



February 11, 2025 (Updated March 26, 2025)

Ms. Amy Fecher, Executive Director  
Arkansas State Police Retirement System  
One Union National Plaza  
124 West Capitol Avenue, Suite 400  
Little Rock, Arkansas 72201

**Re: Actuarial Analysis of Proposed Plan Changes for Tier Two Participants**

Dear Ms. Fecher:

As requested, enclosed are the results of a supplemental actuarial valuation related to proposed benefit changes for the Arkansas State Police Retirement System.

Please let us know if you have any questions or comments.

Sincerely,  
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Mita Drazilov".

Mita D. Drazilov, ASA, FCA, MAAA

A handwritten signature in black ink that reads "Heidi G. Barry".

Heidi G. Barry, ASA, FCA, MAAA

MDD/HGB:ah  
Enclosure

# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

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**Requested By:** Ms. Amy Fecher, Executive Director  
Arkansas State Police Retirement System

**Date:** February 11, 2025 (Updated March 26, 2025)

**Submitted By:** Mita D. Drazilov, ASA, FCA, MAAA and Heidi G. Barry, ASA, FCA, MAAA  
Gabriel, Roeder, Smith & Company

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This report presents the results of an actuarial valuation of proposed changes for Tier Two members of the Arkansas State Police Retirement System.

Mita D. Drazilov and Heidi G. Barry are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

**The date of the valuation was June 30, 2024.** This means that the results of the supplemental valuation indicate what the June 30, 2024 valuation would have shown if the proposed benefit changes had been in effect on that date. Supplemental valuations do **not** predict the result of future actuarial valuations. Rather, supplemental valuations give an indication of the probable long-term cost of the **benefit changes only** without comment on the complete end result of the future valuations.

Actuarial assumptions and methods were consistent with those used in the regular actuarial valuation of the Retirement System on the valuation date, unless otherwise noted. Actuarial assumptions are adopted by the Retirement Board of Trustees. In particular:

- The assumed rate of investment return was 7.0%;
- Payroll was assumed to increase 3.25% per year; and
- Changes in Accrued Liability were amortized over 15 years.

# Arkansas State Police Retirement System

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### as of June 30, 2024

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A brief summary of the active data, as of June 30, 2024, used in these valuations is presented below:

Group	Number	Covered Payroll	Average in Years	
			Age	Service
Tier One	7	\$ 796,279	53.4	28.0
Tier Two	520	38,747,457	38.5	11.3
Tier One - DROP	22	2,263,053	56.2	29.5
Tier Two - DROP	<u>12</u>	<u>1,105,998</u>	<u>53.3</u>	<u>31.0</u>
<b>Total</b>	<b>561</b>	<b>\$ 42,912,787</b>	<b>39.7</b>	<b>12.6</b>

A brief summary of the retired data, as of June 30, 2024, used in these valuations is presented below:

Group	Number	Annual Benefits	Average Age
Tier Two Retired Members	91	\$ 2,703,192	55.5 yrs.

It is our understanding that benefits for current inactive members would not be affected by the proposed benefit changes. They were excluded from this study.

# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

#### Proposal 1

##### Present Death after Retirement Provisions for Tier Two Members:

Retiring member can provide protection for a beneficiary by electing an option which provides beneficiary protection by reducing the retired employee's benefit amount.

**Under Tier Two, if a straight life annuity is elected, no survivor benefit is payable.**

##### Proposed Death after Retirement Provisions for Tier Two Members:

Retiring member can provide protection for a beneficiary by electing an option which provides beneficiary protection by reducing the retired employee's benefit amount.

**For current and future retired members under Tier Two, if a straight life annuity is paid, upon the retiree's death, 50% of the retiree's benefit is continued to a surviving spouse. If the deceased retiree leaves children under age 18, 75% of the retiree's benefit is continued to the surviving spouse. If there is no surviving spouse, the 75% will be divided among the children under age 18.**

#### Actuarial Statement

The financial effects of the proposal are shown below. These financial effects include the computed change in (a) the employer contribution rate expressed as a percent of payroll, (b) the Fiscal Year (FY) 2025 employer contribution dollar amount and (c) the actuarial accrued liability. Payroll includes the payroll for active members as well as DROP participants. In addition, the funded ratio before and after the proposed changes are displayed.

