# West Virginia Consolidated Public Retirement Board



Proposal for Actuarial Consulting Services – TECHNICAL PROPOSAL Solicitation No. CRFP CPR2300000002 - ORIGINAL Due March 1, 2023, prior to 1:30 p.m.

Submitted by: Gabriel, Roeder, Smith & Company

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02/28/23 09:31:48 W Purchasing Division

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Pension Market Leader and Office of the Chief Actuary

February 27, 2023

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February 27, 2023

Ms. Melissa Pettrey
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Re: GRS' Response to the Request for Proposals for Actuarial Consulting Services

Dear Ms. Pettrey:

Gabriel, Roeder, Smith & Company (GRS) is pleased to have the opportunity to submit a Proposal to provide annual actuarial valuation reports and other actuarial services to the West Virginia Consolidated Public Retirement Board (CPRB). The attached Proposal sets forth our understanding of the work to be performed and the qualifications and capabilities of the consultants and resources of GRS.

The mission of CPRB is "To serve those who serve West Virginia by administering nine governmental pension plans to ensure members receive accurate and timely benefits earned for their public service." Consistent with this mission, members should trust that their benefits are secure and they can depend on them during retirement. Employers should trust that their contribution requirements are predictable and annual changes are appropriate. Employers, other plan sponsors, and other users of the financial statements should trust the accounting disclosures are complete and defendable. Taxpayers should trust their resources are being efficiently utilized and communications used for decision making are fully transparent.

GRS' focus will be to help CPRB continue to build its credibility across all of these important areas of need. We will produce disclosures that are accurate, timely, and defendable to scrutiny. We will assist CPRB in building a set of actuarial assumptions that are designed to be appropriate over a series of points in time in the future, not just at the current valuation date. We will build an unbiased actuarial model that is easily explainable and dependable for informed decision making. These last two items, in particular, combine to maximize credibility by minimizing surprises and meeting expectations with complete transparency. Most importantly, ongoing communication efforts will be designed to reduce complex topics and strategies into concise, understandable talking points so all stakeholders continue to view CPRB as a reliable and credible resource.

GRS will help ensure that you continue to earn their trust.

Across the firm, we serve more than 1,000 public sector retirement systems and healthcare programs in 42 states, including over 41 statewide public pension retirement systems, 20 of which have 100,000 or more members and several have multiple plans and cost centers such as CPRB. The location of our retained clients ranges from Hawaii to Rhode Island and from Minnesota to Texas. Thus, given its place in the marketplace and the age of the proposed team, GRS offers CPRB the prospect of forming a long-term strategic partnership with the nation's premier provider of actuarial consulting services to the public sector community and an actuarial team that excels in technology and innovation.

The proposed team, in its work with systems similar to CPRB such as the Employee's Retirement System of Rhode Island, the Colorado Fire and Police Pension Association, the Maryland State Retirement and Pension System and Texas Municipal Retirement System has developed an approach that emphasizes meeting the expectations of all stakeholders. This is done by optimizing the actuarial model to produce steady, reliable outcomes and creating actuarial communications that appropriately, and successfully, communicate those expectations. The team has an extensive understanding of the legislative and political environment surrounding public retirement systems. GRS has a nationally renowned reputation, an excellent research center that specializes in public systems and a clear understanding of the issues public retirement systems face across the nation.

GRS is an employee owned and operated company which delivers a higher level of commitment to providing the best possible service and the most independent consulting advice possible.

Joseph Newton is authorized to represent GRS in all matters related to this proposal. Judith A. Kermans, our President, is authorized to contractually bind the firm.

Please contact Joe if you have any questions or need any additional or clarifying information.

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If we are awarded this engagement, we intend to negotiate in good faith with the CPRB to reach an agreement on contract terms as expeditiously as possible. As the nation's largest provider of actuarial services to public entities, we have negotiated mutually acceptable contract terms with our other clients in support of similar opportunities. We expect to also successfully reach agreement with the CPRB on acceptable contract terms for this opportunity.

We believe that GRS' ongoing client service team is unmatched by any of our competitors. We know you will be pleased with our responsiveness and the quality of our work. Your consideration of GRS as your next actuarial firm is greatly appreciated and we hope to serve the CPRB for many years to come.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Joseph Newton, FSA, EA, FCA, MAAA

Pension Market Leader and Office of the Chief Actuary

Judith A. Kermans, EA, FCA, MAAA

white A. Lemons

President



# REQUEST FOR PROPOSAL

(Agency Name and RFP #)

**6.8.** Availability of Information: Proposal submissions become public and are available for review immediately after opening pursuant to West Virginia Code §5A-3-11(h). All other information associated with the RFP, including but not limited to, technical scores and reasons for disqualification, will not be available until after the contract has been awarded pursuant to West Virginia Code of State Rules §148-1-6.3.d.

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Gabriel, Roeder, Smith & Com	pany
(Company)	
Judith A. Kermans, President	Judica A. Vernans
(Representative Name, Title)	
248.799.9000 ext. 1125	
(Contact Phone/Fax Number)	<del></del> :
February 21, 2023	
(Date)	



Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

# State of West Virginia Centralized Request for Proposals Service - Prof

Proc Folder:	1161206		Reason for Modification:
Doc Description:	Outside Actuarial Services		
Proc Type:	Central Master Agreement		
Date Issued	Solicitation Closes	Solicitation No	Version
2023-02-03	2023-02-21 13:30	CRFP 0203 CPR2300000002	1

#### **BID RECEIVING LOCATION**

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

#### VENDOR

**Vendor Customer Code:** 

Vendor Name: Gabriel, Roeder, Smith & Company

Address: One Towne Square, Suite 800

Street: Town Square

City: Southfield

State: Michigan Country: United States Zip: 48076

Principal Contact: Judith A. Kermans

Vendor Contact Phone: 248.799.9000 Extension: 1125

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey (304) 558-0094

melissa.k.pettrey@wv.gov

Feb 3, 2023

Vendor

Date Printed:

Signature X holith / Jumans

FEIN# 38-1691268

**DATE** 2/27/2023

All offers subject to all terms and conditions contained in this solicitation

Page: 1 FORM ID: WV-PRC-CRFP-002 2020\05

# SECTION 4.2

PROJECT GOALS AND MANDATORY REQUIREMENTS

# **Project Goals and Mandatory Requirements**

- **4.2 Project Goals and Mandatory Requirements:** Vendor should describe its approach and methodology to providing the service or solving the problem described by meet the goals/objectives identified below. Vendor's response should include any information about how the proposed approach is superior or inferior to other possible approaches.
- **4.2.1** Goals and Objectives The project goals and objectives are listed below.

#### **Policy Recommendations and Consulting**

GRS will emphasize accountability, transparency, education, risk management and honesty. We are going to make sure decision makers have a broad understanding of not only the top line numbers, but their limitations, their risks, what strategies have been implemented and how the System will react in adverse scenarios. We will also hold ourselves accountable to previous estimates and provide transparent discussions on either (1) how consistent the new information is, or (2) why the new information is different.

Our consulting specialties tie back to our consulting philosophy, ability to create custom technology, and emphasis on appropriate and clear communication. As discussed throughout the proposal, starting on the cover page, we bring a much broader perspective and dynamic approach to our actuarial consulting. We believe it is important to start with a "top down" approach in developing any policy. By taking this top-down approach, the program will meet the needs of stakeholders over time; which are likely to include some combination of the following:

- 1. Have a high probability of being a final, long-term solution;
- 2. Be based on a sustainable contribution policy;
- Provide an appropriate amount of retirement income;
- 4. Protect stakeholders against the most unmanageable fringe risks;
- 5. Have increased disclosure on the level of funding risk; and
- 6. Have a feasible and agreeable transition plan.

This broader perspective starts with the understanding that there is a future reality that we will have to live with, but at the same time there are obvious limitations in our ability to predict that reality. Traditionally, actuarial consulting has fallen into one of two camps: one that believes that with more work we actually can predict the future and another that understands that we cannot predict the future, but reacts to that truth by accepting that any assumption is as good as any other. Both of these perspectives can be detrimental to the success of the retirement system.

By clients, stakeholders, or even in RFPs, we often are asked about how we perform a certain task or set a specific assumption. For example, "what is your policy for setting the investment return assumption? Or what is your policy on setting the amortization period?" The clearest way to distinguish our answers to all of these individual questions would be to replace them all with one direct, bigger question "Describe your theory and methodology for financing retirement systems". The policies and parameters used to finance a retirement system should not be independent of each other. In fact, they are very dependent on each other. This is one area we believe the public pension industry as a whole has fallen short: there is no macro-level vision, or purpose, driving individual decisions. Instead, each micro-level decision is



considered at some point in time independently of other decisions and context, whether they were made in the past, concurrently, or will be in the future.

There is a Danish proverb, sometimes later credited to Roy Rogers, that quotes "Predictions are difficult, especially ones about the future". While humorous, the proverb states a truth: it is impossible to predict the future. While statistical models and historical relationships can give guidance and narrow the range, as well as likely eliminate some possibilities, it is unfruitful to presume that any set of assumptions would encompass every future causal nuance, political landscape, and trend in human behavior.

Retirement systems, first and foremost, exist to provide security to their beneficiaries and ensure the monies are available to pay their obligations when due. To accomplish this requires a large-scale exercise in the management of uncertainty within a set of constraints.

For example, take a manager of the baseball team trying to decide how to deploy the outfielders. Is it practical to assume the manager can predict when and where exactly the ball will be hit? No. Are there statistical processes that can tell the highest likelihood in the certain situations? Yes. But, is the starting location of the outfielder more important, or the ability of the player to run once the ball is hit? Are the outcomes from the ball being hit different based on different locations in the field? Meaning some locations would cause more damage than others? Are there other needs from the defense that limit the amount of resources available in the outfield, like a number of players needed on the infield? What is the score and situation in the game? In this situation the baseball manager is taking all of this into account and managing uncertainty and risk in the context of winning the baseball game when deciding where to place the outfielders.

Please note, the manager is not trying to estimate the most likely place the ball will be hit independent of all of these other factors. In fact, the most likely place the ball will be hit is likely less meaningful than almost all of those other factors. Likewise, policymakers should be considering the macro-level context when managing the uncertainty and risk of providing benefits over the long term.

The GRS team for CPRB specializes in contextual, macro-level decision making. Specifically, our philosophy for financing retirement programs is to narrow the range of possible future outcomes by getting right what we can get right and developing defensive, unbiased starting points. Then, working together with the client, we help implement responsive strategies that will provide an appropriate and sustainable path to the eventual desired outcome(s). Given the limitations in CPRB's governance relationship with the legislature, how should this basic strategy be applied?

The Board's control is mostly limited to setting the assumptions and the communications. Thus, there should be a transparent, robust process for setting the assumptions and a concise, practical approach to communicating whether the plan is healthy and should stay the course or if changes are needed. The communication needs to be as simple and trackable as possible. The rationale of when to request change also needs to fit properly into these expectations, and be transparently disclosed well before the changes are expected to be needed. In addition, the assumptions, and the potential changes to them over time, need to be as unbiased as possible, not only in the current timeframe, but over future timeframes as well.

Using a macro-level philosophy, and knowing that we need a consistent, transparent narrative to communicate with stakeholders, we can then begin to set other policies, processes, and assumptions.

We encourage CPRB to reach out to the GRS references provided later in the RFP, or any client listed in Appendix B, and hear first-hand how this philosophy has positively impacted their retirement system.



- **4.2.1.1** To procure the services of an actuarial firm with qualified actuaries to prepare the annual July 1<sup>st</sup> actuarial funding valuation reports for the following defined benefit retirement systems:
  - Public Employees' Retirement System (PERS)
  - Teachers' Retirement System (TRS)
  - Department of Public Safety, Death, Disability and Retirement System (Trooper Plan A)
  - State Police Retirement System (Trooper Plan B)
  - Judges' Retirement System (JRS)

Based on our experience with 41 statewide retirement systems and 1,000 local governments, we provide more year end reporting for public sector clients than any other consulting firm in the country.

Virtually all of the statewide systems we work on, as well as local municipalities, require timely and accurate information for the system's annual financial report. This information is typically needed within a month or two after the close of the fiscal year. This requires reconciling the valuation data, producing data schedules, reviewing financial information, computing actuarial liabilities and contribution requirements as well as providing the various disclosure requirements all in a short period of time. Since all of our valuation software and technology tools have been designed specifically for public sector clients, we have the capability of providing all of the necessary information for year-end reporting in a fast and efficient manner.

Our actuarial procedures and models are fully compliant with all relevant Actuarial Standards of Practice (ASOPs) and all Government Accounting Standards Board (GASB) standards.

GRS' motto when it comes to presentations and written communication is "education, not information." Our presentations will be concise, illustrative, and focused on "telling the story." We commonly find that our Boards continue to improve their understanding of the actuarial concepts with each presentation that we deliver, which indicates to us that we are fulfilling our role.

Our consultants strive to deliver reports that are easily understood by all stakeholders. Our clients have told us that this is one of our strengths. We understand that our reports are subject to public disclosure and review. Therefore, you can be confident that our work will always include clear explanations and disclosures, in layperson terms, of the methods and assumptions used in our calculations.

In addition, our goal is to always minimize the use of technical jargon. To the extent that we must use terms common to the industry, we provide concise explanations of these terms, in either glossaries or within the body of the report. To reinforce understanding of the results and the impact of policy options, our reports include graphic representations of the information, such as charts and tables.

In presentations we use the same approaches, and we endeavor to explain technical concepts and to respond to Board questions in a clear and concise manner rather than presenting page after page of numbers.



Our pension valuation software, which we write and maintain, can adjust for variations in pension benefits provided by public employee retirement systems. Our employees have an excellent understanding of our software, resulting from continuous training by our Internal Software Training Processes (ISTP) group.

At GRS, we use a "client service team" approach in order to leverage our resources in the most effective and efficient way. This approach ensures that work is performed at the most appropriate level so that we deliver services to CPRB at the lowest possible cost without compromising quality. It also ensures that a number of associates are familiar with the CPRB's account, preventing any disruption to the services provided to the CPRB.

The key members of your team (all experienced consultants) will give direction to a staff of associates selected according to the appropriate levels of experience and expertise for the project at hand. It is important to GRS that our clients are provided with excellent and timely service. To ensure quality and timely service delivery, we maintain workloads for individuals at levels that allow them to function at the highest level of efficiency.

#### **Quality Management**

In completing any client assignment, it is the goal of each employee of GRS to produce the highest quality work. This practice has been an integral component of our corporate culture throughout the entire history of GRS. GRS has three core components that ensure the quality and consistency of consultant recommendations.

GRS has a total quality management program we refer to as the Peer Review process. Under the Peer Review process, four team members are involved in the preparation of every actuarial valuation report. One team member develops the plan costs and another verifies each value. The supervising actuary will review everything as the valuation process continues to ensure that results not only look correct, but look reasonable. The other supervising actuary will review all work completed by the other team members as a final check. At this stage our actuarial valuation report is reviewed by another actuary as a final peer review to assure that the main results and underlying causes are accurate and well communicated. We document peer review guidelines for each member of a GRS client team.

