



# Minnesota Legislative Committee on Pensions and Retirement

## Benefits and Actuarial Consulting Services

Actuarial Consulting Services

June 13, 2014

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June 13, 2014

Lawrence A. Martin, Executive Director  
Legislative Commission on Pensions and Retirement  
55 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, Minnesota 55155

RE: Proposal for Consulting Actuarial Services

Dear Mr. Martin:

It is our pleasure at Buck to present our proposal for consulting actuarial services to the Minnesota Legislative Commission on Pensions and Retirement. We believe this proposal demonstrates that Buck has the capabilities, resources, and experience to meet your needs and will exceed your expectations.

We are confident we can deliver the right combination of services with quality and cost-efficient consulting support that will achieve the results you desire. We assembled a team of top Buck talent with deep subject matter expertise and experience to work with the Commission on this project.

As the Retirement Practice Leader for the Midwest region of Buck Consultants, I (Paul Baugher) have the authority to bind our proposed terms, which includes a list of all materials and enclosures requested be included with our proposal response.

We extend our appreciation for the invitation to bid on this work, and we hope that our response earns your confidence that Buck is the best partner for the Commission. We look forward to discussing our proposal with you in detail.

Please contact us with any questions and next steps.

Sincerely,



Paul Baugher, FSA, MAAA

Principal, Midwest Retirement Practice Leader

[Paul.Baugher@buckconsultants.com](mailto:Paul.Baugher@buckconsultants.com)



David Driscoll, FSA, MAAA

Principal, National Governmental Practice Leader

[David.Driscoll@buckconsultants.com](mailto:David.Driscoll@buckconsultants.com)

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## Introduction

Buck Consultants is pleased to submit this proposal to the Minnesota Legislative Commission on Pensions and Retirement (Commission) to provide a range of actuarial consulting services as the Commission oversees the state's largest public pension plans. The Commission's search for a partner to provide these services gives you an opportunity to select an actuarial consulting firm with the right combination of public sector experience, understanding of best practices, and the highest standards for actuarial quality in support of your oversight responsibility. We will demonstrate in our response to your RFP that Buck Consultants, LLC ("Buck") can meet, if not exceed, your expectations.

As one of the leading benefit consulting and actuarial services firms in the nation, Buck has its roots in the development of sound retirement plans for public employees. Nearly 100 years ago, in 1916, Buck's founder, George B. Buck, established the actuarial basis for the New York State and City retirement systems. Today, we remain committed to serving public retirement systems, and have over 200 such clients, including 48 statewide retirement systems. We have grown into a diversified firm that provides consulting services to both public and private entities, covering the entire spectrum of employee benefits and human resource management. Our extensive experience and familiarity with specific laws affecting retirement funds within various states will benefit the Commission.

The next three sections of this proposal will present the three key areas for your consideration:

- **Our Team:** we are a group of public plan consultants experienced not only in valuation work, but also in establishing / applying actuarial standards of practice and communicating difficult concepts to a variety of audiences.
- **Our Approach:** we will work with your staff to set mutually agreeable deadlines and provide deliverables with all the necessary requirements so that at the end of the process, you have the documentation that you need to fulfill your oversight of the plans.
- **Our Pricing:** we provide a straightforward approach to our fees so that you can have certainty in the invoices to come, both from in-scope and out-of-scope projects.

Following these three sections, we specifically address each request listed in your RFP so that we are providing as complete a response as possible. We hope that by the time you finish with our proposal, you will realize that we have addressed all your needs and demonstrated that Buck is the best choice for the Commission.

Thank you for the opportunity to respond to this request for proposal.

## Consulting Team

Buck's actuaries offer not only the necessary technical expertise but also the insight and business acumen that separate an outstanding consultant from the rest of the field. They go beyond "number crunching" to offer the valuable insights into our clients' defined benefit plans – including member characteristics, assets and the benefits that generate liabilities, and how those variables affect employers, members and the State. Our commitment to listening and developing customized processes and creative solutions is evident in each of the projects we complete.

We have assembled a strong team to work with the Commission. Their experience speaks for itself:

Team Member	Team Role	Credentials	Years of Public Fund Experience	Years with Buck
<b>David Driscoll</b>	Lead retirement consultant	FSA, EA, MAAA	26	15
<b>Larry Langer</b>	Supporting retirement consultant	ASA, EA, MAAA	16	6
<b>Troy Jaros</b>	Lead actuary	FSA, EA, MAAA	5	9
<b>Kevin Peng</b>	Review manager	ASA, EA, MAAA	6	9
<b>Steve Evanego</b>	Replication manager		2	15
<b>Steve Robb</b>	Review actuary	FSA, EA, MAAA	30+	13

The team is led by David Driscoll. Dave is the National Governmental Practice Leader for Buck based on his vast knowledge of the public sector. He is a frequent speaker at public plan issues and, having served on the Pension Committee of the Actuarial Standards Board, he provides an in-depth perspective on actuarial compliance.

Dave is joined by Larry Langer. Larry is a respected speaker in his own right, often called upon to speak about approaches for plan funding in the public arena. He currently works with a number of state plans and will bring this experience to the team.

Troy Jaros is a growing public plan actuary who has partnered with Dave and Larry on other accounts to broaden his knowledge of public plans. He will serve as the lead actuary on the team, reviewing all our results, reports, and comments to ensure that they meet the standards that the Commission has set.

Kevin Peng is an actuary who will apply his strong technical skills to review numerous valuations each year. He will perform the initial analysis to confirm compliance with standards and accuracy of results, and then work with other team members to develop our recommendations and commentary.

Steve Evanego is an expert within Buck in regards to our valuation systems. He will oversee the replication of one valuation annually both in terms of matching prior year results and measuring current year results. He will be supported by Kevin as well as our Global Valuation Center (GVC), a group of professionals who use standard processes to prepare routine client work, including valuations and administration.

Steve Robb is a member of Buck's Central Peer Review team, a group of senior actuaries whose main purpose is to review work products for quality purposes and to provide another perspective on recommendations. Steve will be reviewing the report that we prepare for the annual valuation replication.

The team will be supported by other staff as necessary. For instance, Paul Baugher, the Midwest Retirement Practice Leader, is not officially part of the team but will serve in an executive sponsor role, making sure that you are satisfied with the services that are being provided. Further, Paul's role allows him to access the best possible staff should additional resources be needed.

## Approach

This section will provide our approach to completing the various components of the scope of services. For each key service, we will highlight our procedures, schedule and responsibilities.

### Review of Actuarial Standards

We would recommend that the first project assigned to us be the review of the Commission's Standards for Actuarial Work, with work beginning in late summer. Prioritizing this project will serve as an ideal way to intimately familiarize ourselves with your current requirements and allow for discussions of possible changes that will better establish our ongoing relationship.

This review will be personally led by Dave Driscoll with support from Larry Langer and Troy Jaros. The project will begin with a thorough review of the current standards. We will then seek any input from the Commission on areas of concern that may need to be addressed. Following an internal discussion, we will prepare a report that summarizes our findings and recommendations. We would then recommend an in-person meeting to present and discuss the report.

### Review of Multiple Actuarial Valuation Reports

Reviewing actuarial valuation reports is a step away from our standard work, in that we are not actually preparing the results as much as we are reviewing for completeness, confirming compliance with standards, and making recommendations on potential areas for change. The initial transition or set-up work for such a project includes the following steps:

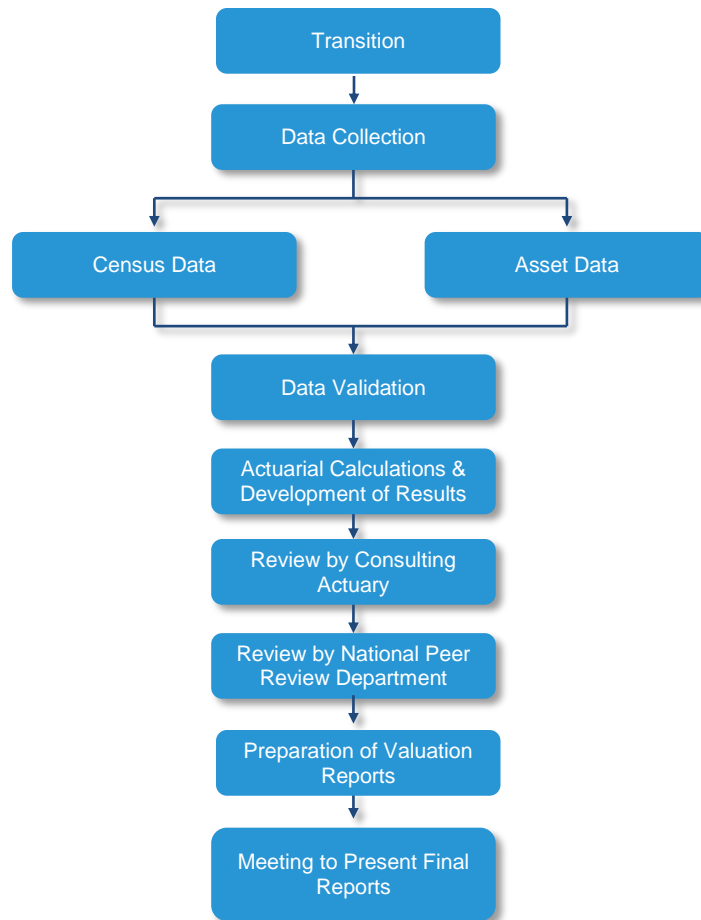
- Review the Commission's Standards for Actuarial Work and develop a checklist of items to monitor as part of our review process
- Review prior year valuation reports to understand how information is provided and develop initial thoughts on recommendations
- Review prior year review report to understand prior Commission actuary's thoughts on the plans and consider their recommendations

The review process will be led by Troy Jaros with support from Kevin Peng. Work will begin when all valuation reports are received for the plan actuaries (we anticipate by December 31 each year). Troy and Kevin will make sure that all standards are met and summarize important information from the reports for the consulting team to consider. Troy will then share the findings with the broader consulting team (Dave Driscoll, Larry Langer, and Troy Jaros). They will discuss each plan separately and finalize our recommendations. The results of these discussions will then be consolidated into our review report, which will be available annually in February. We will meet with the Commission at the spring meeting to present our report.

### Replication of Single Actuarial Valuation Report

At its core, full replication of actuarial results is simply performing a full valuation. Buck performs hundreds of valuations each year, for public, corporate, church and multi-employer plans. Over the years our experience has resulted in a step-by-step process, as illustrated in the chart below:





## Transition

Before any valuation process can truly begin, a transition process must take place. For replications, it is not so much a transition of services as much as a transfer of information. We must tie into the prior year's results in order to have a solid starting point for the current year's replication.

In this transition process, we will request prior year information (data, liability breakouts, report, etc.) and then use it to program our systems. We will work with the current actuary to address any questions or concerns. We will work with the Commission to develop an appropriate timeline for this process, but we would recommend completing this step well in advance of the replication itself so that we are certain to have any potential issues resolved.

## Data Collection

We begin with a collection of data. Data, in this case, includes participant census data, asset data, plan documents, and actuarial assumptions and methods. We will also take the opportunity to review the work plan and schedule with Commission staff to ensure that we are all in agreement.

## Data Validation

An analysis of census data is a necessary and required ingredient of the actuarial valuation process. Data must accurately reflect the participants and their related liabilities, so the financial figures on which decisions are based will be accurate and appropriate.

