________________________ moves the following resolution for approval by the Legislative Commission on Pensions and Retirement ("LCPR"):

I. The executive directors of the Minnesota State Retirement System (MSRS), the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the St. Paul Teachers Retirement Fund Association (SPTRFA) are hereby directed to direct the approved actuary for their respective plans to incorporate the recommendations of Deloitte Consulting LLP (Deloitte), the approved actuary retained by the LCPR, in the next and all future actuarial valuations for each plan *or provide an explanation in the actuarial valuation as to the reason for not incorporating Deloitte's recommendation*.

The recommendations are set forth in the following reports:

- Minnesota Legislative Commission on Pensions and Retirement Actuarial Review of Retirement Systems as of July 1, 2016, dated April 2017 ("Actuarial Review"): This report applies to the following plans:
    - MSRS General
    - MSRS State Patrol
    - MSRS Judges
    - MSRS Legislators
    - MSRS Correctional
    - PERA General
    - PERA Correctional
    - PERA Police and Fire
    - St. Paul Teachers Retirement Fund Association

- Minnesota Legislative Commission on Pensions and Retirement Replication of the July 1, 2016 Actuarial Valuation of the Teachers Retirement Association of Minnesota Retirement Plan, dated April 2017 ("TRA Replication"): This report applies only to the TRA.

Recommendations to be incorporated are the following:

- For the MSRS Legislators Plan: disclose undiscounted cash flows (see pages 9 and 32 of the Actuarial Review);

- For the PERA Police and Fire Plan: apply the phase-in of early retirement factors based on decrement year and disclose methodology in report (see pages 9 and 32 of the Actuarial Review);

- For all the plans: demonstrate the sensitivity of the discount rate assumption by providing the following key metrics using a discount rate 1% higher and 1% lower than the prescribed rate:

   - Actuarial Accrued Liability
   - Unfunded Actuarial Accrued Liability
   - Funded Ratio
   - Contribution Sufficiency/Deficiency

  (See page 31 of the Actuarial Review.)

  Also, show the sensitivity of the threshold year for higher post-retirement benefit increases by showing the same metrics listed above if the threshold was reached immediately and if the threshold was never reached. (Not applicable if current proposals to eliminate the "COLA trigger" are approved and enacted.) (See page 31 of the Actuarial Review.)

- For TRA: value the death benefit paid when a member dies after termination but before commencing benefits and apply the active mortality assumption to vested terminated participants for the period prior to benefit commencement, not for both the period before and after benefit commencement. (See pages 5 and 6 of the TRA Replication.)

II. The executive directors of MSRS, PERA, TRA, and SPTRFA are hereby directed to update, after a reasonable transition period, early retirement and optional benefit forms so they are consistent with the results of the most recent experience study, to the extent required by the following Minnesota Statutes:

- For MSRS: Minnesota Statutes §§ 3A.01, subdivision 1a, 3A.02, 3A.021, subdivision 2, 352.93, subdivision 3a, 352.931, 352B.08, subdivision 3, 352B.30, subdivision 4, 490.121, subdivision 2a, and 490.124, subdivisions 5 and 11 (pursuant to Minnesota Statutes §§ 352.01, subdivision 12, 352.116, subdivisions 1a and 3, and 356.461 MSRS has already updated the factors for the General and Unclassified plans)
- For PERA: Minnesota Statutes §§ 353.01, subdivision 14, 353.30, subdivisions 3 and 5, 353.656, subdivisions 1b and 3a, and 353.71, subdivision 2
- For TRA: Minnesota Statutes §§ 354.05, subdivision 7, 354.44, subdivision 6, 354.35, subdivision 2, and 354.45, subdivision 1
- For SPTRFA: Minnesota Statutes §§ 354A.011, subdivision 3a, 354A.32, and 354A.35, subdivision 2 (after the experience study that is currently in progress is completed and new assumptions are approved)

(Note: By law, these factors should have been updated after the changes to actuarial assumptions approved by the Pension Commission in early 2016. Absent an amendment to these statutes, new factors are to be developed and applied by the plans as soon as practicable. The executive directors of MSRS, PERA, TRA, SPTRFA, and LCPR shall consider, during the interim between the 2016 and 2017 legislative sessions, the need for amendments to these statutes and propose any legislative changes in the 2017 legislative session.)

III. The executive director and deputy director of the LCPR are hereby directed to revise and update the Standards for Actuarial Work during the interim between sessions so revised Standards can be considered for adoption by the Pension Commission before the end of the 2018 legislative session. Revised Standards should incorporate suggestions from the executive directors of the pension plans and Deloitte's recommendations, which include:

- the plans' actuarial assumption regarding employee contribution refunds should be based on actual experience, rather than the current assumption which requires using the greater of the member's contributions plus interest or the present value of the member's accrued benefit (see pages 7 and 27 of the Actuarial Review);

- the actuarial valuation reports for the plans should demonstrate the sensitivity of the discount rate assumption by providing the following key metrics using a discount rate 1% higher and 1% lower than the prescribed rate:

    - Actuarial Accrued Liability
    - Unfunded Actuarial Accrued Liability
    - Funded Ratio
    - Contribution Sufficiency/Deficiency

  (see page 31 of the Actuarial Review);

- the actuarial valuation reports for the plans should demonstrate the sensitivity of the threshold year for higher post-retirement benefit increases by showing the same metrics listed above if the threshold was reached immediately and if the threshold was never reached, if applicable (see page 31 of the Actuarial Review); and

- changes suggested by Deloitte in a letter to the Commission dated May 31, 2015 (copy of letter attached).

