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City of El Paso, Texas

El Paso Firemen's Pension Fund

Actuarial Valuation Report

As of January 1, 2014

June 2014

June 18, 2014

Board of Trustees
El Paso Firemen & Policemen's Pension Fund
201 E. Main, Suite 1616
El Paso, TX 79901-1340-5623

Re: El Paso Firemen's Pension Fund Actuarial Valuation as of January 1, 2014

Dear Ladies & Gentlemen:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the El Paso Firemen's Pension Fund (the Fund) as of January 1, 2014.

Actuarial Valuation

The primary purpose of the valuation report is to determine the adequacy of the current City's contribution rate, to describe the current financial condition of the Fund, and to analyze changes in the Fund's condition. In addition, the report provides information required by the Governmental Accounting Standards Board Statement No. 25 (GASB No. 25).

Use of this report for any other purposes or by anyone other than the Fund and its auditors may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. This report is not intended to benefit any third party, and Buck assumes no duty or liability to any such party. Content from this report should not be provided without a copy of this cover letter. No one may make any representations or warranties based on any statements or conclusions contained in this report without Buck Consultants' prior written consent

With respect to financial reporting, please note that public-sector plans and their sponsors will be transitioning to new financial statement disclosure requirements as set forth in GASB Statement 67 (for plans' financial statements) and Statement 68 (for plan sponsors' financial statements) over the next two years.

Valuations are prepared biennially, as of January 1 of even years. January 1 is the first day of the Fund's plan year.

Financing Objectives

The member contributions are set by state statute and the Board of Trustees, and employer contributions are established by state statute and City Ordinance. The City currently contributes 18.50% of total salary, while the Members currently contribute 15.28% of total salary. These rates are intended to be sufficient to pay the normal cost and to amortize the Fund's unfunded actuarial accrued liability.

Progress Toward Realization of Financing Objectives

As of January 1, 2014, the employer contribution rate needed for GASB purposes to pay the normal cost and fund the Unfunded Actuarial Accrued Liability (UAAL) over 30 years is 21.81%. This is more than the current rate and therefore the current rate is inadequate to satisfy the 30-year maximum amortization period for the unfunded liability that is established under GASB No. 25. However, this does not reflect the lower normal cost rate for participants in the future who will be covered under the second-tier plan. After reflecting that normal cost rate, the period required to amortize the UAAL based on current contribution rates is 23 years.

Section 14A of Article 6243b (Vernon's Annotated Texas Statute) requires that the actuary determine any additional contribution rate necessary to amortize the unfunded actuarial accrued liability, as defined in GASB No. 25, over a 40-year period. If an additional contribution rate is necessary, the contribution rate will be split between the City and the Members in the same proportion as the current contribution rates. However, the contribution rates of the Members shall only increase if the City increases its rate to the 40-year contribution rate. For purposes of Section 14A of Article 6243b (Vernon's Annotated Texas Statute), we have assumed that the return on the market value of assets is 7.75% and used the other assumptions and methods described in Schedule C. Based on this January 1, 2014 valuation, we have determined that the current contribution rates as a percentage of wages would not have to be increased to satisfy the 40-year funding period of Section 14A of Article 6243b (Vernon's Annotated Texas Statute).

Benefit Provisions

The actuarial valuation reflects the benefit and contribution provisions set forth in the Fund's statutes. The benefit provisions used in the valuation are presented in Schedule B. The provisions were changed on June 30, 2007 so that Members of the Fund who entered on or prior to June 30, 2007 are eligible for the Base Plan and Members of the Fund who joined on or after July 1, 2007 are eligible for the Second-Tier Plan.

There have been no changes in the provisions since the last actuarial valuation was completed.

Assumptions and Methods

The actuarial assumptions and methods used in the valuation are presented in Schedule C. Following an experience study performed as of January 1, 2010, the assumptions were revised to better reflect the anticipated future experience of the Fund. The assumptions used in this valuation are unchanged from those used in the 2012 valuation. The assumptions used are individually reasonable and reasonable in the aggregate.

Data

Census data on retired, active, and inactive members, along with data on the Fund's assets, as of January 1, 2014, was supplied by the Fund's staff. We have not subjected this data to any auditing procedures, but have examined it for reasonableness and consistency with the prior year's data.

Actuarial Certification

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of this valuation.

We are Enrolled Actuaries, Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice, and we are available to answer questions about it.

Respectfully submitted,

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Principal, Consulting Actuary

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Enclosures

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Summary of Principal Results

	January 1, 2014	January 1, 2012
Membership		
Active	871	794
Terminated with deferred benefits	8	3
Retired paid from fund	644	610
Compensation		
Total	$ 53,872,177	$ 49,942,127
Average	$ 61,851	$ 62,899
Assets		
Market value	$ 506,891,867	$ 401,602,141
Actuarial value	$ 479,228,995	$ 431,209,946
Valuation Results		
Unfunded actuarial accrued liability	$ 114,707,333	$ 108,582,531
Funding period	23 years	76 years
30-year funding cost (City)	21.81 %	23.82 %
Margin	(3.31)%	(5.32)%
GASB No. 25		
Actuarial accrued liability (AAL)	$ 593,936,328	$ 539,792,477
Assets (actuarial)	$ 479,228,995	$ 431,209,946
GASB ratio	80.7 %	79.9 %
Unfunded AAL	$ 114,707,333	$ 108,582,531

Comments on the Valuation

Overview

The current contribution rates are not sufficient to meet the 30-year maximum amortization period for the unfunded liability that is established under GASB No. 25, based on the current membership data, the current financial data, the current benefit provisions and the actuarial assumptions and methods used to determine liabilities and costs. However, this does not reflect the lower normal cost rate for participants in the future who will be covered under the second-tier plan. After reflecting that normal cost rate, the period required to amortize the UAAL based on current contribution rates is 23 years.

