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**Subject: Updated Service Purchase Factors**

Dear Ariana:

As requested, we have updated the service purchase factors that are used to determine the cost of purchasing service for members participating in the Employees Retirement System of Texas (ERS), the Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOSRF) and Judicial Retirement System of Texas, Plan 2 (JRS2). The primary purpose for updating the service purchase factors was to incorporate the new assumptions adopted by the Board of Trustees on May 20, 2020.

### **Actuarial Present Value**

The Texas Government Code allows ERS and JRS2 members to purchase equivalent service credit in the retirement systems under certain circumstances (Sections 813.513, 813.514 and 838.108). In each of these circumstances, the Code indicates that the cost of the service purchase should be based on the actuarial present value, at the time of deposit, of the additional standard retirement annuity benefits that would be attributable to the purchase of the service credit.

As a result, the actuarial present value was determined such that the cost of the service purchase is equal to the expected increase in the present value of the retirement system's obligation to that member following the service purchase. This increase in present value can be due to the increase projected annuity benefit as well as a possible change in the member's projected retirement date (e.g., Rule-of-80 and 20-year eligibilities). Therefore, the cost of service purchase must incorporate the actuarial assumptions adopted by the Board for purposes of preparing the annual actuarial valuation.

The basis for actuarial equivalence is consistent with the assumptions adopted by the Board on May 20, 2020:

<u>Interest Rate:</u>	7.00% per annum
<u>Mortality Tables:</u>	2020 State Retirees of Texas (SRT) mortality tables for males and females
<u>Mortality Improvements:</u>	Generational mortality improvements in accordance with the ultimate rates from the scales published through 2019 by Retirement Plans Experience Committee of the Society of Actuaries (“Scale U-MP”) and projected from the year 2020. Birth year is assumed to be 2024 less age at calculation.
<u>Unisex Blend:</u>	50% Male/50% Female
<u>Salary Increases:</u>	Consistent with assumptions detailed in Section E of the 2020 actuarial valuation reports for ERS and JRS2; including the State base salary of a district judge as it impacts the benefits payable to elected class members subsequent to retirement

For purposes of calculating the service purchase factors, the pre-retirement decrements, such as termination, death and or disability, have been ignored.

#### **Additional Service Credit for ERS**

Section 813.513 of the Texas Government Code allows eligible members of ERS to establish not more than 36 months of equivalent membership service credit, including law enforcement or custodial officer service (if applicable), in either the elected class or the employee class.

#### *Methodology*

The value of the service purchase was calculated two ways:

- Method 1. Using **first eligibility for unreduced benefits** in determining the projected retirement dates and the corresponding age and service at retirement; and
- Method 2. Using **first eligibility for reduced benefits** in determining the projected retirement dates and the corresponding age and service at retirement (if applicable).

The projected benefits assume that the member will continue to work until the respective projected retirement date, with or without the purchase of service. The final cost of service purchase is based on the method that has the greatest increase in value.

The cost of service purchase for law enforcement and custodial officers (LECOs) is based on the greater of: (1) the retirement provisions for a regular State employee (e.g., Rule-of-80, 2.3% benefit



multiplier, etc), and (2) the enhanced retirement provisions for members with CPO/CO service (e.g., 20-year retirement, 2.8% benefit multiplier, etc.).

Since Section 813.513 allows members to purchase up to 36 months of service, service purchase factors have been developed for members purchasing service for one year, two years, and three years.

#### *Tab Inventory*

The attached file contains six tabs. The first three tabs provide the purchase factors for purchasing one, two or three years of service for regular State employees accruing non-CPO/CO service ("Regular"), for LECO members accruing CPO/CO service ("CPO") and for elected class members ("ESO"). Each of these tabs includes fields for Tier and Years Purchased.

Please note the following regarding the understanding of "Tier":

- "Tier1" – applicable to members hired before September 1, 2009
- "Tier2" – applicable to members hired on or after September 1, 2009 and before September 1, 2013
- "Tier3" – applicable to members hired on or after September 1, 2013

#### *Application of Tables*

The members completed (truncated) years of age and service should be used to determine the associated percentage from the appropriate table. The final service purchase cost should be calculated by multiplying the member's current salary by the percentage from the appropriate table. With the exception of the elected class members, the factors were developed such that the member's current salary should generally be used to calculate the cost of service purchase (and not the member's average compensation). For elected class members, the cost of service purchase should be based on the greater of: (1) the member's current salary, and (2) the current judicial pay consistent with pay used in the benefit determination.