Impact on Results			
Employer Contribution Rate	Percent of Payroll		
	Tier One	Tier Two	Total
Normal Cost	0.00%	2.17%	2.02%
UAAL (15-Year Amortization)	0.00%	3.75%	3.48%
<b>Total</b>	0.00%	5.92%	5.50%
<b>FY 2025 Employer \$ Contribution*</b>	\$ -	\$ 2,436,003	\$ 2,436,003
<b>Actuarial Accrued Liability</b>	\$ -	\$ 17,625,410	\$ 17,625,410
<b>Funded Ratio Before Change</b>	91.0%	74.9%	78.8%
<b>Funded Ratio After Change</b>	91.0%	69.3%	76.4%

\* Tier One, Tier Two and total amortization payments are expected to increase by 3.25% of payroll annually for the remainder of the amortization period.

Employers are assumed to contribute on DROP payroll.



# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

#### Proposals 2(a)-2(d)

##### Present Deferred Retirement Option Plan (DROP) Provisions for Tier Two Members:

Tier Two members with at least 28 years of credited service and who are eligible to receive a service retirement pension may participate. Participating members may continue in employment for up to 7 years and have **seventy-two percent (72%)** of their accrued monthly benefit (at date of participation) credited to an individual account in the DROP in lieu of any further benefit accruals.

##### Proposed DROP Provisions for Tier Two Members:

**For current and future DROP members,** Tier Two members with at least 28 years of credited service and who are eligible to receive a service retirement pension may participate. Participating members may continue in employment for up to 10 years and have **Proposal 2(a) one-hundred percent (100%), Proposal 2(b) eighty-five percent (85%), Proposal 2(c) eighty percent (80%) or Proposal 2(d) seventy-five percent (75%)** of their accrued monthly benefit (at date of participation) credited to an individual account in the DROP in lieu of any further benefit accruals. **For current DROP members, this benefit change would apply to future DROP accruals.**

### Actuarial Statement

The financial effects of the proposal are shown below. These financial effects include the computed change in (a) the employer contribution rate expressed as a percent of payroll, (b) the Fiscal Year (FY) 2025 employer contribution dollar amount and (c) the actuarial accrued liability. Payroll includes the payroll for active members as well as DROP participants. In addition, the funded ratio before and after the proposed changes are displayed.

	Impact on Results					
	Proposal 2(a)			Proposal 2(b)		
	100% DROP Account Accrual			85% DROP Account Accrual		
	Percent of Payroll			Percent of Payroll		
Employer Contribution Rate	Tier One	Tier Two	Total	Tier One	Tier Two	Total
Normal Cost	0.00%	0.55%	0.51%	0.00%	0.22%	0.20%
UAAL (15-Year Amortization)	0.00%	0.89%	0.83%	0.00%	0.38%	0.35%
<b>Total</b>	0.00%	1.44%	1.34%	0.00%	0.60%	0.55%
<b>FY 2025 Employer \$ Contribution*</b>	\$ -	\$ 592,541	\$ 592,541	\$ -	\$ 246,892	\$ 246,892
<b>Actuarial Accrued Liability</b>	\$ -	\$ 4,195,322	\$ 4,195,322	\$ -	\$ 1,781,244	\$ 1,781,244
<b>Funded Ratio Before Change</b>	91.0%	74.9%	78.8%	91.0%	74.9%	78.8%
<b>Funded Ratio After Change</b>	91.0%	73.6%	78.2%	91.0%	74.3%	78.5%

  

