

GASB 67 Actuarial Information for the Fiscal Year Ending June 30, 2024

GASB 68 Actuarial Information for the Fiscal Year Ending June 30, 2024 (Measurement Period Ending June 30, 2024)



Submitted by:

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December 16, 2024

Mr. Robert Bolyard Finance Director City of Grafton 1 W. Main Street Grafton, WV 26354 Deputy Chief Ryan Roberts
Pension Board Secretary
City of Grafton
Firemen's Pension and Relief Fund

Re: City of Grafton Firemen's Pension and Relief Fund
GASB 67 and GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2024

Dear Robert,

The following report contains the GASB 67 actuarial information to be included with the plan's financial statements for the plan year ending June 30, 2024 and the GASB 68 actuarial information to be included with the City's financial statements for the fiscal year ending June 30, 2024. The GASB 68 information has been provided as of the June 30, 2024 measurement date for FY 2024.

Methodology, Reliance and Certification

This report was prepared for the internal use of the City and its auditors in connection with our actuarial valuations of the pension plan as required by GASB 68. The purpose of this report is to provide the GASB 67 actuarial information for use in the plan's financial statements for the plan year ending June 30, 2024 and the GASB 68 information for use in the City's financial statements for the fiscal year ending June 30, 2024. It is neither intended nor necessarily suitable for other purposes. Bolton is not responsible for the consequences of any other use or the reliance upon this report by any other party.

These calculations are applicable for the valuation date only. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

The total pension liability is based on the July 1, 2023 actuarial valuation rolled forward to June 30, 2024. Our understanding is that there have been no substantial changes affecting the liabilities of the plan since July 1, 2023 that would cause our estimates of the June 30, 2024 liabilities to not reasonably reflect the condition of the plan. The methods, assumptions, and participant data used are detailed in the July 1, 2023 actuarial valuation report. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the actuarially determined contribution for the fiscal year ended June 30, 2024 is contained in the July 1, 2022 actuarial valuation report. The discount rate assumption may be different if a blended rate is used for GASB purposes.

The included calculations assume that the members and the City will continue to make all required contributions in accordance with the City's funding policy. The level of plan assets, the expected future employer and employee contributions, and the expected future investment earnings are expected to be sufficient to cover all expected future benefits and expenses. Thus, these GASB results were developed using the long-term investment return assumption as the discount rate.

The long-term nominal expected rate of return on pension plan investments was determined using a methodology approved by the Municipal Pensions Oversight Board (MPOB) and is based on the funded status (current and projected), equity exposure, and funding policy.

Mr. Robert Bolyard December 16, 2024 Page 2

Methodology, Reliance and Certification (cont.)

This report is based on plan provisions, census data, and asset data submitted by the City. We have relied on this information for purposes of preparing this report. We have not audited the census data provided; however, based on our review, the data appears to be reasonable and consistent with previously provided information. Unless otherwise noted in our report, we believe the information provided is sufficiently complete and reliable for purposes of the results presented in this report. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The City is solely responsible for the validity and completeness of this information.

The City is responsible for selecting the plan's funding policy based on five methods allowed for under state law. The actuarial valuation methods are chosen by the actuary in accordance with actuarial standards of practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries and as required by GASB 67 & 68. The MPOB selects the asset valuation methods and assumptions; these selections are reviewed by a qualified actuary no less than every five years. The actuary shall provide a report to the Board with recommendations on any changes to the actuarial process. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in this report. The City and MPOB are solely responsible for communicating to Bolton Partners, Inc. any changes required thereto.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward-looking projection over a very long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future.

The City could reasonably ask how the valuation would change if we used a different assumption set or if plan experience exhibited variations from our assumptions. This report does not contain such an analysis. That type of analysis would be a separate assignment.

In addition, decisions regarding benefit improvements, benefit changes, the trust's investment policy, and similar issues should not be based on this valuation. These issues are complex and other factors should be considered when making such decisions. Other factors might include the anticipated vitality of the local economy and future growth expectations, as well as other economic and financial factors.

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the City or, in this case, a measure of accounting expense. It does not affect the cost of the plan. As the experience of the plan evolves, it is normal for the level of contributions and expense of the plan to change.