Section 14A of Article 6243b (Vernon's Annotated Texas Statute) requires that the actuary determine any additional contribution rate necessary to amortize the unfunded actuarial accrued liability, as defined in GASB No. 25, over a 40-year period. Based on this January 1, 2014 valuation, we have determined that the current contribution rates as a percentage of wages would satisfy the 40-year funding period of Section 14A.

Section 3 shows in more detail the changes to the unfunded actuarial accrued liability (UAAL), the funding cost, and the funding period based on the current contribution rates.

Funding Status

There are two significant measures of the funding status of the Fund. The first is the 30-year funding cost. This is the City contribution rate required to pay the normal cost and to amortize the UAAL over a 30-year period. As you can see, this rate is currently 21.81% compared with the City's actual contribution rate of 18.50% and the 30-year funding cost in 2012 of 23.82%. Section 3 shows a reconciliation of the changes between the 2012 and 2014 figures.

The other measure is the funding period. This is the length of time in years that will be required to amortize the current UAAL based on the current contribution rate. This period was 76 years in 2012 but is 23 years based on the 2014 valuation. During the 2012 and 2013 plan years the market value of assets developed rates of return exceeding the assumed 7.75% which results in asset gains. However, these gains are being phased in over five years under the asset valuation method so there is a deferred effect on how those gains will impact the funded status. Nevertheless, these gains have now resulted in the situation that the market value of assets is greater than the actuarial value of assets and will therefore be a source of future gains being recognized.

The UAAL is the excess of the liability assigned to prior years (the actuarial accrued liability) over the value of assets. Section 3 shows a reconciliation of this amount between 2012 and 2014.

GASB Statement No. 25

Section 4 provides information required for reporting under GASB No. 25. The GASB funded ratio increased from 79.9% as of January 1, 2012 to 80.7% as of January 1, 2014.

Benefit Provisions

Schedule B summarizes all the benefit provisions of the fund. There are no significant benefits which were not taken into account in this valuation

The provisions were changed on June 30, 2007 so that Members of the Fund on or prior to June 30, 2007 are eligible for the Base Plan and Members of the Fund on or after July 1, 2007 are eligible for the Second-Tier Plan.

There have been no changes in the provisions since the last actuarial valuation was completed.

Actuarial Assumptions and Methods

Schedule C describes all of the assumptions used for this valuation. An experience study was performed as of January 1, 2010. As recommended in that study, the Board adopted assumption changes to better reflect anticipated experience of the Fund.

After the study was performed, changes to actuarial standards of practice required actuaries to consider the effect of mortality improvement both prior to and subsequent to the valuation date. The mortality assumption was changed as of January 1, 2012 to the RP-2000 mortality table with separate healthy annuitant and employee tables with Scale AA forecasts of mortality improvement projected to seven years after the valuation date for annuitants and 15 years after the valuation date for non-annuitants.

There are no changes in actuarial assumptions and methods from those used in the prior valuation for the January 1, 2014 valuation.

GASB Statement No. 27

Under GASB Statement No.27, employers must determine a pension expense based on a 30-year amortization of the UAAL. The amortization can assume payroll growth due to inflation, but no membership growth. Prior to 2006, the pension expense under GASB No.27 was determined based on a 40-year amortization of the UAAL. If the actual contribution rate is less than the rate required by GASB No. 27, the excess must be expensed. This will result in the employer showing an accrued but unpaid liability for pension benefits on its financial statements.

The annual required contribution under GASB No. 25 is 21.81% of wages. The City must contribute 21.81% of wages plus an adjustment for any pension asset or obligation to avoid any changes in its net pension asset or obligation.

Financial Data

The financial data used in this report was supplied by the Fund's staff.

Section 5 reconciles the Fund's assets between 2012 and 2014 and shows the development of the actuarial value of assets (AVA). Rather than using the market value for cost calculations, we use an adjusted market value, which phases in gains and losses (compared to the assumed investment return rate) over five years. This method is designed to reduce the volatility of the results.

Historical returns and experience are also summarized in Section 5.

Membership Statistics

Data on active members and on retired members was supplied by the Fund's staff. The active membership increased from 794 to 871 between 2012 and 2014, a 9.7% increase over the two year period, while payroll grew from $49.9 million to $53.9 million over the same period, a 7.9% increase. Schedule A shows a summary of the membership data.

