EL PASO FIREMEN’S PENSION FUND

ACTUARIAL AUDIT
OF JANUARY 1, 2024 VALUATION

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

VIA E-MAIL

March 21, 2025

El Paso Firemen's Pension Fund
El Paso, TX

Re: Actuarial Audit of January 1, 2024 Valuation

To whom it may concern:

We are pleased to present to El Paso (City) this report of the actuarial audit of the El Paso Firemen's Pension Fund (Fund). Foster & Foster was retained by the City to perform a full-scope (Level 1) actuarial audit of the January 1, 2024 actuarial valuation report produced by Rudd and Wisdom, Inc. (Actuary). Accordingly, we have performed the following tasks:

- A review of the actuarial assumptions and methods used in the Fund's valuation;
- An examination of the current actuary's data collection and calculation processes and its interpretation of plan provisions and benefits;
- Replicate the liabilities and funding requirements;
- An assessment of the results of the Actuary's most recent valuation report and experience study;
- An opinion on the Fund's current actuarial funding policies and practices; and
- Any additional advice, comments, or concerns deemed appropriate.

This report was prepared at the request of the City and is intended for use by the City and those designated or approved by the City. This report may be provided to other parties only in its entirety and only with the permission of the City. Foster & Foster will not accept any liability for any misuse of this report.

In conducting the valuation, we have relied on liability information supplied by the Actuary and various personnel, report and asset information supplied by Fund staff. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the El Paso Firemen's Pension Fund, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact me at 630-320-0200.

Respectfully Submitted,

Foster & Foster, Inc.

By: Jason L. Franken

Jason L. Franken, FSA, EA, MAAA

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EXECUTIVE SUMMARY

An actuarial valuation provides a best estimate of a plan's liabilities, assets, funded status and annual contribution requirements at a particular point in time. This estimate helps ensure that current assets and future contribution requirements will be sufficient to fund the benefits as they are earned by working members and provide benefits promised to members throughout retirement. Future liabilities are determined by projecting future benefit payments for each member based on individual census data, the plan's provisions, and a set of actuarial assumptions regarding future salary increases and future member behavior. The extent to which an actuarial valuation accurately measures a plan's liabilities, funded status and contribution levels depends on a variety of factors including:

- The accuracy and completeness of the underlying census and financial information;
- Accurate incorporation of the plan's provisions into the actuarial model;
- The extent to which actuarial assumptions predict future participant behavior and future economic outcomes; and
- The appropriateness of the actuarial methods being used.

A thorough actuarial audit will include review of the above factors to ensure the actuary's valuation provides the best estimates possible. In addition, there are several other items an actuary must take into consideration when performing an actuarial valuation. An actuary must consider the Actuarial Standards of Practice, which provide guidelines in assessing the underlying data, setting appropriate actuarial assumptions/methods, and disclosing results. State and federal laws related to maintaining and funding pension systems is another important consideration. Accordingly, a thorough actuarial audit will include review of these factors in conjunction with the ones mentioned previously.

The remainder of this report focuses on the audit of the January 1, 2024 actuarial valuation report for the El Paso Firemen's Pension Fund prepared by your Actuary. We have organized this audit report into the following key categories which correspond to the objectives outlined above:

- Member Data Review;
- Asset Data and Asset Method Review;
- Liability Review;
- Funding Calculation and Actuarial Methods Review;
- Assumption Review;
- Plan Provisions Review, and
- Report Review.

For each of the above categories, we have provided details regarding the review we performed along with key observations and recommendations. In general, we believe the valuation results are reasonable and we found no major deficiencies. More specifically, we find that:

- The approach to develop the actuarially determined contribution is sufficient and consistent with the long-term objective of funding the plan over time and paying benefits as they become due;
- Underlying member and asset information used is reasonable, consistent, and free of any material discrepancies;
- Actuarial assumptions and methods are reasonable;
- The valuation report generally complies with the Actuarial Standards of Practice that apply specifically to valuing pensions and is sufficient in communicating actuarial results; and
- The valuation has been completed in accordance with Federal requirements and the guidelines set forth by the Texas Pension Review Board (PRB).