While revising the Standards, LCPR staff shall begin work with the executive directors and staffs of the plans and Deloitte to study changes to the funding policy for the plans, including consideration of the reports noted by Deloitte on page 7 of the Actuarial Review and as suggested in the letter dated May 31, 2015. Changes to the funding policy may include changes to the method for amortizing liabilities.

Deloitte.

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May 31, 2015

Ms. Rachel Thurlow
Deputy Director
Legislative Commission on Pensions and Retirement
55 State Office Building
Saint Paul, Minnesota 55155

Re: Review of Actuarial Standards of Work

Dear Rachel,

The purpose of this letter is to summarize proposed updates and improvements to the Standards for Actuarial Work (the Standards) last updated by the Legislative Commission on Pension and Retirement (LCPR, or the Commission) on August 11, 2010. The suggestions that follow are intended to facilitate a conversation with the Commission, the retirement systems and their retained actuaries. A presentation to the Commission summarizing these findings is contracted to be completed by August 15.

Background

We are proposing changes to the Standards that fall into two broad categories: updates and improvements. Updates are required for several reasons. Most of the Actuarial Standards of Practice (ASOPs) applicable to pension plans have been revised in the last few years. The Minnesota Legislature has passed statutes changing benefits and funding requirements that should be considered and incorporated into the Standards. And finally, the retirement plans to which the Standards apply have also changed, namely the merger of the Minneapolis Employees Retirement Fund (MERF) into the Public Employees Retirement Association (PERA) and the merger of the Duluth Teacher's Retirement Fund Association (DTRFA) into the Teacher's Retirement Association (TRA).

In addition to necessary updates, the Standards are expected to be periodically improved by the Commission’s retained actuary. Best practices in the pension actuarial community are not instantly codified by the ASOPs. The Commission relies on its actuary to bring best practices forward for consideration. Additionally, we believe that as the Commission's newly retained actuary we can bring a fresh perspective to the Commission.

Proposed Updates and Improvements

Because of changes in the retirement industry and the State of Minnesota specifically, the following updates are suggested:

Addition of funding stability projection methodology - Legislation was passed that ties post-retirement benefit increases, also known as Cost of Living Adjustments (COLA), to each Plan's funded ratio. The actuaries retained by state retirement systems are charged with projecting plans' funded ratios in order to value future COLA's. We are proposing the Standards include a prescribed method to project plans' funded ratios.

Requirement of generational mortality projection - The actuarial industry as a whole has shifted toward a strong preference for generational projection of mortality. While all of the statewide and major local Minnesota public retirement plans project mortality, some of the plans use static projection. Static mortality will generally need to be changed to a later projection date with each new experience study as the demographics of the population change; therefore, the expected losses associated with mortality improvement would only be recognized every five or six years. Using generational projection provides more accurate and transparent valuation results. While the majority of plans already use this method, we believe it should be required for consistency. Although we are recommending this for valuation purposes, we understand it may not be appropriate for other purposes such as setting actuarial equivalence factors.

Consideration of any changes in funding policy - Our review of state retirement systems suggested the Commission consider industry best practices regarding funding policy. Should changes in funding policy be adopted after discussion over the coming months, there could be several changes that would need to be made to the Standards for consistency.

In addition to the updates above, we also recommend the Commission consider the following improvements.

Allow retained actuaries to value benefit elections that do not maximize participant economic value - Although it is reasonable to assume that participants behave rationally, the experience of many public plans is that this type of assumption is often conservative. As noted in our review of state retirement systems, we suggest allowing the actuary to consider plan experience when determining what percentage of vested participants are expected to elect a return of their employee contributions with interest upon termination.

Require additional assumption sensitivity disclosures in valuation reports – As discussed in our review of state retirement systems, we believe that readers of valuation reports would benefit from disclosure of the impact on liabilities and contributions of certain assumption changes.

Clarify the purpose of the Standards and modify accordingly - It is our opinion that the Standards as currently written provide a mixture of education and actuarial requirements. By clarifying the purpose of the standards, perhaps as being regulatory and not educational, the Standards could be refined and simplified, making the Standards easier to follow.

General cleanup and housekeeping - In our review of the Standards we identified what we consider to be minor errors and omissions. A sampling is provided below, but the sum of all changes would improve readability.

- Remove references to specific ASOPs and replace with a more broad statement of ASOP applicability

- Update inaccurate section references (e.g., Section VII.B. should be XI.)
- Eliminate items that are no longer relevant (e.g., Credited Projected Benefit)
- Remove references to merged plans and systems
- Modify any language that may be considered to conflict with current statutes or accepted actuarial practices

Again, we welcome the opportunity to discuss these recommendations further.

Sincerely,

Michael de Leon, EA, ASA, FCA, MAAA
Specialist Leader

cc: Judy Stromback, Deloitte Consulting, LLP