Actuarial Cost, Margin and Funding Period

		January 1, 2014	January 1, 2012
1.	Covered Payroll	$ 53,872,177	$ 49,942,127
2.	Actuarial present value of future pay	$ 537,230,571	$ 481,570,590
3.	Current contribution rates		
	a. City	18.50 %	18.50 %
	b. Member	15.28 %	15.28 %
	c. Total	33.78 %	33.78 %
4.	Normal cost rate		
	a. Total (before adjustment for overtime)	26.13 %	27.97 %
	b. Total (after adjustment for overtime)	25.13 %	26.89 %
	c. Member contribution rate	15.28 %	15.28 %
	d. Employer normal cost rate (4b - 4c)	9.85 %	11.61 %
5.	Actuarial present value of future benefits	$ 734,314,676	$ 674,487,771
6.	Actuarial present value of future normal costs (4a x 2)	$ 140,378,348	$ 134,695,294
7.	Actuarial accrued liability (5 - 6)	$ 593,936,328	$ 539,792,477
8.	Actuarial value of assets	$ 479,228,995	$ 431,209,946
9.	Unfunded actuarial accrued liability (UAAL) (7 - 8)	$ 114,707,333	$ 108,582,531
10.	30-year funding cost for City*		
	a. Employer normal cost rate (4d)	9.85 %	11.61 %
	b. Amortization rate	11.96 %	12.21 %
	c. Total	21.81 %	23.82 %
11.	Margin over/(under) 30-year cost (3a - 10c)*	(3.31)%	(5.32)%
12.	Funding period to amortize UAAL*	23 years	76 years

* 30-year funding cost is necessary for accounting purposes only. The actual funding period is calculated based on level contributions and reflects the provisions of the second-tier plan for Members hired after June 30, 2007. The normal cost rate based on the provisions of the second-tier plan is 19.96% (before adjustment for overtime).

Analysis of Change in UAAL

1. UAAL as of January 1, 2012	$	108,582,531
2. Changes due to:		
a. Expected increase (negative amortization)	$	9,341,670
b. Actual contributions greater than expected		(1,973,566)
c. Other changes including liability experience		(5,661,514)
d. Assumption changes		0
e. Asset experience		4,418,212
Total Changes	$	6,124,802
3. UAAL as of January 1, 2014	$	114,707,333

Analysis of Change in Funding Cost

1.	30-year funding cost as of January 1, 2012	23.82 %
2.	Changes due to:	
	a. Actual contributions greater than expected	(0.20)%
	b. Other changes including liability experience	(2.27)%
	c. Assumption changes	0.00 %
	d. Asset experience	0.46 %
	Total	(2.01)%
3.	30-year funding cost as of January 1, 2014	21.81 %

Analysis of Change in Funding Period

1.	Funding period as of January 1, 2012	76 years
2.	Changes due to:	
	a. Passage of time	(2)
	b. Actual contributions greater than expected	0
	c. Other changes including liability experience	(52)
	d. Assumption changes	0
	e. Asset experience	1
	Total	(53)
3.	Funding period as of January 1, 2014	23 years

GASB #25 Disclosure Amounts as of January 1, 2014

Period Ending	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)-Entry Age	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
December 31, 2006						
December 31, 2007	$317.9	$431.9	$114.0	73.6%	$41.2	276.7%
December 31, 2008						
December 31, 2009	403.7	493.3	89.6	81.8%	48.2	185.9%
December 31, 2010						
December 31, 2011	431.2	539.8	108.6	79.9%	49.9	217.4%
December 31, 2012						
December 31, 2013	479.2	593.9	114.7	80.7%	53.9	212.9%

GASB #25 Schedule of Employer Contributions for Period Ending December 31, 2013

Period Ending	Annual Required Contribution	Percentage Contributed
December 31, 2006	$15,343,321	52%
December 31, 2007	15,794,257	404%
December 31, 2008	13,255,005	65%
December 31, 2009	14,998,356	517%
December 31, 2010	11,747,947	82%
December 31, 2011	12,144,598	82%
December 31, 2012	12,946,310	78%
December 31, 2013	13,579,930	77%

Reconciliation of Fund Assets

	Period Ending December 31, 2013	Period Ending December 31, 2012
1. Value of fund at beginning of period	$ 440,917,143	$ 401,602,141
2. Contributions		
f. City	10,503,657	10,062,408
g. Member	8,698,734	8,413,389
h. Total	$ 19,202,391	$ 18,475,797
3. Benefit payments	(27,825,895)	(25,652,521)
4. Earnings	75,079,805	46,944,682
5. Administrative expenses	(481,577)	(452,956)
6. Value of assets at end of period	$ 506,891,867	$ 440,917,143

Determination of Excess Earnings To Be Deferred

	Period Ending	
	December 31, 2013	December 31, 2012
1. Market value at beginning of period	$ 440,917,143	$ 401,602,141
2. Net new investments		
a. City contributions	$ 10,503,657	$ 10,062,408
b. Member contributions	8,698,734	8,413,389
c. Benefit payments	(27,825,895)	(25,652,521)
d. Total	$ (8,623,504)	$ (7,176,724)
3. Weighted new investments (2d x 50%)	$ (4,311,752)	$ (3,588,362)
4. Assets available (1 + 3)	$ 436,605,391	$ 398,013,779
5. Assumed investment return rate	7.75%	7.75%
6. Expected net return (4 x 5)	$ 33,836,918	$ 30,846,068
7. Actual net return		
a. Total investment return	$ 75,079,805	$ 46,944,682
b. Administrative expenses	(481,577)	(452,956)
c. Net return	$ 74,598,228	$ 46,491,726
8. Gains/(losses) subject to deferral (7c - 6)	$ 40,761,310	$ 15,645,658

Calculation of Actuarial Value of Assets

1. Market value of assets as of December 31, 2013 — $ 506,891,867

2. Deferral amounts

	Year	Total Gain/(Loss)	Percent Deferred	Deferral Amount
a.	2013	$ 40,761,310	80%	$ 32,609,048
b.	2012	15,645,658	60%	9,387,395
c.	2011	(42,471,500)	40%	(16,988,600)
d.	2010	13,275,145	20%	2,655,029
e.	Total			$ 27,662,872