Buck's data system is capable of handling data provided in any machine-readable format, including those provided by Minnesota's plan administrators and the plan's trustee. The data system enables us to run an automated and parameterized process that performs queries to check for data anomalies such as unusual salary increases, missing pay, date of birth changes, date of hire changes, transfer activity, etc.

Once the data are screened for inconsistencies, data questions are submitted. Responses to questions are then incorporated into the final data.

### Actuarial Calculations and Development of Results

The valuation programming will be updated to produce baseline actuarial liabilities and asset values. A detailed gain and loss analysis is performed to isolate key demographic changes and the impact on corresponding liabilities. Changes in assumptions, methods, and/or plan provisions are incorporated. Test lives are generated and reviewed to ensure changes are appropriately captured.

### Review of Results

The lead actuary will identify key financial implications of the valuation and evaluate the results against Minnesota's actuarial standards and requirements. Our national peer reviewer assigned to the team will take an independent review of the valuation to not only confirm the accuracy of the results, but also provide another perspective on the recommendations.

### Report and Presentation

Each valuation report provides detail required by various users based on information in the plans. The report contains tables that summarize the key demographic data used for the valuation, the plan provisions as applied in the valuation, and a detailed outline of the actuarial assumptions and methods. Each report also contains a detailed reconciliation of assets, development of valuation assets, summary of plan liabilities, and a development of the annual requirements. All reports will be conformed to the Minnesota actuarial standards.

Our presentation to the Commission will show our results and the plan actuary's results side-by-side for easy comparison. We will then highlight key findings and recommendations to consider.

### Schedule and Work Plan

The following charts outline the steps, responsibilities and target completion date for the entire replication process. Once selected, we will review these charts with the Commission to make sure they are satisfactory for all parties.

Note the following:

- Our charts assume that the Commission has selected their ongoing actuarial consultant by August 1, 2014.
- Dates shown are for the 2014 / 2015 replication process but the general timeframes hold true for future years as well. One transition / replication process will occur each year and this is the plan that we would generally expect to follow every time.

First comes the transition, or transfer of information on the plan to be replicated. This process will be led by Steve Evanego with support from Troy Jaros and Kevin Peng.

Transition Task	Responsibility	Target Date
Request data for replication plan (data, plan documents, reports, additional liability details)	Buck	August 4
Data provided to Buck	Plan Actuary	August 25
Review data for completeness	Buck	September 8
Discuss any open issues on data	Buck / Plan Actuary	September 15
Match plan actuary's prior year results	Buck	September 29
Notify Commission of results of transition process	Buck	October 6

Once the transition is completed, the timing should be ready for the valuation / replication to begin. This process will be led by Troy Jaros with support from Steve Evanego and Kevin Peng.

Replication Task	Responsibility	Target Date
Provide electronic census data	Plan Administrator	October 1
Provide data questions to plan administrator	Buck	October 27
Provide answers to data questions to Buck	Plan Administrator	November 10
Finalize valuation data	Buck	November 28
Run valuation programs and develop/review results	Buck	December 15
Provide copy of valuation report to Buck	Plan Actuary	December 31
Provide replication report to Commission	Buck	January 30

### Review of Quadrennial Experience Studies

Reviewing an experience study can be a tricky task. You do not have access to the participant data used in the analysis, so you are limited in the depth of your review. This does not mean, however, that such a review is not worthwhile. There are simply challenges in addressing the validity of the study.

Our approach is to first review recent valuation reports, considering the current assumptions used and any significant gains or losses experienced by the plan over the past few years. This gives us direction on what we might expect to see in the experience study report. Our next step is to review the study report itself, gaining an understanding of the process used by the actuary, the actual versus expected headcount projections, and the recommendations for future measurements. It is at this point that we can compare our expectations to the recommendations in the report and see if they are consistent. Our report will summarize our thoughts on the process used, the reasonableness of the recommendations made, and any items that we do not consider being properly addressed in the study.

Our review will be led by Troy Jaros, who will summarize details for consideration by the broader consulting team. He will then discuss the study report with Dave Driscoll and Larry Langer to get their thoughts on the recommendations and the assumption landscape in public plans more generally.

Timing of the experience study was not certain from the RFP, but we will discuss timing of the report and our review with Commission staff once we are selected.

## Other Services

Other services included in the scope of services are optional services that may or may not be necessary from year to year. Such services include:

- Review of actuarial cost estimates for proposed benefit, contribution, actuarial assumption, or other changes
- Review of optional annuity form table or annuity reserve factor changes
- Review of prior service credit purchase payment amount determination
- Review of privatization gains or losses
- Provision of advice and counsel to the Commission or the Commission staff on pension benefit design and funding issues
- Preparation of special studies requested by the Commission

All of these services are items that we are familiar with, having performed them many times for other clients. There is no doubt that we will be able to meet your expectations in regards to all of these items.

While you can direct your requests and questions to any team member at any time, we would generally consider Troy Jaros as the main contact for these items. He will be able to field the request, inform all team members, direct the necessary team members to prepare information, and collaborate with the other consultants to make sure that our deliverable fully meets your needs.

## Pricing

The Commission’s RFP specifically requested fixed fee costs for three separate services: annual review of 11 actuarial valuation reports, annual replication of one actuarial valuation report, and review of quadrennial experience studies. Our pricing for these services is as follows:

- Annual fixed fee of \$105,000, which includes all actuarial valuation reviews and one replication for the year. This fee includes all steps outlined in our approach, including data analysis, liability and result calculation, report writing, and presentation of our report. Participant data is assumed to be clean and require no more than 70 hours annually to prepare for valuation purposes.

Note that our fixed fees outlined above will increase annually (effective July 1) by an amount consistent with cost-of-living.

- One-time fixed fee of \$25,000 for review of quadrennial experience studies. Fees for this service will be billed monthly during 2015 as time is accrued on the project. The fee covers gathering of information, analysis, and summary of our findings and recommendations in a report.

For all other services, our fees will be charged on an hourly basis unless a separate scope can be clearly defined and agreed to. Our rates for the period July 1, 2014 – June 30, 2015 are shown in the table below. After this one year period, Buck can increase the rates to reflect changes in market conditions (e.g., CPI-U) but will notify the Commission in advance of any changes to the rates.

Level	Hourly Rate for 2014/2015
Principal or Managing Director	\$475
Director	\$375
Sr. Consultant or Sr. Manager	\$325
Consultant or Manager	\$250
Sr. Associate	\$225
Associate	\$200
Other Technical and General Operating Personnel	\$125

## Responses to Specific Items Raised in RFP

In this proposal, we have sought to provide the key information that you need to understand Buck in terms of our team, our approach, and our pricing. We realize that this information will not address every question that you have raised in your RFP. As such, we are listing each item included in the RFP below and providing an answer so that our proposal is complete. Answers that have previously been addressed will reference the prior sections.

### A. Minimum Qualifications Standards and Important Qualification Factors

**The Commission requires that the actuarial firm to be retained must meet the definition of an approved actuary in Minnesota Statutes, Section 356.215, which requires a fellow of the Society of Actuaries.**

Our team, as presented in the “Consulting Team” section of this document, consists of 5 credentialed actuaries, including 3 Fellows of the Society of Actuaries.

**The Commission also will consider the following elements in retaining a reviewing or auditing consulting actuarial firm:**

- 1) **Sufficient Firm Size. The extent to which the consulting actuarial firm has the capability to meet the Commission’s needs as well as the needs of any other firm clients is an important factor.**

Buck Consultants, LLC is one of the leading benefit consulting and actuarial services firms in the world, supporting more than 3,000 clients and their employee benefit programs. Our firm has over 1500 employees and resources in 80 locations. Our Retirement practice is the firm’s largest with more than 500 professional, including 98 fellows of the Society of Actuaries.

Buck today is a wholly owned subsidiary of Xerox, a Fortune 150 company with more than 140,000 employees in 160 countries around the world. With the backing of such a large corporation, we seek to grow and, as such, remain a sufficiently sized firm for many years to come.

- 2) **Prior Public Pension Experience by Actuarial Firm. The experience of the actuarial firm in evaluating and forecasting the financial condition of large defined benefit pension plans for public employees is an important factor.**

Serving public sector clients is one of Buck’s core competencies. Buck is the nation’s leading provider of benefit consulting and actuarial services to government plans since 1916, when George S. Buck implemented the first actuarially funded public sector retirement plan for the New York State and City Retirement Systems. We offer significant public sector pension and health care experience, providing actuarial and benefit consulting services for state and municipal governments and quasi-governmental organizations. Our clients range from large statewide systems to city and county government municipal entities, and school districts.

Our retirement consultants assist organizations with the design, financial evaluation and administration of benefit plans and related arrangements. Our retirement service capabilities include:

- Preparation of the annual actuarial valuations
- Audit information
- Experience studies for review of actuarial assumptions
- Preparation of fiscal notes on proposed legislation
- Multi-year funded status forecasts
- Actuarial review studies
- Development of funding policy
- Plan design strategy and costing
- Demographic forecasting
- Asset/liability modeling
- Strategic analyses of contribution and cash flow projections
- Compliance
- Fiduciary review
- Investment consulting

- 3) **Prior Public Pension Experience by Assigned Firm Personnel. Because continuity is very important in establishing sound public policy in the pension area, the prior public pension plan experience of the firm personnel primarily assigned to the Commission's work and the potential for a long-term relationship with the Commission and continuity is an important factor.**

Buck put together a highly experienced and deep team to provide the best possible service for the Commission. Our team, as presented in the "Consulting Team" section of this document, consists of both credentialed actuaries and additional technical staff with extensive experience with public sector retirement systems. With this depth and experience, we will be able available to meet your needs and respond quickly to special requests.

- 4) **Prior Reviewing/Auditing Actuary Experience. The prior experience of the actuarial firm and of the actuarial firm personnel proposed for assignment to Commission work in reviewing or auditing the work product of other actuaries is an important factor.**

Buck has provided actuarial audits for decades and commonly delivers these services through our governmental practice for defined benefit plans. We understand the following issues are critical to reviewing the work product of other actuaries:

- Verification that complete and accurate data were used
- Examination of the assumptions and methods used for compliance with Actuarial Standards of Practice and other requirements
- Review of calculations for accuracy, including (where required) replication of all significant results
- Review of the report in which results are communicated for accuracy, completeness and compliance with applicable standards of practice.

Buck has a distinguished record of performing actuarial reviews or audits for a number of large public employee retirement systems across the country. Recent review studies of large public employee retirement systems and specialty consulting performed by Buck include:

#### **Denver Employees Retirement Plan (DERP)**

- Performed a full scope audit of DERP in 2013. We suggested a number of changes to improve the accuracy of the actuarial valuation results, and raised issues regarding the asset valuation methodology and Actuarial Standards of Practice. We presented our report to the DERP Board in January 2014.

#### **New Mexico Legislative Council Service**

- Performed a limited scope actuarial review of the actuarial valuation performed by the PERA and ERB actuary in 2010. Additionally, we performed projection analysis to assist the committee with the determination and understanding of the long-term funding requirements and the sustainability of PERA and ERB. We presented our results during three successive meetings of the Retirement System Solvency Task Force in 2010.