Quality Assurance Procedures at GRS are developed and monitored by a standing Professionalism Committee (members of the Office of the Chief Actuary servs as an ex-officio members). The GRS Professionalism Committee performs internal audits of the work we do for our clients and monitors compliance with quality forms. The Professionalism Committee reports to the firm's President. We have provided a sample Quality Assurance Checklist in Appendix C.



### **Pension Valuation Approach**

Listed below is the basic approach we would use in performing the funding valuation reports for the systems. Please see our proposed detailed work plan on page 7.



#### **Hold Planning Meeting**

We will have a meeting with the CPRB soon after we receive notification that we have been selected to provide actuarial consulting services. We believe that meeting with you upfront to clarify the deliverables is critical to developing a strong working relationship. We will discuss any special concerns that you may have. GRS will review with the Board/Staff the flow of events for the valuations and make note of important dates and issues to be addressed in the valuations. We will discuss the methods and assumptions used in the previous year's valuation and recommend any changes, as needed. The result of the meeting is a work plan for the upcoming valuation process. We will hold annual planning meetings via conference call, as needed.



#### **Review Current Plan Provisions**

GRS will review State statutes, actuarial standards, and request and review information such as plan documents, summary plan descriptions, bargaining agreements, and other communications to active and retired members, in order to evaluate the nature of the pension benefits of System members.



#### **Perform Replication Valuations**

GRS will request census data files and assumption tables used in the previous year's valuations from the former actuary. We will perform a replication valuation of the previous year's valuation. We consider the replication valuation a standard practice and crucial to understanding the intricacies of the systems. This parallel valuation also serves as an "audit" in that it replicates the work of the prior actuary and will highlight any exceptions in the valuation process that may merit discussion.



#### **Request Member Data**

GRS will request data files including records on each person who is actively participating in the plan as of the valuation date, receiving a benefit as of the valuation date, or who retains a right to future benefits. We request that the census information be provided electronically, in Access, Excel, or some other format. GRS and the Board/Staff will discuss and decide upon a secure method of data transmission, for example, with a secure FTP site (file transfer protocol). GRS has 1,000 public sector clients and has never had a breach of confidential information in its entire history, which dates back to 1938.



# **Pension Valuation Approach - Concluded**



#### **Prepare Data**

Once data has been received, it is checked for general reasonableness, and compared with the prior year. Selected individual cases are reviewed in detail to ensure that the data changed as expected from year to year. GRS utilizes its Data Analysis tool that helps with the manipulation and analysis of valuation data. For example, we would confirm that active member test cases had an increase in service and that their reported pay amounts compare well between the two years. Retirees would be checked to confirm that they received the proper COLA, if applicable. Issues found by the reasonableness check that could impact the valuation results are then sent to the client for their input. Once staff has provided a reasonable check of the information provided, GRS will prepare the data for the valuations.



#### **Receive Financial Data**

We will request asset data from the plan in order to calculate actuarial value of assets, unfunded actuarial accrued liability, funded ratio, and contribution rates for the systems. We will review the information for reasonableness, including comparing the asset return against market indices and comparing the contributions and benefit payments against projected amounts. We will reconcile differences with the investment manager or plan staff.



#### **Produce Valuation Results**

Once the data files are ready for use, they will be run through our valuation programs to produce initial results. The results will be thoroughly checked, and costs and liabilities will be developed along with the contribution rate. The valuations will compare the actuarial assumptions and actual experience of the plan each year. Any unusual or unexpected results are discussed immediately with the Board/Staff.



#### **Prepare Reports**

The valuation reports will then be drafted. The format is normally consistent from year to year for ease of use. At the initial planning meeting, we will discuss report content and format to ensure all the necessary information is provided.



#### **Present Reports**

The annual reports will be prepared and forwarded to the CPRB Staff. We will then schedule a meeting to present the reports to the Retirement Board. At this meeting, we will highlight the most important valuation results and any trends emerging from the current and prior years' results. We will also inform the Retirement Board of the latest developments in the public sector benefits field as they apply to the CPRB.

On the following page is a suggested work plan for completion of the actuarial valuations.



**GRS' Proposed Detailed Pension Work Plan** 

V 1	The state of the s	etailed Pension Work Pla Responsibility		
	Task Description	GRS	System	Due Date*
Planning Meeting	Meeting with the CPRB and team regarding scope of actuarial services	<b>~</b>	~	
	Commence Parallel Valuation			
Transition	GRS requests the following information from the prior actuary  Valuation-ready data  Historical reports and documents	~	~	
	Replicate Valuation Results			
	<ul> <li>Write and test valuation programs</li> <li>Run parallel valuations and confirm discrepancies with prior actuary</li> </ul>	~		
	Submit and discuss replication results with CPRB		AT ITE	
HILL THE STATE OF	Census Data	1 2 2 1 1		F = 1 1 2 1
	Receipt of census data from CPRB		<b>V</b>	
	Review and load data and email questions to the CPRB	<b>/</b>		
Data	Data answers received from CPRB		~	
	Load data answers, finalize data and prepare schedule	~		
	Financial Data		EL I	177 (13)
	Receipt of financial statements from CPRB		~	
	Assets entered and reviewed	<b>/</b>		
	Calculations and Programs			1 100
	Test Life program check	~		
	Test Life program review	<b>~</b>		
	Financing work papers input	<b>V</b>		
	Financing work papers review	~		
Valuation	Run gain/loss programs and analyze	<b>/</b>		
2 1 2	Review gain/loss by source	<b>~</b>		
11,000	Report			
	Draft valuation report	~		
- T	<ul><li>Valuation report review</li></ul>	<b>~</b>		
	Consultant final review of valuation report	~		
Beer Level	Deliverable Schedule			
S	Draft report to CPRB	<b>/</b>		
	Final report to CPRB	<b>~</b>		
Barbara :	Presentation of report to Board of Trustees	<b>/</b>		

<sup>\*</sup> Final due dates will be determined at the planning meeting.



#### **Professionalism Committee**

Quality Assurance Procedures at GRS are developed and monitored by a standing Professionalism Committee (a member of the Office of the Chief Actuary serves as an ex-officio member). The GRS Professionalism Committee performs internal audits of the work we do for our clients and monitors compliance with quality forms. The Professionalism Committee reports to the firm's President. The following paragraphs describe how our quality assurance procedures apply to three specific types of client assignments.

- 1) Actuarial Valuations Each actuarial valuation for a defined benefit pension plan or a post-retirement health care program is supervised by a qualified consulting actuary, from the beginning of the process until the final product is sent to the client. Actuarial valuations are prepared by an actuarial analyst and are initially checked by a more senior associate.
  - The two associates work very closely with the consulting actuary to resolve any issues that may arise throughout the process. After completion of the initial checking, the valuation is reviewed by the consulting actuary. The actuary reviews the results for reasonableness. Once the results are finalized and a report is prepared, the report is peer-reviewed by another qualified actuary. Each step of the process is documented using the quality forms and the documentation is filed with the work papers.
- 2) Special Projects All projects other than actuarial valuations also follow our standard quality procedures. Initial calculations are prepared by an analyst, checked by a more senior associate, and reviewed and peer-reviewed by a qualified actuary. Each step of the process is documented using the quality forms and the documentation is filed with the work papers.
- 3) Client Correspondence Any substantive client correspondence (letters hard copy or electronic, reports, presentations, etc.) prepared by one of our actuaries or consultants is peer-reviewed by another actuary or consultant. Each step of the process is documented using the quality forms and the documentation is filed with a copy of the correspondence.

#### **Internal Audit**

Our internal audit process ensures that our associates follow our quality procedures and that the services provided to our clients is continuously improving. Please note this is a procedural audit. Through this process, a group of our actuaries and consultants audits the work performed for our clients that are not their own. The various clients are selected randomly annually. A member of the Professionalism Committee begins the audit with conversations with the actuary or consultant and other client team members, and then reviews the work papers, the valuation report and other relevant files to see if quality procedures have been followed and documented. They will also review Experience Study reports to ensure the assumptions are reasonable and documented as well.

After the Committee member has completed these steps, the findings are discussed with the actuary or consultant responsible for that client. The findings are shared with the other members of the Professionalism Committee at its next quarterly meeting, after which it is forwarded to the President.



**4.2.1.2** To procure the services of an actuarial firm with qualified actuaries to prepare the annual June 30 GASB Statement No. 67 and 68 Actuarial Reports (generally rolled forward from the July 1st actuarial valuation reports noted in Goal 1, above. These reports must be issued no later than September 25th of each year.

With regard to GASB Statements No. 67 and No. 68, GRS has been an industry leader of this effort, from providing feedback to GASB Board Members, conducting webinars and education sessions on the new standards to performing the calculations for some of our clients.

GRS has a dedicated GASB committee that provides GRS consultants with the knowledge and tools necessary to comply with the accounting standards. Our internal committees, which are staffed by some of our most experienced consultants, are a great resource for our employees and our clients. For the many reasons highlighted above, we are confident that GRS is the most capable firm to assist you in evaluating and managing your pension benefits.

# GASB Statement No. 67 and No. 68 Approach

Listed below is the basic approach we would follow in preparing the GASB Statement No. 67 and GASB Statement No. 68 reports



#### **Confirm Discount Rate**

Perform projections to determine whether there is a crossover date and, if necessary, calculate the single discount rate to be used for GASB Statement No. 67 and No. 68, if required.



#### **Calculate Liabilities**

Calculate the total pension liabilities using the entry age normal cost method (as required by GASB), using the GASB Statement No. 67 and GASB Statement No. 68 blended discount rate (if applicable), and projecting liabilities from the actuarial valuation date to the measurement date (July 1, 2022 to June 30, 2023). We will also calculate liabilities for the sensitivity analysis based on a discount rate of +1% and -1% from the single discount rate.



#### Prepare GASB Statement No. 67 and 68 Actuarial Valuation Reports

After the total pension liability for each of the plans is calculated, the GASB schedules are produced and thoroughly checked, and the GASB Statement No. 67 and 68 actuarial valuation report will be drafted. (At the initial planning meeting we will discuss the GASB actuarial valuation report content and format to ensure all the necessary information is provided and in the preferred format.) For many clients, we include a comparison of the funding actuarial valuation results and the GASB actuarial valuation results as part of the valuation presentation meeting.

Our proposed detailed work plan for completion of the GASB actuarial valuations is provided on the following page.



# **GRS' Proposed Detailed GASB 67/68 Work Plan**

		Respoi	nsibility	Due Date*
	Task Description	GKS	System	Due Date
Planning Meeting	Meeting with the CPRB and team regarding timing and deliverables	<b>~</b>	~	
	Commence Parallel Valuation			
	GRS requests the following information from the prior actuary  Valuation-ready data Historical reports and documents	<b>~</b>	~	
	Replicate Valuation Results			
	<ul> <li>Write and test valuation programs</li> <li>Run parallel valuations and confirm discrepancies with prior actuary</li> <li>Submit and discuss replication results with the CPRB</li> </ul>	<b>~</b>		
Data	<ul> <li>Receipt of provision data from CPRB</li> <li>Review and email questions to the CPRB</li> <li>Receipt of financial statements from CPRB</li> <li>Assets entered and reviewed</li> <li>Receipt of component unit information from the CPRB</li> <li>Review of component unit information from the CPRB</li> </ul>	<b>~</b>		
	Calculations and Programs			HIERT IN
	<ul> <li>Test Life program and projection check</li> <li>Test Life program and projection review</li> <li>Financing work papers input</li> <li>Financing work papers review</li> </ul>			
Valuation	Report			
	<ul> <li>Draft valuation report</li> <li>Valuation report review</li> <li>Consultant final review of valuation report</li> </ul>	× ×		
	Deliverable Schedule	File	NAME OF THE OWNER OWNER OF THE OWNER	A CONTRACTOR
Des Tal	<ul><li>Draft report to the CPRB</li><li>Final report to the CPRB</li></ul>	~		

<sup>\*</sup> Final due dates will be determined at the planning meeting.



4.2.1.3 To procure the services of an actuarial firm with qualified actuaries to prepare an annual investment return projection and an annual inflation rate projection, based on a 10-year, 20-year, and a 30-year time horizon. The analysis should include the 25th percentile, 50th percentile, 75th percentile, expected return, and standard deviation based on arithmetic and geometric averages. These projections should be based on the June 30 investment summaries provided by the West Virginia Investment Management Board and include any investment restrictions identified in the investment portfolio. The projections are normally formalized each year by mid-August.

GRS will provide the specified projections of all the scenarios listed above. Our normal retainer services always include full projections and use of our modeling software. We will provide the projection output for the request above in any format requested. In addition, we will provide modeling and projections as needed to assist with the communications process. The following are insights into our philosophy on projections as well as a description of our modeling software.

#### SCENARIO AND STRESS TESTING

A hot topic in the current public pension community is the idea of stress testing. Pushed recently by Pew Charitable Trusts, this is being heralded as some new, transparent process that will solve all the problems, or at least prepare plan sponsors for potentially adverse outcomes.

What our clients know is that the same types of testing have been performed for years. Scenario testing of various forms, along with simulation models, has been used in our presentation to clients and thus the stress test is nothing new. However, the problem without the proposed stress test is all it does is produce bad outcomes, with no alternatives provided.

Any adverse outcome will look bad without context. The scenarios should be designed to provide appropriate stress and communication, but more importantly, to test separate options against one another. The current set of policies might be the best possible combination. Without the other options to compare to, even the best options look bad and the "stress test" being pushed is just another tool being used against plans because even good policies could potentially be found unsatisfactory.

As the premiere provider of actuarial services, we have performed more scenario and stress tests of various kinds than any competitor. We will bring that experience to CPRB to assist with good policy making.

We have full capabilities for asset liability modeling, historical testing, adapting funding policies, and even modeling benefit provision changes over time. But more importantly, we can help focus on the correct framework and mindset for setting the full set of policies used by a retirement system. In 2019, we performed a full funding process review for Texas Municipal Retirement System, which includes asset liability modeling, investment policy and funding policy. Our presentation helped to set up that process as one large project, not individual decisions. That way all policies directly involved with how monies will be available to pay benefits are consistent and pulling in the same direction.

GRS will always be available to provide insight into strategic planning, asset allocation, and other issues for CPRB. We will perform stress tests for CPRB, but will communicate the results in the context of other factors, and offer alternatives when the results are unfavorable.