3. Actuarial value of assets (1 – 2e) — $ 479,228,995

Summary of Asset Experience and Yield on Market Value of Assets

		Plan Year (1)	Beginning of Year Market Value (2)	Employer Plus Employee Contributions to Fund (3)	Benefit Disbursements from Fund (Including Refund of Contributions) (4)	Net Earnings on Fund (6)-(2)+(4)-(3) (5)	End of Year Market Value (6)	Annualized Yield Based on Market Value (7)
3/1/1966	thru	2/28/1967	$ 1,547,208	$ 370,095	$ 182,298	$ 32,663	$1,767,668	1.99%
3/1/1967	thru	2/29/1968	1,767,668	380,444	192,195	86,728	2,042,645	4.66
3/1/1968	thru	2/28/1969	2,042,645	593,198	208,366	121,904	2,549,381	5.45
3/1/1969	thru	8/31/1969	2,549,381	280,772	106,614	(6,609)	2,716,930	(0.50)
9/1/1969	thru	8/31/1970	2,716,930	768,543	227,417	(30,712)	3,227,344	(1.03)
9/1/1970	thru	8/31/1971	3,227,344	799,479	234,759	296,867	4,088,931	8.46
9/1/1971	thru	8/31/1972	4,088,931	893,998	251,884	211,612	4,942,657	4.80
9/1/1972	thru	8/31/1973	4,942,657	1,055,881	272,197	(295,827)	5,430,514	(5.55)
9/1/1973	thru	8/31/1974	5,430,514	1,113,313	318,569	(1,123,014)	5,102,244	(19.27)
9/1/1974	thru	8/31/1975	5,102,244	1,207,931	390,572	1,137,268	7,056,871	20.64
9/1/1975	thru	8/31/1976	7,056,871	1,337,359	493,835	1,044,645	8,945,040	13.97
9/1/1976	thru	8/31/1977	8,945,040	1,577,958	609,556	263,996	10,177,438	2.80
9/1/1977	thru	8/31/1978	10,177,438	1,776,875	763,734	95,253	11,285,832	0.89
9/1/1978	thru	8/31/1979	11,285,832	1,972,493	862,797	1,093,021	13,488,549	9.23
9/1/1979	thru	8/31/1980	13,488,549	1,004,483	1,003,091	2,363,277	15,853,218	17.52
9/1/1980	thru	8/31/1981	15,853,218	2,420,405	1,233,471	925,838	17,965,990	5.63
9/1/1981	thru	8/31/1982	17,965,990	2,839,208	1,567,891	1,810,233	21,047,540	9.73
9/1/1982	thru	8/31/1983	21,047,540	3,086,224	1,892,082	3,085,445	25,327,127	14.26
9/1/1983	thru	8/31/1984	25,327,127	3,373,113	2,000,420	3,000,669	29,700,489	11.54
9/1/1984	thru	12/31/1984	29,700,489	915,457	720,809	1,780,169	31,675,306	19.01
1/1/1985	thru	12/31/1985	31,675,306	24,605,901	22,995,801	7,284,906	40,570,312	22.43
1/1/1986	thru	12/31/1986	40,570,312	6,238,743	5,833,057	8,054,718	49,030,716	19.75
1/1/1987	thru	12/31/1987	49,030,716	4,399,173	2,623,305	1,272,708	52,079,292	2.55
1/1/1988	thru	12/31/1988	52,079,292	4,332,419	3,358,360	3,938,446	56,991,797	7.49
1/1/1989	thru	12/31/1989	56,991,797	4,613,241	3,980,955	10,755,980	68,380,063	18.77
1/1/1990	thru	12/31/1990	68,380,063	4,964,139	4,364,185	3,223,512	72,203,529	4.69
1/1/1991	thru	12/31/1991	72,203,529	5,370,948	4,731,758	13,537,940	86,380,659	18.67
1/1/1992	thru	8/31/1992	86,380,659	3,984,655	3,408,292	2,245,838	89,202,860	3.91
9/1/1992	thru	8/31/1993	89,202,860	6,114,853	5,731,676	11,379,020	100,965,057	12.73
9/1/1993	thru	8/31/1994	100,965,057	6,370,197	6,467,470	3,826,728	104,694,512	3.79
9/1/1994	thru	8/31/1995	104,694,512	6,378,848	6,977,688	11,150,010	115,245,682	10.68
9/1/1995	thru	8/31/1996	115,245,682	6,871,024	7,459,968	8,855,917	123,512,655	7.70
9/1/1996	thru	8/31/1997	123,512,655	7,236,916	8,380,348	25,587,041	147,956,264	20.81
9/1/1997	thru	8/31/1998	147,956,264	7,438,353	9,394,749	(3,494,009)	142,505,859	(2.38)
9/1/1998	thru	6/30/1999	142,505,859	6,480,485	8,376,426	29,017,367	169,627,285	25.08
7/1/1999	thru	6/30/2000	169,627,285	8,087,144	10,577,992	7,740,233	174,876,670	4.60
7/1/2000	thru	6/30/2001	174,876,670	8,814,568	11,098,252	529,864	173,122,850	0.30
7/1/2001	thru	6/30/2002	173,122,850	9,581,909	12,265,846	(6,232,926)	164,205,987	(3.63)
7/1/2002	thru	6/30/2003	164,205,987	10,681,239	13,312,583	5,409,823	166,984,466	3.32
7/1/2003	thru	12/31/2003	166,984,466	5,965,660	6,867,584	18,137,881	184,220,423	22.97
1/1/2004	thru	12/31/2004	184,220,423	13,397,445	14,368,403	22,696,133	205,945,598	12.35
1/1/2005	thru	12/31/2005	205,945,598	14,060,139	15,278,655	16,456,483	221,183,565	8.01

