Vernon                     | 7%                    | 2-1                              | 75 T                   | 2016R          | 30                             | 2016R          | 5-91                                   |                        |
| Victoria                   | 6%                    | 2-1                              | 100 T                  | 1993R          | 70                             | 1993R          | 11-84                                  | 8-16-82                |
| Vidor                      | 7%                    | 2-1                              | 100 T                  | 2006R          | 70                             | 2006R          | 1-92                                   | 10-11-07               |
| Volente                    | 6%                    | 1.5-1                            |                        |                |                                |                |  |                        |
| Village Fire Department    | 7%                    | 1.5-1                            | 100 T                  | 2009           | 70                             | 2009           |  |                        |
| Waco                       | 7%                    | 2-1                              | 100 T                  | 2005R          | 50                             | 2014           | 9-89                                   | 4-01-03                |
| Waelder                    | 5%                    | 1-1                              | 100                    | 1992R          | 30                             | 1988           |  |                        |
| Wake Village               | 7%                    | 2-1                              | 100                    | 1995R          | 70                             | 1995R          |  | 2-14-11                |
| Waller                     | 5%                    | 1.5-1                            | 100 T                  | 2010R          |                                |                |  |                        |
| Wallis                     | 6%                    | 1-1                              | 100                    | 2001R          |                                |                |  |                        |
| Walnut Springs             | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Waskom                     | 5%                    | 1-1                              | 100 T                  | 2005R          | 70                             | 2005R          |  |                        |
| Watauga                    | 7%                    | 2-1                              | 100 T                  | 1999R          | 70                             | 1999R          | 11-89                                  |                        |
| Waxahachie                 | 7%                    | 2-1                              | 100 T                  | 1997R          | 70                             | 1997R          | 1-90                                   | 12-16-85               |
| Weatherford                | 7%                    | 2-1                              | 100 T                  | 2000R          | 50                             | 2014R          | 10-88                                  | 3-28-89                |
| Webster                    | 7%                    | 2-1                              | 100 T                  | 1998R          | 70                             | 1998R          | 2-95                                   | 1-02-07                |
| Weimar                     | 7%                    | 2-1                              | 100                    | 2008R          | 50                             | 2008R          |  |                        |
| Wellington                 | 5%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2007           | 10-89                                  |                        |
| Wells                      | 5%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Westlaco                   | 7%                    | 2-1                              | 50 T                   | 2017           | 30                             | 2017           |  | 8-18-05                |
| West                       | 5%                    | 1.5-1                            | 100                    | 2003R          | 50                             | 1981           |  |                        |
| West Columbia              | 5%                    | 2-1                              | 100 T                  | 2003R          | 50                             | 1976           |  | 7-12-10                |
| West Lake Hills            | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  | 5-13-92                |
| West Orange                | 7%                    | 2-1                              | 100                    | 2003R          | 70                             | 2003R          | 11-89                                  |                        |
| West Tawakoni              | 5%                    | 2-1                              | 100 T                  | 2007R          |                                |                |  | 9-13-05                |
| West University Place      | 7%                    | 2-1                              | 100 T                  | 2004R          | 70                             | 2010           | 1-91                                   | 11-26-90               |
| Westlake                   | 7%                    | 2-1                              | 100 T                  | 2006R          |                                |                |  |                        |
| Westover Hills             | 5%                    | 1-1                              | 90                     | 1991           | 30                             | 1991           |  |                        |
| Westworth Village          | 7%                    | 2-1                              | 100 T                  | 2010R          | 70                             | 2010R          |  |                        |
| Wharton                    | 5%                    | 1.5-1                            | 100 T                  | 2010R          | 70                             | 2010R          | 1-97                                   |                        |