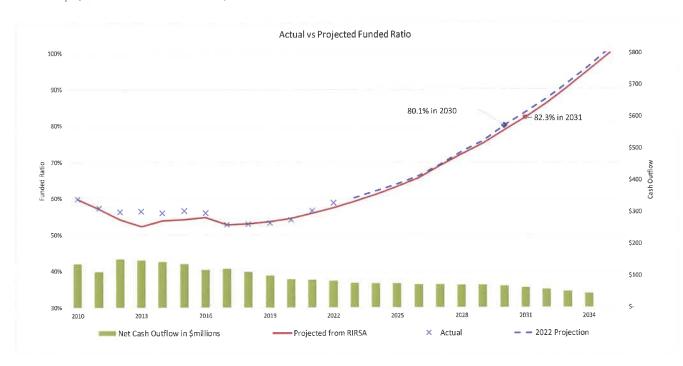
#### **Communication and Monitoring Progress**

Once the strategies have been designed and deployed, monitoring and communication become the focus. We will typically choose one, perhaps two, main metrics to focus on in the communication materials. By narrowing the focus on the metrics that means the most in the specific situation, we can set memorable expectations and track progress against those expectations over time.

Valuation reports will include a short-term projection of plan costs and funded status. When this projection is added to the historical values over the last five or six valuations, this can produce a ten-year pattern in which the employer is not currently at the beginning of nor the end of, but, in fact, in the middle. With this approach, we can analyze the trends looking in both directions and be proactive in dealing with any negative trends as they develop instead of waiting until they clearly show in the experience and, thus, end up being reactive instead.

In addition, we will typically include a comparison of any projection from the current valuation to the one from the prior year, or perhaps even one from the most recent experience study and/or legislative reform. In this way, the Board can see the trend of the trend. This helps with transparency in the funding process, as well as helping set expectations for stakeholders.

The following is an example from this last round of valuation presentations for one of our clients. The client had material pension and funding reform in 2011, which set the projected funded ratio as the red line in the graph. This line has not been changed since 2011. Also on the graph are X's which show the actual history of the funded ratio, along with blue dashes that estimate future funded ratios. As shown, the actual path has been almost spot on compared to those 2011 projections.





This is how credibility and trust are developed. By having actual results confirm previous communications. Why can a stakeholder depend on today's projection if yesterday's proved to be unmeaningful? And this only partially occurs because the previous assumptions were "correct". It is actually mainly driven by having assumptions that are reasonable but do not change when they do not have to, having discipline to follow the plan, and having other policies that adapt to unfolding experience in a sustainable way.

#### GRS Foresight™

GRS is proposing to provide an instance of GRS Foresight™ to CPRB Staff for their use as part of this contract. There are no additional fees for the use of this product. This product is based on the same underlying model that your GRS team uses for projections and determining funding periods.

GRS Foresight™ is a comprehensive stress testing and solution-driven modeling tool for public sector retirement programs. This industry-leading tool, created from our consultants' vast experience, provides data and analysis you can rely on for decision making. A video explaining the benefits and features of the tool can be found here: <a href="https://www.grsconsulting.com/grs-foresight/">https://www.grsconsulting.com/grs-foresight/</a>.

This modeling tool considers how future stakeholders could be impacted by decisions made today. GRS Foresight™ helps you determine a sustainable path for your retirement program by developing unbiased starting points and dependable forecasts.

Vastly different from the private sector, public sector retirement programs are unique, with great variety in benefit provisions and funding sources. GRS Foresight™ is adaptable to meet specific needs, even down to terminology and output. We work closely with you to ensure GRS Foresight™ meets all of your needs.

By running experience scenarios and utilizing stress test modules, you can use GRS Foresight™ to efficiently test various funding policies or strategies and different actuarial assumptions to predict their impact under the stressed scenarios.

#### Benefits and Features of GRS Foresight™

- Evaluates the sustainability of the retirement programs
- Accounts for alternative future realities
- Assesses various funding strategies
- Prepares budget forecasts
- Analyzes risk management strategies
- Provides insight into the impact of future realized rates of return and inflation
- Offers turnkey stochastic modeling
- Considers sensitivities of liabilities to future economic outcomes
- Uniquely designed for public sector systems
- Adaptable to individual client requirements, even down to terminology and output.



#### **How It Works**

GRS Foresight™ is accessed through GRS Advantage™. By using up-to-date valuation data and current economic conditions and assumptions, you are able to look in-depth at the valuation results and model various scenarios for future outcomes. Knowing the risks facing a plan helps guide the long-term management of those risks and gives you confidence in the conclusions drawn from the data. Meeting-ready output is available, and GRS Foresight™ creates the necessary documentation to support policy decisions affecting your plan.

The program can evaluate a wide range of variables impacting public sector plans, including:

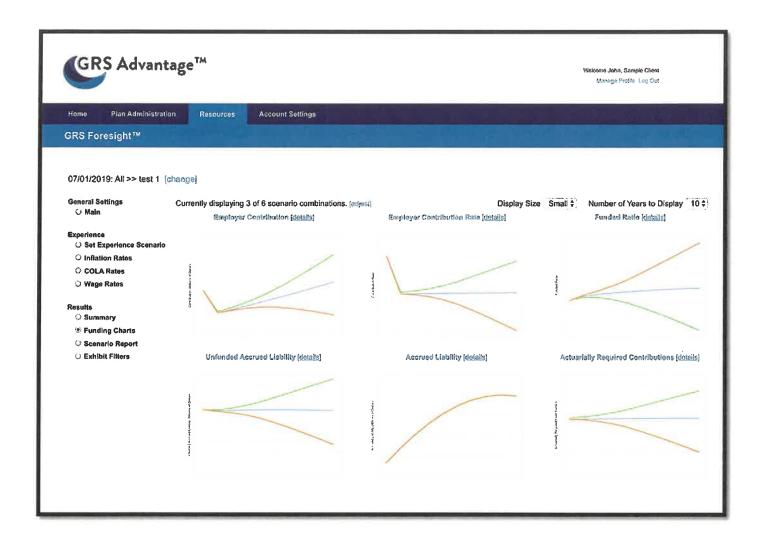
- Fixed-rate plans
- Corridors
- Direct rate smoothing
- Layered amortizations
- DB/DC hybrid protocols
- Population growth
- Ad hoc COLAs and supplemental payments, including funding strategies and the ability to model multiple ad hoc decisions in the future
- Investment returns, including a unique approach of using historical patterns with modified outcomes and volatility

In addition, if you have other programs that can create return scenarios, GRS Foresight™ can be integrated with those outcomes to produce stochastic results for analysis.

The following pages demonstrate the comprehensive and solution-driven benefits of GRS Foresight $^{\text{\tiny{M}}}$ . We welcome an opportunity to provide a complete demo to CPRB.

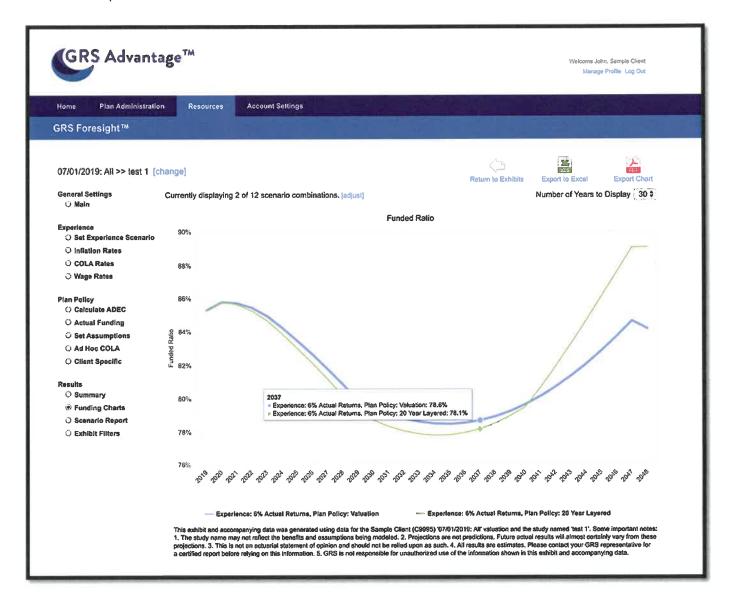
GRS Foresight™ helps determine a sustainable path for retirement programs by developing unbiased starting points and providing reliable forecasts (at least, as reliable as possible). GRS Foresight™ will also efficiently test various policies or strategies with different assumptions to illustrate their impact.







By using up-to-date valuation data and current economic conditions and assumptions, GRS Foresight™ can look in-depth at the valuation results and model various scenarios for future outcomes.





GRS Foresight™ is adaptable to individual client requirements, even down to terminology and output. The underlying model is identical to the model used internally by GRS actuaries for funding policy and scenario testing. By using up-to-date valuation data and current economic conditions and assumptions, GRS Foresight™ can look in-depth at the valuation results and model various scenarios for future outcomes.





- **4.2.1.4** To procure the services of an actuarial firm with qualified actuaries to prepare experience studies, under the following timeline:
  - Public Employees' Retirement System (PERS) to be completed by June 30, 2024 for implementation in the June 30, 2024 GASB Statements No. 67 and No. 68 Actuarial Report and the July 1, 2024 Actuarial Funding Valuation Report.
  - Teachers' Retirement System (TRS) to be completed by June 30, 2025 for implementation in the June 30, 2025 GASB Statements No. 67 and No. 68 Actuarial Report and the July 1, 2025 Actuarial Funding Valuation Report.
  - West Virginia Uniformed Services Defined Benefit Plans:
    - Department of Public Safety, Death, Disability and Retirement System (Trooper Plan A)
    - State Police Retirement System (Trooper Plan B)
    - Deputy Sheriffs Retirement System (DSRS)
    - Emergency Medical Services Retirement System (EMSRS)
    - Municipal Police Officers and Firefighters Retirement System (MPFRS)
    - Natural Resources Police Officers Retirement System (NRPORS), to be completed by June 30, 2026 for implementation in the June 30, 2026 GASB Statements No. 67 and No. 68 Actuarial Reports and the July 1, 2026 Actuarial Funding Valuation Reports.
  - Judges' Retirement System (JRS) to be completed by June 30, 2026 for implementation in the June 30, 2026 GASB Statements No. 67 and No. 68 Actuarial Report and the July 1, 2026 Actuarial Funding Valuation Report.

GRS will prepare the requested experience studies under the required timelines.

The most common approaches to setting assumptions involves looking at each decision individually and then, depending on the actuary, either (1) make the minimum changes necessary at this time to be "reasonable" (being overly concerned about the potential impact on current contribution requirements) or (2) overanalyze the data to create an overly precise assumption, with no concern about short term budget impacts or possible adjustments that the assumptions may require at a later time. Neither of these approaches maximize sustainability, and neither of these approaches help enhance trust and credibility. Neither considers how this decision, and the framework of the model, fit into the context of the overall goal or the main strategy to accomplish that goal. In fact, usually the goal is not even clearly defined.

As discussed earlier, in our approach, we start with the goal, and the macro-level objective, and work down from there. The assumption and method setting falls into the segment for developing a defensive, unbiased starting point. An actuarial model, and the assumptions used, should understand that there are future decisions to be made, and even future experience studies to perform. Some decisions may seem "reasonable" at the time, but looking out over the time horizon, it could be easy to predict that assumptions will have to change again, how, and in what direction. This would be considered building bias into the process. This is most clearly seen in mortality assumptions, where the use of a static assumption may be appropriate as of a given valuation, but it can be easily predicted that the assumption will have to be "updated" at a future experience study. There is always the potential to reassess and adjust as necessary. However, if those adjustments are always in the same direction, and future adjustments can be predicted years beforehand, then that is a biased model and the perpetual increasing of the UAAL and contributions over time as these adjustments always increase costs will erode credibility and trust.



The actuarial model has to give a solid foundation to work over time. There can be no predictable bias. This includes details such as how the assumptions are applied based on age/service/occupation categories, and how certain groups impact the liabilities more than others. A set of assumptions can correctly predict the number of retirements and still produce actuarial losses. It matters which members are retiring and when.

The actuary should be expected to produce an unbiased, dependable actuarial model. That is our job. We strive to produce a model that limits true potential variance as much as possible, hopefully down to only actual investment return (or spread between investment return and wage inflation) and population changes. The actuarial model of CPRB is fitting this characteristic. The average actuarial gain or loss over the past five valuation cycles has been 0.07% of the projected liability.

As we have been implementing this type of approach, aside from changes to the investment return assumption unfortunately, the financial impact of recommended assumption changes resulting from our experience studies have gotten quieter and quieter. Meaning the impact of changes during experience studies has diminished. It is not because the previous assumptions correctly predicted the future, but because the process that was designed and the removal of predictable bias made adjustments automatic and minor. Our assumption process considers the bigger picture and includes how often experience studies are done as well as how many years are used in the data (not the typical 5 years) to produce predictability, and improve trust.

In summary, the actuarial model is supposed to give a starting point and a framework to work off of, not predict the future. Instead of managing uncertainty by being overly conservative, we will manage uncertainty by creating an unbiased process, including how and how often assumptions are analyzed, modeled, and anticipate how they may change in the future.

A model that predictably makes it fiscally burdensome on future generations will make it difficult to build trust and is not equitable to the entire population affected. The following discussion provides some insight on how this approach impacts the setting of the most important and the least controllable future outcome, the investment return assumption.

#### Detailed Approach

We perform experience studies including the review of demographic and economic assumptions for most of our clients on a regular basis. These studies are an important part of the actuarial services provided to our retirement system clients. Given our large public sector client base and our extensive experience, we offer a special advantage in this area.

In order to perform the valuation, assumptions must be made regarding the future experience of the System with regard to the following risk areas:

- Rates of withdrawal of active members
- Rates of disability among active members
- Patterns of salary increases to active members
- Rates of retirement among active members
- Rates of mortality among active members, retirees, and beneficiaries
- Long-term rates of investment return



In conducting experience studies, actuaries generally use data over a period of several years. This is necessary in order to gather enough data so that the results are statistically significant. In addition, if the study period is too short, the impact of the current economic conditions may lead to misleading results.

It is known, for example, that the health of the general economy can impact salary increase rates and withdrawal rates. Using results gathered during a short-term boom or bust will not be representative of the long-term trends in these assumptions. Also, big events like the recent pandemic could make the data questionable for future expectations. We have been very patient in making changes using the experience during the pandemic in setting future assumptions.

Also, the adoption of legislation, such as plan improvements or changes in salary schedules, will sometimes cause a short-term distortion in the experience. For example, if an early retirement window was opened during the study period, we would typically see a short-term spike in the number of retirements followed by a dearth of retirements for the following two-to-four years. Using a longer period prevents giving too much weight to such short-term effects.

On the other hand, using a much longer period could water down real changes that may be occurring, such as mortality improvement or a change in the ages at which members retire.

Based upon actuarial audits we have performed on the work of other actuaries, we are convinced that the experience study we provide our clients is one of the highest quality reports being done in the industry. Other studies we have seen by well-known actuaries display a much smaller amount of data and recommendations without providing the amount of foundation that we do.

The following is our plan for completing the experience study. Some steps will depend on the form in which data can be supplied, and may need to change once we have more information.