Summary of Asset Experience and Yield on Market Value of Assets (continued)

		Plan Year (1)	Beginning of Year Market Value (2)	Employer Plus Employee Contributions to Fund (3)	Benefit Disbursements from Fund (Including Refund of Contributions) (4)	Net Earnings on Fund (6)-(2)+(4)-(3) (5)	End of Year Market Value (6)	Annualized Yield Based on Market Value (7)
1/1/2006	thru	12/31/2006	221,183,565	14,652,563	16,791,226	34,067,233	253,112,135	15.48%
1/1/2007	thru	12/31/2007	253,112,135	70,379,603	18,378,936	32,175,561	337,288,363	11.53
1/1/2008	thru	12/31/2008	337,288,363	16,137,223	20,047,854	(85,447,754)	247,929,978	(25.48)
1/1/2009	thru	12/31/2009	247,929,978	85,174,157	21,308,978	69,536,975	381,332,132	24.85
1/1/2010	thru	12/31/2010	381,332,132	17,635,517	23,563,764	42,598,666	418,002,551	11.26
1/1/2011	thru	12/31/2011	418,002,551	18,199,916	24,288,106	(10,312,220)	401,602,141	(2.49)
1/1/2012	thru	12/31/2012	401,602,141	18,475,797	25,652,521	46,491,726	440,917,143	11.68
1/1/2013	thru	12/31/2013	440,917,143	19,202,391	27,825,895	74,598,228	506,891,867	17.09

Membership Data

	January 1, 2014	January 1, 2012
1. Active members		
a. Number of males	855	783
b. Number of females	16	11
c. Total	871	794
d. Total payroll	$ 53,872,177	$ 49,942,127
e. Average annual pay	61,851	62,899
f. Average age	38.2	38.7
g. Average service (years)	11.3	11.7
h. Total accumulated member contributions	72,899,227	65,076,772
i. Average member contributions	83,696	81,961
2. Inactive members		
a. Number currently being paid from fund	644	610
b. Number entitled to deferred benefits	8	3
c. Total number of inactive members	652	613
d. Total current annual benefit	$ 27,471,809	$ 24,058,199
e. Average current annual benefit	42,135	39,247
f. Average age	65.6	65.2

THE NUMBER AND ANNUAL WAGES OF ACTIVE MEMBERS DISTRIBUTED BY FIFTH AGE AND SERVICE AS OF JANUARY 1, 2014

YEARS OF SERVICE

AGE	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total
Under 25	5	47	2	0	0	0	0	0	0	0	54
	36,487	38,802	50,970	0	0	0	0	0	0	0	
25 to 29	4	73	70	0	0	0	0	0	0	0	147
	36,727	42,299	53,319	0	0	0	0	0	0	0	
30 to 34	1	24	69	25	0	0	0	0	0	0	119
	36,487	44,025	53,825	64,772	0	0	0	0	0	0	
35 to 39	0	8	37	71	27	0	0	0	0	0	143
	0	41,639	59,102	64,250	70,235	0	0	0	0	0	
40 to 44	0	8	37	50	69	34	0	0	0	0	198
	0	39,123	60,901	63,503	70,799	76,717	0	0	0	0	
45 to 49	0	1	20	21	35	56	8	0	0	0	141
	0	36,967	64,116	66,571	68,640	71,129	85,356	0	0	0	
50 to 54	0	0	4	20	3	15	15	0	0	0	57
	0	0	64,029	68,898	62,982	71,241	71,519	0	0	0	
55 to 59	0	0	1	4	0	0	3	1	0	0	9
	0	0	67,557	72,586	0	0	71,517	65,878	0	0	
60 to 64	0	0	0	3	0	0	0	0	0	0	3
	0	0	0	69,067	0	0	0	0	0	0	
65 to 69	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	
70 & Up	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	
Total	10	161	240	194	134	105	26	1	0	0	871

THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS,
DISABLED MEMBERS AND BENEFICIARIES
BY AGE AS OF JANUARY 1, 2014

AGE	NUMBER	BENEFIT	AVERAGE BENEFIT
40	1	$ 25,263	$ 25,263
42	2	73,030	36,515
43	1	28,920	28,920
44	2	60,816	30,408
45	3	172,338	57,446
46	6	264,546	44,091
47	4	194,278	48,570
48	8	361,113	45,139
49	7	276,850	39,550
50	14	646,805	46,200
51	11	582,047	52,913
52	19	801,844	42,202
53	18	925,143	51,397
54	20	1,050,204	52,510
55	20	942,906	47,145
56	16	700,034	43,752
57	15	647,569	43,171
58	27	1,182,661	43,802
59	29	1,318,275	45,458
60	24	1,090,006	45,417
61	25	1,139,626	45,585
62	24	1,128,966	47,040
63	17	808,695	47,570
64	16	828,887	51,805
65	20	992,558	49,628
66	19	847,092	44,584
67	14	681,195	48,657
68	10	479,876	47,988
69	11	464,758	42,251
70	15	620,651	41,377
71	13	618,803	47,600
72	19	728,371	38,335
73	20	859,508	42,975

THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS,
DISABLED MEMBERS AND BENEFICIARIES
BY AGE AS OF JANUARY 1, 2014

AGE	NUMBER	BENEFIT	AVERAGE BENEFIT
74	16	$ 640,157	$ 40,010
75	22	987,743	44,897
76	15	624,344	41,623
77	16	616,060	38,504
78	21	837,115	39,863
79	13	357,167	27,474
80	11	322,320	29,302
81	10	334,496	33,450
82	7	152,875	21,839
83	8	192,309	24,039
84	10	348,776	34,878
85	5	173,319	34,664
86	2	39,790	19,895
87	4	98,384	24,596
88	1	11,558	11,558
89	8	106,745	13,343
90	1	14,788	14,788
91	3	14,859	4,953
97	1	5,100	5,100
TOTAL	644	$ 27,421,539	$ 42,580

THE NUMBER AND FUTURE ANNUAL
ALLOWANCES OF TERMINATED MEMBERS,
ENTITLED TO A FUTURE BENEFIT
BY AGE AS OF JANUARY 1, 2014

AGE	NUMBER	BENEFIT	AVERAGE BENEFIT
29	1	$ 0	$ 0
32	1	0	0
34	1	0	0
39	2	34,534	17,267
41	1	0	0
47	2	15,736	7,868
TOTAL	8	$ 50,270	$ 6,284

Note that the monthly benefits for some terminated members are zero since they have elected to hold their contributions. For those members, we are valuing the member contributions.

Summary of Benefit Provisions
As of January 1, 2014

The Base Plan

1. *Pension Fund*: The El Paso Firemen's Pension Fund.

2. *Wages*: Base pay, plus longevity pay, incentive pay and overtime.

3. *Final Wages*: The average of the monthly wages, excluding overtime pay, on which a Member made contributions to the Pension Fund during the 36-month period preceding retirement, but not less than the 12-month monthly wages preceding June 30, 2007.

4. *Member*: Any person who was enrolled as a fire fighter in the Fire Department of the City of El Paso on or prior to June 30, 2007.

5. *Credited Service*: The time for which a Member contributes to the Pension Fund.

6. *Qualified Spouse*: The widow (widower) of a deceased Member.

7. *Qualified Child or Children*: The surviving, dependent children under 19 years of age (23 if a full-time student).

8. *Contribution Rates*: The active Member contributes 15.28% of their pre-tax wages per year. The City contributes 18.50% of the Member's wages per year (18.00% base contribution plus 0.50% contribution for Members hired after age 29).

9. *Service Retirement Benefits*:

   a. Normal Retirement Benefit

Eligibility	Age 45 with 20 years of Credited Service.
Benefit	2.75% of Final Wages times years of Credited Service, not to exceed 77% of Final Wages.

   b. Early Retirement Benefit

Eligibility	20 years of Credited Service.

Benefit

2.75% of Final Wages times years of Credited Service, not to exceed 28 years, multiplied by the appropriate actuarial reduction factor. The actuarial reduction factors are as follows:

Age	Factor
44	.95
43	.90
42	.84
41	.78
40	.71
39	.63
38	.55

Other factors may be obtained by interpolation.

c. Deferred Retirement Benefit

Eligibility

At least 10 years of Credited Service.

Benefit

2.75% of Final Wages for each year of Credited Service not to exceed 28 years. This benefit is payable commencing at age 50, or immediately upon termination of service if at least age 50 at termination.

d. Withdrawal (Refund) of Contributions

Eligibility

5 years of Credited Service.

Benefit

Total employee contributions without interest. No other benefits are payable under the Plan once the contributions are withdrawn.

10. *Survivor Benefits*

a. Qualified Surviving Spouse Benefit

Eligibility

Death of a Member who was active, retired, or eligible for a deferred retirement benefit.

Benefit

100% of Member's earned benefit at date of death, but not less than 50% of Final Wages. If there are qualified surviving children or Member was eligible for a deferred retirement benefit, the surviving spouse's benefit is reduced to 66-2/3%.

b. Qualified Surviving Children Benefit

Eligibility	Death of a Member who was active, retired, or eligible for a deferred retirement benefit.
Benefit	Two-thirds of the Member's earned benefit at date of death if there is no surviving spouse. If a surviving spouse is receiving a benefit, the above fraction is reduced to one-third.

11. *Disability Retirement Benefit*

Eligibility	Total and permanent disability from an injury in the line of duty or any injury not due to the Member's own fault.
Benefit	2.75% of Final Wages times Credited Service, not to exceed 28 years, with a minimum benefit of 50% of Final Wages.

12. *Minimum Benefits*: Minimum pension benefit for any retiree or qualified spouse is $400 per month.

13. *Cost of Living Adjustment*: Cost of living adjustments are applicable to those retiring after March 23, 1980. If the Member retires at age 60 or later, the retirement income will be increased by 3% per year beginning on the date of retirement and then on each January 1 thereafter. If the retirement age is 55 through 59, the 3% annual increase will begin when the Member reaches age 60. A 3% increase will also be given on each subsequent January 1. If the retirement age is prior to 55, the 3% annual increase will begin five years after the retirement date. The first increase begins on the anniversary date of the Member's retirement; thereafter increases will occur on each January 1. Cost-of-living increases are not granted for deferred retirements. For beneficiaries of an active member who dies in service, the initial increase will occur five years after the Member's death. Increases will occur on each January 1 thereafter.