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-97   | X                           | X        | REMOVED               | Universal City             | 01305       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 12-91  |                             |          | REMOVED               | University Park            | 01306       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-98   | X                           | X        | 9.50%                 | Uvalde                     | 01308       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Valley Mills               | 01312       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Valley View                | 01313       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-11   | X                           | X        | 12.50%                | Van                        | 01314       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 12.50%                | Van Alstyne                | 01316       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-97   | X                           | X        | 9.50%                 | Van Horn                   | 01318       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-03   | X                           | X        | REMOVED               | Vega                       | 01320       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 13.50%                | Venus                      | 01324       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 12-96  | X                           | X        | REMOVED               | Vernon                     | 01326       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-92   | X                           | X        | REMOVED               | Victoria                   | 01328       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 7-97   | X                           | X        | REMOVED               | Vidor                      | 01329       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Volente                    | 01331       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-96   | X                           | X        | REMOVED               | Village Fire Department    | 01500       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-91  |                             |          | REMOVED               | Waco                       | 01330       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Waelder                    | 01332       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-92   | X                           | X        | 13.50%                | Wake Village               | 01334       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 6-02   | X                           | X        | 9.50%                 | Waller                     | 01336       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    |  | X                           | X        | 8.50%                 | Wallis                     | 01337       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Walnut Springs             | 01338       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 5-00   | X                           | X        | 7.50%                 | Waskom                     | 01340       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-92   | X                           | X        | REMOVED               | Watauga                    | 01341       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-91  | X                           | X        | REMOVED               | Waxahachie                 | 01342       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-92  | X                           | X        | REMOVED               | Weatherford                | 01344       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 2-95   | X                           | X        | REMOVED               | Webster                    | 01345       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-98   | X                           | X        | REMOVED               | Weimar                     | 01346       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 12-98  | X                           | X        | REMOVED               | Wellington                 | 01350       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  |                             |          | 7.50%                 | Wells                      | 01352       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-95  | X                           | X        | REMOVED               | Weslaco                    | 01354       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | West                       | 01356       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-13   |                             |          | 11.50%                | West Columbia              | 01358       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-96  | X                           | X        | REMOVED               | West Lake Hills            | 01359       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 10-95  |                             |          | REMOVED               | West Orange                | 01361       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | West Tawakoni              | 01365       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 1-96   | X                           | X        | REMOVED               | West University Place      | 01364       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Westlake                   | 01363       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 10-93  | X                           | X        | 7.50%                 | Westover Hills             | 01362       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-00   | X                           | X        | 13.50%                | Westworth Village          | 01366       |
| 10 yrs  | 10 yrs/age 60, 20 yrs/any age    | 11-97  | X                           | X        | 9.50%                 | Wharton                    | 01368       |

# Plan Provisions For Participating Municipalities

Continued

| Participating Municipality | Employee Deposit Rate | Municipal Current Matching Ratio | Updated Service Credit |                | Increased Benefits to Retirees |                | Military Service Credit Effective Date | Buyback Effective Date |
|----------------------------|-----------------------|----------------------------------|------------------------|----------------|--------------------------------|----------------|--|------------------------|
|                            |                       |                                  | Rate (%)               | Year Effective | Rate <sup>①</sup> (%)          | Year Effective |  |                        |
| Wheeler                    | 5%                    | 2-1                              | 100                    | 1999R          | 70                             | 1999R          |  |                        |
| White Deer                 | 5%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| White Oak                  | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 12-00                                  |                        |
| White Settlement           | 7%                    | 2-1                              | 100 T                  | 2017R          | 70                             | 2017R          | 6-90                                   | 12-21-99               |
| Whiteface                  | 5%                    | 1.5-1                            | 100 T                  | 1996R          | 70                             | 1996R          | 10-01                                  |                        |
| Whitehouse                 | 5%                    | 2-1                              | 100                    | 2017R          | 70                             | 2017R          |  |                        |
| Whitesboro                 | 5%                    | 1.5-1                            | 100 T                  | 1998R          | 70                             | 1998R          |  |                        |
| Whitewright                | 5%                    | 1.5-1                            | 100 T                  | 1992R          |                                |                |  |                        |
| Whitney                    | 5%                    | 1-1                              | 100 T                  | 2002R          | 70                             | 2002R          |  |                        |
| Wichita Falls              | 5% <sup>②</sup>       | 2-1                              | 50 T                   | 1997R          | 70                             | 1997R          |  |                        |
| Willis                     | 7%                    | 2-1                              | 100 T                  | 2011R          | 70                             | 2011           |  |                        |
| Willow Park                | 7%                    | 2-1                              |                        |                |                                |                |  | 12-09-14               |
| Wills Point                | 5%                    | 2-1                              | 100 T                  | 2009R          | 70                             | 2009R          |  |                        |
| Wilmer                     | 6%                    | 2-1                              | 100                    | 1991           | 70                             | 1991           |  |                        |
| Wimberley                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Windcrest                  | 6%                    | 1.5-1                            | 100 T                  | 2004R          | 70                             | 2004R          |  |                        |
| Winfield                   | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Wink                       | 7%                    | 2-1                              | 100                    | 1991           | 70                             | 1991           |  |                        |
| Winnsboro                  | 5%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2015R          | 1-89                                   | 3-11-08                |
| Winona                     | 7%                    | 2-1                              | 100                    | 2006R          | 70                             | 2007R          |  |                        |
| Winters                    | 5%                    | 2-1                              | 100 T                  | 2001R          | 70                             | 2001R          |  |                        |
| Wolfforth                  | 5%                    | 2-1                              | 100 T                  | 2015R          | 70                             | 2015R          | 1-00                                   |                        |
| Woodcreek                  | 5%                    | 1-1                              |                        |                |                                |                |  |                        |
| Woodsboro                  | 5%                    | 1-1                              | 100                    | 1992R          | 70                             | 1992R          |  |                        |
| Woodville                  | 7%                    | 2-1                              | 100 T                  | 2000R          | 70                             | 2000R          |  |                        |
| Woodway                    | 7%                    | 2-1                              | 100 T                  | 1992R          | 70                             | 1992R          | 1-91                                   |                        |
| Wortham                    | 6%                    | 2-1                              | 100 T                  | 2004R          |                                |                |  |                        |
| Wylie                      | 7%                    | 2-1                              | 100 T                  | 1995R          | 70                             | 1995R          | 2-89                                   | 12-12-00               |
| Yoakum                     | 6%                    | 2-1                              | 100                    | 1992R          | 70                             | 1992R          | 5-82                                   |                        |
| Yorktown                   | 5%                    | 1-1                              | 100                    | 1988           | 70                             | 1988           |  |                        |
| Zavalla                    | 7%                    | 1-1                              | 100 T                  | 2001R          |                                |                | 9-05                                   |                        |