- 1. Review former actuary's last experience study to gain a better understanding of judgments that were made at that time.
- 2. Discuss events of the previous 5 years with staff in order to determine if there have been one-time events that may have an effect on the judgments we will need to make in connection with the experience study.
- 3. Review structure of assumptions for potential changes and discuss with staff. For example, timing of decrements within the year, timing of pay increases, treatment of service purchases, option factor subsidies, and the like. It is also important to understand how the data is presented, particularly regarding retirement and disability.
- 4. Request full valuation data sets for previous years from the prior actuary or from CPRB.
- 5. Push each year's data set through valuation and gain loss systems in order to obtain normalized data for input into the experience study program. Verify that the census counts produced by programs match those of the former actuary to within acceptable tolerances.
- 6. Run experience study program on normalized data.
- 7. Determine assumption structure that provides the best fit to the data (vector format, select and ultimate, matrix type, age based, service based). This may vary by decrement.
- 8. Review economic information. Discuss outlook with staff and investment consultant.
- 9. Select inflation assumption, payroll growth assumption, and interest rate scenarios within a range that meets actuarial standards of practice and that is compatible with general expectations and the practices of similar systems. Data on other systems is available from the NASRA Public Pension Coordinating Council and of course from GRS' own clients.



- 10. Review option factors, service purchase factors and all other factors and loads for actuarial equivalence based upon the new assumptions. Recommend new factors or adjust valuation program as needed to ensure that actuarial equivalence is properly accounted for.
- 11. Review all proposed changes with staff. Seek staff input on assumptions. On occasion we have found that Retirement System Staff can provide insights that go well beyond the raw numbers from the study. We want to be sure that our assumptions are estimating a likely future, and not just trying to recreate the past.
- 12. Produce computer runs illustrating the effect of all assumption changes.
- 13. Prepare draft report for staff review.
- 14. Incorporate staff comments into final report. Deliver and present report in accordance with staff and Board expectations.

#### Timing of Experience Studies

Consistent with historical practices, CPRB performs experience studies every five years. However, we have generally moved away from every five years to every three or four years for our clients. Auditors have gotten much more skeptical on the assumptions and the Actuarial Standards of Practice have moved to a more current, positive declaration that the assumptions being used are the current best estimate. In addition, having done the work more than 4 years ago started to get hard to justify that we knew the assumptions were still reasonable.

Also, only performing the analysis every five years sets up a high probability of having to make a large change to the assumptions. We prefer to have more frequent, smaller adjustments. This is an item we would discuss with CPRB staff and the Board on the pros and cons of each timing frequency and proceed as directed.

#### **Economic Assumptions**

At GRS, economic assumptions are developed based on a building block process that begins with price inflation. The best estimate for price inflation is developed using historical data and future expectations. From price inflation, other economic assumptions, such as wage inflation, and the investment return assumption, can be developed. Also, Actuarial Standards of Practice come into consideration when the actuary makes his or her recommendations about economic assumptions.

With regard to the assumed rate of return, GRS utilizes a forward-looking model with investment return assumptions from several different investment consulting firms. The model uses: (1) capital market assumptions, (2) inflation expectations, and (3) the allocation of assets among the various asset classes. The chart (shown on the following page) shows various samples of expected returns by percentile (40<sup>th</sup>, 50<sup>th</sup> and 60<sup>th</sup>) as well as the probability of exceeding the current investment return assumption. The Actuarial Standards of Practice requires the actuary to identify and focus on an estimate, which he or she reasonably anticipates the actual results will fall. The charts provide insight on the type of analysis that the actuary will take into account when providing you a recommended assumption.



	GRS 2022 CMAM								
Capital Market Assumption Set (CMA)	CMA Expected Nominal Return	CMA Inflation	Expected Real Return (2)–(3)	Actuary Inflation Assumption	Expected Nominal Return (4)+(5)	Investment Expenses	Expected Nominal Return Net of Expenses (6)-(7)		Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)
1	6.26%	3.00%	3.26%	2.30%	5.56%	0.00%	5.56%		11.56%
2	6.73%	2.60%	4.13%	2.30%	6.43%	0.00%	6.43%		14.72%
3	6.49%	2.50%	3.99%	2.30%	6.29%	0.00%	6.29%		12.08%
4	6.63%	2.40%	4.23%	2.30%	6.53%	0.00%	6.53%		13.99%
5	6.45%	2.31%	4.14%	2.30%	6.44%	0.00%	6.44%	Ì	11.42%
6	6.81%	2.31%	4.50%	2.30%	6.80%	0.00%	6.80%		13.25%
7	7.44%	2.64%	4.80%	2.30%	7.10%	0.00%	7.10%		14.46%
8	7.19%	2.50%	4.69%	2.30%	6.99%	0.00%	6.99%		13.22%
9	7.24%	2.41%	4.84%	2.30%	7.14%	0.00%	7.14%		13.19%
10	7.30%	2.26%	5.04%	2.30%	7.34%	0.00%	7.34%		14.37%
11	7.54%	2.29%	5.25%	2.30%	7.55%	0.00%	7.55%		13.72%
12	9.30%	3.10%	6.20%	2.30%	8.50%	0.00%	8.50%		13.98%
Average	7.12%	2.53%	4.59%	2.30%	6.89%	0.00%	6.89%		13.33%

Average from last 3 CMAMs	7.15%	13.31%
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GRS 2022 CMAM						
Capital Market Assumption Set (CMA)	Distribution o	Probability of exceeding				
(1)	(2)	<b>50th</b> (3)	(4)	(5)		
1	4.02%	4.93%	5.86%	26.36%		
2	4.27%	5.43%	6.60%	34.71%		
3	4.65%	5.61%	6.57%	33.32%		
4	4.52%	5.62%	6.74%	35.59%		
5	4.93%	5.83%	6.74%	34.68%		
6	4.95%	5.99%	7.05%	38.13%		
7	5.00%	6.14%	7.29%	40.33%		
8	5.15%	6.19%	7.24%	39.90%		
9	5.30%	6.34%	7.39%	41.26%		
10	5.26%	6.39%	7.53%	42.39%		
11	5.61%	6.69%	7.78%	44.81%		
12	6.51%	7.61%	8.72%	53.30%		
Average	5.01%	6.06%	7.12%	38.73%		

Average from last 3 CMAMs, 10 Year Horizon	6.33%
Average from last 3 CMAMs. 20+ Year Horizon	7.15%



- **4.2.1.5** To procure the services of an actuarial firm with qualified actuaries to provide other assistance and consultations to/with the CPRB Actuarial Staff, including but not limited to:
  - Peer review of the annual July 1st Actuarial Funding Valuations prepared by the CPRB Actuarial Staff, for the following plans:
    - Deputy Sheriffs Retirement System (DSRS)
    - Emergency Medical Services Retirement System (EMSRS)
    - Municipal Police Officers and Firefighters Retirement System (MPFRS)
    - Natural Resources Police Officers Retirement System (NRPORS)
  - Peer review of the annual June 30th GASB Statements No. 67 and No. 68 Actuarial Reports prepared by the CPRB Actuarial Staff, for the following plans:
    - Deputy Sheriffs Retirement System (DSRS)
    - Emergency Medical Services Retirement System (EMSRS)
    - Municipal Police Officers and Firefighters Retirement System (MPFR)
    - Natural Resources Police Officers Retirement System (NRPORS)
  - Peer review of the experience study reports for each of the four experience studies outlined in Goal 4 above.

GRS works with several systems that have internal actuaries, investment and administrative professionals of all types. Examples include the Texas Municipal Retirement System and the Municipal Employees Retirement System of Michigan.

Our approach provides an opportunity for an interactive consulting relationship between GRS and the internal actuarial teams. CPRB actuarial staff will have access to all GRS technology tools and access to our research library and all communications pertaining to changes in laws or standards relevant to public sector retirement systems. The CPRB Actuarial Team will be an extension of GRS and GRS an extension of the CPRB Actuarial Team. General communication time between CPRB actuarial staff and the GRS team are included in the retainer fees for no additional charges.

 As needed, assist with the actuarial cost analysis of bills introduced during the regular or special sessions of the West Virginia Legislature. The regular session of the West Virginia Legislature normally commences on the second Wednesday of January and lasts for 60 consecutive days.

GRS will provide thoughtful and complete cost estimates for proposed legislative changes to CPRB by the requested delivery date. Our vast experience with the legislative processes for other retirement systems has taught us that response time to cost requests is of paramount importance in providing actuarial services to a public retirement system so as not to damage the system's standing with the legislature. On average we are able to provide our analysis within a week. In some cases, we have managed turnaround times of less than 24 hours.

We are able to accomplish this type of timeline, while still providing thoughtful and accurate analyses as a result of our team-based approach and processes. For example, we always have multiple actuaries assigned to each client (all of whom are up-to-date on the client) so that a team member is always available to provide assistance. In addition, our processes are developed and implemented ahead of the beginning of the session so that programming and setup time are minimized.



Very little, if any, legislation is introduced that we have not seen before. We are able to draw from these prior experiences to provide thorough analysis of any situation. GRS works with 41 statewide retirement systems, all with tight schedules for impact estimates and legislative analysis. GRS meets those deadlines each year.

The general process we follow in conducting financial impact studies follows:

- 1. Upon receipt of each request, GRS will first review the benefit change and consult with the CPRB 's staff members to the extent needed to clarify technical questions with respect to the proposed change under consideration.
- Once we fully understand the proposed change, we will assess whether computer valuation runs are required, or if sufficient "building blocks" are already available from the valuation or from other cost studies. If the building blocks approach is appropriate, we will use it. This approach will only be used on studies where this method would produce results that are substantially equal to the results that would be produced by new valuation runs.
- 3. If the building block approach is not appropriate, we would make and test any required programming changes and select any subset of data that is necessary for the study. For example, some assumption changes may be required and/or only a subset of data might be necessary (such as an early retirement window or a service purchase provision).
- 4. Next we would analyze and review the results for reasonableness and consistency with prior cost studies.
- 5. We will then confer and meet (as needed) with the systems regarding both the short and the long term effect of the proposed changes.
- 6. GRS will also discuss with the systems any potential policy or administrative problems associated with implementing the new benefit proposals.
- 7. Finally, GRS will assist the systems in preparing presentation material designed to assist policy makers in their evaluation of the financial, policy and administrative implications of the proposed changes.
  - Prepare the Annual Comprehensive Financial Report (ACFR) Actuarial Funding Valuation
     Certification Letters for the five plans outlined in Goal 1 above. Note, the Actuarial Section
     exhibits, and Financial Section exhibits for each certification letter are prepared by the
     CPRB and peer reviewed by the outside actuarial firm team.

GRS will prepare certification letters that contain an overall summary of the content of each actuarial valuation report, including but not limited to an analysis of key valuation results. We will prepare two certification letters: one that conveys the results of the traditional funding actuarial valuations and another that conveys the results of the GASB-compliant financial reporting actuarial valuations. GRS will provide the CPRB with the signed certification letters within one week after delivery of final actuarial results (in electronic format) to CPRB via email.



Other consultations, as deemed necessary by CPRB Management and/or Board.

Joe Newton and other GRS team members will provide actuarial and consulting advice as deemed necessary by CPRB Management and/or Board. Such services will be provided by phone, virtual meetings, or on-site in Charleston and/or letter, as requested. We believe our work with other major public plans and our work with public interest groups (GFOA, GASB, NASRA, etc.) and the collective experience of the actuaries and consultants assigned to this account uniquely qualifies GRS in this area.

Our continuing objective is to remain your trusted advisor and to continue to partner with you as risk managers and subject matter experts. As your partner, we view our relationship with the CPRB as a dynamic process in which both GRS and the CPRB take an active role. Our research and consulting philosophy rests on these fundamental principles. Our philosophy and approach brings the CPRB a broad strategic perspective to your retirement needs and the highest quality actuarial services available in the industry.

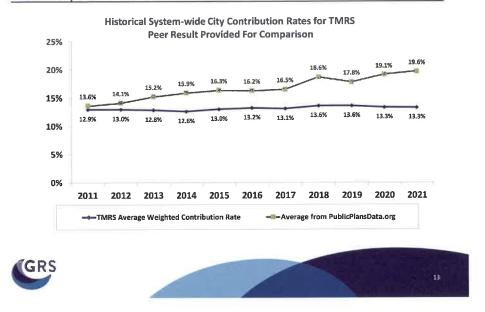
The following are two case studies of two of the largest reform events in the industry and the evidence that our approach produces optimal outcomes.

#### **Texas Municipal Retirement System**

The TMRS performance over the last 10 years while we have been actuaries is one of the largest success stories in the industry. Since 1947, TMRS had historically been a cash balance plan with separate trust funds for active employee contribution balances, employer asset balances, and retiree reserves. This fund structure created the possibility of extreme volatility in the employer contribution rates for member cities since the city assets held the burden of absorbing all of the investment volatility, even though the city assets only represented less than half of the total plan assets. For an entire two-year period, GRS worked with TMRS, the various stakeholders, and the Texas Legislature to "restructure" the Trust Fund so that the employer and retiree reserves would become incorporated into the employer's asset balance. These changes were enacted in May 2012 and have resulted in substantial deleveraging of the member city's contribution rates, which has resulted in less volatile and lower, more predictable contributions in future years without reducing any member benefits. The funded ratio of TMRS has risen from 74% when we were retained as the actuary to 90% as of the last valuation. The contribution rates from year to year have been very stable and the benefit levels have seen a net improvement during a time when systems across the country were seeing declines. We have built tremendous credibility across the State due to these outcomes. We know how to create a sustainable retirement system for all stakeholders. We have had employers and members alike comment on how much trust they have that the TMRS structure will continue to thrive. We deliver almost 2,000 valuations annually through this process, including GASB Statement No. 68 for all reporting entities, and have had no technical issues and an actuarial audit performed in 2015 by an outside firm found no issues. The following is a graph of the comparison of the employer contribution rate into TMRS since 2011 compared to the average contribution rate for the average plan in the country. The TMRS contributions are determined actuarially each year, with no output smoothing. As shown, our approach and optimization have enhanced sustainability.



System-wide, the average city contribution rate remained approximately level from the 2020 to 2021 valuation and rates have been very stable the last decade



## **Employees Retirement System of Rhode Island**

Another success story that has changed how pension reform is accomplished. The State had been through several rounds of pension reform and benefit cuts, but the funded status continued to deteriorate. This was really the first major reform process where we were able to implement a top down approach, getting stakeholders to buy into goals and limitations first, and then work towards a sustainable solution. This was the largest reform in the country when implemented, but the enacted legislation has resulted in a very predictable pattern of valuation results, with the amortization period of the State plan now at 13 years. The contribution in dollar amounts remain within a few percentage points of the original projections from a decade ago.

This is another example of completely building credibility with all groups so that real, dependable solutions can be allowed to work. We have now had three experience studies since the reform, and aside from a change to the investment return assumption, there have been almost no changes to assumptions, and thus no additional costs to the original information. A graph of the funded ratio compared to previous projections was provided earlier in the proposal (see page 12).

#### Application to CPRB

CPRB is different than these two situations in that the current financial situation is much better than what they were facing and hopefully CPRB will never have to face those kinds of changes. But these examples do show what kind of sustainability we help our clients achieve and establishing trust with stakeholders by meeting expectations over time with good outcomes.