14. *Normal Form of Retirement Benefit*:

a. Single Member	Life Annuity.
b. Married Member	100% joint-and-survivor annuity.

15. Back Deferred Retirement Option Program (Back DROP):

Members who are 50 years old and have over 20 and one half years of service can elect the Back DROP. The Back DROP benefit is a lump sum and a reduced monthly benefit. The reduced monthly benefit equals the benefit calculated at the beginning of the Back DROP period. The lump sum equals the number of months in the Back DROP period multiplied by the monthly benefit. The Back DROP period must be at least six months and not more than 36 months. After deducting the period of the Back DROP the member must still have 20 years of credited service for the calculation of their benefit.

Summary of Benefit Provisions
As of January 1, 2014

The Second-Tier Plan

1. *Pension Fund*: The El Paso Firemen's Pension Fund.

2. *Wages:* Base pay, plus longevity pay, incentive pay and overtime.

3. *Final Wages*: The average of the monthly wages, excluding overtime pay, on which a Member made contributions to the Pension Fund during the 36-month period preceding retirement.

4. *Member*: Any person who has been or becomes enrolled as a fire fighter in the Fire Department of the City of El Paso on or after July 1, 2007.

5. *Credited Service*: The time for which a Member contributes to the Pension Fund.

6. *Qualified Spouse*: The widow (widower) of a deceased Member.

7. *Qualified Child or Children*: The surviving, dependent children under 19 years of age (23 if a full-time student).

8. *Contribution Rates*: The active Member contributes 15.28% of their pre-tax wages per year. The City contributes 18.50% of the Member's wages per year (18.00% base contribution plus 0.50% contribution for Members hired after age 29).

9. *Service Retirement Benefits*:

   a. Normal Retirement Benefit

Eligibility	Age 50 with 25 years of Credited Service.
Benefit	2.50% of Final Wages times years of Credited Service.

   b. Deferred Retirement Benefit

Eligibility	At least 10 years of Credited Service.
Benefit	2.50% of Final Wages for each year of Credited Service. This benefit is payable commencing at age 50, or immediately upon termination of service if at least age 50 at termination.

c. Withdrawal (Refund) of Contributions

Eligibility	5 years of Credited Service.
Benefit	Total employee contributions without interest. No other benefits are payable under the Plan once the contributions are withdrawn.

10. *Survivor Benefits*

a. Qualified Surviving Spouse Benefit

Eligibility	Death of a Member who was active, retired, or eligible for a deferred retirement benefit.
Benefit	75% of Member's earned benefit at date of death, but not less than 50% of Final Wages. If there are qualified surviving children or Member was eligible for a deferred retirement benefit, the surviving spouse's benefit is reduced to 50%.

b. Qualified Surviving Children Benefit

Eligibility	Death of a Member who was active, retired, or eligible for a deferred retirement benefit.
Benefit	50% of the Member's earned benefit at date of death if there is no surviving spouse. If a surviving spouse is receiving a benefit, the surviving children's benefit is reduced to 25%.

11. *Disability Retirement Benefit*

Eligibility	Total and permanent disability from an injury in the line of duty or any injury not due to the Member's own fault.
Benefit	2.50% of Final Wages times Credited Service with a minimum benefit of 50% of Final Wages.

12. *Minimum Benefits*: Minimum pension benefit for any retiree or qualified spouse is $400 per month.

13. *Cost of Living Adjustment*: None.

14. *Normal Form of Retirement Benefit*

a. Single Member	Life Annuity
b. Married Member	75% joint and survivor annuity

15. *Back Deferred Retirement Option Program (Back DROP)*:

Members who are 50 and one half years old and have over 25 and one half years of service can elect the Back DROP. The Back DROP benefit is a lump sum and a reduced monthly benefit. The reduced monthly benefit equals the benefit calculated at the beginning of the Back DROP period. The lump sum equals the number of months in the Back DROP period multiplied by the monthly benefit. The Back DROP period must be at least six months and not more than 36 months. After deducting the period of the Back DROP the member must still have 25 years of credited service for the calculation of their benefit.

Summary of Actuarial Methods and Assumptions
(Effective as of January 1, 2014)

INVESTMENT RETURN: 7.75% per annum, compounded annually, net all expenses including administrative expenses. This rate reflects an underlying inflation rate of 3.50% and a real rate of return of 4.25%.

DEMOGRAPHIC ASSUMPTIONS: Representative values of the assumed annual rates of withdrawal, death, and disability are as follows:

Annual Rate per 1,000 Members

		Mortality – Pre Commencement*		Mortality – Post Commencement*		
Age	Withdrawal	Male	Female	Male	Female	Disability
20	20.0	0.20	0.12	0.20	0.12	1.30
25	20.0	0.28	0.14	0.28	0.14	1.50
30	10.0	0.38	0.20	0.38	0.20	2.00
35	10.0	0.67	0.35	0.67	0.35	2.70
40	10.0	0.86	0.46	0.86	0.46	3.80
45	5.0	1.03	0.70	1.62	0.71	5.80
50	0.0	1.26	1.02	3.65	1.64	9.80
60	0.0	3.06	3.40	5.84	5.58	0.00
70	N/A	6.40	6.58	16.17	15.07	N/A
80	N/A	52.12	39.59	52.12	39.59	N/A

* Mortality rates for disabled individuals are the same as for healthy lives.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increase attributable to longevity and promotion are as follows:

Years of Service	Annual Rate of Salary Increase
1	10.75%
11	5.60
21	4.50
31	4.50
41	4.50

Total payroll is assumed to increase 3.50% per year. New hires are assumed to replace terminations.