	Impact on Results					
	Proposal 2(c)			Proposal 2(d)		
	80% DROP Account Accrual			75% DROP Account Accrual		
	Percent of Payroll			Percent of Payroll		
Employer Contribution Rate	Tier One	Tier Two	Total	Tier One	Tier Two	Total
Normal Cost	0.00%	0.12%	0.11%	0.00%	0.04%	0.04%
UAAL (15-Year Amortization)	0.00%	0.22%	0.21%	0.00%	0.08%	0.07%
<b>Total</b>	0.00%	0.34%	0.32%	0.00%	0.12%	0.11%
<b>FY 2025 Employer \$ Contribution*</b>	\$ -	\$ 139,906	\$ 139,906	\$ -	\$ 49,379	\$ 49,379
<b>Actuarial Accrued Liability</b>	\$ -	\$ 1,041,889	\$ 1,041,889	\$ -	\$ 365,879	\$ 365,879
<b>Funded Ratio Before Change</b>	91.0%	74.9%	78.8%	91.0%	74.9%	78.8%
<b>Funded Ratio After Change</b>	91.0%	74.6%	78.6%	91.0%	74.8%	78.7%

\* Tier One, Tier Two and total amortization payments are expected to increase by 3.25% of payroll annually for the remainder of the amortization period.

Employers are assumed to contribute on DROP payroll.



# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

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#### Proposals 3(a)-3(d) Combination of Proposals 1 and 2

##### Present Provisions for Tier Two Members:

###### **Deferred Retirement Option Plan (DROP)**

Tier Two members with at least 28 years of credited service and who are eligible to receive a service retirement pension may participate. Participating members may continue in employment for up to 7 years and have **seventy-two percent (72%)** of their accrued monthly benefit (at date of participation) credited to an individual account in the DROP in lieu of any further benefit accruals.

###### **Death after Retirement**

Retiring member can provide protection for a beneficiary by electing an option which provides beneficiary protection by reducing the retired employee's benefit amount.

**Under Tier Two, if a straight life annuity is elected, no survivor benefit is payable.**

##### Proposed Provisions for Tier Two Members:

###### **Deferred Retirement Option Plan (DROP)**

**For current and future DROP members,** Tier Two members with at least 28 years of credited service and who are eligible to receive a service retirement pension may participate. Participating members may continue in employment for up to 10 years and have **Proposal 3(a) one-hundred percent (100%), Proposal 3(b) eighty-five percent (85%), Proposal 3(c) eighty percent (80%) or Proposal 3(d) seventy-five percent (75%)** of their accrued monthly benefit (at date of participation) credited to an individual account in the DROP in lieu of any further benefit accruals. **For current DROP members, this benefit change would apply to future DROP accruals.**

###### **Death after Retirement**

Retiring member can provide protection for a beneficiary by electing an option which provides beneficiary protection by reducing the retired employee's benefit amount.

**For current and future retired members under Tier Two, if a straight life annuity is paid, upon the retiree's death, 50% of the retiree's benefit is continued to a surviving spouse. If the deceased retiree leaves children under age 18, 75% of the retiree's benefit is continued to the surviving spouse. If there is no surviving spouse, the 75% will be divided among the children under age 18.**

# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

#### Proposals 3(a)-3(d) Combination of Proposals 1 and 2

#### Actuarial Statement

The financial effects of the proposal are shown below. These financial effects include the computed change in (a) the employer contribution rate expressed as a percent of payroll, (b) the Fiscal Year (FY) 2025 employer contribution dollar amount and (c) the actuarial accrued liability. Payroll includes the payroll for active members as well as DROP participants. In addition, the funded ratio before and after the proposed changes are displayed.

Impact on Results						
	Proposal 3(a) 100% DROP Account Benefit & Automatic 50% Survivor Benefit			Proposal 3(b) 85% DROP Account Benefit & Automatic 50% Survivor Benefit		
	Percent of Payroll			Percent of Payroll		
	Tier One	Tier Two	Total	Tier One	Tier Two	Total
<b>Employer Contribution Rate</b>						
Normal Cost	0.00%	2.64%	2.46%	0.00%	2.34%	2.18%
UAAL (15-Year Amortization)	0.00%	4.55%	4.23%	0.00%	4.07%	3.78%
<b>Total</b>	0.00%	7.19%	6.69%	0.00%	6.41%	5.96%
<b>FY 2025 Employer \$ Contribution*</b>	\$ -	\$ 2,958,591	\$ 2,958,591	\$ -	\$ 2,637,631	\$ 2,637,631
<b>Actuarial Accrued Liability</b>	\$ -	\$ 21,409,293	\$ 21,409,293	\$ -	\$ 19,126,898	\$ 19,126,898
<b>Funded Ratio Before Change</b>	91.0%	74.9%	78.8%	91.0%	74.9%	78.8%
<b>Funded Ratio After Change</b>	91.0%	68.3%	75.9%	91.0%	68.9%	76.2%