In completing our review, we also made several observations and recommendations for the City's consideration. The most notable of these observations / recommendations are summarized below:

- Assumption Review
  - The mortality projection is currently based on the MP-2020 table. Since these projection scales are updated annually, it might be worth including the annual projection scale update as part of the underlying mortality assumption, so that the most current information is being used each year.
  - The interest rate assumption of 7.75%, while reasonable and supported, is an outlier when compared to other large funds. We would concur with the Actuary's recommendation for the City to lower this assumption to 7.50%, either all at once or over a series of smaller moves. Alternatively, we would recommend that the City discuss a thorough long-term risk assessment of the investments held and document your future plan.
- Report Review
  - The valuation report does not include any long-term risk disclosure as required by Actuarial Standard of Practice Number 51. While some short-term risks are considered, a more complete discussion of the risks should be included in future reports.

MEMBER DATA REVIEW

An actuarial valuation determines liabilities based on current and projected benefits to be paid to each member of the plan. As such, one of the key items provided for the actuarial valuation is data on each of the current members. Member data includes the status of the member (active, terminated, disabled, retired, beneficiary), key dates (birth, hire, retirement, termination), gender, pensionable pay, benefit amounts, and forms of payment.

There are typically two levels of data review:

- Review unprocessed data that was provided to the actuary to perform the valuation. The goal here is to determine if the audit would arrive at substantially the same final data as the plan's actuary after processing was complete.
- Review the final data that was provided by the plan's staff against plan provision requirements and the member data summaries provided in the valuation report.

The scope of our audit included both levels of data review. We found the data provided to the Actuary to be very clean and sufficient to measure the benefits provided by the Fund. The Actuary's processed data was consistent with the data provided by the Fund. Further, we found no material differences between the data and report summaries. As such, the actuarial valuation appropriately reflected the member data provided by the Fund.

OBSERVATIONS / RECOMMENDATIONS

None.

ASSET DATA AND ASSET METHOD REVIEW

An actuarial valuation compares the plan's liabilities to the assets to determine the plan's funded status and the resulting need for additional contributions. We confirmed that the valuation used assets consistent with those shown in the December 31, 2023 Annual Financial Report for the Fund.

While assets are measured on a market-value basis, an actuarial value of assets is used to measure the funded status of the plan and determine contribution requirements. The actuarial value of assets is based on a method that recognizes asset gains and losses over a period of time. This produces an asset value that is less volatile than the market value, resulting in less volatile contribution requirements. An acceptable smoothing method will dampen volatility and will meet the following three requirements:

1. Will not produce an actuarial value of assets that is unreasonably higher or lower than the market value of assets. To achieve this, an appropriate market value corridor is applied to the actuarial value of assets;

2. Will not be biased (systematically higher or lower than the market value); and

3. Will not spread asset gains and losses over an unreasonable length of time.

The Fund's actuarial value of assets is based on a commonly accepted and widely used method that smooths market value gains and losses over a five-year period. Since the method recognizes market value gains and losses over a five-year period, the actuarial value of assets will converge with the market value absent future gains and losses on assets. Therefore, the method is unbiased. We find this portion of the method used to be reasonable and consistent with actuarial standards of practice. Finally, we reviewed the calculation of the actuarial value of assets and determined that the method has been utilized appropriately.

OBSERVATIONS / RECOMMENDATIONS

None.

LIABILITY REVIEW

In order to confirm the accuracy of the liability calculations provided in the actuarial valuation report, we developed an independent actuarial model. The model used the same plan provisions, member data, actuarial assumptions, and methods that were used by the Actuary to independently verify the liabilities calculated for representative sample members.

The actuarial valuation process, while sophisticated in its calculation methodology, is an estimate of the financial value of benefits payable on contingent events, most of which occur many years into the future. This means that the estimates contain a considerable amount of uncertainty and variability. As actuaries, we recognize that small differences in the results do not change the overall financial results portrayed in the valuation. Furthermore, the actuarial software used by different firms has implicit differences that create variances in valuation numbers. For these reasons, we consider the comparison of key valuation results in terms of both value and percentage differences. As a general rule, results that are within 2% of the plan actuary's calculation of present value of future benefits and within 5% for the plan actuary's calculation of actuarial accrued liability and normal cost are deemed acceptable. Further analysis may be needed to determine if any calculation issues exist when results fall outside those margins.

Below is a summary of the results of the replication process, which shows that the results are within the thresholds outlined above. As a result, it was not necessary to review sample liability calculations. Based on these results, it is our professional assessment that the Fund's actuary has provided a reasonable valuation of the liabilities.