Overtime is assumed to be 4.00% of base, incentive, and longevity pay. The City and Members contribute on total pay including overtime.

RETIREMENT RATES: The percentage of population assumed to retire at various ages is as follows:

The Base Plan

Age	Rate	Age	Rate	Age	Rate
42	5.0%	48	15.0%	54	20.0%
43	10.0	49	15.0	55	30.0
44	10.0	50	25.0	56	40.0
45	20.0	51	15.0	57	40.0
46	10.0	52	15.0	58	40.0
47	10.0	53	20.0	59	40.0
				60	100.0

The Second-Tier Plan

Age	Rate	Age	Rate
50	60.0%	56	40.0%
51	20.0	57	40.0
52	20.0	58	40.0
53	20.0	59	40.0
54	20.0	60	100.0
55	30.0		

SPOUSES: 100% of active members are assumed to be married with the male three years older than the female. No children's benefits were valued because of the assumption that 100% of members are married.

POST RETIREMENT COST OF LIVING: 3% of pension annually for Members in the Base Plan, as defined in the Summary of Plan Provisions.

BACK DROP ELECTION: Participants who meet the eligibility requirements for the Back DROP option are assumed to elect the maximum Back DROP period.

FUTURE EXPENSES: All expenses, investment and administration, are paid from the Fund. The 7.75% assumed rate of return is net of these expenses.

VALUATION METHOD: The method used to determine Normal Cost and Accrued Actuarial Liability is the Entry Age Normal Cost Method. Under the Entry Age Normal Cost Method, an annual Normal Cost is determined for each covered active Member which is the contribution required to provide all the projected pension benefits assuming this contribution is payable over a period ending on the date of retirement (separation from active service) and expressed as a level percentage of compensation. The Actuarial Accrued Liability is determined as the excess of the total present value of all pension benefits over the total present value of future Normal Costs. The Unfunded Actuarial Accrued Liability as of the valuation date is determined as the excess of the Actuarial Accrued Liability over the assets of the Fund.

The Normal Cost and Accrued Actuarial Liability are derived by making certain assumptions as to the rates of interest, mortality, turnover, etc., which are assumed to reflect experience for many years into the future. Since actual experience will differ from the assumptions, the costs determined must be regarded as estimates of the true costs of the Plan. The effects of any actuarial gains or losses are immediately reflected in the Unfunded Actuarial Accrued Liability and the Normal Cost.

ACTUARIAL VALUE OF ASSETS: The actuarial value of assets is calculated based on the following formula:

$$MV - (8/10) \times G/(L)_1 - (6/10) \times G/(L)_2 - (4/10) \times G/(L)_3 - (2/10) \times G/(L)_4$$

where:

MV = the market value of assets as of the valuation date

$G/(L)_i$ = the asset gain or (loss) (i.e., actual return on assets less expected return on assets) for the i-th year preceding the valuation date.

Glossary of Terms

Following is a glossary of some of the commonly used actuarial terms.

Actuarial Accrued Liability	The portion, as determined by a particular cost method, of the total present value of benefits that is attributable to past service credit.
Actuarial Assumptions	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income and salary increases. Actuarial assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Gain (Loss) or Liability/Asset Experience	A measure of the difference between actual and expected experience based upon a set of actuarial assumptions. Examples include higher than expected salary increases (loss) and a higher return on fund assets than anticipated (gain).
Actuarial Present Value of Future Benefits	Also referred to as the present value of benefits. It is the value, as of a specified date, of an amount payable in the future, where the amount has been adjusted to reflect both the time value of money and the probability that the payment is actually made.
Actuarial Present Value of Future Normal Costs	The value, as of a specified date, of future normal costs, equal to the employer normal cost rate times the actuarial present value of future pay.
Actuarial Present Value of Future Pay	The value, as of a specified date, of future pay where the amount has been adjusted to reflect both the future value of money and the probability that the payment is actually made.
Amortization Rate or UAAL Payment	That portion of the pension plan contribution which is designed to pay off (amortize) the unfunded actuarial accrued liability in a systematic fashion. Equivalently, it is a series of periodic payments required to pay off a debt.
Covered Payroll	The rate of pay as of a specified date adjusted with a half-year salary increase based on the assumed salary increase assumptions.

Entry Age Actuarial Cost Method	This method assumes that the annual costs are the level premiums needed from entry age until retirement age to fund the ultimate retirement benefit. These premiums are expressed as a percentage of salary. The portion of this actuarial present value allocated to a valuation year is called the normal cost.
Funding Policy	The policy for the amounts and timing of contributions to be made by the employer, members and any other sources to provide the benefits promised by the pension plan.
Noneconomic Actuarial Assumptions	Probabilities that members will separate from active service for causes such as retirement, disability, death and withdrawal, as well as rates of post-retirement mortality. The probabilities reflect the experience of the Plan's membership.
Normal Cost	The ongoing annual cost allocated to the system by a particular actuarial cost method for providing benefits (future cost). Normal cost payments are made during the working lifetime of the member.
Unfunded Actuarial Accrued Liability	The excess of the actuarial accrued liability over the actuarial value of assets.
Vested Benefit	The benefit an employee is entitled to even if the employee separates from active service prior to normal retirement age.