MEMORANDUM

Date: September 13, 2021

To: Pension Review Subcommittee

From: Gabriel, Roeder, Smith & Co.

Re: GRS Follow up Items

Per the Subcommittee's request, we are responding to the September 10 presentation from PERA's Executive Staff and the retained actuary, Segal, regarding their responses to our report dated September 1, 2021. GRS has no changes in their original findings and recommendations.

In our presentation on August 18, 2021, we provided our initial findings and recommendations. Our main finding raised concerns on certain demographic assumptions and the treatment of new hire liabilities in the determination of the Actuarially Determined Contribution (ADC) and the projections used in the Signal Light Report. This led to our main recommendation, which was for PERA to accelerate the timing of the Experience Study from 2024 into 2022 to reexamine the assumptions in light of the data presented in our report. In particular, part of this reexamination would involve having the current actuary use 10-years worth of withdrawal experience data (including redoing the reconciliations for the 2012-2015 experience data) to justify the approximate 75% credibility given to the prior assumption over the more recent data.

As discussed in our presentation, it is projected that the 2022 valuation could trigger an AAP Adjustment to lower contributions based upon the current actuarial assumptions. If an AAP Adjustment is triggered based on an overly optimistic set of assumptions, and then the assumptions are strengthened afterward showing a need for an increase in contribution, given that the amount of change in a given year is capped, it could take several years for the contributions to reach an appropriate amount.

The response to our report by PERA and Segal focused around process. The argument for not moving the experience study up was that they had a set schedule for various projects already approved by the Board. There was really no other justification provided nor data to justify the appropriateness of the current assumptions.

<u>Turnover Assumption</u>

Segal commented that the high credibility given to the previous assumptions over the more recent data was justified in the desire to be "conservative" in the amount of change at one time. In this case, given the size of the gap between the expectations and the experience, and given the experience showed the expectations to materially underestimate the liabilities, the conservative approach would have been to give less credibility to the historical data, or at least warrant further analysis. Our recommendation

included Segal using more years of experience data and redoing the analysis from 2012-2015 to ensure that the data that has been given 75% credibility was trustworthy. Going back and redoing 2012-2015 would solve these issues and help produce a more reliable turnover assumption.

Retirement Assumption

Our report pointed out that there was likely another source of loss for this assumption, such as service purchase subsidies, portable service not being in the data, pay spiking, etc. There was no data or discussion on this topic at the meeting. There is no reason to believe the losses will not continue.

Treatment of New Members

Our report pointed out that there was an underreporting of the normal cost of PERA and understating of projected future liabilities based on the handling of new hires liabilities. The actuarial valuation process, and any projections of the same, can be seen similar to a balance sheet, where the assets and the liabilities are accumulated over time. This is on an annual basis in the valuation process, and on a projected basis in the projections. When accumulating two balances in this way that are then going to be compared to each other over time, it is imperative that the methods, data, and processes used to accumulate both are consistent with each other.

The current process for accumulating the assets and the liabilities are not consistent in the way new hires are handled. On the liability side, no liability for a potential member is included in the annual accrual (normal cost), and in the projections it is assumed that all future members will be hired directly on the next valuation date, thus will have no liability in the first valuation they are in. However, on the asset side, an open group payroll is used in estimating the contributions that will be made from year to year. Thus, the contributions resulting from the payroll of these potential members are included in the accumulation of the assets.

This is not an immaterial issue and not a historically undisclosed issue. This amount is itemized each year in the valuation report as a loss. It has averaged $225 million a year for the last few years. This will continue and accumulate over time. There are several options to address this, including just adding the $225 million to the normal cost as a load, or adjusting the entry age normal cost financing period to start from the first valuation date the member is included in the data so that they do start with a $0 liability on the first valuation date.

Based on discussion in the September 10th meeting, Segal indicated that they do not anticipate making any changes at this time. In our opinion, this annual loss will continue prospectively and be a drag on future results. This lowers the reliability of the results in the signal light analysis and overstates the probabilities of achieving full funding by 2048.

Assumptions and Disclosures

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Joseph Newton and Dana Woolfrey are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.