#### **GRS Research**

GRS communicates the results of its research through: 1) GRS Insight, its newsletter; 2) News Scan, brief news summaries; and 3) research reports, detailed papers that contain information and analysis of issues. Our current publications are available on our website at <a href="https://www.grsconsulting.com">www.grsconsulting.com</a>. Clients have access to archived publications through GRS Advantage<sup>TM</sup>, our client services website.

The highlights below indicate our level of activity on issues relevant to employee benefit plans over the past decade.

- GRS has reported on over 600 benefit related news items in its News Scan publication.
- GRS has written over 80 in-depth articles and research reports, which were either published internally or written for other industry publications.
- The GRS Research Group has responded to over 600 client inquiries related to retirement plans, disability and death benefits, and retiree health care plans. For inquiries that require legal expertise, we have successfully worked with clients' legal counsel.

We are also very active in the public benefits community, providing research and assistance to many of the national associations serving state and local retirement funds. Additionally, ERSRI has access to the GRS consultants that present at conferences and seminars across the country. GRS supports and is actively involved in many national and regional industry and public sector associations. Our consultants routinely serve as speakers, committee members, and as authors of articles for industry publications. The following is a sample list of the national organizations that GRS supports.

National Association of Retirement Administrators (NASRA)
National Council on Teacher Retirement (NCTR)
National Conference of Public Employee Retirement System (NCPERS)
Public Pension Financial Forum (P2F2)
State and Local Government Benefits Association (SALGBA)
International Foundation of Employee Benefit Plans (IFEBP)
Government Finance Officers Association (GFOA)

In addition, as we have more public sector consulting actuaries than any other firm and are the leader in standards, practices, and creative solutions, we are also the most prominent firm in the public sector actuarial community. The following page displays a listing of major committees that GRS consultants are currently serving, all of which directly impact public sector retirement systems. We receive no compensation from our clients, or these organizations, for this time and effort. However, we know that if we do not intercede on behalf of our clients at the highest levels of standard and policy setting, we would all be negatively impacted.



We have associates on the following actuarial committees:

- Actuarial Standards Board Committee for Pension ASOPs
- Actuarial Standards Board Committee for General ASOPs
- American Academy of Actuaries Public Pension Subcommittee
- Board of Directors of the Conference of Consulting Actuaries and Strategic Planning Committee
- Conference of Consulting Actuaries Joint Program Committee for the Enrolled Actuaries Meeting, and Committee on Professionalism
- Society of Actuaries Retirement Plans Experience Committee
- Conference of Consulting Actuaries Public Plans Community
- American Academy of Actuaries Retiree Benefits Subcommittee
- **4.2.2 Mandatory Project Requirements** The following mandatory requirements relate to the goals and objectives and must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it will comply with the mandatory requirements and include any areas where its proposed solution exceeds the mandatory requirement. Failure to comply with mandatory requirements will lead to disqualification, but the approach/methodology that the vendor uses to comply, and areas where the mandatory requirements are exceeded, will be included in technical scores where appropriate. The mandatory project requirements are listed below.
  - **4.2.2.1.Mandatory Requirement 1:** Vendor shall provide only "qualified actuaries" for this assignment. A "Qualified Actuary" means an actuary who is an Associate or Fellow member of the Society of Actuaries with at least 3 years of experience with large public pension plans. The "Lead Consultant" should be a Fellow member of the Society of Actuaries and have at least 10 years of consulting experience with large public pension plans.

All members of the proposed client service team for the CPRB meet and exceed the requirements for qualified actuaries and Lead Consultant, as indicated below.

Joseph Newton, the proposed Lead Consultant, has more than 20 years of consulting experience with large public pension plans. Joe is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Fellow of the Conference of Consulting Actuaries and a Member of the American Academy of Actuaries.

Name and Professional Designations	Role	Years of Experience
Joseph Newton, FSA, EA, FCA, MAAA	Lead Consultant	20+
Sheryl L. Christensen, FSA, EA, FCA, MAAA	Support Actuary	25+
Jeffrey T. Tebeau, FSA, EA, FCA, MAAA	Support Actuary	15+

Most importantly, because GRS, and the Dallas office of GRS in particular, focuses on complicated state-wide public retirement systems, the amount and quality of the required work for such systems demands experienced and talented analysts. Because of this, GRS has mostly experienced and advanced senior analysts (many of which have more than 15 years of experience and/or are qualified actuaries), not less experienced general analysts. Therefore, the level of expertise at all levels is high.

Resumes for the proposed team are provided in Appendix A.



**4.2.2.2.Mandatory Requirement 2:** Vendor shall provide a succession plan in the event the firm's actuaries are unable to perform the work due to illness, an accident, cessation of employment or for any other reason as determined by the vendor or by the CPRB.

The CPRB can take great comfort in the stability of your GRS client service team. All three have been with GRS for more than 10 years, and Joe and Jeff worked at GRS their entire career. In addition, all three are far enough from retirement to be able to provide services to CPRB for decades.

In addition, each plan that GRS works for is serviced by multiple consultants, that way the succession plan is built right into the day-to-day interaction with the client. In the case of the CPRB, Joe, Sheri, and Jeff are all well-seasoned public plan actuaries and consultants. If one of these individuals is not able to attend a particular meeting, one of the other highly experienced individuals will be available.

Historically, we have experienced very low turnover. Moreover, in the event that one of the key members of your team leaves the firm, the others would continue to provide the full range of services you have become accustomed to expect. Because all of our consultants are well versed in public plan issues, we are able to seamlessly accommodate staffing changes resulting from retirement or other separations. GRS will offer a consultant with similar qualifications and experience to replace the individual that left the company. Any replacement will of course be subject to the CPRB staff and Board of Trustees approval.

Finally, when key lead consultants are considering retirement, they typically reduce their work schedule somewhat to allow for an orderly transition of client responsibilities to a new consultant. This is a long, thoughtful and transparent process which heavily involves the client's staff and Board. In all cases, any potential new consultant assignment is subject to the client's approval.



# SECTION 4.3

QUALIFICATIONS AND EXPERIENCE

## **Qualifications and Experience**

- 4.3 Qualifications and Experience: Vendor should provide information and documentation regarding its qualifications and experience in providing services or solving problems similar to those requested in this RFP. Information and documentation should include, but is not limited to, copies of any staff certifications or degrees applicable to this project, proposed staffing plans, descriptions of past projects completed (descriptions should include the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met.), references for prior projects, and any other information that vendor deems relevant to the items identified as desirable or mandatory below.
- **4.3.1** Qualification and Experience Information: Vendor should describe in its proposal how it meets the desirable qualification and experience requirements listed below.
  - **4.3.1.1 Qualification and Experience Desirable 1:** Please describe the firm, the firm's qualifications for this engagement, the firm's experience in providing actuarial valuations/studies to state sponsored retirement systems, and the firm's experience working with government retirement systems.

Founded in 1938, Gabriel, Roeder, Smith & Company (GRS) is a national actuarial and benefits consulting firm. GRS practice areas include pension, OPEB, defined benefit plan administration, and client software, all of which comprise core competencies for GRS. We derive 100% of our revenue from actuarial and benefits consulting services. The chart below illustrates the services that GRS provides:

#### **Gabriel, Roeder, Smith & Company Services**

### **Actuarial Consulting Pension & OPEB Valuations Actuarial Audits Experience Studies** Cost Impact Studies Benefit Design: DB, Hybrid, and Cash Balance **Benefit Adequacy Analysis** Funding & Benefit Policies Asset/Liability Studies §415 Screening Software & Tools GRS Foresight™: Actuarial Projections GRS Advantage™: Client Services Website GRS Snapshot™: Pension Dashboards GRS Trendline™: Public Pension Plan Survey Tool **DB Plan Administration Record Keeping Data Housing Benefit Calculations Call Center Communications Plan Sponsor Portal** Member Portal



GRS is headquartered in Southfield, Michigan, with additional offices in Rockford, Michigan; Minnesota; Colorado; Florida; Illinois; and Texas.

We are an employee-owned corporation that is independent of banks, accounting firms, insurance companies, brokerage firms, and multinational corporations. This means GRS can provide the CPRB with independent and unbiased advice and service.

Since success of the company is determined by successful consulting relationships, our employees have a strong personal stake in the success of their relationships with clients. Our employees are strongly motivated to be the best they can be, and to do the best they can do for our clients. This leads to a high degree of professionalism and performance, and distinguishes us from most of our competitors, and all of our larger competitors. Because we are a small firm, our employees know that they can have an influence on the end result. People are therefore encouraged to innovate, to find new and better ways of doing things, and to continually improve their skills and our products.

GRS is the only firm that has been dedicated to serving public sector plans since its inception. Public sector work is not a sideline for our primary work, it is our primary work. With over 1,000 clients, we provide actuarial and benefits consulting services to more public sector clients than any other firm in the country. Most of our clients have multiple benefit structures and employer groups. Therefore, it is unlikely that there is any public sector benefit design or funding issue that GRS has not already helped another client manage or solve.

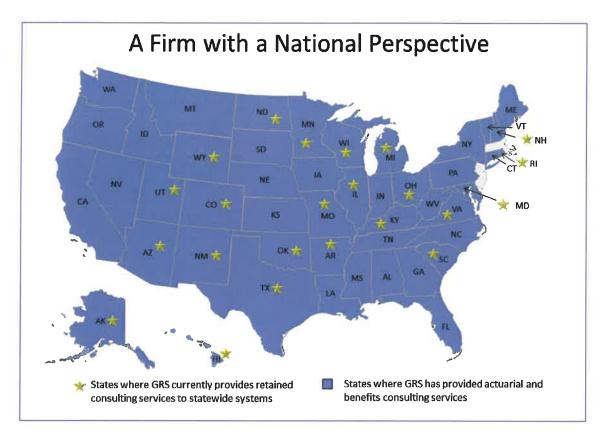
If a question arises that your consulting team cannot answer from direct experience, your team can easily find a colleague with direct experience who can assist in dealing with the matter.

Some key characteristics of our client base offer an insightful overview of our public plan experience:

- Nearly 100% of our client base and our revenue comes from public sector work;
- Our client base is comprised of post-retirement benefit systems and employers at cities, counties, public authorities, states, schools, libraries and public hospitals;
- We serve clients of all sizes from plans with 10 participants to plans with more than 800,000 participants;
- 41 statewide retirement systems covering a total of over 7 million participants and \$1 trillion in assets;
- 29 statewide retirement systems with 50,000 or more participants;
- 25 Statewide retirement systems with more than \$10 billion in assets; and
- The majority of our clients have been with us for decades. We have been associated with more than half of our clients for at least 30 years, many for more than 50 years, and some for over 80 years. We believe that our clients' long association with our company results from our focus on technological innovation, research, and employee professional growth efforts solely attentive on managing the challenges faced by benefit plans.



Our national depth is illustrated by the following map which demonstrates the breadth of our public sector client experience.



GRS' statewide client list is provided on the following pages.

A representative list of our 400 public pension fund clients is provided in Appendix B.



# **GRS' Statewide Client List**

System	Plan Structure	Year Retained	Assets (in billions)	Actives	Retired
Arizona State Retirement System	Cost Sharing Multiple Employer	2016	\$48.0	210,000	159,000
Arkansas Judicial Retirement System	Single Employer	1982	\$0.3	145	178
Arkansas Local Police and Fire Retirement System	Cost Sharing Multiple Employer	1981	\$2.4	6,900	3,400
Arkansas Public Employees Retirement System	Cost Sharing Multiple Employer	1962	\$11.0	44,000	39,000
Arkansas State Police Retirement System	Single Employer	1962	\$0.4	489	688
Arkansas Teacher Retirement System	Cost Sharing Multiple Employer	1956	\$21.5	66,633	51,405
Colorado Fire and Police Pension Association (FPPA)	Agent Multiple Employer	2004	\$5.5	15,800	9,900
Employees' Retirement System of Rhode Island	Cost Sharing Multiple Employer	2001	\$8.4	32,000	27,000
Hawaii Employees' Retirement System	Cost Sharing Multiple Employer	2001	\$17.0	66,000	51,000
Illinois Judges' Retirement System	Single Employer	2012	\$1.4	944	1,298
Illinois Municipal Retirement Fund	Agent Multiple Employer	1992	\$50.2	170,637	140,808
Illinois State Employees Retirement System	Single Employer	2001	\$23.8	62,000	75,900
Kentucky Retirement Systems	Cost Sharing Multiple Employer	2017	\$23.5	121,000	132,000
Maryland State Retirement and Pension Agency	Cost Sharing Multiple Employer	2008	\$67.0	195,000	169,368
Maryland Transit Administration	Single Employer	2021	\$0.4	2,532	2,033
Michigan Judges Retirement System	Cost Sharing Multiple Employer	2006	\$0.3	71	528
Michigan Public School Employees Retirement System	Cost Sharing Multiple Employer	2006	\$51.4	165,000	221,000
Michigan State Employee Retirement System	Single Employer	2006	\$12.0	6,500	60,000
Michigan State Police Retirement System	Single Employer	2006	\$1.5	2,000	3,257
Minnesota State Employees Retirement System	Cost Sharing Multiple Employer	2012	\$13.8	52,000	44,000
Missouri Dept. of Transportation and Highway Patrol	Cost Sharing Multiple Employer	1999	\$2.3	7,200	9,200
Missouri Local Government Employees Retirement System	Agent Multiple Employer	1967	\$8.1	35,380	26,421
Municipal Employees Retirement System of Michigan	Agent Multiple Employer	2017	\$11.0	32,000	44,000
New Hampshire Retirement System	Cost Sharing Multiple Employer	2006	\$9.0	48,000	40,000
New Mexico Educational Retirement Board	Cost Sharing Multiple Employer	2001	\$16.0	49,000	53,000



# GRS' Statewide Client List (Concluded)

System	Plan Structure	Year Retained	Assets (in billions)	Actives	Retired
New Mexico Public Employees Retirement Association	Cost Sharing Multiple Employer	2022	\$16.5	48,000	43,000
North Dakota Public Employees Retirement System	Cost Sharing Multiple Employer	2016	\$3.1	25,000	13,000
Ohio Public Employees Retirement System	Cost Sharing Multiple Employer	1954	\$98.0	279,000	224,000
Oklahoma Teachers' Retirement System	Cost Sharing Multiple Employer	2001	\$22.0	90,000	53,000
Public Employees Retirement Association of Minnesota	Cost Sharing Multiple Employer	2012	\$41.0	165,000	125,000
Rhode Island Municipal Retirement System	Cost Sharing Multiple Employer	2001	\$2.0	7,600	6,000
South Carolina Retirement System	Cost Sharing Multiple Employer	2011	\$33.0	199,000	148,000
State Universities Retirement System of Illinois	Cost Sharing Multiple Employer	1996	\$20.0	76,000	69,000
Texas Employees Retirement System	Single Employer	2013	\$28.0	142,000	118,000
Texas Municipal Retirement System	Agent Multiple Employer	2008	\$34.0	114,000	73,000
Texas Teacher Retirement System	Cost Sharing Multiple Employer	2001	\$202.0	918,000	458,000
Utah Retirement System	Cost Sharing Multiple Employer	2001	\$39.0	98,000	73,000
Virginia Retirement System	Agent Multiple Employer	2022	\$79.0	235,000	291,000
Wisconsin Retirement System	Cost Sharing Multiple Employer	1976	\$112.0	258,000	222,000
Wyoming Retirement System	Cost Sharing Multiple Employer	2009	\$8.0	29,000	35,000



**4.3.1.2** Qualification and Experience Desirable 2: Please provide at least three references. Please provide the contact information for the pension plan name, a contact person, their address, telephone number, and email.