KEY LIABILITY RESULTS

Liability Measure (in millions)	Fund Actuary	Foster & Foster	Value Difference	Percent Difference
Present Value of Future Benefits				
- Actives	456.6	460.1	3.5	0.8%
- Inactives	600.0	601.6	1.6	0.3%
- Total	1.056.6	1,061.7	5.1	0.5%
Actuarial Accrued Liability				
- Actives	344.3	342.8	-1.5	-0.4%
- Inactives	600.0	601.6	1.6	0.3%
- Total	944.3	944.5	0.2	0.0%
Normal Cost (% of payroll)				
- Total	17.94%	17.69%	-0.3%	-1.4%

OBSERVATIONS / RECOMMENDATIONS

None.

FUNDING CALCULATION AND ACTUARIAL METHODS REVIEW

Review of the calculation of the recommended contributions consists of review of several components as follows:

- Review of the accuracy of the calculations used to determine the contribution requirements.
- Review of the appropriateness of the underlying actuarial funding method used to calculate the normal cost (the annual amount needed to fund the benefits as they are earned by members).
- Review of planned contribution rates.

Below is an analysis of each of these items:

Review of the Accuracy of the Calculations Used

We reviewed the calculation of the required contribution based on the underlying assumptions and methods and found the calculations to be accurate. We were able to match the contribution as a percentage of payroll in each year based on the liability information provided in the report.

Review of the Appropriateness of the Underlying Actuarial Funding Method

The Entry Age Normal funding method is the method used by most public sector funds, including Texas defined benefit systems (as published by PRB in their "Guide to Public Retirement Systems in Texas"). This method spreads costs evenly over the member's career in relation to their annual salary, which is consistent with how many public funds base their contributions. Entry Age Normal is also required for use with Governmental Accounting Standards. The Conference of Consulting Actuaries (CCA) Public Plans Community in their August 2024 white paper entitled "Actuarial Funding Policies and Practices for Public Pension Plans" recommend use of the "Entry Age cost method with level percentage of pay" as a model practice. As such, we find the funding method used to be appropriate.

Review of Planned Contribution Rates

The PRB's Funding Guidelines, effective June 30, 2017, provide that (1) funding of the unfunded actuarial accrued liability should be level or declining as a percentage of payroll over the amortization period and (2) actual contributions made to the plan should be sufficient to cover the normal cost and to amortize the unfunded actuarial accrued liability over as brief a period as possible, but not to exceed 30 years, with 10-25 years being the preferable target.

The 2024 valuation report shows that the Fund has phased into higher annual contribution rates. These rates exceed the rate that would be required to amortize the unfunded liability over 30 years starting in 2024. We were able to replicate the amortization period shown in the report within a reasonable range. With the short-term projections provided by the Actuary to monitor the expected amortization period in the future, we feel comfortable that the approach used is appropriate and in full compliance with the PRB guidelines.

OBSERVATIONS / RECOMMENDATIONS

None.

ASSUMPTION REVIEW

Actuarial assumptions are used within a valuation to measure the future benefits to be paid from a plan by considering economic and demographic factors that will impact the plan. Economic assumptions include investment rates of return/discount rates, inflation rates, and salary scales. Demographic assumptions include rates for mortality, retirement, termination, and disability.

As part of any audit, assumptions are to be reviewed in terms of their reasonableness and appropriateness as well as their compliance with applicable Actuarial Standards of Practice. Our review has considered all the assumptions, both individually and collectively, and we find them to be reasonable and appropriate. Further, we believe the assumptions and methods are in compliance with Actuarial Standards of Practice, most notably Standards 4, 27, and 35. It should be noted however, that a detailed review of the assumptions based on past and anticipated future experience or prior gains and losses is beyond the scope of this report.

OBSERVATIONS / RECOMMENDATIONS

- The last detailed study of Fund experience was completed in 2021 and reflected in the January 1, 2022 valuation report. Having a regularly scheduled review of experience is a best practice and puts you squarely in compliance with Texas Government Code.

- The mortality assumption is based on the latest tables produced for public sector plans, Pub-2010. The tables used for inactive members appear to be the same for all groups, even though group-specific tables (retiree, survivor, disabled) are available with the Pub-2010 results. We would recommend utilizing these group-specific tables to provide the best estimate of inactive liabilities.

- We noticed that the mortality generational projection makes use of MP-2020, which was not the most recent scale available when the valuation reports were completed. Since these projection scales are generally updated annually, it might be worth considering including the annual projection scale update as part of the underlying mortality assumption, so that the most current information is being used each year.

- A detailed analysis of the interest rate assumption is beyond the scope of this audit. We were able to consider the 7.75% assumption, though, from two perspectives to give our thoughts on the selected rate. This review, summarized below, finds that the current assumption, while reasonable, is definitely on the high-side of reasonable.