① For years prior to 1982, the rate is the actual percentage in annuities. For 1982 and later, the rate is the percentage of the change in the CPI-U since retirement date, granted to each annuitant as an increase of the original annuity.

② Police Department — 7%.

③ All plans include Vested Employee Survivor benefits and Occupational Disability benefits except for these two inactive cities.

④ Also includes 25 yrs/age 50 retirement eligibility.

T — Includes Transfer Credits.

R — Annually Repeating. Ordinance automatically renews effective January 1 of each successive year.

# Plan Provisions For Participating Municipalities

Continued

| Vesting | Service Retirement Eligibilities | Restricted Prior Service Credit Effective Date | Supplemental Death Benefits |          | Statutory Maximum (%) | Participating Municipality | City Number |
|---------|----------------------------------|--|-----------------------------|----------|-----------------------|----------------------------|-------------|
|         |                                  |  | Employees                   | Retirees |                       |                            |             |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Wheeler                    | 01370       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | White Deer                 | 01372       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 5-00   | X                           | X        | REMOVED               | White Oak                  | 01377       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-91  | X                           | X        | REMOVED               | White Settlement           | 01378       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Whiteface                  | 01374       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 3-95   | X                           | X        | 11.50%                | Whitehouse                 | 01375       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-98   | X                           | X        | 9.50%                 | Whitesboro                 | 01376       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 9.50%                 | Whitewright                | 01380       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 4-02   | X                           | X        | 7.50%                 | Whitney                    | 01382       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    | 10-96  |                             |          | REMOVED               | Wichita Falls              | 01384       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 8-97   | X                           | X        | 13.50%                | Willis                     | 01386       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Willow Park                | 01387       |
| 10 yrs  | 10 yrs/age 60, 25 yrs/any age    |  | X                           | X        | REMOVED               | Wills Point                | 01388       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-97  | X                           | X        | 12.50%                | Wilmer                     | 01390       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Wimberley                  | 01392       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 6-00   | X                           | X        | 10.50%                | Windcrest                  | 01393       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Winfield                   | 01395       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 11-99  | X                           | X        | REMOVED               | Wink                       | 01396       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 1-96   | X                           | X        | 11.50%                | Winnsboro                  | 01398       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 13.50%                | Winona                     | 01399       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 10-00  | X                           | X        | 11.50%                | Winters                    | 01400       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Wolfforth                  | 01403       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | REMOVED               | Woodcreek                  | 01409       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 7.50%                 | Woodsboro                  | 01404       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 5-99   | X                           | X        | REMOVED               | Woodville                  | 01406       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | REMOVED               | Woodway                    | 01407       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     |  | X                           | X        | 12.50%                | Wortham                    | 01408       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-91   | X                           | X        | REMOVED               | Wylie                      | 01410       |
| 5 yrs   | 5 yrs/age 60, 25 yrs/any age     | 3-98   | X                           | X        | REMOVED               | Yoakum                     | 01412       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     |  | X                           | X        | 7.50%                 | Yorktown                   | 01414       |
| 5 yrs   | 5 yrs/age 60, 20 yrs/any age     | 9-09   |                             |          | 9.50%                 | Zavalla                    | 01415       |