#### **Colorado Public Employees Retirement Association**

- Performed a full scope review for Colorado PERA in 2009. We suggested a number of changes to improve the accuracy of the actuarial valuation results. We presented our report to the PERA Board in July 2009
- After the successful completion of the DB/DC retirement plan study performed for the Office of the State Auditor of Colorado in 2001, Colorado PERA hired Buck in 2002 to design a retirement choice plan for consideration by the legislature. The result was a unique design that blended the strengths of both defined benefit and defined contribution plans. Dave was the project leader.
- In 2003, Colorado PERA asked Buck to provide a second opinion regarding the economic assumption alternatives presented by PERA's actuary, Gabriel, Roeder, Smith and Company (GRS). Dave presented Buck's opinion to the PERA Board at its retreat in July 2003.
- Colorado PERA hired Buck to replace GRS as its actuary in November 2003. Dave and his staff perform PERA's actuarial valuation, are assisting with actuarial issues concerning a proposed merger of the Denver Public School Retirement System into PERA, and are developing 30-year funding projection software.

- 5) **Accessibility. The availability of the firm personnel assigned to the Commission work to meet with the Commission, often on short notice during the legislative session between January and May, annually, is an important factor.**

Your Buck team, defined in question 3 above, is committed to being available to the Commission, including on short notice and have staffed the team appropriately to meet your needs. We understand well the critical nature of this work and the timeliness demanded during your legislative session. Our leading national resources can join discussions via phone or in person as time allows. Further, our team includes staff based in Minneapolis who can join you for live meetings on short notice, as needed.



- 6) **Absence of Contractual Liability Limits and Contractual Third-Party Reliance Disclaimers.** The extent to which the consulting actuarial firm seeks to limit its liability with respect to errors in its actuarial work or to disallow reliance on actuarial results by third parties is an important factor.

We treat the question of limitation of liability on a case-by-case basis. Our policy is to be market-competitive. Although limitations of liability may not always be explicitly stated in contracts, all firms have them. For example, small employee-owned firms sometimes do not include explicit limits in their contracts, but limits exist nevertheless. Damages in lawsuits are limited to what these firms' hard assets are worth plus the amount of insurance coverage in force (which may be less than policy limits because of actual or pending claims for the same policy period).

We ask only for a liability limit that is competitive with those offered - whether expressly stated or implied - by other firms who will be considered for this work. We believe we can agree on a mutually agreeable limit that is market-competitive and commensurate with the associated fees, and we believe the interests of all parties concerned are best served by an explicit statement of this limit in our contract.

Please see our standard engagement letter in Appendix B.

## B. Firm Information

In addition to indicating how the actuarial firm meets the minimum conditions described in section IV, the Commission requires the actuarial firm to demonstrate its qualifications through a narrative presentation of the following information:

- 1) **Firm's Structure, Operational Method, and Communication Capability.** Describe the structure of the actuarial firm and its operational method. Include in the description an indication of how the actuarial firm communicates pension fundamentals in an understandable manner to audiences of diverse and non-technical backgrounds.

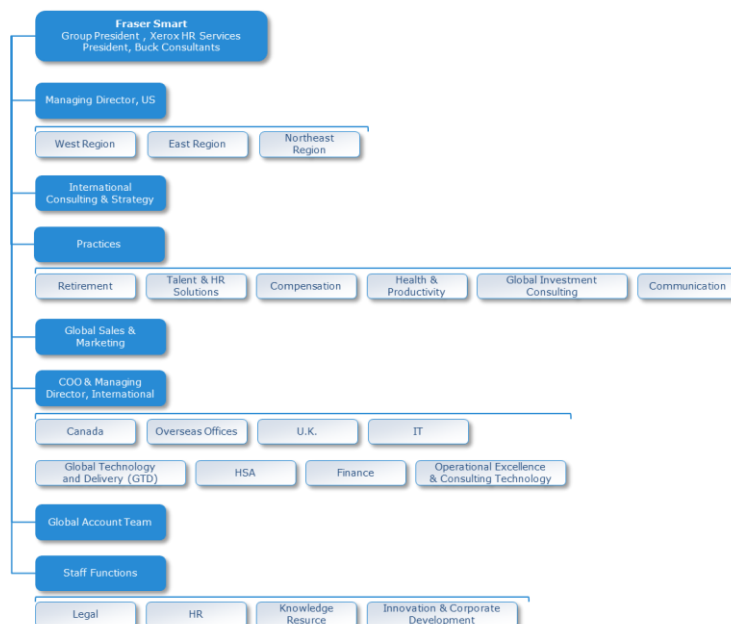
### Firm Structure

Buck Consultants is one of the leading benefit consulting and actuarial services firms in the world, supporting more than 3,000 clients and their employee benefit programs. Our firm has over 1500 employees and resources in 80 locations.

Buck is a wholly-owned subsidiary of Xerox Corporation, which is a Fortune 150 company with 140,000 employees in 160 countries around the world. Xerox, working with its subsidiaries, operates as the world's leading enterprise for business process and document management and is differentiated through its ability to apply technology, industry expertise and diverse services to simplifying the way work gets done. Collectively, Xerox offers a unique set of strengths anchored by world-class innovation; operational excellence; a global reach and presence; and one of the strongest and most respected brands in the world.

### Operational Method

Buck is located within the division of Human Resource Services (HRS). Fraser Smart is the Executive Vice President of HRS, as noted in the following organizational chart. We also provide the divisions of Buck Consultants, LLC. Our organization structure is depicted below.



Your Buck team will be staffed from the Midwest sub region of the West region. Resources will primarily be drawn from our St. Louis, Chicago, Minneapolis, and Detroit offices, although we will always strive to provide the best resources, regardless of location.

**Communication Capability**

Our approach to the role of the actuary is simple: At Buck, actuarial services are not provided by "back room" actuaries, but rather by actuaries who can personally interact with the client at all levels – from staff members to board members – and help all of them make the best use of our work. This is an important distinction that has an impact on the kinds of people we hire.

We believe that actuarial services should be not only timely and accurate but also relevant. This is why having "client-facing" actuaries is so very important. By understanding your needs, our actuaries can suggest courses of action, warn of potential surprises (bad or good), and better help you achieve your objectives.

Our team is led by two consultants (Dave and Larry) who have vast experience with presenting results to different public clients. Further, they are frequently asked to speak at various conferences due to their ability to discuss complex topics in a way that everyone can understand.

**2) Firm's Prior Public Pension Experience. Provide a description of any major public employee pension plan actuarial valuation and related experience by the actuarial firm rendered during the last five years and the degree of any consulting or other involvement by the actuarial firm with other elected public bodies.**

We serve nearly 200 public-sector retirement systems. Buck currently provides actuarial and retirement consulting services to 38 statewide retirement systems in 11 states. We provide a list of our Public Employee Retirement Systems ("PERS") clients including a listing of their multiple benefit plans and number of participants on the following pages. As displayed in the following table, the statewide systems alone cover 3.4 million members and hold \$268 billion in assets.

State	Retirement System	Actuary Services Provided Since	Total Retirement Participants	2013 Retirement Assets (Millions)
<b>1. Alaska</b>	State of Alaska Public Employees' Retirement System	2005	84,650	\$13,012
	State of Alaska Teachers' Retirement System	2005	24,683	\$5,345
	State of Alaska Judicial Retirement System	2005	182	\$141
	State of Alaska Elected Public Officers Retirement System	2005	38	\$0
	State of Alaska National Guard and Naval Militia Retirement System	2005	6,313	\$34
				<b>115,866</b>
<b>2. Arizona</b>	Arizona State Retirement Plan	2001	536,626	\$30,299
	Arizona State Retirement System	2001	1,415	\$348

State	Retirement System	Actuary Services Provided Since	Total Retirement Participants	2013 Retirement Assets (Millions)
	Arizona State Retirement LTD Program	2001	4,307	\$263
			<b>542,348</b>	<b>\$30,910</b>
<b>3. Illinois</b>	Illinois Teachers' Retirement System	1989	393,657	\$38,155
			<b>393,657</b>	<b>\$38,155</b>
<b>4. New Jersey</b>	The Public Employees' Retirement System of New Jersey	1919	430,256	\$26,870
	The Police & Firemen's Retirement System of New Jersey	1996	81,624	\$22,685
	The Judicial Retirement System of New Jersey	1996	962	\$245
	The State Police Retirement System of New Jersey	1996	5,734	\$1,834
	The Consolidated Police & Firemen's Pension Fund of NJ	1996	185	\$5
	The Prison Officers' Pension Fund of NJ	1996	121	\$8
	The Supplemental Annuity Collective Trust of NJ	1996	3,388	\$156
			<b>522,270</b>	<b>\$51,803</b>
<b>5. North Carolina</b>	North Carolina - Teachers' and State Employees' Retirement System	1943	617,396	\$59,912
	North Carolina - Local Governmental Employees' Retirement System	1943	224,480	\$20,295
	North Carolina - Consolidated Judicial Retirement System	1943	1,123	\$481
	North Carolina - National Guard Pension Fund	1943	14,679	\$97
	North Carolina - Registers of Deeds' Supplemental Pension Fund	1998	194	\$45
	North Carolina-Legislative Retirement System	2011	533	\$29
	North Carolina - Fire & Rescue Squad Workers' Pension Fund	1943	51,413	\$328
			<b>909,818</b>	<b>\$81,817</b>
<b>6. Ohio</b>	Ohio Police & Fire Pension Fund	2004	54,669	\$10,278
			<b>54,669</b>	<b>\$10,278</b>
<b>7. Oklahoma</b>	Oklahoma - Police Pension and Retirement System	2001	8,580	\$1,977
	Oklahoma - Firefighters Pension and Retirement System	2001	23,700	\$1,899
	Oklahoma - Department of Wildlife Conservation	2001	496	\$84

State	Retirement System	Actuary Services Provided Since	Total Retirement Participants	2013 Retirement Assets (Millions)
			<b>32,776</b>	<b>\$3,960</b>
<b>8. Pennsylvania</b>	The Public School Employees' Retirement System of Pennsylvania	1919	495,543	\$49,116
			<b>495,543</b>	<b>\$49,116</b>
<b>9. South Dakota</b>	South Dakota Retirement System	1989	77,103	\$9,086
			<b>77,103</b>	<b>\$9,086</b>
<b>10. Vermont</b>	Vermont State Employees' Retirement System	1996	15,490	\$1,469
	Vermont State Teachers' Retirement System	1948	20,917	\$1,553
	Vermont Municipal Employees' Retirement System	1998	11,140	\$446
			<b>47,547</b>	<b>\$3,468</b>
<b>11. West Virginia</b>	West Virginia Public Employees' Retirement System	1996	78,251	\$4,710
	West Virginia Teachers' Retirement System	1996	72,471	\$5,751
	West Virginia Judges' Retirement System	1996	131	\$141
	West Virginia Department of Public Safety Death, Disability and Retirement Fund	1996	809	\$520
	West Virginia State Police Retirement System	1996	692	\$96
			<b>152,354</b>	<b>\$11,218</b>

- 3) **Function of Assigned Firm Personnel and Prior Experience.** For each non-clerical employee of the actuarial firm proposed to be assigned to Commission work, identify the Minnesota public employee pension plans or functions with which the person will be involved and indicate the person's prior public employee pension plan experience.

The "Consulting Team" section of this document outlines each person's credentials, public plan experience, and role on the team.

- 4) **References.** List five major retirement systems or businesses with defined benefit pension plans by which the actuarial firm previously has been retained, complete with the name and telephone number of a contact person, as references who can be contacted about the prior performance of the actuarial firm in providing actuarial services.

We list below five references that you are welcome to contact. In deference to our clients, we ask that you notify us before contacting them.