Mr. Robert Bolyard December 16, 2024 Page 3

Methodology, Reliance and Certification (cont.)

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the plan in the case of plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

The valuation was completed using both proprietary and third-party models (including software and tools). We have tested these models to ensure they are used for their intended purposes, within their known limitations, and without any known material inconsistencies unless otherwise stated.

The calculations in this report have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the Plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

We make every effort to ensure that our calculations are accurately performed. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

Bolton does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretation on which this report is based reflects Bolton's understanding as an actuarial firm. Bolton recommends that recipients of this report consult with legal counsel when making any decisions regarding compliance with ERISA, the Internal Revenue Code, or any other statute or regulation.

The City should notify Bolton promptly after receipt of this report if the City disagrees with anything contained in the report or is aware of any information that would affect the results of the report that has not been communicated to Bolton or incorporated herein. The report will be deemed final and acceptable to the City unless the City promptly provides such notice to Bolton.

The undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2023 actuarial valuation report contains information that is integral to the results contained herein and a copy may be provided upon request.

Sincerely,

James Ritchie, ASA, EA, FCA, MAAA

Jordan McClane, FSA, EA, FCA, MAAA

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Actuarial Information to Include in the Financial Statements for the June 30, 2024 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2024, were as follows:

Total pension liability	\$ 2,236,391
Plan fiduciary net position	 (2,024,626)
Employer's net pension liability	\$ 211,765
Plan fiduciary net position as a percentage of the total pension liability	90.53%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2023 rolled forward to June 30, 2024 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 2.50% Rates vary by years of service Salary increases 6.00% Single discount rate (BOY) Single discount rate (EOY) 6.00% Investment rate of return (BOY) 6.00%, net of pension plan investment expense, including inflation 6.00%, net of pension plan investment expense, including inflation Investment rate of return (EOY) Long-term municpal bond rate (BOY) 3.86% Long-term municpal bond rate (EOY) 3.97% SOA PubS-2010(B) with generational projection using Scale MP-2021 Mortality Year Fund is projected to be fully funded 2029

Year assets are expected to be depleted N/A

for a closed plan

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2023 actuarial valuation report.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	Decrease 5.00%	Current count Rate 6.00%	1%	Increase 7.00%	
Employer's net pension liability	\$ 448,035	\$	211,765	\$	13,005

City of Grafton, West Virginia Firemen's Pension and Relief Fund Actuarial Information to Include in the Financial Statements for the June 30, 2024 Measurement Date



Changes in the Net Pension Liability

	I	ncrea	ase (Decrease)	
	tal Pension Liability (a)		an Fiduciary et Position (b)		et Pension Liability (a) - (b)
Balances at 6/30/23	\$ 2,199,220	\$	1,932,437	\$	266,783
Changes for the year:					
Service cost	-				-
Interest	127,271				127,271
Changes of benefit terms	-				-
Differences between expected and actual experience	87,005				87,005
Changes of assumptions	(21,040)				(21,040)
Contributions - employer (including Premium Tax Allocation)			91,287		(91,287)
Contributions - member			-		-
Net investment income			158,167		(158,167)
Benefit payments, including refunds of member contributions	(156,065)		(156,065)		-
Administrative expense			(1,200)		1,200
Other					-
Net Changes	 37,171		92,189		(55,018)
Balances at 6/30/24	\$ 2,236,391	\$	2,024,626	\$	211,765
Return on Investments			8.3%		





Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2024

Note	Description	Amount
Α	Service cost	\$ -
В	Interest on the total pension liability	127,271
Α	Changes of benefit terms	-
С	Differences between expected and actual experience	87,005
С	Changes of assumptions	(21,040)
Α	Employee contributions	-
D	Projected earnings on pension plan investments	(113,967)
С	Differences between expected and actual earnings on plan investments	10,404
Α	Pension plan administrative expense	1,200
Α	Other changes in fiduciary net position	-
	Total Pension Expense	\$ 90,873

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

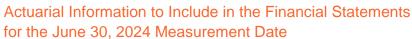
B Based on the following calculation:

	F	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	E	rojected arnings x (b) x (c)
Beginning total pension liability	\$	2,199,220	100%	6.00%	\$	131,953
Service cost (end of year)		-	0%	6.00%		-
Benefit payments, including refunds of employee contributions		(156,065)	50%	6.00%		(4,682)
Total interest on the total pension liability					\$	127,271

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	F	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	E	rojected arnings x (b) x (c)
Beginning plan fiduciary net position	\$	1,932,437	100%	6.00%	\$	115,946
Employer contributions		91,287	50%	6.00%		2,739
Employee contributions		-	50%	6.00%		-
Benefit payments, including refunds of employee contributions		(156,065)	50%	6.00%		(4,682)
Administrative expense and other		(1,200)	50%	6.00%		(36)
Total Projected Earnings					\$	113,967





Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2024, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	ed Outflows esources	rred Inflows Resources
Differences between expected and actual experience	\$ -	\$ -
Changes of assumptions	-	-
Net difference between projected and actual earnings	30,624	
on pension plan investments		-
Total	\$ 30,624	\$ -

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2025	\$ 7,108
2026	44,826
2027	(12,470)
2028	(8,840)
2029	-
Thereafter	-

Actuarial Information to Include in the Financial Statements

for the June 30, 2024 Measurement Date

Total pension liability

Changes in the Employer's Net Pension Liability and Related Ratios Last 10 Fiscal Years

B

Service cost	\$	-	\$	-	\$	-	\$	-	\$	-	\$	14,433	\$	11,904	\$	24,172	\$	20,265	\$	16,998
Interest		127,271		127,119		129,190		143,080		164,119		157,279		156,177		162,452		160,757		147,952
Changes of benefit terms		-		-		-		-		-		-		-		-		-		-
Differences between expected and actual experience		87,005		30,039		(12,323)		(12,607)		(367,062)		88,078		(132,769)		(83,721)		154,358		19,796
Changes of assumptions		(21,040)		-		-		(212,954)		-		-		-		-		282,960		-
Benefit payments, including refunds of member contributions		(156,065)		(153,176)		(149,576)		(148,496)		(146,876)		(144,716)		(142,826)		(161,765)		(133,989)		(113,887)
Net change in total pension liability		37,171		3,982		(32,709)		(230,977)		(349,819)		115,074		(107,514)		(58,862)		484,351		70,859
Total pension liability - beginning		2,199,220		2,195,238		2,227,947		2,458,924		2,808,743		2,693,669		2,801,183		2,860,045		2,375,694		2,304,835
Total pension liability - ending (a)	\$	2,236,391	\$	2,199,220	\$	2,195,238	\$	2,227,947	\$	2,458,924	\$	2,808,743	\$	2,693,669	\$	2,801,183	\$	2,860,045	\$	2,375,694
Plan fiduciary net position		2024		2023		2022		2021		2020		2019		2018		2017		2016		2015
Contributions - employer (including Premium Tax Allocation)	\$	91,287	\$	97,718	\$	51,160	\$	97,633	\$	135,812	\$	122,156	\$	140,558	\$	136,240	\$	93,567	\$	102,218
Contributions - member	•	-	•	-	•	-	•	-	•	-	·	9,000	•	2,982	•	4,034	•	4,707	•	5,266
Net investment income		158,167		128,103		(162,088)		299,539		91,445		132,042		89,065		94,822		(16,695)		46,756
Benefit payments, including refunds of member contributions		(156,065)		(153,176)		(149,576)		(148,496)		(146,876)		(144,716)		(142,826)		(161,765)		(133,989)		(113,887)
Administrative expense		(1,200)		(1,203)		(1,200)		(1,200)		(19,200)		(1,200)		(1,200)		(1,347)		(1,446)		(1,273)
Other		-		-		-		-		-		-		-		-		-		-
Net change in plan fiduciary net position	\$	92,189	\$	71,442	\$	(261,704)	\$	247,476	\$	61,181	\$	117,282	\$	88,579	\$	71,984	\$	(53,856)	\$	39,080
Plan fiduciary net position - beginning		1,932,437		1,860,995		2,122,699		1,875,223		1,814,042		1,696,760		1,608,182		1,536,198		1,590,054		1,550,973
Plan fiduciary net position - ending (b)	\$	2,024,626	\$	1,932,437	\$	1,860,995	\$	2,122,699	\$	1,875,223	\$	1,814,042	\$	1,696,760	\$	1,608,182	\$	1,536,198	\$	1,590,053
Employer's net pension liability - ending (a)-(b)	\$	211,765	\$	266,783	\$	334,243	\$	105,248	\$	583,701	\$	994,701	\$	996,909	\$	1,193,001	\$	1,323,847	\$	785,641
Plan fiduciary net position as a percentage of the																				
total pension liability		90.53%		87.87%		84.77%		95.28%		76.26%		64.59%		62.99%		57.41%		53.71%		66.93%
Covered payroll		N/A	\$	44,446	\$	36,547	\$	68,362	\$	75,231	\$	61,732								
Employer's net pension liability as a percentage of																				
covered payroll		N/A		2238.00%		2727.71%		1745.13%		1759.71%		1272.66%								
Expected average remaining service years of all participants		1.00		1.00		1.00		1.00		1.00		1.00		1.27		2.78		2.94		2.88