    - One approach is to review the model the long-term rate of return using the Horizon Actuarial Services (HAS) survey. Using the 2021 survey results and the asset allocation information as of December 31, 2020 included in the experience study report for the Fund, a reasonable range for the long-term rate of return assumption would be 6.64% to 8.01%. The range is based on the 40th and 60th percentile of the 20-year returns using the capital market assumptions of the 24 survey respondents who provided long-term assumptions to the HAS survey. The percentiles generally mean that there would be a 60% probability that the average return over the 20-year period would exceed 6.64% and a 40% probability that the average return over the 20-year period would exceed 8.01%. The 50% probability is 7.33%.
    - A second approach is to consider return assumptions used by other public funds, as found in national assumption surveys. The National Association of State Retirement Administrators

(NASRA) released updated information in October 2021 to their ongoing summary of investment return assumptions used by public employers. Figure 1 below, taken from NASRA's website, shows that an assumption of 7.00% to 7.50% is most common among respondents. Figure 2 shows how discount rates are trending down over the last 22 years, with a current median of 7.00%.

Figure 1

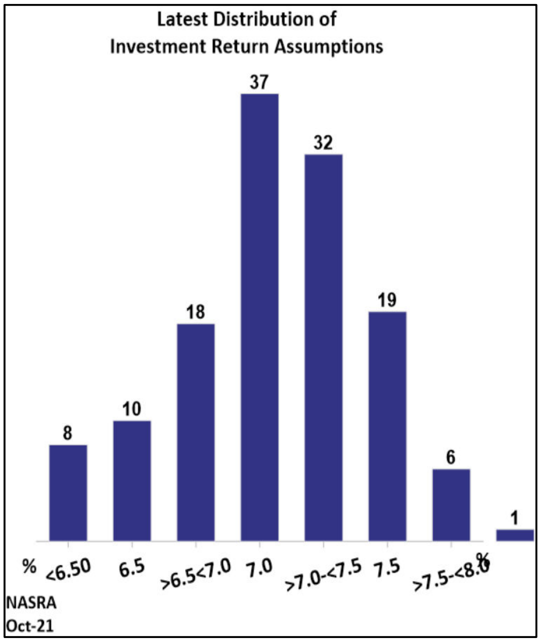
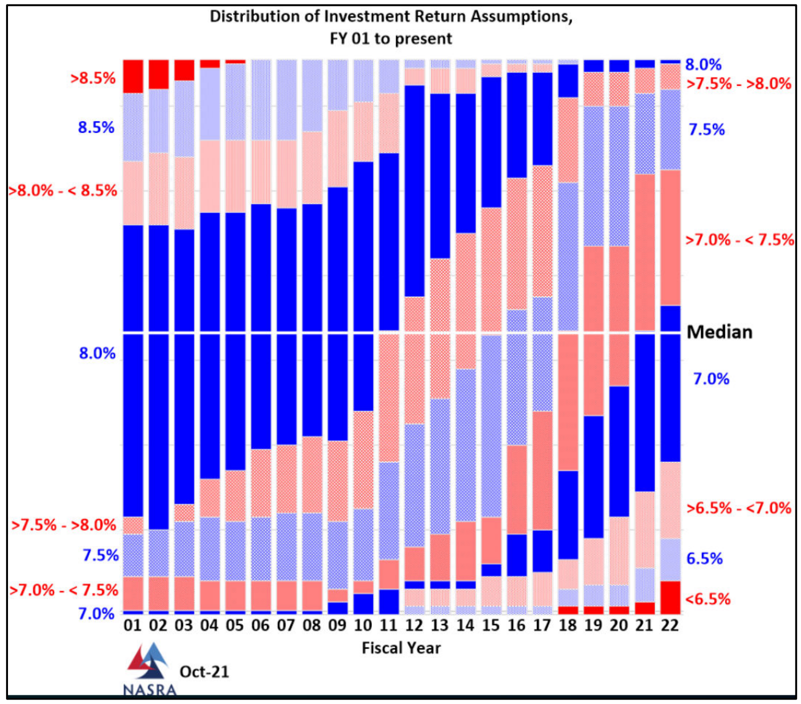
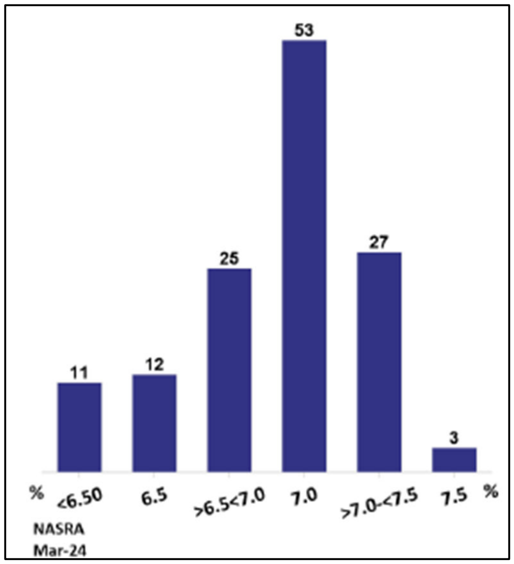