Name of Pension Client	Contact Information	Years Buck Retained	Services Provided
<b>North Carolina Retirement Systems</b>	Steve Toole Director, Retirement Systems Division 919-508-5303	Since inception (1943 – present)	Pension consulting and valuation services, asset liability modeling, process reviews
<b>Teachers’ Retirement Systems of the State of Illinois</b>	Dick Ingram Executive Director 217-753-0315	1989 – present	Pension consulting and valuation services
<b>Cook County Pension Fund</b>	Nickol Hackett Executive Director 312-603-1224	2012 - present	Retirement consulting (pension and OPEB) and valuation services
<b>Nebraska Public Employees’ Retirement System</b>	Phyllis Chambers Executive Director 402-471-2053	1998 – 2013	Pension consulting and valuation services
<b>City of Denver Employees’ Retirement Plan</b>	Rich Harris Finance & Compliance Officer 303-839-5419	2013 - 2014	Actuarial review services

5) **Client Additions and Subtractions. Provide a list of all new clients added by the actuarial firm and all former clients lost by the actuarial firm during the most recent five-year period.**

Buck does not provide detailed client lists to our clients or prospects. While we can understand the need for references and background on our work in the public plan space (both of which we have responded to in this proposal), we are not able to provide further client information. We have attempted to accommodate your request by including in our references above one new client (Cook County Pension Fund; transitioned in 2012) and one former client (Nebraska Public Employees’ Retirement System; left in 2013 due to strict approach on limits of liability). We encourage you to contact both of them so that your questions can be answered.

6) **Firm's Valuation System. Describe the valuation system of the actuarial firm, indicate whether the software proposed to be used has been obtained from an outside vendor or is proprietary software developed by the actuarial firm, and indicate the capabilities and procedures of the actuarial firm to retain prior actuarial valuation and related data.**

For valuation purposes, we use a state-of-the-art actuarial valuation system, which includes ProVal™, leased from Winklevoss Technologies (WinTech). This suite, used by Buck since 2005, is completely PC-driven and is installed on our local area network. All major enhancements to the system, including updating it for regulatory changes, specifically PPA, are made by Winklevoss. Buck is one of their largest clients and we are extremely satisfied with WinTech's responsiveness to our suggestions.

The system's capabilities include:

**Pension Valuations** – Determination of annual contribution requirements for pension plans; annual expense for the income statement; and projected, accrued and vested benefit obligations.

**Postretirement Welfare Plan Valuations** – Determination of the liabilities and expense for postretirement medical and life insurance plans as required by GASB 43 and 45.

**Projections** – Calculation of expected future cash flows from the plan, future contribution requirements and funding status under a variety of economic scenarios as well as support for deterministic and stochastic forecasts with a powerful tool for users to change assumptions and graphically view the effect.

**Cost Studies** – Calculation of the effect of plan changes.

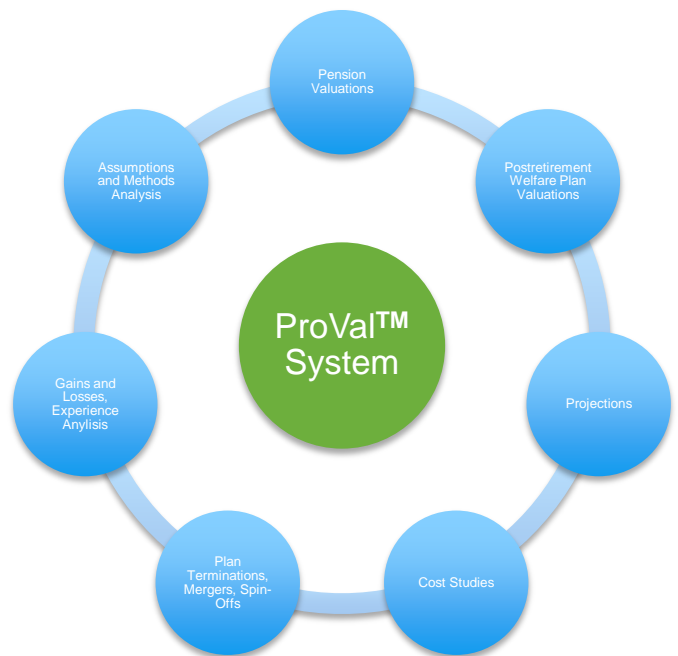
**Gains and Losses/Experience Analyses** – Measurement of the effect on obligations or contributions of differences in anticipated versus actual experience, including an analysis of expected versus actual number of withdrawals, deaths, retirements and disabilities.

**Assumptions and Methods Analysis** – Determination of the effect of changing actuarial assumptions and cost methods.

Our system enables us to run an automated and parameterized process that provides us the functionality to:

- Perform queries to check for data anomalies such as unusual salary increases, missing pay, date of birth changes, date of hire changes, transfer activity, etc.
- Construct a flow of lives to identify any abnormalities
- Produce control totals
- Produce forms and reports to communicate the results
- Import data directly into our valuation system

With our new technology, we can connect you more closely to your data through analytical tools, thus allowing you to make the best fact-based decisions. For instance, outputs from our valuation system can easily be partnered with our proprietary ALM models to provide you with projections to develop strategies for the future. Our ALM system makes use of GEMS, an award-winning economic and



capital market modeling tool. As you can see, our valuation software gives access to a wide range of solutions.

### **Data Security and Backup Strategy**

Strict practices and procedures are in place in all Buck offices to ensure the security, integrity and confidentiality of client data, both when housed within Buck and during information transfer. Buck has always maintained safeguards against unauthorized access and misuse of our clients' confidential information. These safeguards are periodically enhanced, both systemically and procedurally, and are reviewed by our internal and statutory auditors as part of our spot and annual (SAS 70, Type II) review programs. The safeguards include:

- Secure PGP webmail site, allowing files to be securely uploaded and downloaded from a password protected webmail box, over an encrypted SSL connection
- Secure Large File Transfer site, allowing large files over 10 MB in size to be securely uploaded and download at a password protected web site over an encrypted SSL connection
- Computers outfitted with virus, anti-spam, and firewall protection as well as PGP whole disk encryption (to guard against inadvertent disclosure)
- Annual training for all Buck employees on data privacy and security

System files are backed up once a day and sent offsite. Separate files that contain scanned images are retained on the system as an integral part of our data retention process and are backed up accordingly. Historical transaction and accounting information are stored and can be recreated as necessary to help ensure that the requisite data are available to meet regulatory requirements.

- 7) **Firm's Potential Conflicts of Interest. If the actuarial firm previously has been retained by a statewide or local Minnesota public pension plan, a Minnesota governmental employing unit, a Minnesota public employee labor union, or a comparable party interested in Minnesota public pension policy development, those relationships should be indicated. If the actuarial firm intends to continue any of these prior relationships during the course of a contract with the Commission, address the extent that the relationship constitutes a potential conflict of interest when providing services for the Commission and how the actuarial firm will deal with any actual conflicts.**

Buck was the actuary to Teachers Retirement Association of Minnesota in the past but we have had not performed actuarial work for any state retirement system in Minnesota in the last seven years. Other public entities in Minnesota for whom we have provided consulting include:

- City of Minneapolis – have served as OPEB actuary since 2008 and continue to this day; given that separate Buck teams are involved, we are not aware of any conflict of interest that would occur with this client.
- City of Minnetonka – performed plan design study in 2011 for Paid On Call Firefighters; no ongoing relationship at this time

We are not aware of any other Minnesota relationships at this time. Should other potential relationships develop, we will make sure that the Commission is aware in advance and work to



address any conflict of interest concerns that may exist. If resolution to those concerns cannot be reached, we will walk away from this other potential relationship.

- 8) **Most Recent Audited Annual Financial Report. If the actuarial firm is publicly held, provide a copy of the firm's most recent audited annual financial report.**

Buck is a wholly-owned subsidiary of Xerox. Publicly available financial information is available online (<http://news.xerox.com/investors>). Given that this document is over 150 pages, we chose to simply provide the online address for this proposal. If a hard copy is needed, please let us know.

## C. Approach and Work Plan

The actuarial firm must specify how it will provide the required and requested actuarial services within the specified timeframes and must indicate how its staff and the various projects will be organized to carry out the required tasks. Further, the work plan must identify the person who will be assigned overall responsibility for the work and indicate the business office location of that person.

The actuarial firm must set forth its implementation procedures, which must specify:

- 1) how the work of the firm under the contract will be coordinated with the Commission staff;
- 2) the personnel who will be responsible for presenting reports and results to the Commission;
- 3) the personnel who will be assigned as replacements in the event of the subsequent employment termination by or the non-availability of the primary assigned personnel.

The “Approach” section of this document, which begins on page 4, outlines how we will handle each of the components of the scope of services.

## D. Actuarial Services Compensation

The contract will require that the actuarial firm provide all of the actuarial consulting services required by the Legislative Commission on Pensions and Retirement. The actuarial firm must indicate its specific required compensation amounts for the initial contract year and four subsequent years, as follows:

Service	Compensation Amount
Review of the annual actuarial valuation reports for 11 plans annually	Fixed Fee
Replication of the annual actuarial valuation report for 1 plan annually	Fixed Fee
Review of the quadrennial experience studies for MSRS-General, PERA-General, and TRA	Fixed Fee
Review of the actuarial cost estimates for proposed benefit, contribution, actuarial assumption, or other changes	Rate per hour
Review of optional annuity form table or annuity reserve factor changes	Rate per hour
Review of prior service credit purchase payment amount determination	Rate per hour
Review of privatization gains or losses	Rate per hour
Attendance at Commission meetings other than for presenting fixed fee projects	Rate per hour
Provision of advice and counsel to the Commission or the Commission staff on pension benefit design and funding issues	Rate per hour
Preparation of special studies requested by the Commission	Rate per hour

All fixed fee and hourly rate information is included in our “Pricing” section. Note that the review of actuarial standards was not included in the chart. We are assuming that it will be billed on a “rate per hour” basis.

The proposal should also contain the following items:

- 1) **A schedule of current hourly rates that the actuarial firm charges to its other current clients for each level of personnel anticipated to be assigned to this contract;**

Hourly rate information is included in our “Pricing” section.

- 2) **A description of how any out-of-pocket expenses will be charged, if the out-of-pocket expense is not included in the fixed fee or the hourly fee;**

Out-of-pocket expenses will be charged at cost to the Commission. We will make sure that the Commission is aware of potential charges in advance of making any purchase. The most obvious such expense will be for travel to meetings (other than the annual spring results meeting, which is included as part of our fixed fee).

- 3) **A description of how any computer expenses will be charged, if the computer expense is not included in the fixed fee or the hourly fee, with an indication of the items that will be includable as computer costs and an indication of the amount of computer charges per time unit;**

Buck does not charge separately for computer expenses.

- 4) **A description of how development costs will be charged, if not included in the fixed or hourly fees, and the estimate of development costs arising out of the actuarial services contract for:**

- a. **any necessary changes to the firm's current computer systems;**
- b. **any necessary changes for data entry;**
- c. **gaining familiarization with the Minnesota pension plans and systems; and**
- d. **obtaining other data and information necessary to perform actuarial services tasks; and**

No transition costs will be charged to the Commission; they are absorbed by Buck as part of our ongoing relationship. Further, any updates to our computer systems are a part of our doing business and is not directly charged to our clients.