2021

2019

2022

Notes to Schedule: Benefit changes:

There were no changes for FY2024.

Changes of assumptions: Pursuant to the 2023 Experience Study Report, changes were made to cost-of-living increases, mortality improvement rates, retirement rates, termination rates, and disability rates.

2024

Actuarial Information to Include in the Financial Statements for the June 30, 2024 Measurement Date

Schedule of Employer Contributions

Last 10 Fiscal Years



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Actuarially determined contribution	\$ 45,462	\$ 41,504	\$ 49,788	\$ 75,339	\$ 129,613	\$ 120,337	\$ 143,624	\$ 138,617	\$ 90,056	\$ 102,530
Contributions in relation to the actuarially determined contribution										
Employer provided	30,000	45,500	1,261	50,000	95,000	81,000	101,391	99,644	64,100	70,309
State provided	61,287	52,218	49,899	47,633	40,812	41,156	39,167	36,596	29,467	31,909
Contribution deficiency (excess)	\$ (45,825)	\$ (56,214)	\$ (1,372)	\$ (22,294)	\$ (6,199)	\$ (1,819)	\$ 3,066	\$ 2,377	\$ (3,511)	\$ 312
Covered payroll	N/A	N/A	N/A	N/A	N/A	\$ 44,446	\$ 36,547	\$ 68,362	\$ 75,231	\$ 61,732
Outsite diagrams and another after a second and a second and a second	N1/A	N1/A	N1/A	N1/A	N1/A	074.040/	004.000/	400.000/	404.070/	405 500/
Contributions as a percentage of covered employee payroll	N/A	N/A	N/A	N/A	N/A	274.84%	384.60%	199.29%	124.37%	165.58%

Notes to Schedule

Valuation date:

Actuarially determined contribution (ADC) amounts are calculated as of the beginning of the fiscal year (July 1) for the year immediately following the fiscal year. The assumptions shown below are those used in the 7/1/2022 actuarial valuation to calculate the FY2024 ADC. Assumptions used to determine all contributions in the past would not have been the same.

Methods and assumptions used to determine contribution rates:

Actuarial cost method Entry Age Normal
Amortization method Level Dollar
Remaining amortization period 8 to 15 years

Asset valuation method 4-year smoothed market

Inflation 2.50%

Salary increases Rates vary by years of service

Investment rate of return 6.00%, net of pension plan investment expense, including inflation

Retirement age Rates vary by age

Mortality SOA PubS-2010(B) with generational projection using Scale MP-2019

Actuarial Information to Include in the Financial Statements for the June 30, 2024 Measurement Date



Schedule of Differences between Projected and Actual Earnings on Pension Plan Investments

In conformity with paragraph 33b of Statement 68, the effects of differences between projected and actual earnings on pension plan investments are recognized in pension expense using a systematic and rational method over a closed five-year period, beginning in the current reporting period. The following table illustrates the application of this requirement.