Other specific client references are shown below, and a sample of our statewide pension clients with contact information is provided in Appendix B. We encourage you to contact any you wish.

Reference Name:

**Account Primary Contact:** 

Title:

Address:

Telephone Number:

**Email Address:** 

Reference Name:

**Account Primary Contact:** 

Title:

Address:

Telephone Number:

**Email Address:** 

Reference Name:

**Account Primary Contact:** 

Title:

Address:

Telephone Number:

**Email Address:** 

**Employees Retirement System of Rhode Island** 

Mr. Frank J Karpinski

**Executive Director** 

50 Service Avenue

Warwick, RI 02886

(401) 462-7610

frank.karpinski@ersri.org

**Texas Municipal Retirement System** 

Ms. Leslee S. Hardy

Decision Support Actuary - Director

PO Box 149153

Austin, Texas 78714

(512) 225-3760

Ihardy@tmrs.com

**Colorado Fire and Police Pension Association** 

Mr. Chip Weule

Chief Benefits Officer

Stanford Place II

7979 East Tufts Avenue, Suite 900

Denver, CO 80237

(303) 770-3772

asmith@fppaco.org



**4.3.1.3 Qualification and Experience Desirable 3:** Please provide a proposed staffing plan for this project, including the biographies of all staff identified for this project.

The proposed team has vast experience working with Statewide retirement plans across the nation of various sizes, complexities, and maturities. This will be specifically beneficial to CPRB as the individual plans it administers range quite widely in their characteristics. The team will be led by Joe Newton, FSA, EA, MAAA who has over 20 years of actuarial experience and has developed many cutting edge tools and strategies employed by plans across the country. He will be supported by Sheryl L. Christensen, FSA, EA, FCA, MAAA, a Senior Consultant with more than 25 years of actuarial and consulting experience and Jeffrey T. Tebeau, FSA, EA, FCA, MAAA, a Senior Consultant with more than 15 years of actuarial and consulting experience. All three of these team members meet the requirement for Lead Consultant outlined in the RFP, giving CPRB depth and security for continuation of service if the need arises. Between the three proposed Senior Actuaries, they have been involved with fourteen statewide retirement systems as the retained actuary and six others as an auditing actuary. The experience with fourteen statewide retirement systems as the retained actuary is more than all but one other firm can claim in total, thus it is safe to say the combined experience of the proposed team is unmatched by any of our competitors.

The following is a summary of the experience of the three proposed consultants for the CPRB:



Joseph Newton FSA, EA, FCA, MAAA, will serve in the role of Lead Consultant. Joe is the Pension Market Leader for GRS. In this capacity, Joe functions in one of the most senior professional roles at GRS, providing significant firm-wide leadership and contribution at the highest levels. This role bridges the gap between industry requirements, internal processes, and client deliverables to further strengthen GRS' position in the marketplace. Joe is a Senior Consultant and Actuary with over 20 years of professional actuarial and consulting experience with statewide and municipal public retirement systems.

Joe is also a key representative of GRS' Office of the Chief Actuary where he helps to monitor the firm's adherence to established actuarial standards, provides oversight and interpretations for the firm's actuarial methodologies, and serves as a GRS spokesperson for the company's perspectives and positions on actuarial issues.

Joe also serves on the Associate Advisory Committee to the Executive Committee of NASRA.

Nationally, Joe is a Lead Consultant for the following statewide public retirement systems for which he provides all of the requested services in the RFP. The typical GRS setup, like the one proposed for CPRB, is to have more than one Lead Consultant on any client. For most of the clients below, Joe services as strategic advisor and handles communication with the Board and legislative sessions, but his day-to-day duties are quite minimal, in contrast to the proposed setup for CPRB, for which Joe intends to be heavily involved at all levels of the relationship.



	Size	?
System	Total Members	Assets
Employees Retirement System of Hawaii	114,600	\$16.6 billion
Employees' Retirement System of Rhode Island	49,000	\$6.8 billion
Colorado Fire and Police Pension Association	9.200	\$2.4 billion
Employees Retirement System of Texas	253,000	\$27.2 billion
South Carolina Retirement Systems	366,000	\$24.9 billion
Teacher Retirement System of Texas	1,279,000	\$154.6 billion
Texas Municipal Retirement System	173,000	\$28.6 billion

Joe stresses a top-down approach to pension plan consulting, which integrates the major goals of stakeholders, addresses human capital needs, and utilizes projection and valuation techniques that manage risk. He has been instrumental in GRS' internal development of several technical projects, including being the architect of GRS' stress testing software program, GRS Foresight, which is unmatched in the industry.

Joe has built an enviable reputation in the public sector actuarial community for his creative ability to communicate difficult and complex ideas to Boards and Stakeholders. Also importantly, he believes it has helped its clients increase their credibility with the legislative and executive branches of the State government.



Sheryl L. Christensen, FSA, EA, FCA, MAAA, will lead several of the valuation and other administrative projects. Sheri is a Senior Consultant and an expert in our technical software and processes used to provide actuarial consulting services. Sheri has been involved in many facets of pension education. She seeks to provide education to Boards throughout the course of the regular valuation process and staff training. Sheri is support actuary for the Minnesota State Retirement System and Public Employees Retirement Association of Minnesota, and has filled that role for her entire career. She has more than 25 years of actuarial and consulting experience. Sheri has served clients in Delaware, Indiana, Iowa, Kansas, Michigan, Minnesota, North Dakota, South Dakota, Texas, West Virginia and Wisconsin. During

Sheri's career, she has worked with statewide and municipal retirement systems, church plans, not-for-profit organizations, and corporate plans.



Jeffrey T. Tebeau, FSA, EA, FCA, MAAA, will serve as support actuary, assisting Joe and the GRS team with project management and oversight of the valuation process. Jeff has more than 15 years of actuarial and consulting experience for both local and statewide public retirement systems while working from the Southfield, Michigan, office. Throughout his career, Jeff has consulted extensively on plan design, funding, accounting and cost impacts for defined benefit pension plans and post-retirement health care programs. Jeff was recently promoted to Senior Consultant, having proven himself professionally as a lead consulting actuary for several municipal and statewide retirement plans.



Jeff is the lead actuary and senior consultant for the State of Rhode Island's OPEB plan and the North Carolina Office of the State Auditor, as well as several municipal clients such as the retirement systems of the City of Grand Rapids. In addition, he has filled the role of support actuary on many other plans across the country such as the Maryland State Retirement and Pension System, New Hampshire Retirement System, Ohio Public Employees Retirement System, and the State Employees' Retirement System of Illinois. During Jeff's tenure at GRS, he has gained valuable experience in most of the service areas critical to actuarial consulting for public defined benefit plans. Jeff has experience with all aspects of the valuation process, including experience studies, accounting disclosures, plan design, and cost impact statements. He has been instrumental to creating bespoke calculators and projections for his clients to assist decision-makers in challenging environments. While proficient in the day-to-day detailed and technical aspects of actuarial work, Jeff has also helped many of his clients understand the short and long-term implications and risks of their potential decisions. He has presented his work to retirement boards, city councils, and state legislative committees.

Jeff has spoken at the Michigan Association of Public Employees Retirement Systems (MAPERS) and the Florida Public Pension Trustees Association (FPPTA).



Judith Kermans, FSA, EA, MAAA is the President and CEO of GRS and will serve as a Corporate Sponsor for CPRB. Judith is responsible for overall client service operations and the professional development of all GRS actuaries and consultants. As a Senior Consultant, Judith serves many state and local plans. She has more than 30 years of actuarial and benefits consulting experience with state and local public sector clients in Arkansas, Colorado, Connecticut, Indiana, Michigan, Missouri, New Hampshire, and Virginia. Her focus is on the design and funding of defined benefit and hybrid public employee retirement systems covering teachers, general employees, and public safety plans.

Judith has served as a speaker at many national and local conferences, such as, the National Conference on Teacher Retirement (NCTR), National Council of Public Employee Retirement Systems (NCPERS), and Michigan Association of Public Employees Retirement System (MAPERS). Her presentations have covered topics such as the GASB accounting standards, pension plan design, funding policy, and pension risk management.

In addition, the proposed team will also be supported by the following actuaries.



Jamal Adora, ASA, EA, MAAA is a Consultant in GRS' Southfield, Michigan office. He is proud to have provided more than eight years of consulting service to public employee retirement systems throughout the country. His expertise covers a wide variety of systems including: pension and retiree health plans; public safety and general retirement systems; as well as individual towns and statewide systems. Some of the services he has provided include annual valuations, special cost analyses, experience studies, and assisting in the development of funding policies.

At GRS, Jamal is recognized for his expertise in advancing GRS' technology and tools. He was one of the initial testers of GRS Foresight®, has expanded the functionality of

GRS' valuation software, and has enhanced the knowledge of GRS' associates through internal training sessions.





Abra Hill, ASA, FCA, MAAA is a Consultant in GRS' Minneapolis, Minnesota office. She has more than 15 years of actuarial and employee benefits consulting experience with statewide and local government benefit plans. She has served clients in Arkansas, California, Florida, Michigan, Minnesota, Missouri, North Carolina, New Hampshire, Ohio, and Rhode Island.

Abra's actuarial experience includes pension and OPEB valuations, experience studies, cost analyses of proposed plan changes, cash flow projections and sensitivity analysis, gain/loss analysis by source, actuarial audits, §415 calculations, per capita claims cost analysis, and Medicare Part D attestations. She also provides clients with

benefit calculation and benefit statement services.



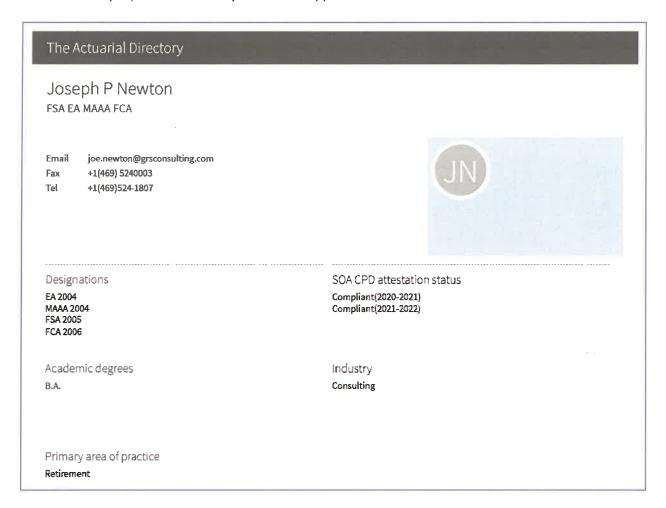
**Kevin Noelke, ASA, FCA, MAAA** is a consultant and actuary in GRS' Southfield, Michigan office. He has more than 10 years of actuarial and consulting experience with public sector retirement systems. Kevin works with plans in Florida, Illinois, Maryland, Michigan, Minnesota, New Hampshire and Rhode Island.

Kevin's expertise includes pension and OPEB/VEBA valuations, accounting reports complying with GASB Statement Nos. 67, 68, 74 and 75, deliverables relating to Florida Statutes, experience studies, actuarial funding projections, cost analyses of proposed plan changes, retirement benefit calculations, and annual benefit statements.



Credentials for all team members may be verified in the Actuarial Directory at <a href="https://www.actuarialdirectory.org">www.actuarialdirectory.org</a>. Screen shots from the Actuarial Directory are below.

Resumes for the proposed team are provided in Appendix A.





#### The Actuarial Directory

#### Sheryl Lynn Christensen FSA EA MAAA FCA

Email sheri.christensen@grsconsulting.com

+1(763) 4325842 Tel +1(763)710-9158



Designations

MAAA 2007 EA 2007 FCA 2018 FSA 2022

SOA CPD attestation status

Compliant(2021-2022) Compliant(2020-2021)

Industry Consulting Primary area of practice

Retirement

### The Actuarial Directory

## Jeffrey Thomas Tebeau

FSA MAAA EA FCA

Consultant

Gabriel, Roeder, Smith & Company



**United States** 

Email jeff.tebeau@gmail.com

Email jeff.tebeau@grsconsulting.com

+1(248)799-9000 Tel

Designations

MAAA 2015 EA 2016 FSA 2018 FCA 2021

SOA CPD attestation status

Compliant(2021-2022) Compliant(2020-2021)

Industry Consulting Primary area of practice

Retirement

Specializations

Other Post-Employment Benefits

Public Sector - Pension

Society of Actuaries Sections

Retirement



- 4.3.2 Mandatory Qualification/Experience Requirements The following mandatory qualification/experience requirements must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it meets the mandatory requirements and include any areas where it exceeds the mandatory requirements. Failure to comply with mandatory requirements will lead to disqualification, but areas where the mandatory requirements are exceeded will be included in technical scores where appropriate. The mandatory qualifications/experience requirements are listed below.
  - **4.3.2.1 Mandatory Qualification and Experience Requirement 1:** The firm must have provided actuarial services to governmental defined benefit pension plans for the past five years or more.

Gabriel, Roeder, Smith & Company has provided actuarial services to governmental defined benefit pension plans for more than 80 years and, therefore, has a proven track record of success.

**4.3.2.2 Mandatory Qualification and Experience Requirement 2:** The firm must have sufficient depth regarding Qualified Actuaries and Lead Consultants to ensure Goals are met in a timely manner and to provide adequate resources for the consulting team.

GRS has the necessary resources for performing all services and providing deliverables within the requested timeframe. We do not compromise service quality for client base growth; therefore, GRS only bids on work that it has the resources to provide. We have 64 credentialed actuaries and consultants with decades of benefits experience. Your assigned team will always have backup if needed.

GRS will service your plan using a fully-staffed team. Fully-staffed teams have senior consultants, consultants, senior analysts, analysts, and administrative staff, all dedicated to your account. Team Leaders report to a member of the executive management team, who is responsible for the overall operations of the region. We find that these methods produce timely solutions to client needs.

Each client service team has access to a full complement of technology resources which include network servers (including virtual private network capabilities), computer equipment, and actuarial and business software. These resources allow team members to work independently or together from any location. Through our Secure Internal Portal GRS staff is able to access research materials, communicate through discussion boards, and use GRS actuarial tools.