- 5) **A description of the firm's billing practices, timing, and procedures.**

Our standard billing practices are outlined in our Engagement Letter in Appendix B. These terms can be negotiated if an alternative approach is desired. For instance, some clients like to be billed their fixed fee amounts on a scheduled basis (e.g., quarterly).

## E. Affirmative Action

In accordance with the provisions of Minnesota Statutes, Section 363A.36, no bid for a contract in excess of \$100,000 may be accepted from an employer having more than 20 full-time employees at any time during the previous 12 months unless the employer has an affirmative action plan approved by the Minnesota Commissioner of Human Rights. The Commission will not accept a proposal unless it includes one of the following:

- 1) A copy of the actuarial firm's current certificate of compliance issued by the Minnesota Commissioner of Human Rights; or
- 2) A notarized statement certifying that the actuarial firm has a current certificate of compliance issued by the Minnesota Commissioner of Human Rights; or
- 3) A notarized statement certifying that the actuarial firm has not had more than 20 full-time employees located in the State of Minnesota at any time during the 12 months prior to submission of the proposal.

We are demonstrating compliance through option 3. A copy of our notarized statement is provided in Appendix C.

## F. Workers' Compensation

The successful proposer must submit acceptable evidence of compliance by the actuarial firm with the workers' compensation insurance coverage requirements of Minnesota law for any Minnesota employees before the execution of the contract.

We are demonstrating compliance through the exhibit provided below.

ACORD®		CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY) 12/31/2013															
<p>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.</p> <p><b>IMPORTANT:</b> If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).</p>																			
<p><b>PRODUCER</b> MARSH USA, INC. 1166 AVENUE OF THE AMERICAS NEW YORK, NY 10036 Attn: ACS.CertRequest@marsh.com</p> <p>303099-ALL-CAS-14-15</p>			<p><b>CONTACT NAME:</b> <b>PHONE (A/C, No, Ext):</b> <b>E-MAIL:</b> <b>ADDRESS:</b></p>																
<p><b>INSURED</b> *XEROX BUSINESS SERVICES LLC DBA AFFILIATED COMPUTER SERVICES LLC 2828 N. HASKELL AVENUE DALLAS, TX 75204</p>			<p><b>INSURER(S) AFFORDING COVERAGE</b></p> <table border="1"> <thead> <tr> <th>INSURER</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : ACE American Insurance Company</td> <td>22667</td> </tr> <tr> <td>INSURER B : St. Paul Fire &amp; Marine Ins Co</td> <td>24767</td> </tr> <tr> <td>INSURER C : Indemnity Ins Co Of North America</td> <td>43575</td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>			INSURER	NAIC #	INSURER A : ACE American Insurance Company	22667	INSURER B : St. Paul Fire & Marine Ins Co	24767	INSURER C : Indemnity Ins Co Of North America	43575	INSURER D :		INSURER E :		INSURER F :	
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INSURER F :																			
<b>COVERAGES</b>		<b>CERTIFICATE NUMBER:</b> NYC-006548527-06		<b>REVISION NUMBER:</b> 18															
<p>THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.</p>																			
INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS													
A	<p><b>GENERAL LIABILITY</b></p> <p><input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR</p> <p>GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO- JECT <input type="checkbox"/> LOC</p>		HDO G27329445	01/01/2014	01/01/2015	<p>EACH OCCURRENCE \$ 2,000,000</p> <p>DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 2,000,000</p> <p>MED EXP (Any one person) \$ N/A</p> <p>PERSONAL &amp; ADV INJURY \$ 2,000,000</p> <p>GENERAL AGGREGATE \$ 10,000,000</p> <p>PRODUCTS - COM/OP AGG \$ INCLUDED</p>													
A	<p><b>AUTOMOBILE LIABILITY</b></p> <p><input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS</p>		ISA H08815586	01/01/2014	01/01/2015	<p>COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000</p> <p>BODILY INJURY (Per person) \$</p> <p>BODILY INJURY (Per accident) \$</p> <p>PROPERTY DAMAGE (Per accident) \$</p>													
B	<p><input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE</p> <p>DED RETENTION \$</p>		ZUP-12P63747-14-NF	01/01/2014	01/01/2015	<p>EACH OCCURRENCE \$ 5,000,000</p> <p>AGGREGATE \$ 5,000,000</p>													
C	<p><b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b></p> <p>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in MN) <input type="checkbox"/> Y <input checked="" type="checkbox"/> N</p> <p>If yes, describe under DESCRIPTION OF OPERATIONS below</p>	N/A	WLR C47876710 (AOS) WLR C47876709 (AZ, CA and MA) SCF C47876722 (WI)	01/01/2014 01/01/2014 01/01/2014	01/01/2015 01/01/2015 01/01/2015	<p><input checked="" type="checkbox"/> WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER</p> <p>E.L. EACH ACCIDENT \$ 1,000,000</p> <p>E.L. DISEASE - EA EMPLOYEE \$ 1,000,000</p> <p>E.L. DISEASE - POLICY LIMIT \$ 1,000,000</p>													
<p><b>DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES</b> (Attach ACORD 101, Additional Remarks Schedule, if more space is required)</p> <p>NAMED INSURED INCLUDES BUCK CONSULTANTS LLC EVIDENCE OF COVERAGE.</p>																			
<b>CERTIFICATE HOLDER</b>			<b>CANCELLATION</b>																
<p>XEROX BUSINESS SERVICES, LLC DBA AFFILIATED COMPUTER SERVICES 2828 N HASKELL AVE DALLAS, TX 75204</p>			<p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</p> <p>AUTHORIZED REPRESENTATIVE of Marsh USA Inc. Jessica A. May <i>Jessica A. May</i></p>																

ACORD 25 (2010/05)

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## G. Contents of Proposal

The Commission will only consider full and complete proposals. A full and complete proposal must contain the following items:

- 1) Evidence of compliance with minimum qualification standards as set forth in section IV.
- 2) Complete information as required in section V.
- 3) Specification of a work plan as set forth in section VI.
- 4) Specification of the particular required compensation amounts and descriptions of out-of-pocket expenses, computer expenses, and development costs, as outlined in section VII.
- 5) An affirmative action compliance document as required in Section VIII.
- 6) An indication of the actuarial firm's capability to produce actuarial valuations and experience study reports as specified in Minnesota Statutes, Section 356.215, and the current Commission Standards for Actuarial Work.
- 7) Copies of examples of your firm's best work product for a prior or current client communicating actuarial valuation, experience study and benefit cost estimate results.
- 8) A list of any past or current contractual arrangements with a Minnesota public employee pension plan, a Minnesota public employing unit, an organization of Minnesota public employees, or a comparable group or entity with an interest in Minnesota public pension policymaking, as provided in Section V.
- 9) A transmittal letter, signed by an officer of the actuarial firm or by a comparable official who has the authority to bind the actuarial firm to the proposed terms, which must include a list of all materials and enclosures included in the proposal.

Items 1 through 5 and 8 through 9 have been addressed in the prior pages of this proposal. All items should be readily found by using the Table of Contents that was provided at the beginning.

For item 6 we have addressed our capabilities and approach in performing valuations and experience study reviews. We fully understand the need to perform our work and prepare our reports in compliance with Minnesota statutes, Section 356.215 and the current Commission Standards for Actuarial Work.

For item 7 we have provided examples of work products in Appendix D.

## Appendix A: Professional Biographies



## David L. Driscoll, FSA, MAAA, FCA, EA

*Principal and Consulting Actuary*

David Driscoll is a Principal and Consulting Actuary, and also serves as National Public-Sector Consulting Leader for Retirement Consulting. He joined Buck in 1999.

### Experience

- David has more than 20 years of actuarial consulting experience.
- Before joining Buck, David worked in the actuarial consulting division of a major insurance company.
- David is a frequent speaker on actuarial aspects of retirement systems, and has spoken in recent years at gatherings of the Society of Actuaries, the National Conference on Public Employee Retirement Systems, the National Association of State Treasurers, and the Actuaries Club of Boston. Recent presentations include:
  - *Proposals to Require MVL Disclosure by Public Retirement Systems: An Update*, NCPERS 2009 Annual Conference
  - *Valuing Assets for Actuarial Purposes: What's the Right Thing to Do?*, NCPERS 2010 Annual Conference
  - *Determining and Defending Your Assumed Rate of Return*, NCPERS 2011 Annual Conference
  - *Justifying Your Actuarial Assumptions*, NCPERS 2013 Annual Conference.
- David has been quoted on public retirement matters in such publications as *The Miami Herald*, *The New York Times*, *USA Today* and *Pensions and Investments*.

### Clients

David's consulting clients have included:

- Armed Forces Benefit Association
- Burlington, Vermont, Employees Retirement System
- Dallas Police and Fire Pension System
- INFICON, Inc.
- Maine State Deferred Compensation Plan
- Massachusetts Bay Transportation Authority Retirement Fund
- NBC Universal
- Pennsylvania School Employees Retirement System
- Texas Employees' Retirement System
- Vermont Municipal Employees' Retirement System
- Vermont State Employees' Retirement System
- Vermont State Teachers' Retirement System
- West Virginia Consolidated Public Retirement Board

### Education & Achievements

- Fellow of the Society of Actuaries
- Enrolled to perform actuarial services under ERISA by the Joint Board for the Enrollment of Actuaries
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Member of the Pension Committee of the Actuarial Standards Board, 2003-2006
- B.A. with high distinction from Indiana University
- M.A. in economics from the University of Rochester

## Larry Langer, FCA, ASA, MAAA, EA

*Principal, Consulting Actuary*

Larry Langer is a Principal and Consulting Actuary. He joined Buck in 2008.

### Experience

- Larry has more than 25 years of actuarial consulting experience consulting on actuarial aspects of retirement systems.
- Before joining Buck, Larry worked in the retirement of two consulting firms.
- Larry is a firm believer in describing actuarial matters in terms that are understandable and actionable by all. The following link will lead you to an example:  
<http://a2govtv.pegcentral.com/player.php?video=0a82e30e5de8edb7fed34e52b5a22690> Larry begins speaking at minute 14 of this discussion. More interaction with the city council occurs from minutes 43 through about the 1 hour mark, at which point the discussion ends.
- Larry is a frequent speaker on actuarial aspects of public retirement systems, and has spoken in recent years at gatherings of the Ohio Retirement Systems & Ohio Deferred Compensation Joint Trustee Training Program, National Council on Teacher Retirement, National Pension Education Association, Michigan Association of Public Employee Retirement Systems, and the Illinois Government Finance Officers Association. Recent presentations include:
  - *Actuarial Principles*, Ohio Retirement Systems & Ohio Deferred Compensation Joint Trustee 2011 Training Program
  - *Impact of Lowering Your Assumptions*, NCTR 89th Annual Convention 2011 Annual Conference
  - *GASB Reporting: Communication Strategies for the New Rules*, National Pension Education Association 32nd Annual Conference (2012)
  - *Decoding Actuarial Assumptions*, 2013 Illinois Public Pension Institute
  - *Actuary Hour*, Michigan Association of Public Employee Retirement Systems, most recently in the Fall 2013 Conference
  - *Early Retirement Incentives*, GFOA 2003 National Conference; after presentation Larry assisted GFOA staff on the 2004 publication *A Primer on Early Retirement Incentives*

## Clients

Larry's consulting clients include:

City of Ann Arbor Employees Retirement System And VEBA

Cook County Pension Funds

Milwaukee County Employees' Retirement System

City of Milwaukee Employees' Retirement System

Ohio Police & Fire Fund

North Carolina Retirement Division

Teachers' Retirement System of the State of Illinois

Washtenaw County Employees Retirement System and VEBA

## Education & Achievements

- B.S. in actuarial science from Central Michigan University
- Associate of the Society of Actuaries
- Member of the American Academy of Actuaries
- Enrolled Actuary
- Fellow of the Conference of Consulting Actuaries
- Member of the Conference of Consulting Actuaries Public Plans Committee

## Troy Jaros, FSA, EA, MAAA, FCA

*Consultant, Retirement Actuary*

Troy Jaros is a Consultant in the Retirement practice. He joined Buck in May 2005 and supports all aspects of the actuarial valuation process and consulting.