The purchase of service should not be permitted when the member has currently accrued a benefit equal to 100% of their average compensation (e.g., 43.5 years of non-CPO/CO service, 35.7 years of CPO/CO service, etc.).

### **90-Day Wait Service Credit**

Section 813.514 allows ERS members to establish service credit in the employee class only for service performed during a 90-day waiting period to become a member.

#### *Methodology*

The 90-day wait service purchase factors were developed in a similar manner as the “one-year” Additional Service Credit service purchase factors. However, the factors were scaled to be applicable to the purchase of one-month of service.

#### *Tab Inventory*

Tabs four and five (“Regular\_monthly” and “CPO\_monthly”) contain the factors for determining the cost of establishing service credit for service performed during a 90-day waiting period to become an ERS member. Each of these tabs includes fields for Tier and Months Purchased.

#### *Application of Tables*

The methodology for calculating the appropriate cost of service purchase is the same as the methodology for the Additional Service Credit service purchase. Even though the factors are used to calculate the cost of establishing service credit for a 90-day waiting period, the table factors provide the cost of purchasing one, two or three months of service. This approach is consistent with the previous service purchase factors provided for this purpose.

### **Additional Service Credit for JRS2**

Section 838.108 allows eligible members of JRS2 to establish not more than 60 months of equivalent membership service credit only for the purpose of becoming eligible to retire under the 20-year service retirement eligibility for JRS2.

#### *Methodology*

The service purchase factors were developed by determining the difference in the actuarial present value of the member’s current accrued benefit and the actuarial present value of the member’s immediate (20-year) retirement benefit following the service purchase.



The estimated plan benefits assume that the member will immediately terminate employment, regardless of whether the member purchases service. As a result, members who are less than age 60 are assumed to terminate without the service purchase, defer receipt of their benefit until age 60 (since they are not eligible for an immediate benefit), and not qualify for the 10% increase for active service retirements.

This method produces the highest possible cost of service purchase and is consistent with past ERS administrative procedures for JRS2 service purchase factors. This is a reasonable method for calculating the cost of service purchase; however, it should be noted that the assumption of “immediate termination” is different than the assumption used to develop the cost of service purchase for ERS plan members. As previously noted, the projected benefits for ERS plan members assume that the member will continue to work until the projected retirement date, both with or without the purchase of service.

If ERS would like to consider adopting the “continues working” assumption for the JRS2 service purchase factors, we can develop the alternate set of factors for review. The cost of service purchase based on the “continues working” assumption will be significantly less than the current “immediate termination” assumption.

#### *Tab Inventory*

Tab six (“JRS2”) contains the annual service purchase factors for JRS2.

#### *Application of Tables*

There is only one table applicable to the purchase of JRS2 service credit. Only member’s completed (truncated) years of age should be used to determine the associated percentage from the table. The final service purchase cost should be determined by multiplying the salary used to calculate the member’s final benefit by the percentage from table.

#### **Impact**

There were a number of the assumption changes adopted by the Board in August which have a significant impact on the cost to purchase service:

1. The discount rate was reduced from 7.5% to 7.0%. This change increased the purchase price.
2. The longevity expectation was increased trivially by increasing the birth year determination from 2023 to 2024.
3. The salary increase expectations were reduced. This change decreased the purchase price, particularly for those purchasing service at younger ages.

The tabular service purchase factors for ERS regular State employees are generally 4% to 6% higher than the prior tabular factors for most age service combinations. The increases from discount rate outweighed the reduction from salary expectations.



**Concluding Remarks**

We believe these updates to the service purchase factors will ensure that ERS provides the opportunity to purchase service on an actuarial equivalent basis.

Various procedures for developing certain factors were discussed in this letter. If ERS would like additional detail regarding these procedures, please let us know. Additionally, if the factors need to also be provided in an alternate format for system implementation; please provide the specifications for the alternate format.

If you have any other questions about these factors, please let us know.

Sincerely,  
Gabriel, Roeder, Smith & Company



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Enclosures