# **APPENDIX A**

**TEAM MEMBER BIOGRAPHIES** 

## Joseph Newton, FSA, EA, FCA, MAAA

Pension Market Leader and Office of the Chief Actuary

joe.newton@grsconsulting.com



#### Expertise

Joe Newton is a nationally recognized public sector actuary who works with numerous statewide, regional, and local retirement systems and is located in GRS' Dallas, Texas office. He has more than 20 years of actuarial and benefits consulting experience. Joe's clients are located in Colorado, Hawaii, Rhode Island, South Carolina, Kentucky, and Texas.

Joe is the Pension Market Leader for GRS. In this capacity, Joe functions in one of the most senior professional roles in GRS, providing significant firm-wide leadership and contribution at the highest levels. This role bridges the gap between industry requirements, internal processes, and client deliverables to further strengthen GRS' position in the marketplace.

Joe is also a member of the GRS Office of the Chief Actuary. In this capacity, he provides strategic thought leadership to public sector clients as well as ensuring that service is being provided at the highest level by all GRS employees.

As well respected in our industry, several of Joe's projects have changed the way services are provided, and how pensions are understood, in the public sector community. There are several examples of plan redesign projects, including optimized funding mechanisms and creative plan design features that originated with Joe's consulting and have been further implemented by other systems. Joe has a unique ability to create innovative solutions to specific problems, and then be able to communicate these sometimes complex solutions to all stakeholders.

Joe stresses a top-down approach to pension plan consulting, which integrates the major goals of stakeholders, addresses human capital needs, and utilizes projection and valuation techniques that manage risk. He has built an enviable reputation in the public sector actuarial community for his creative ability to communicate difficult and complex ideas to Boards and Stakeholders. Most importantly, Joe believes he has helped his clients increase their credibility with the legislative and executive branches of the State government. In many cases, we have annual educational sessions for legislative leaders that are of paramount importance in establishing and maintaining this credibility.

Joe is an appointed member on the Associate Advisory Committee of the National Association of State Retirement Administrators (NASRA) where he provides support for NASRA's vital initiatives to support public employee benefit programs across the country.

#### **Professional Designations**

- Fellow, Society of Actuaries
- Enrolled Actuary

- Fellow, Conference of Consulting Actuaries
- Member, American Academy of Actuaries

#### Education

Bachelor of Arts, Mathematics, and Business Administration, Austin College (Sherman, Texas)



## Sheryl L. Christensen, FSA, EA, FCA, MAAA

Senior Consultant sheri.christensen@grsconsulting.com



#### **Expertise**

Sheri Christensen is a Senior Consultant in GRS' Minnesota office. She has more than 25 years of actuarial and consulting experience. Sheri has served clients in Delaware, Indiana, Iowa, Kansas, Michigan, Minnesota, North Dakota, South Dakota, Texas, West Virginia and Wisconsin.

During Sheri's career, she has worked with statewide and municipal retirement systems, church plans, not-for-profit organizations, and corporate plans. Sheri's areas of expertise include traditional and hybrid defined benefit pension plans and retiree health care benefits. Her work covers valuations, actuarial audits, cost analyses for proposed plan and/or assumption changes, experience studies, funding projections, and service purchase calculations.

#### **Professional Designations**

- Fellow, Society of Actuaries
- Enrolled Actuary, ERISA
- Fellow, Conference of Consulting Actuaries
- Member, American Academy of Actuaries

#### **Professional Activities**

Sheri regularly attends national and regional conferences held by associations serving public employee retirement systems and church plans. She also provides educational sessions to clients covering actuarial valuation fundamentals.

#### Education

Bachelors of Science, Mathematics (emphasis on actuarial science) and minor in Statistics, University of Minnesota, Institute of Technology



## Jeffrey T. Tebeau, FSA, EA, FCA, MAAA

Senior Consultant

jeff.tebeau@grsconsulting.com



#### **Expertise**

Jeff Tebeau is a Senior Consultant in GRS' Southfield, Michigan office. He has more than 15 years of actuarial and consulting experience for local and statewide public employee retirement systems. Jeff serves retirement systems in Illinois, Florida, Maryland, Michigan, New Hampshire, Ohio, and Rhode Island.

Jeff's actuarial experience includes pension and retiree health care valuations, experience studies, cost analyses of proposed plan changes, funding projections, retirement benefit calculations, and preparation of annual benefit statements for system members.

#### **Professional Designations**

- Fellow, Society of Actuaries
- Enrolled Actuary
- Fellow, Conference of Consulting Actuaries
- Member, American Academy of Actuaries

#### **Professional Activities**

Jeff regularly serves as a speaker on issues that impact public pension retirement systems. Topics that he has covered include funding, risk management, benefit reform, and social security. In recent years, he has spoken at the Michigan Association of Public Employees Retirement Systems (MAPERS), the Florida Public Pension Trustees Association (FPPTA), and a GRS client educational event.

#### Education

Bachelor of Arts, Mathematics, Spring Arbor University



## Judith A. Kermans, EA, FCA, MAAA President & CEO, Senior Consultant

judy.kermans@grsconsulting.com



#### Expertise

Judith Kermans is the President and CEO of GRS. She is located in GRS' Southfield, Michigan office. In this capacity, Judith is responsible for: overall client service operations and the professional development of all GRS actuaries and consultants.

As a Senior Consultant, Judith serves many state and local plans. She has more than 30 years of actuarial and benefits consulting experience with state and local public sector clients in Arkansas, Colorado, Connecticut, Indiana, Michigan, Missouri, New Hampshire, and Virginia. Her focus is on the design and funding of defined benefit and hybrid public employee retirement systems covering teachers, general employees, and public safety plans.

Judith's extensive experience with benefit designs unique to the public sector include Deferred Retirement Option Plans (DROPs), multiple DB benefit tier design, Hybrid (DB/DC) and variable annuity plans. She is also a subject matter expert on Early Retirement Incentive Plans (ERIPs) and has substantial experience with governmental plan compliance including IRC section 415 and reporting disclosures for public plans including GASB accounting standards.

Judith has a goal of providing consulting to public employee retirement system boards and plan sponsors that will guide them towards benefit designs that encourage benefit adequacy paired with fiscal sustainability. For example, she is particularly adept at advising pension plans and plan sponsors that are confronting severe fiscal distress or even bankruptcy proceedings.

#### **Professional Designations**

- Enrolled Actuary
- Fellow, Conference of Consulting Actuaries
- Member, American Academy of Actuaries

#### **Presentations and Publications**

Judith has served as a speaker at many national and local conferences, such as, the National Conference on Teacher Retirement (NCTR), National Council of Public Employee Retirement Systems (NCPERS), and Michigan Association of Public Employees Retirement System (MAPERS). Her presentations have covered topics such as the GASB accounting standards, pension plan design, funding policy, and pension risk management.

#### Education

Bachelor of Science, Mathematics, Michigan Technological University



## Jamal Adora, ASA, EA, MAAA

Consultant

jamal.adora@grsconsulting.com



#### Expertise

Jamal is a Consultant in GRS' Southfield, Michigan office. He is proud to have provided more than eight years of consulting service to public employee retirement systems throughout the country. His expertise covers a wide variety of systems including: pension and retiree health plans; public safety and general retirement systems; as well as individual towns and statewide systems. Some of the services he has provided include annual valuations, special cost analyses, experience studies, and assisting in the development of funding policies.

At GRS, Jamal is recognized for his expertise in advancing GRS' technology and tools. He was one of the initial testers of GRS Foresight®, has expanded the functionality of GRS' valuation software, and has enhanced the knowledge of GRS' associates through internal training sessions.

Jamal has a goal of providing consulting to public employee retirement system boards and plan sponsors that will guide them towards benefit designs that encourage benefit adequacy paired with fiscal sustainability. For example, he is particularly adept at advising pension plans and plan sponsors that are confronting severe fiscal distress.

#### **Professional Activities**

Jamal regularly attends national and regional conferences held by associations serving public employee retirement systems. He has also served as a conference speaker for associations such as the Michigan Association of Public Employees Retirement System (MAPERS). His speaking engagements have covered topics on retirement plan design, actuarial basics and Social Security education topics.

#### **Professional Designations**

- Associate, Society of Actuaries
- Enrolled Actuary
- Member, American Academy of Actuaries

Jamal is currently working towards attaining the designation of Fellow of the Society of Actuaries (FSA).

#### Education

Master of Arts in Mathematics, Wayne State University Bachelor of Arts in Mathematics, University of Michigan-Dearborn



# Abra Hill, ASA, FCA, MAAA Consultant abra.hill@grsconsulting.com



#### **Expertise**

Abra Hill is a Consultant in GRS' Minneapolis, Minnesota office. She has more than 15 years of actuarial and employee benefits consulting experience with statewide and local government benefit plans. She has served clients in Arkansas, California, Florida, Michigan, Minnesota, Missouri, North Carolina, New Hampshire, Ohio, and Rhode Island.

Abra's actuarial experience includes pension and OPEB valuations, experience studies, cost analyses of proposed plan changes, cash flow projections and sensitivity analysis, gain/loss analysis by source, actuarial audits, §415 calculations, per capita claims cost analysis, and Medicare Part D attestations. She also provides clients with benefit calculation and benefit statement services.

During her career, Abra has developed expertise in benefit design studies covering pension and OPEB. Her work has helped clients assess the impact of multiplier changes, tiered benefit structures, hybrids, and OPEB benefit redesign. Contribution and liability projections, alternative cost and risk sharing options, and benefit adequacy issues have been the focus of these studies.

### **Professional Designations**

- Associate, Society of Actuaries
- Fellow, Conference of Consulting Actuaries
- Member, American Academy of Actuaries

#### Education

Bachelor of Science, Mathematics, concentration in Actuarial Science, Michigan Technological University





kevin.noelke@grsconsulting.com



#### **Expertise**

Kevin Noelke is a consultant in GRS' Southfield, Michigan office. He has more than 10 years of actuarial and consulting experience with public sector retirement systems. Kevin works with plans in Florida, Illinois, Maryland, Michigan, Minnesota, New Hampshire and Rhode Island.

Kevin's expertise includes pension and OPEB/VEBA valuations, accounting reports complying with GASB Statement Nos. 67, 68, 74 and 75, deliverables relating to Florida Statutes, experience studies, actuarial funding projections, cost analyses of proposed plan changes, retirement benefit calculations, and annual benefit statements.

#### **Professional Designations**

- Associate, Society of Actuaries
- Member, American Academy of Actuaries
- Fellow, Conference of Consulting Actuaries

#### Education

Bachelor of Science, Actuarial Mathematics, University of Michigan



# APPENDIX B

SAMPLE OF GRS' STATEWIDE CLIENT LIST

System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
Arizona State Retirement System Mr. Paul Matson, Executive Director 3300 N. Central Avenue Phoenix, AZ 85012 (602) 240-2031	Cost-Sharing Multiple- Employer	2016	47.0	210,000	159,000
Arkansas Local Police and Fire Retirement System Mr. David Clark, Executive Director 620 W. 3rd, Suite 200 Little Rock, AR 72201-2212 (501) 682-1749	Cost-Sharing Multiple- Employer	1981	2.8	6,800	3,800
Arkansas Public Employees Retirement System Ms. Amy Fecher, Executive Director One Union National Plaza, 124 West Capitol Ave., Suite 400 Little Rock, AR 72201 (501) 682-7854	Cost-Sharing Multiple- Employer	1962	9.7	44,000	40,000
Arkansas Teacher Retirement System Mr. Clint Rhoden, Executive Director 1400 West Third Street Little Rock, AR 72201 (501) 682-1820	Cost-Sharing Multiple- Employer	1956	19.0	71,000	52,000
Colorado Fire and Police Pension Association (FPPA) Ms. Ahni Smith, Chief Operations Officer 5290 DTC Parkway, Suite 100 Greenwood Village, CO 80111 (303) 770-3772	Agent Multiple-Employer	2004	5.5	15,800	9,900



System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
Employees' Retirement System of Rhode Island Mr. Frank Karpinski, Executive Director 50 Service Avenue Warwick, RI 02886 (401) 457-3950	Cost-Sharing and Agent Multiple-Employer Plans	2001	7.6	26,000	23,000
Illinois Municipal Retirement Fund Mr. Brian Collins Executive Director 2211 York Road, Suite 500 Oak Brook, IL 60523-2337 (630) 368-5355	Agent Multiple-Employer	1992	57.0	172,000	215,000
Illinois State Employees Retirement System Mr. Tim Blair, Executive Secretary 2101 S. Veterans Parkway Springfield, IL 62704-9255 (217) 785-7016	Single-Employer	2001	23.5	121,000	132,000
Kentucky Public Pensions Authority Mr. David Eager, Executive Director Perimeter Park West, 1260 Louisville Road Frankfort, KY 40601 (502)696-8455	Cost-Sharing Multiple- Employer	2017	11.8	134,000	119,000
Maryland State Retirement and Pension System Mr. Martin Noven, Executive Director 120 East Baltimore Street Baltimore, MD 21202-6700 (410) 625-5600	Cost-Sharing Multiple- Employer	2008	64.0	195,000	172,000



System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
Michigan Public School Employees Anthony Estell, Director, 530 W. Allegan Lansing, MI 48933 (517) 322-1145	Cost-Sharing Multiple- Employer	2006	51.4	165,000	221,000
Michigan State Employee Retirement System Anthony Estell, Director, 530 W. Allegan Lansing, MI 48933 (517) 322-1145	Single-Employer	2006	14.0	5,400	60,000
Minnesota State Employees Retirement System Ms. Erin Leonard, Executive Director 60 Empire Drive, Suite 300 St. Paul, MN 55103-3000 (651) 284-7848	Cost-Sharing Multiple- Employer	2012	20.0	56,000	51,000
Missouri Dept. of Transportation and Highway Patrol Employees' Retirement System Mr. Scott Simon, Executive Director 1913 William Street, P.O. Box 1930 Jefferson City, MO 65102-1930 800-270-1271	Cost-Sharing Multiple- Employer	1999	3.0	6,800	9,400
Missouri Local Government Employees Retirement System Mr. Bill Betts, Executive Secretary PO Box 1665 Jefferson City, MO 65102 (573) 636-9455	Agent Multiple-Employer	1967	8.1	35,380	26,421



System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
Municipal Employees Retirement System of Michigan Ms. Kerrie Vanden Bosch, Chief Executive Office 1134 Municipal Way Lansing, MI 48917 (507) 703-9030	Agent Multiple Employer	2017	11.0	32,000	44,000
New Hampshire Retirement System Ms. Jan Goodwin, Executive Director 54 Regional Drive Concord, NH 03301 (603) 410-3520	Cost-Sharing Multiple- Employer	2006	11.0	48,000	41,000
New Mexico Educational Retirement Board Mr. Rick Scroggins, Deputy Director 701 Camino de Los Marquez Santa Fe, NM 87505-1826 (505) 476-6118	Cost-Sharing Multiple- Employer	2001	16.3	49,000	53,000
New Mexico Public Employees Retirement Association Mr. Greg Trujillo, Executive Director 33 Plaza La Prensa Santa Fe, NM 87507 505-476-9303	Cost Sharing Multiple Employer	2022	16.5	48,000	43,000