### Experience

Troy's wide-ranging experience encompasses:

- Preparing and reviewing annual actuarial valuations
- Preparing and reviewing net periodic pension expense calculations and annual disclosure results
- Preparing government form filings – Form 5500 and PBGC premiums
- Performing and reviewing participant benefit calculations
- Designing and develop benefit calculation models using Visual Basic and Excel applications
- Examining plan experience through gain and loss analysis and experience analysis studies in order to select and review actuarial assumptions and funding methods
- Assisting with completion of discrimination testing under sections 401(k), 401(a)(4) and 410(b) of the Internal Revenue Code
- Performing cost estimates for both public and private sector clients
- Evaluating and assisting on redesign of retirement benefit programs
- Auditing employee data for reasonability and consistency with prior data
- Performing asset calculations.

### Clients

Troy works on valuations for several clients, including:

- City of Milwaukee Employees' Retirement System
- Public School Retirement System of the City of St. Louis
- Employees Retirement System of the County of Milwaukee
- KWS Seeds
- City of Minnetonka, Minnesota
- Ambre Energy North America
- Peter Kiewit Sons', Inc.

### Education & Achievements

- Bachelor's degree in mathematics (actuarial specialization), minor in management, from the University of Minnesota
- Fellow of the Society of Actuaries
- Enrolled Actuary under ERISA
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries

## Kevin Peng, ASA, EA, MAAA

*Project Manager*

Kevin Peng is a Consultant in the Chicago office of Buck Consultants, a Xerox company. He joined the firm in June 2005.

### Experience

- prepare funding valuations and financial reporting for both defined benefit pension and post-retirement health care plans
- perform actuarial studies for defined benefit and postretirement welfare plans
- analyze and review actuarial assumptions based on the completion of experience studies
- prepare government filings
- prepare and review benefit calculations
- perform non-discrimination testing

### Clients

Kevin's consulting clients have included:

- American College of Surgeons
- Ann Arbor Employees Retirement System.
- Employees' Retirement System of Baltimore County
- Employees' Retirement System of County of Milwaukee
- International Monetary Fund
- City of Milwaukee Employees' System
- Pennsylvania Public School Employees' Retirement System
- Schneider Electric
- Steptoe & Johnson LLP
- Teachers' Retirement System of the State of Illinois

### Education & Achievements

- M.S., Applied Mathematics with a concentration in Actuarial Science from the University of Illinois at Urbana Champaign
- M.S., Applied Mathematics with a concentration in Statistic from National Chengchi University , Taipei, Taiwan
- B.S., Mathematic science from National Taiwan Normal University , Taipei, Taiwan
- Associate of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries

## Steve Evanego

*Consultant, Retirement Actuary*

Steve Evanego is a Consultant in the Retirement practice. He joined Buck in 1998 and supports all aspects of the actuarial valuation process.

### Experience

Steve's experience includes a strong understanding of our valuation systems, having worked on numerous conversions and transitions to our current system. Steve also has vast experience with:

- Preparing and reviewing annual actuarial valuations
- Examining plan experience through gain and loss analysis and experience analysis studies
- Auditing employee data for reasonability and consistency with prior data
- Preparing multi-year projections for financial planning purposes

### Clients

Clients that Steve has worked on include:

- County of Baltimore
- Carpenters Pension Fund
- Cook County
- Huntington Ingalls Industries
- Illinois Teachers
- Wellpoint

### Education & Achievements

- Bachelor's degree in mathematics from Trenton State College



## Appendix B: Standard Engagement Letter



[DATE]

[NAME]  
[TITLE]  
[COMPANY]  
[ADDRESS]  
[CITY STATE ZIP]

Dear <client representative>:

This letter agreement (“Agreement”) confirms the terms under which [client name] (“Client”) has engaged Buck Consultants, LLC (“Buck Consultants”) to perform certain [employee benefit and/or human resource consultation services and/or actuarial] consulting services as more particularly described in Section 1 below and Exhibit A hereto (the “Services”). The agreed terms and conditions under which Buck Consultants and Client are undertaking this engagement are as follows:

1. Services. In consideration for, and subject to, the mutual undertakings set forth herein, Buck Consultants agrees to provide the Services described in Exhibit A hereto.
2. Client Materials, Information, Data and Cooperation. To enable Buck Consultants to perform the Services, Client will promptly provide Buck Consultants with such direction, materials, information, data and access to its representatives as Buck Consultants reasonably requests. Buck Consultants is not responsible for verifying the accuracy or completeness of information supplied to it by Client representatives. If Buck Consultants receives inaccurate, incomplete or improperly formatted information, Buck Consultants shall have no liability for relying on the same, and any additional time and expense required to correct the information will be billed to and paid by Client as additional Services. The Services Buck Consultants has agreed to provide are solely those tasks specified in Exhibit A. Buck Consultants shall not be responsible for administration of Client’s business or internal affairs in any fashion. Performance of the Services does not imply additional or ancillary functions or obligations on the part of Buck Consultants. The Services provided by Buck Consultants are advisory, and in the nature of consulting services; Buck Consultants is not providing legal, trust or accounting services and is not taking on any fiduciary duties or obligations to Client. All of the Services provided by Buck Consultants will be rendered in its capacity as an arm’s length independent contractor and not as an agent.
3. Fees. For and during the term of this Agreement, Client will pay Buck Consultants the Fees specified in Exhibit B hereto (“Schedule of Fees”). All such Fees shall be paid in accordance with the payment terms set forth in Exhibit B. In the event that, during the term of this Agreement, Buck Consultants performs services in addition to those

described in Exhibit A at the request of Client, then Client shall pay Buck Consultants for such additional services at Buck Consultants' then-current time and material rates, or such other amounts as the parties may agree in writing. All such additional services shall be considered "Services" hereunder. Also, in the event that Buck Consultants, during or after the term of this Agreement, is requested to respond to a third party's request for information or documents relating to work provided hereunder and including without limitation pursuant to a subpoena or to a request to coordinate with Client's successor actuary or consultant, then Client shall pay Buck Consultants for its Services with respect to responding to such request at Buck Consultants' then current time and material rates, together with any reasonable out of pocket expenses incurred by Buck Consultants (including but not limited to counsel fees if responding to a subpoena) or such other amounts as the parties may agree in writing.

4. Term and Termination. The initial term of this Agreement will be twenty-four (24) months beginning [ DATE ] and ending [ DATE ]. This Agreement will automatically be extended for additional terms of twelve (12) months each unless Client or Buck Consultants gives written notice to the other at least ninety (90) days before the expiration of the initial or any subsequent term. In the event of a material breach of this Agreement which remains uncured for 30 days following written notice of the breach describing such breach in reasonable detail, the non-breaching party will have the right to terminate this Agreement upon ten (10) days prior written notice.
5. Confidentiality. Both Buck Consultants and Client recognize that in the course of this Agreement information will be exchanged consisting of confidential trade secret or business information ("Confidential Information"). Each party shall treat the other party's Confidential Information as it would treat its own confidential trade secret or business information, and with at least reasonable care as is appropriate to avoid unauthorized use or disclosure. Buck Consultants may provide Confidential Information to any of its agents and affiliates that need to know such information for the performance of the Services. In addition, Buck Consultants reserves the right to use non-confidential Client information for press releases and marketing materials. The obligations set forth in this Section 5 shall not apply to information that (i) is or becomes generally known to the public, other than as a result of a disclosure of a party's Confidential Information by the other party, (ii) is rightfully in the possession of the other party prior to disclosure, free of any obligation of confidentiality, (iii) is received by a party in good faith and without restriction from a third party not under a confidentiality obligation to the other party and having the right to make such disclosure, or (iv) is independently developed without reference to the other party's Confidential Information.
6. Buck Consultants' Proprietary Rights. The work product Buck Consultants delivers to Client in connection with this engagement is intended for Client's internal use as specifically contemplated when Buck Consultants was engaged to prepare it, and Client will retain ownership of the work product, and any information, specific to Client's employees or business, and as such, Client shall have the exclusive right to use, reproduce and adapt it for internal purposes within its organization as Client deems appropriate, provided that Buck Consultants shall have no responsibility or liability for use of its work product in any manner other than as contemplated when Buck Consultants was engaged to prepare it.

All materials, information, processes, software and products used by Buck Consultants to perform the Services under this Agreement (including without limitation specifications,

database structures, report formats, templates, software, techniques, know-how, methods, algorithms, procedures and documentation), all additions, improvements and modifications made thereto in the course of Buck Consultants performing Services, and Buck Consultants' work papers and records are Buck Consultants' proprietary information (hereinafter, "Proprietary Information"). Proprietary Information belongs exclusively to Buck Consultants, its affiliates or third-party licensors, and the Client shall not have any proprietary or other right or interest in or to the Proprietary Information. To the extent Proprietary Information is incorporated into work product Buck Consultants delivers to Client hereunder, Client shall have a fully paid, non-exclusive, non-transferable and non-sublicensable right to use such Proprietary Information in conjunction with such work product.

7. Remedies. Client shall not assert or seek, and Buck Consultants shall not be liable to Client for, any damages or other monetary claim or claims on any legal or equitable theory of liability or recovery exceeding, in the aggregate, the amount of \$ <insert amount>. Client hereby waives and agrees not to assert any claims for lost profits, indirect damages, consequential damages, special damages, incidental damages, exemplary damages, and punitive damages, regardless of whether such claims arise pursuant to this Agreement or pursuant to another legal or equitable claim or relationship between the parties. The provisions of this Section 7 shall apply regardless of whether any such claim or claims arise by statute, contract, indemnity, this Agreement, or otherwise arising in law or equity in any jurisdiction. The statute of limitations with respect to the assertion of any claims against Buck Consultants shall expire one year following the earliest date when the alleged error or omission or other event giving rise to the alleged claim first occurred, and, if not timely asserted by Client by initiation of a claim in a court of competent jurisdiction, shall be forever barred. No act of Buck Consultants other than the execution of an express waiver of the provisions of this Section 7 shall be effective to toll or extend the aforesaid one year limitation period or otherwise increase Buck Consultants liability with respect to any claims asserted against Buck.
8. Non-Solicitation Personnel. During the term of this Agreement and for one year following the effective date of its termination, Client agrees that, without the prior written consent of Buck Consultants, it shall not knowingly solicit for employment, any employee or former employee of Buck Consultants who was engaged in the performance of the Services during the twelve (12) month period immediately preceding such solicitation. The preceding sentence shall not prohibit Client from considering for employment any such employee or former employee of Buck Consultants who (i) seeks employment with Client in response to a general advertisement by Client (so long as the advertisement is not directed toward employees of Buck Consultants) or (ii) is identified in the course of employment searches by an independent third party retained by Client (so long as the search is not directed toward employees of Buck Consultants).
9. Miscellaneous. This Agreement is the product of mutual negotiation and drafting among sophisticated business people. Each party has been represented by competent counsel of such party's own choosing. Accordingly, no party shall be deemed to be the draftsperson of this Agreement. This Agreement constitutes the full, complete and final expression of the parties' understanding with respect to the subject matter hereof and supersedes all prior oral or written understandings between the parties. Neither party has relied on any promises, representations or warranties except as expressly set forth in this Agreement. The parties hereto intend that no third party shall have any rights or