Figure 2



- The 2024 valuation report notes that the Actuary had continued to recommend a decrease in the interest rate assumption to 7.50% for the 2024 valuation. The updated survey results, noted below, continue to deviate, with the return analysis suggesting that the current rate is supported while the peer-group comparison shows continued downward trends. We would concur with the recommendation to lower the assumption, or at least recommend that a thorough review of the associated risk be discussed and a future plan be documented.
    - Using the 2023 HAS survey results with the asset allocation information as of December 31, 2023 for the Fund, a reasonable range for the long-term rate of return assumption (20-year returns) would be 7.45% to 8.84%. The 50% probability is 8.14%.
    - The NASRA survey results of investment return assumptions updated through March 2024 are shown below. Figure 3 shows that 7.00% is by far the most common assumption among respondents.
    - The 2023 guide from the PRB notes that only 12% of Texas municipal plans use an interest rate at or above 7.50%.

Figure 3



- The inflation assumption of 2.75% is reasonable with that found in the HAS survey published in 2021. Among the 24 investment firms who provided long-term data, this survey shows an average long-term expectation of inflation of 2.23%. The decrease in this assumption from 3.00% to 2.75% was appropriate. The 2023 HAS survey shows a long-term expectation of 2.46%, so the current assumption is reasonable, although the recommended decrease to 2.50% is supported.
- The payroll growth assumption (currently 2.75%) was considered as part of the 2021 experience study, with actual payroll information from 2014 – 2020 being considered. The assumption was easily supported based on this historical data and, based on additional years of payroll information in the GASB reports, the assumption continues to be supported.

PLAN SUMMARY REVIEW

The benefits available to Fund membership are outlined in the plan document. The "Summary of Present Plan" section of the valuation report provides a brief summary of the relevant provisions of the plan document which impact the benefits paid by the Fund. Our audit compared this summary to the plan document, considering both the content as well as the clarity of the provisions shown. We found the summary to be complete and understandable.

OBSERVATIONS / RECOMMENDATIONS

The plan document provides in section 10.01 that former members with less than five years of service are not entitled to a refund of contributions. While this is being reflected properly in the valuation, we wanted to note that this provision is unique and differs from most of the other public plans that we work with. The typical approach would be to allow a refund of contributions to all non-vested members.

REPORT REVIEW

VALUATION REPORT

The valuation report summarizes the work completed as part of the valuation process. In doing so, the report should meet certain requirements and objectives. Below is a summary of the key requirements and objectives:

- The report should clearly and concisely relay the results of the valuation;
- The report should include a summary of the data, assumptions, methods and plan provisions used to develop the results;
- The report should provide discussion of the key risks that should be considered by the reader in reviewing the results and a discussion of the impact on plan maturity (including measures of maturity where appropriate) when reviewing these risks;
- The report should provide certain disclosures that clarify and supplement the results as required by the Actuarial Standards of Practice (ASOP); and
- The report should provide information sufficient to allow another actuary to reasonably verify the results.

OBSERVATIONS / RECOMMENDATIONS

ASOP Number 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*, was issued in September 2017. The purpose of this ASOP was to assist actuaries in identifying and disclosing risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition. The Standard was effective for any actuarial work product with a measurement date on or after November 1, 2018.

In the 2024 valuation report, two specific risks (investment return and interest rate) are considered, but the discussion is more in regards to short-term Fund considerations, rather than the longer-term risks of these items on the Fund's financials. Further, there was no identification of other potential risks (e.g., salary increase, payroll growth, demographic assumptions) that could significantly impact future results. Many actuarial firms are addressing such topics in a seperate risk section or reference to an external risk document to be in compliance with this Standard, but none was found. This additional information should be added for all future reports.