System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
North Dakota Public Employees Retirement System Mr. Scott Miller, Executive Director 1600 East Century Avenue, Suite 2 Bismarck, ND 58502-1657 (701) 328-3900	Cost-Sharing Multiple- Employer	2016	3.1	25,000	13,000
Ohio Public Employees Retirement System Ms. Karen Carraher, Executive Director 277 E Town St Columbus, OH 43215-4642 (614) 227-0011	Cost-Sharing Multiple- Employer	1954	110.0	281,000	226,000
Oklahoma Teachers' Retirement System Ms. Sarah Green, Executive Director PO Box 53524 2500 North Lincoln Blvd. Oklahoma City, OK 73152 (405) 521-4745	Cost-Sharing Multiple- Employer	2001	22.0	90,000	67,000
Public Employees Retirement Association of Minnesota Mr. Doug Anderson, Executive Director 60 Empire Dr., Suite 200 St. Paul, MN 55103 (651) 201-2690	Cost-Sharing Multiple- Employer	2012	37.0	165,000	129,000



System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
South Carolina Retirement System Ms. Peggy Boykin, Director PO Box 11960 Columbia, SC 29211-1960 (803)-734-8117	Cost-Sharing Multiple- Employer	2011	33.0	199,000	148,000
State of Hawaii Employees' Retirement System Mr. Thomas Williams, Executive Director City Financial Tower 201 Merchant Street, Suite 1400 Honolulu, HI 96813-2980 (808) 587-5381	Cost-Sharing Multiple- Employer	2001	17.0	66,000	51,000
State Universities Retirement System of Illinois Ms. Suzanne Mayer, Executive Director 1901 Fox Drive Champaign, IL 61820 (217) 378-8800	Cost-Sharing Multiple- Employer	1996	22.0	60,000	31,000
Texas Employees Retirement System Ms. Catherine Terrell, Deputy Executive Directory 200 E. 18th Street Austin, TX 78701 (512) 867-7238	Single-Employer	2013	28.0	142,000	118,000
Texas Municipal Retirement System Mr. David Wescoe, Executive Director 1200 N. IH35, PO Box 149153 Austin, TX 78714-9153 (512) 225-3701	Agent Multiple-Employer	2008	38.0	116,000	77,000



System and Contact	Plan Structure and Number of Agent Employers	Year Retained	Assets (in billions)	Actives	Retired
Texas Teacher Retirement System Mr. Brian Guthrie, Executive Director 1000 Red River Street Austin, TX 78701 (512) 542-6411	Cost-Sharing Multiple- Employer	2001	202.0	918,000	458,000
Utah Retirement System Daniel D. Andersen, Executive Director 540 East 200 South Salt Lake City, UT 84102-2099 (801) 366-7343	Cost-Sharing Multiple- Employer	2001	38.0	98,000	73,000
Virginia Retirement System Ms. Patricia Bishop, Director 1200 East Main Street Richmond, VA 23219 1-(888) 827-3847, ext. 7332	Agent Multiple Employer	2022	79.0	235,000	291,000
Wisconsin Retirement System Ms. Cindy Klimke, Chief Trust Financial Officer, 4822 Madison Yards Way Madison, WI 53705 (608) 267-0745	Cost-Sharing Multiple- Employer	1976	112.0	258,000	291,000
Wyoming Retirement System Mr. David Swindell Executive Director 6101 Yellowstone Road Suite 500 Cheyenne, WY 82002 (307) 777-6109	Cost-Sharing Multiple- Employer	2009	8.0	29,000	35,000



# **APPENDIX C**

QUALITY ASSURANCE CHECKLIST

# GABRIEL, ROEDER, SMITH & COMPANY PEER REVIEW FORM

Client Name:		
Task:		
Project Number:	Client Team:	
CID Update is Complete	(Reviewer):	
Embedded Document Pr or Checker)	operties Have Been Revie	ewed (Doer
	PROJECT TYPE	E: (NUMBER OF SIGNERS)
Valuation*: 4		
Special Project*	: 3 including 2 who meet	the criteria for signing reports**.
Substantive Corn if both sign the o		t the criteria for signing reports. This form is not required
	on: 3; or 2 if using a fully s that includes document	automated benefit calculator. Alternatively, a clienting who did the work.
	nts: 3; review should inclu fully completed Lavender	ude a comparison of LY to TY results by member. Form (EBS CHECKLIST).
	Name	Date
Doer:		
Checker:		
Reviewer:		
Peer Reviewer:		
TAA:		
Proofreading		

<sup>\*</sup> Also need to complete page 2 of this form.

<sup>\*\*</sup>One signer must be an MAAA and either an EA or an ASA, and must meet the Qualification Standards for issuing a Statement of Actuarial Opinion. The second signer must be at least a Consultant level 3, or an EA or an ASA. For OPEB reports, please see the list of approved signers for premium development.

# GABRIEL, ROEDER, SMITH & COMPANY ASOP COMPLIANCE FORM

	Reviewer	Peer Reviewer
ASOP No. 4 / 6 – Qualification Standards Requirement		
ASOP No. 23 – Data Quality	11	
ASOP No. 27 – Selection of Economic Assumptions for Measuring Pension Obligation		
ASOP No. 35 – Selection of Demographic and Non-economic Assumptions for measuring Pension Obligation		
ASOP No. 41 – Actuarial Communications		¥ <del></del>
ASOP No. 44 – Selection and Use of Asset Valuation Methods for Pension Valuations		
ASOP No. 51 – Assessment and Disclosure of Risk		
ASOP No. 56 – Modeling	-	
Reviewer:	Date:	
Peer Reviewer:	Date:	

#### When to use other forms:

- Valuation: yellow project planning; green checklist; pink peer review
- Supplementals: orange checklist; pink peer review
- Employee Benefit Statements: lavender EBS checklist

### **Data Checklist**

Doer	Checker	N/A	
			Reviewed things to be remembered from last year's valuation checklist
			Prepared reconciliation grid of members
	-		(actives, inactives, retirees, etc.)
	-		All the necessary data is included in the valuation
	: •		Data issues were resolved with the client
			Check Data for Reasonableness:
			Actives – pay increase for each member since last year compared to assumptions
			Actives – number of actives, total payroll, accumulated contributions, average age, average pay, average service
			Inactives – average age, average monthly benefit,
			accumulated contributions
	. 4		Retirees and Beneficiaries – average age, monthly benefit
			Retirees and Beneficiaries – check cost-of-living increases
	-		New benefit provisions are incorporated in the data
Comments:			
Doer			Date
Checker			Date
Review			Date

## **Asset Checklist**

Doer	Checker	N/A	
Market Value			
-			Beginning of year Market Value matches last year's end of year Market Value
			Benefit payments are reasonable compared to expected benefit payments
			Expenses are reasonable compared to last year
			Actual contributions are reasonable compared to last year's valuation report
			Investment return looks reasonable when compared to major market indices
			Market Value of Assets reconciles from beginning to end of year
Actuarial Value			
		-	Phase-in amounts are consistent with last year
			Appropriate items are included in the Net Cash Flow
		1	Prior year assumed investment rate of return was used
			Return on Actuarial Value of Assets looks reasonable
			Asset gain/loss was prepared and checked
			The Actuarial Value of Assets before application of corridor, plus unrecognized gain/loss, adds up to Market Value of Assets
Describe Corric	lor:		
-			
Comments:			
-			
Doer	N. J.		Date
Checker			Date
Review			Date

# Valuation Run and Financing Spreadsheet Checklist (Final Benefit Structure and Assumptions)

Doer	Checker	N/A	
AMEM8 (Active	es)		
-			The appropriate method was used (check one): slow:/ fast:
			Counts match data file for each group
			The appropriate assumptions are coded for each group, after assumption changes if any (mortality, salary scale, withdrawal, retirement, disability, etc.)
			The appropriate formula is being used for each group, after change in benefit provisions, if any.
			The benefit eligibility requirements are coded correctly for each group, after change in benefit provisions if any.
			415 testing – number of records flagged: test type (G, P/F):
			Test Lives (for each group):
			Demographic information is read in correctly (DOB, DOH, Service, Pay, etc.)
		-	Benefits are calculated correctly
			Checked decrements, present value factors for various test lives
RBVal (Retirees	5)		
-			Counts, line up with data file for each group
			Appropriate assumptions are coded for each group, after change if any
			Benefits coded correctly (i.e., retiree increases, COLA timing consistent with data)
			415 testing – number of records flagged: test type (G, P/F):
			Test Lives (for each group):  Demographic information is read in correctly (DOB, Benefit, form of payment, Beneficiary DOB, beneficiary sex)
			Present value factors are correct (check different forms of payment)
DDV-L ANAEN	40 (los stives)		Tresent value factors are correct (effect afficient forms of payment)
RBVal or AMEN			Counts, line up with data file for each group
			The appropriate assumptions are coded for each group, after change, if any
			Test Lives (for each group):
			Demographic information is read in correctly (DOB, Benefit, Deferral age)
			Present value factors are correct

# Valuation Run and Financing Spreadsheet Checklist (Final Benefit Structure and Assumptions)

Doer Checker N/A	
	Check liability gain/loss and explain what caused gain/loss
Change in Liabilities from Assumptions or Benefit Changes	
	The change in UAL looks reasonable
	The change in NC looks reasonable
	The change in PVFB looks reasonable
	Compared benefit or assumption changes with results of most recent study
Financing Spreadsheet	
	Liabilities are imported correctly from valuation run for each group
	NC is calculated correctly
	Employee contributions are entered correctly
	The appropriate amortization years were used for the UAL, gains and losses, benefit changes, and assumption changes
Customer Information Database (CID)	_ The GRS CID was updated and checked.
Comments:	
Doer Date	
Checker Date	
Review Date	

## **Valuation Report**

Doer	Checker	N/A	
Cover letter			
Executive Sumn	nary		Cover letter conforms with GRS standard
	indry		Contributions match figures from financing spreadsheet
			Contributions look reasonable compared to last year's results
			Change in the contributions is explained and appears reasonable
			Gain/Loss is explained briefly
			Current funded status of the plan and changes from last year are explained
			Changes from the prior valuation are quantified and/or explained
Valuation Resul	lts		
	-	_	Development of contributions is shown in detail
			Determination of Unfunded Actuarial Accrued Liability is included
- <u> </u>		<u> </u>	Amortization of UAL is prepared based on the Board's funding policy
Summary of Bei	nefits		
		<u> </u>	Benefit summary has been updated since the last valuation
Actuarial Assum	nptions and Met	hods	
			Assumptions and methods line up with the valuation runs
			Assumptions and methods have been updated for changes since last year
			All assumptions and methods are disclosed as required by the ASOPs
Demographic In	formation		
			Active age and service distribution tables have been prepared
			Retiree and Inactive demographic data schedules have been prepared
	-		Data adjustments and assumptions are disclosed as required by ASOP No. 23
Actuarial Section	n		
			The pink peer review form is completed and attached.
Comments:			
Dear			Date
Doer		NT FET	Date
Checker			Date
Review			Date

## **Next Year's Data Collection Checklist**

	Doer	Checker	N/A	
				Census data elements and formats were adequate or are modified as described below
				Financial information data elements were adequate or are modified as described below
-				Data request includes changes to statutes or plan provisions
-				Other items
			What We I	Need to Remember for Next Year's Valuation
1.	Data: _			
2.	Assumption	ons:		
3.	Method(s	)		
4.	Valuation	Runs:		
	a. Active:	<u> </u>		
	b. Retiree	es/Beneficiaries/	TVs:	
5.	Report:			
om	ments:			
	- 45-75.			
_				
-				
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-				



**GRS'** Exceptions to the Terms and Conditions

If we are awarded this engagement, we will negotiate in good faith with the WV Consolidated Public Retirement Board (CPRB) to reach an agreement on contract terms as expeditiously as possible. As the nation's largest provider of actuarial services to public entities, we have negotiated mutually acceptable contract terms with our other clients in support of similar actuarial opportunities. We expect to also successfully reach agreement with the CPRB on acceptable contract terms for this opportunity.

GRS respectfully suggests consideration of the following changes to the contract terms to better reflect the contract activities being performed under this engagement.

#### Section 3.36 Indemnification

GRS would appreciate consideration of a reasonable limit on the amount of indemnification provided by GRS in item (1) related to "any claims or losses" but in accordance with **WV Code** § **5A-3-62**. In return, GRS would be willing to offer a discount to the fees. This ensures that GRS is able to operate its business in a mutually beneficial fashion for its employee owners and more than 1,000 clients for decades to come.



# **APPENDIX E**

ACKNOWLEDGEMENT OF ADDENDA

# ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: CPR2300000002

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

	Addendum	Numbers	Received:
--	----------	---------	-----------

(Check the box next to each addendum received)

[ ]	X ]	Addendum No. 1	[	]	Addendum No. 6
[ ]	X ]	Addendum No. 2	[	]	Addendum No. 7
[	]	Addendum No. 3	[	]	Addendum No. 8
[	]	Addendum No. 4	]	]	Addendum No. 9
[	]	Addendum No. 5	[	]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Company

Company

Authorized Signature

February 27, 2023

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.



Department of Administration **Purchasing Division** 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

#### State of West Virginia **Centralized Request for Proposals** Service - Prof

Proc Folder:

1161206

**Reason for Modification:** 

Doc Description: Outside Actuarial Services

Addendum No.1 is being issued to move the bid opening date per

the attached.

**Proc Type:** 

Central Master Agreement

13:30

**Date Issued** 

**Solicitation Closes** 

Version

2023-02-16

2023-03-01

CRFP

Solicitation No

0203

CPR2300000002

2

**BID RECEIVING LOCATION** 

**BID CLERK** 

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

VENDOR

**Vendor Customer Code:** 

Vendor Name: Gabriel, Roeder, Smith & Company

Address: One Towne Square, Suite 800

Street: Town Square

City: Southfield

State: Michigan

Country: United States

**Zip**: 48076

Principal Contact: Judith A. Kermans

Vendor Contact Phone: 248.799.9000

Extension: 1125

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey (304) 558-0094

melissa.k.pettrey@wv.gov

Vendor

Signature X

vaich A. Verners

FEIN#

38-1691268

DATE

2/27/2023

All offers subject to all terms and conditions contained in this solicitation

FORM ID: WV-PRC-CRFP-002 2020\05



Department of Administration **Purchasing Division** 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

#### State of West Virginia **Centralized Request for Proposals** Service - Prof

Proc Folder:

1161206

Reason for Modification:

**Doc Description:** Outside Actuarial Services

Addendum No. 2

**Proc Type:** 

Central Master Agreement

13:30

**Date Issued** 

**Solicitation Closes** 

Version

2023-02-21

2023-03-01

CRFP

Solicitation No

0203

CPR2300000002

3

**BID RECEIVING LOCATION** 

**BID CLERK** 

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION 2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

#### VENDOR

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Vendor

Signature X

white A. Vermens

FEIN# 38-1691268

DATE

2/27/2023

All offers subject to all terms and conditions contained in this solicitation

FORM ID: WV-PRC-CRFP-002 2020\05