claims hereunder or be entitled to any benefits under or on account of this Agreement as a third-party beneficiary or otherwise. The parties hereto expressly agree that this Agreement will be construed and enforced in accordance with the internal laws of the State of New York, without regard to New York choice of law provisions. The parties hereby consent to the exclusive jurisdiction and venue of the federal and state courts situated in and for the State of New York, County of New York with respect to any dispute arising between the parties, regardless of whether such dispute arises pursuant to this Agreement or otherwise. The parties consent to the waiver of trial by jury in any dispute arising between the parties. This Agreement may be amended only by a writing signed manually in pen and ink by the parties hereto, it being understood that an exchange of emails not bearing pen and ink signatures (or a replica of a manual signature) shall not be sufficient to modify or amend this Agreement. If any provision of this Agreement is declared invalid or unenforceable, by judicial determination or otherwise, such provision shall not invalidate or render unenforceable the entire Agreement but rather the provision in question shall be construed only so narrowly as is required in order to be enforceable; or if such more narrow construction of the provision in question is not possible, then the entire Agreement shall be construed as if not containing the particular invalid or unenforceable provision and the rights and obligations of the parties shall be construed and enforced accordingly. In each instance, such construction or "blue-penciling" of the Agreement shall be effected in such a manner as to give effect to the intent of the parties as expressed within the four corners of this Agreement. This Agreement may be executed in any number of counterparts. Each executed counterpart shall be conclusively deemed to be an original. All executed counterparts taken together shall constitute one and the same agreement. A transmission by facsimile or other electronic means of communication of this Agreement bearing a pen and ink signature on behalf of a party hereto shall be legal and binding on such party. Sections 2, 3, 5, 6, 7, 8 and 9, and Client's obligation to pay all amounts due to Buck Consultants under this Agreement, shall survive the termination or expiration of this Agreement.

If the foregoing accurately reflects your understanding and agreement, please acknowledge by signing below and returning a duplicate of this Agreement to the undersigned at the address above.

Sincerely,

<Buck Consultants Representative>  
Buck Consultants, LLC

The Agreement set forth herein is hereby agreed to and accepted this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

<Client Representative>  
<Client>

**Exhibit A**

**Scope of Services**

During the term and subject to the conditions set forth in the accompanying Agreement, Buck Consultants will provide the following Services to <Client>:

<describe in detail scope of consulting services, time frames to perform such services and list of any deliverables>

**Exhibit B**

**Schedule of Fees**

[INSERT APPROPRIATE LANGUAGE]

After the initial first twelve (12) months of the Agreement, Buck Consultants may modify the Schedule of Fees specified above by giving Client thirty (30) days written notice of such change. In addition to the fees specified above, Client will pay (i) an eight percent (8%) technology and intellectual capital fee based on the total professional fees invoiced from time to time hereafter, and (ii) all out-of-pocket expenses incurred by Buck Consultants in connection with the provision of the Services including, without limitation, copying, telephone charges, postage and the like.

Buck Consultants will invoice Client periodically, generally on a monthly basis, for all fees and expenses due and payable by Client. Client shall pay all invoiced amounts within thirty (30) days of the receipt by Client of Buck Consultants' invoice. Any amount not paid by Client when due shall bear interest at the rate of one and one half percent (1.5%) per month or the highest permissible rate under applicable law, whichever is less, until paid in full.

## Appendix C: Affirmative Action Statement



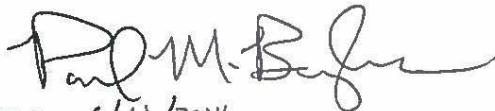
**Affirmative Action Certification**

Re: RFP Section VII- Affirmative Action

In accordance with the provisions of Minnesota Statutes, Section 363A.36, no bid for a contract in excess of \$100,000 may be accepted from an employer having more than 20 full-time employees at any time during the previous 12 months unless the employer has an affirmative action plan approved by the Minnesota Commissioner of Human Rights. The Commission will not accept a proposal unless it includes one of three options, including:

**A notarized statement certifying that the actuarial firm has not had more than 20 full-time employees located in the State of Minnesota at any time during the 12 months prior to submission of the proposal.**

As a Principal of Buck Consultants, I certify that Buck Consultants has less than 20 full-time employees located in the State within the last 12 months.

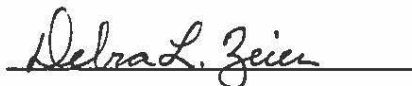


Date: 6/11/2014

Paul Baugher  
Principal, Midwest Retirement Practice Leader  
Buck Consultants

State of Missouri, County of St. Louis

The foregoing instrument was acknowledged before me this 11th day of June, 2014, at St. Louis, Missouri by Paul M. Baugher to be his/her free act and deed.

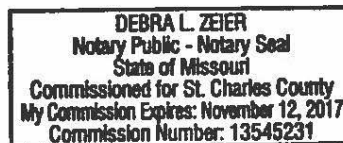


Signature of Notary Public

Name of Notary Public (print your name) SEAL

Notary Public, State of Missouri

My commission expires: 11-12-2017



## Appendix D: Work Product Examples

## Example Valuation

Buck Consultants prepared a valuation report for the Arizona State Retirement System. Given the size of the file and the fact that the information is publically available, we are providing a link below to access the report:

[https://www.azasrs.gov/sites/default/files/pdf/Plan\\_Valuation.pdf](https://www.azasrs.gov/sites/default/files/pdf/Plan_Valuation.pdf)

## Example Experience Study

Buck Consultants prepared an experience study report for the State Teacher's Retirement System of Vermont. Given the size of the file and the fact that the information is publically available, we are providing a link below to access the report:

[http://www.vermonttreasurer.gov/sites/treasurer/files/pdf/retireTeacher/reports/2010\\_experience\\_study-VSTRS.pdf](http://www.vermonttreasurer.gov/sites/treasurer/files/pdf/retireTeacher/reports/2010_experience_study-VSTRS.pdf)

## Example Cost Study

Buck Consultants prepared cost study analyses for two different public plan clients. This information is not public, so we have redacted all identifying information and included copies of the results letters on the pages following.

April 1, 2013

**VIA E-MAIL** [REDACTED]

Mr. [REDACTED]  
Director of Government Relations  
Employees Retirement System [REDACTED]  
[REDACTED]  
[REDACTED]

**Re:** [REDACTED]

Dear [REDACTED]:

As requested, we have estimated the actuarial impact of expanding the definition of "law enforcement officer" to include certain staff members of the attorney general. Our analysis is attached.

**Summary of Proposed Change**

Under the proposal, Sections 402.009, 659.301(5), 811.001(9), 814.104(b), 814.1075(b), and 815.505 of the [REDACTED] Code would be amended effective September 1, 2013, to reclassify members of the retirement system who are commissioned as law enforcement officers by the attorney general as "law enforcement officers" as defined by Section 811.001(9)(A) of the [REDACTED] Code. As a result of this change, the funding and benefit provisions that apply to CPO/CO service would be extended to service performed by law enforcement officers commissioned by the attorney general.

I am a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Please contact me with any questions concerning our analysis.

Very Truly Yours,

[REDACTED]

David L. Driscoll, FSA, EA, MAAA  
Principal, Consulting Actuary

DLD:km  
\\ERS\COR\30326DD1.DOCX

Enclosures

cc: [REDACTED]

[REDACTED]  
[REDACTED]

**Actuarially Sound Contribution Rate:** Section 811.006 of the [REDACTED] Code provides that changes in contribution rates or benefit provisions may not be adopted if such changes would cause the time required to amortize the unfunded accrued liability – the amount of liabilities in excess of the actuarial value of assets – to equal or exceed 31 years. That is, under the [REDACTED] Code, the System is considered actuarially sound if the current total contribution rate covers the plan’s administrative expenses and the cost of benefits being earned during the year by current active members – the normal cost – as well as the cost of amortizing any unfunded accrued liability over a maximum of 31 years.

**ERS Actuarial Status:** The fiscal year 2013 total contribution rate for ERS is 13.00% of payroll, which is comprised of 6.50% member contributions and 6.50% employer contributions. Based on the February 28, 2013, update of the August 31, 2012, actuarial valuation of ERS, the total normal cost rate, which is calculated to be a level percentage of active member payroll, is 12.27%. Based on the February 28, 2013, update of the August 31, 2012, actuarial valuation and assuming the rate of return on the market value of assets is 8% per year, the actuary has projected that the actuarially sound total contribution rate under Section 811.006 for fiscal years 2014 and 2015 is 18.94%. The current total contribution rate of 13.00% falls short of the Section 811.006 standard by 5.94% of payroll. The 13.00% total contribution rate covers the normal cost requirements; however, the remaining contribution of 0.73% is insufficient to pay down the existing unfunded accrued liability. Based on the February 28, 2013 update of the August 31, 2012 actuarial valuation, the unfunded accrued liability is expected to grow indefinitely. Therefore, the current expected funding period is infinite.

**[REDACTED] Actuarial Status:** The fiscal year 2013 total contribution rate for [REDACTED] is 1.00% of payroll, which is comprised of 0.50% member contributions and 0.50% employer contributions. Based on the February 28, 2013, update of the August 31, 2012, valuation of [REDACTED], the total normal cost rate, which is calculated to be a level percentage of active member payroll, is 2.08%. Based on the February 28, 2013, update of the August 31, 2012, actuarial valuation and assuming the rate of return on the market value of assets is 8% per year, the actuary has projected that the actuarially sound total contribution rate under Section 811.006 for fiscal years 2014 and 2015 is 3.09%. The current total contribution rate of 1.00% falls short of the Section 811.006 standard by 2.09% of payroll. The 1.00% total contribution rate does not cover the normal cost requirements and is therefore insufficient to pay down the existing unfunded accrued liability. Based on the February 28, 2013, update of the August 31, 2012, actuarial valuation, the unfunded accrued liability is expected to grow indefinitely. Therefore, the current expected funding period is infinite.

**Proposed Legislation:** Under the proposal, Sections 402.009, 659.301(5), 811.001(9), 814.104(b), 814.1075(b), and 815.505 of the [REDACTED] Code would be amended effective September 1, 2013, to reclassify members of the retirement system who are commissioned as law enforcement officers by the attorney general as “law enforcement officers” as defined by Section 811.001(9)(A) of the [REDACTED] Code. As a result of this change, the funding and benefit provisions that apply to CPO/CO service would be extended to service performed by law enforcement officers commissioned by the attorney general.