RESPONSE FROM FUND ACTUARY

Rudd and Wisdom, Inc.
Consulting Actuaries

March 12, 2025

Mr. Jason L. Franken
Foster & Foster, Inc.
184 Shuman Blvd., Suite 305
Naperville, IL 60563

Re: Response to the Preliminary Report of the Actuarial Audit of the January 1, 2024 Actuarial Valuations of the El Paso FPPF

Dear Mr. Franken:

The City of El Paso engaged your firm, Foster & Foster, Inc., to conduct an actuarial audit of the January 1, 2024 actuarial valuations we performed for the El Paso Firemen & Policemen's Pension Fund (El Paso FPPF or Fund), one for the Firemen's Pension Fund and one for the Policemen's Pension Fund. We received your February 27, 2025 preliminary reports of the actuarial audit. The state law requiring actuarial audits of public employee pension plans gives the Fund Board of Trustees the opportunity to make written comments in response to your preliminary audit reports. The Board has asked us to prepare the comments below on their behalf for inclusion in your final reports to the City.

We are pleased with the results of your actuarial audits. For the City of El Paso and the Fund Board of Trustees, the key section in your preliminary reports is in the Executive Summary on the top of page 2. That portion of the report is summarized in the second sentence, "we believe the valuation results are reasonable." This means that both the City and the Board can rely on the results of those actuarial valuations.

You made three observations/recommendations in the Executive Summary, each of which is repeated below, with our response immediately following.

Mortality Improvement Projection

> "*The mortality projection is currently based on the MP-2020 table. Since these projection scales are updated annually, it might be worth including the annual projection scale update as part of the underlying mortality assumption, so that the most current information is being used each year.*"

The changes of the MP series of projection scales from year-to-year from 2014 to 2021 have been very small. In addition, no update was provided in 2022, 2023, and 2024 due to the distorting effects of COVID on the national mortality experience. Given the small year-to-year changes, we prefer to update at the time we complete a full experience study, which are completed every five years, or in conjunction with other more significant assumption changes between experience studies. In the event a projection scale is developed with some post-COVID experience or some adjustments for the COVID distortions between scheduled experience studies, we will consider updating at that time. We believe that the MP-2020 projection scale used for generational projection is a reasonable component of the mortality assumption.

Interest Rate Assumption

> "*The interest rate assumption of 7.75%, while reasonable and supported, is an outlier when compared to other large funds. We would concur with the Actuary's recommendation for the City to lower this assumption to 7.5%, either all at once or over a series of smaller moves. Alternatively, we would recommend that the City discuss a thorough long-term risk assessment of the investments held and document your future plan.*"

The Fund Board of Trustees, rather than the City of El Paso, holds the responsibility for adopting the investment return assumption. The Board will have another opportunity to review our recommendation before the next actuarial valuation as of January 1, 2026. As part of each biennial actuarial valuation, we carefully review the economic assumptions and provide our recommendations.

Risk Disclosure

> "*The valuation report does not include any long-term risk disclosure as required by Actuarial Standard of Practice Number 51. While some short-term risks are considered, a more complete discussion of the risks should be included in future reports.*"

In accordance with Actuarial Standard of Practice Number 51 (ASOP 51), an actuary should identify risks that, in their professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition. In our professional opinion, the primary risk for the Fund is the risk that actual investment returns are different than the long-term assumed rate of return.

In our January 1, 2024 actuarial valuation reports, we highlight this risk on pages 1-3 by presenting projected amortization periods for the next two biennial actuarial valuations under six different scenarios. These projections assess the potential impact of short-term variations in investment returns relative to the assumed 7.75% rate by illustrating their effect on the amortization period of the unfunded liability. Additionally, on page 9, we compare the effects of using an investment return assumption of 7.5% versus 7.75%.

We believe these analyses provide the most relevant ASOP 51 disclosures for the Fund Board of Trustees, the City of El Paso, and other stakeholders. However, we understand there may be other secondary risks worth investigating in the future. As such, for future valuation reports we will consider including additional language and/or analysis regarding other types of risks and plan maturity measures to further align with ASOP 51.

Please let us know if you have any questions about these responses.

We appreciate the professional manner in which you have conducted this actuarial audit and your communications with Rudd and Wisdom.

Sincerely,

Mark R. Fenlaw

Mark R. Fenlaw, F.S.A.

Brandon L. Fuller, F.S.A.

Rebecca B. Morris

Rebecca B. Morris, A.S.A.

MRF/BLF/RBM:nlg

cc: Mr. Tyler Grossman, Executive Director & CIO

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