  

Impact on Results						
	Proposal 3(c) 80% DROP Account Benefit & Automatic 50% Survivor Benefit			Proposal 3(d) 75% DROP Account Benefit & Automatic 50% Survivor Benefit		
	Percent of Payroll			Percent of Payroll		
	Tier One	Tier Two	Total	Tier One	Tier Two	Total
<b>Employer Contribution Rate</b>						
Normal Cost	0.00%	2.26%	2.11%	0.00%	2.20%	2.05%
UAAL (15-Year Amortization)	0.00%	3.93%	3.65%	0.00%	3.81%	3.54%
<b>Total</b>	0.00%	6.19%	5.76%	0.00%	6.01%	5.59%
<b>FY 2025 Employer \$ Contribution*</b>	\$ -	\$ 2,547,104	\$ 2,547,104	\$ -	\$ 2,473,037	\$ 2,473,037
<b>Actuarial Accrued Liability</b>	\$ -	\$ 18,477,684	\$ 18,477,684	\$ -	\$ 17,915,438	\$ 17,915,438
<b>Funded Ratio Before Change</b>	91.0%	74.9%	78.8%	91.0%	74.9%	78.8%
<b>Funded Ratio After Change</b>	91.0%	69.1%	76.3%	91.0%	69.2%	76.4%

\* Tier One, Tier Two and total amortization payments are expected to increase by 3.25% of payroll annually for the remainder of the amortization period.

Employers are assumed to contribute on DROP payroll.

# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

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#### Additional Comments

**Comment 1** — The figures shown on the prior page are based on the June 30, 2024 actuarial valuation. Please remember that this change, if adopted, would likely impact the June 30, 2025 valuation. That valuation will likely be completed in the fall of 2025, and is based on member data and financial results as of June 30, 2025, neither of which is available to us at this time.

**Comment 2** — The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in this report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the authors of this report prior to relying on information in this report.

**Comment 3** — If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the authors of this report prior to making such decision.

**Comment 4** — This report is intended to describe the financial effect of the proposed plan change. No statement in this report is intended to be interpreted as a recommendation in favor of the change, or in opposition to it.

**Comment 5** — In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

**Comment 6** — This report is intended to describe the financial effect of the proposed plan change on the Retirement System. Except as otherwise noted, potential effects on other benefit plans were not considered.

**Comment 7** — The reader of this report should keep in mind that actuarial calculations are mathematical estimates based on current data and assumptions about future events (which may or may not materialize). Please note that actuarial calculations can and do vary from one valuation year to the next, sometimes significantly if the group valued is very small (less than 30 lives). As a result, the cost impact of a benefit change may fluctuate over time, as the demographics of the group changes.

**Comment 8** — It was assumed that all Tier Two active and current Tier Two DROP members as of June 30, 2024 would be affected by the changes in the DROP provisions. It was assumed that all Tier Two active members and current Tier Two retirees as of June 30, 2024 who have chosen a straight life or 50% joint and survivor benefit option at retirement would be affected by the changes in the death after retirement benefit provisions.





# Arkansas State Police Retirement System

## Supplemental Actuarial Valuation

### as of June 30, 2024

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#### Additional Comments (Concluded)

**Comment 9** — It was assumed that 90% of current Tier Two retirees as of June 30, 2024 who have chosen a straight life benefit are married. Male spouses are assumed to be three years older than female spouses.

**Comment 10** — The probabilities of retirement were not adjusted in connection with this valuation. If members retire differently than our assumptions, as a result of the proposed change(s), then the cost/savings of the benefit change will be different than shown herein.

**Comment 11** — It was assumed that members will participate in the forward DROP to the extent that participating in the forward DROP would provide the highest value of benefits.

**Comment 12** — This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.