For this analysis, the Office of the Attorney General (OAG) indicated there are currently 157 OAG law enforcement officers who would qualify for participation in [REDACTED] under House Bill 2253. Our cost estimate thus reflects the addition of 157 employees to [REDACTED] with the same demographic characteristics (age, service, gender and salary) as the current [REDACTED] population. For purposes of this cost estimate, it was assumed that the changes in House Bill 2253 would be recognized in the August 31, 2013, actuarial valuation and that the actuarial assumptions used to value CPO/CO employees would be considered appropriate for determining the liability and normal cost requirements of the new benefits for these employees. The bill does not increase the number of employees or the valuation payroll of the ERS plan, but it increases the number of employees covered by [REDACTED] by the size of the affected active workforce (157), and it increases the projected fiscal year 2014 valuation payroll of [REDACTED] by the projected payroll of these employees (approximately \$6.3 million). It was assumed that any pre-September 1, 2013 credited OAG law enforcement service would be treated as Law Enforcement Service under Section 811.001(9)(A) for all OAG law enforcement officers active on the effective date of this bill. It was also assumed that the changes in the bill would not apply to members who retired prior to September 1, 2013, or who are no longer actively employed as of September 1, 2013.

**Actuarial effect on ERS:** Based on the analysis outlined above and based on the same data, assumptions, and methods as were used in the February 28, 2013, update of the August 31, 2012, actuarial valuation, the changes in this bill would increase the actuarially sound contribution rate (from 18.94% to 18.95%) and increase the unfunded accrued liability (UAL) by \$2.0 million. There would be no change to either the projected August 31, 2013, funded ratio or normal cost rate rounded to the nearest basis point.

**Employees Retirement System of [REDACTED]  
Actuarial Impact of [REDACTED]**

*(Dollar Amounts in Millions)*

Item	Current ERS Plan	After Proposal	Change due to Proposal
<b>1. Projected 8/31/2013 Valuation Results</b>			
(a) Accrued Liability	\$ 31,113.2	\$ 31,115.2	\$ 2.0
(b) Actuarial Value of Assets*	\$ 24,687.4	\$ 24,687.4	\$ 0.0
(c) Unfunded Accrued Liability (a – b)	\$ 6,425.8	\$ 6,427.8	\$ 2.0
(d) Funded Status: (b / a)*	79.3%	79.3%	0.0%
(e) Total FY 2013 Contribution Rate	13.00%	13.00%	0.00%
(f) Funding period based on (e)	Infinite	Infinite	Infinite
(g) Additional Rate needed to satisfy 31-year funding requirement	<u>5.94%</u>	<u>5.95%</u>	<u>0.01%</u>
(h) Actuarially Sound Rate for FY 2014-FY 2015: (e + g)	18.94%	18.95%	0.01%
(i) Funding Period based on (h)			
– As of 8/31/2013	31.0 years	31.0 years	0.0 years
– As of 8/31/2014	31.0 years	31.0 years	0.0 years
<b>2. Allocation of FY 2014-FY 2015 Rate</b>	FY 2013 Rates	Actuarially Sound	
(a) Employer Rate	6.50%	12.45%	5.95%
(b) Member Rate	<u>6.50%</u>	<u>6.50%</u>	<u>0.00%</u>
(c) Total Rate: (a + b)	13.00%	18.95%	5.95%
(d) Normal Cost Rate	12.27%	12.27%	0.00%
(e) Rate Available to Amortize UAL: (c – d)	<u>0.73%</u>	<u>6.68%</u>	<u>5.95%</u>
(f) Total Rate: (d + e)	13.00%	18.95%	5.95%
<b>3. FY 2014 Valuation Payroll</b>	\$ 5,907.2	\$ 5,907.2	\$ 0.0
<b>4. Five-Year Impact on State Contributions**</b>	FY 2013 Rates	Actuarially Sound	
(a) FY 2014	\$ 384.0	\$ 735.4	\$ 351.4
(b) FY 2015	397.4	761.1	363.7
(c) FY 2016	411.3	787.7	376.4
(d) FY 2017	425.7	815.3	389.6
(e) FY 2018	440.6	843.8	403.2

\* Amounts reflect the impact of the recognition of a portion of the net asset losses that existed at February 28, 2013.

\*\* Assumes payroll increases 3.5% per annum and the stated contribution rate remains constant through fiscal year 2018. The actual required contributions for fiscal years 2016 through 2018 will be based on later actuarial valuations and may be higher or lower.

Aside from the proposed change and the assumptions noted above, this estimate is based on the same data, assumptions, and plan provisions as were used in the February 28, 2013, update of the August 31, 2012, actuarial valuation. The total actuarially sound contribution rate for fiscal years 2014 and 2015 in the exhibit is the rate projected to satisfy the 31-year funding requirement of Section 811.006 through fiscal years 2014 and 2015.

**Actuarial effect on [REDACTED]:** Based on the analysis outlined above and based on the same data, assumptions, and methods as were used in the February 28, 2013, update of the August 31, 2012, actuarial valuation, changes in this bill would increase the actuarially sound contribution rate (from 3.09% to 3.10%), increase the unfunded accrued liability (UAL) by \$3.7 million, and decrease the funded ratio (from 77.2% to 76.9%). There would be no change to the projected August 31, 2013, normal cost rate, but because the bill increases the [REDACTED] valuation payroll, it also increases the dollar amount of the normal cost requirement.



**Actuarial Impact of House**

(Dollar Amounts in Millions)

Item	Current Plan	After Proposal	Change due to Proposal
<b>1. Projected 8/31/2013 Valuation Results</b>			
(a) Accrued Liability	\$ 1,093.7	\$ 1,097.4	\$ 3.7
(b) Actuarial Value of Assets*	<u>\$ 844.2</u>	<u>\$ 844.2</u>	<u>\$ 0.0</u>
(c) Unfunded Accrued Liability (a – b)	\$ 249.5	\$ 253.2	\$ 3.7
(d) Funded Status: (b / a)*	77.2%	76.9%	(0.3)%
(e) Total FY 2013 Contribution Rate	1.00%	1.00%	0.00%
(f) Funding period based on (e)	Infinite	Infinite	Infinite
(g) Additional Rate needed to satisfy 31-year funding requirement	<u>2.09%</u>	<u>2.10%</u>	<u>0.01%</u>
(h) Actuarially Sound Rate for FY 2014-FY 2015: (e + g)	3.09%	3.10%	0.01%
(i) Funding Period based on (h)			
– As of 8/31/2013	31.0 years	31.0 years	0.0 years
– As of 8/31/2014	31.0 years	31.0 years	0.0 years
<b>2. Allocation of FY 2014-FY 2015 Rate</b>	FY 2013 Rates	Actuarially Sound	
(a) Employer Rate	0.50%	2.60%	2.10%
(b) Member Rate	<u>0.50%</u>	<u>0.50%</u>	<u>0.00%</u>
(c) Total Rate: (a + b)	1.00%	3.10%	2.10%
(d) Normal Cost Rate	2.08%	2.08%	0.00%
(e) Rate Available to Amortize UAL: (c – d)	<u>(1.08)%</u>	<u>1.02%</u>	<u>2.10%</u>
(f) Total Rate: (d + e)	1.00%	3.10%	2.10%
<b>3. FY 2014 Valuation Payroll</b>	\$ 1,518.8	\$ 1,525.3	\$ 6.5
<b>4. Five-Year Impact on State Contributions**</b>	FY 2013 Rates	Actuarially Sound	
(a) FY 2014	\$ 7.6	\$ 39.7	\$ 32.1
(b) FY 2015	7.9	41.1	33.2
(c) FY 2016	8.2	42.5	34.3
(d) FY 2017	8.5	44.0	35.5
(e) FY 2018	8.8	45.5	36.7

\* Amounts reflect the impact of the recognition of a portion of the net asset losses that existed at February 28, 2013.

\*\* Assumes payroll increases 3.5% per annum and the stated contribution rate remains constant through fiscal year 2018. The actual required contributions for fiscal years 2016 through 2018 will be based on later actuarial valuations and may be higher or lower.

Aside from the proposed change and the assumptions noted above, this estimate is based on the same data, assumptions, and plan provisions as were used in the February 28, 2013, update of the August 31, 2012, actuarial valuation. The total actuarially sound contribution rate for fiscal years 2014 and 2015 in the exhibit is the rate projected to satisfy the 31-year funding requirement of Section 811.006 through fiscal years 2014 and 2015.

**Actuarial Certification:** Based on the current plan provisions and the fiscal year 2013 total contribution rates of 13.00% for the ERS plan, and 1.00% for [REDACTED], the amortization periods for the unfunded accrued liability of both these plans exceed 30 years by one or more years. As long as a benefit change does not increase the actuarial cost of ERS, no additional State contribution will be required as a result of the legislation. However, as required by Section 811.006 of the [REDACTED] Code, any legislation that reduces the rate of contributions or interest rates, credits additional service, or provides any benefit improvements that increase the actuarial cost of ERS will require a State contribution at least equal to the normal cost plus an amount necessary to amortize the unfunded liabilities of the new benefit structure over a 31-year period. The bill considered here improves benefits and has the potential to increase the actuarial costs of these plans; therefore, Buck Consultants certifies that if this bill is enacted, it is projected that State contributions for fiscal years 2014 and 2015 will need to increase for both plans – to 12.45% of payroll for the ERS plan, and to 2.60% of payroll for [REDACTED] – in order to become actuarially sound and comply with the requirements of Section 811.006 of the [REDACTED] Code.

The actuary's analysis is based on the assumption that no other legislative changes affecting the funding of ERS and [REDACTED] will be adopted. It should be noted that when several proposals are adopted, the effect of each may be compounded, resulting in a cost that is greater (or less) than the sum of each proposal considered independently. This certification complies with the Rules adopted by the State Legislature.

November 29, 2013



**RE: Impact of Enhanced Early Retirement for Emergency Dispatchers**

Dear [REDACTED]:

You have asked us to determine the cost impact on the [REDACTED] Employees' Retirement System ([REDACTED]ERS) of providing emergency dispatchers with the right to retire at age 55 with 20 years as an emergency dispatcher with no early retirement penalty.

Your staff have identified 73 active participants who would be affected by this. As it is not possible to determine from the data whether all of their past service was earned while serving as an emergency dispatcher, we have assumed that it was. We have also assumed that the affected participants would avail themselves of the ability to retire with unreduced benefits at earlier ages to the maximum degree afforded by the proposal.

If the proposed provision had been reflected in the June 30, 2013, actuarial valuation of the System, the fiscal-year 2015 and 2016 State contributions developed on page 51 of the report on the valuation would have risen by approximately \$198,100 and \$207,600, respectively. The increase in the 2015 contribution is comprised of an increase in normal cost of approximately \$81,300 and an increase in amortization requirements of \$116,800, while the increase in the 2016 contribution is comprised of an increase in normal cost of approximately \$85,000 and an increase in amortization requirements of \$122,600.

1. Apart from the assumed retirement of the 73 affected participants, these calculations are based on the data, assumptions and methods used in the June 30, 2013, actuarial valuation of the [REDACTED]ERS.
2. As noted above, these calculations are based on the assumption that all affected participants will avail themselves to the greatest degree possible of the opportunity to retire with unreduced benefits that would be provided under this proposal. If it were assumed that fewer than 100% of the participants took advantage of this enhancement, the increases in the fiscal-year 2015 and 2016 contributions would be smaller than those set forth above. I should also note in this connection that nearly half of the affected participants are at or close to eligibility for unreduced retirement benefits under present System provisions, so the

[REDACTED]  
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response of about 35-40 of the affected participants will have a significant impact on the actual cost outcome, while the response of the rest will have a negligible impact.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions concerning it.

Please do not hesitate to contact me if you wish to discuss these estimates

Sincerely,

[REDACTED]  
David L. Driscoll, FSA  
Principal, Consulting Actuary