	betwee and Ad on P	ifferences een Projected ctual Earnings Pension Plan	Recognition Period	Difference	ween Projec	Expense Aris nd Actual Ea	s on Plan In	_	nents
Year	ln	vestments	(Years)	2024	2025	2026	2027		2028
2020	\$	16,490	5	3,298					
2021		(188,588)	5	(37,718)	(37,716)				
2022		286,462	5	57,292	57,292	57,294			
2023		(18,142)	5	(3,628)	(3,628)	(3,628)	(3,630)		
2024		(44,200)	5	\$ (8,840)	(8,840)	(8,840)	(8,840)		(8,840)
Net increa	ase (dec	rease) in pension	n expense	\$ 10,404	\$ 7,108	\$ 44,826	\$ (12,470)	\$	(8,840)

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Projected and Actual Earnings on Pension Plan Investments

	Investment	Investment	Amounts cognized in		Balan June 3		
Year	Earnings Less than Projected (a)	Earnings Greater than Projected (b)	ion Expense Through ne 30, 2024 (c)	Ou Re	eferred atflows of esources a) - (c)	h	Deferred nflows of esources (b) - (c)
2020	\$ 16,490	\$ -	\$ 16,490	\$	-	\$	-
2021	=	188,588	150,872		-		37,716
2022	286,462	-	171,876		114,586		-
2023	=	18,142	7,256		-		10,886
2024	-	44,200	8,840		-		35,360
				\$	114,586	\$	83,962

Actuarial Information to Include in the Financial Statements for the June 30, 2024 Measurement Date

B

Schedule of Differences between Expected and Actual Experience

In conformity with paragraph 33a of Statement 68, the effects of differences between expected and actual experience are recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

Differences between Expected and Recognition Actual Period				Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Experience										
Year	Experience	(Years)		2024	20	25	2026		2027		2028	2	029	Thereafter
2016	154,358	2.938776												
2017	(83,721)	2.777475												
2018	(132,769)	1.274654												
2019	88,078	1.000000												
2020	(367,062)	1.000000												
2021	(12,607)	1.000000												
2022	(12,323)	1.000000												
2023	30,039	1.000000												
2024	87,005	1.000000	\$	87,005										
Net increase (decrease) in pension expense			\$	87,005	\$	-	\$	-	\$	-	\$ -	\$	-	\$ -

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Expected and Actual Experience

			Amounts Recognized in	June 3	oces at 60, 2024
Year	Experience Losses (a)	Experience Gains (b)	Pension Expense Through June 30, 2024 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	154,358	-	154,358	-	-
2017	-	83,721	83,721	-	-
2018	-	132,769	132,769	-	-
2019	88,078	-	88,078	-	-
2020	-	367,062	367,062	-	-
2021	-	12,607	12,607	-	-
2022	-	12,323	12,323	-	-
2023	30,039	-	30,039	-	-
2024	87,005	-	87,005	-	-
				\$ -	\$ -

Actuarial Information to Include in the Financial Statements for the June 30, 2024 Measurement Date

B

Schedule of Changes of Assumptions

In conformity with paragraph 33a of Statement 68, the effects of changes of assumptions should be recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

	Changes of	Recognition Period	Inc	rease (De	ecrease) i	in Pension E	Expen	se Arising f	from tl	he Effects of	Char	nges of Assump	otions
Year	Assumptions	(Years)	2024	20	25	2026		2027		2028		2029	Thereafter
2016	282,960	2.938776											
2017	-	2.777475											
2018	-	1.274654											
2019	-	1.000000											
2020	-	1.000000											
2021	(212,954)	1.000000											
2022	-	1.000000											
2023	-	1.000000											
2024	(21,040)	1.000000	\$ (21,040)										
Net increase (decrease) in pension expense			\$ (21,040)	\$	-	\$	-	\$	-	\$	-	\$ -	\$

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions

	Increases	Decreases	Amounts Recognized in	Balances at June 30, 2024					
Year	in the Total Pension Liability (a)	in the Total Pension Liability (b)	Pension Expense Through June 30, 2024 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)				
2016	282,960	-	282,960	-	-				
2017	-	-	-	-	-				
2018	-	-	-	-	-				
2019	-	-	-	-	-				
2020	-	-	-	-	-				
2021	-	212,954	212,954	-	-				
2022	-	-	-	-	-				
2023	-	-	-	-	-				
2024	-	21,040	21,040	-	-				
				\$ -	\$ -				