



## **Municipal Pensions Oversight Board**

### **City of South Charleston West Virginia Policemen's Pension and Relief Fund**

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)

# **Bolton**

Submitted by:

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December 30, 2024

Ms. Hannah Parsons  
City Treasurer  
City of South Charleston  
238 Fourth Avenue/P.O. Box 8597  
South Charleston, WV 25303

Sergeant Daniel Johnson  
Pension Board Secretary  
City of South Charleston  
Policemen's Pension and Relief Fund

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

Dear Hannah,

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 was used for GASB purposes.

The included calculations are based on a blended discount rate of 4.22%. The plan's expected gross rate of investment return of 4.25% has been blended with the 3.97% yield corresponding to the 20-year maturity on a municipal general obligation AA bond yield curve published on Fidelity's Fixed Income Market Data webpage as of June 30, 2024. The development of the blended discount rate is included within this report.

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.

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.

### 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.



Methodology, Reliance and Certification (cont.)

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.

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.

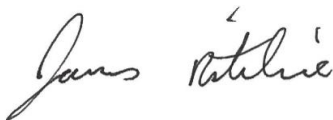
We make every effort to ensure that our calculations are accurately performed. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

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



City of South Charleston, West Virginia Policemen’s Pension and Relief Fund  
 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	\$ 36,900,944
Plan fiduciary net position	(5,236,521)
Employer's net pension liability	<u>\$ 31,664,423</u>
Plan fiduciary net position as a percentage of the total pension liability	14.19%

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%
Salary increases	Rates vary by years of service
Single discount rate (BOY)	4.06%
Single discount rate (EOY)	4.22%
Investment rate of return (BOY)	4.25%, net of pension plan investment expense, including inflation
Investment rate of return (EOY)	4.25%, net of pension plan investment expense, including inflation
Long-term municipal bond rate (BOY)	3.86%
Long-term municipal bond rate (EOY)	3.97%
Mortality	SOA PubS-2010(B) with generational projection using Scale MP-2021
Year Fund is projected to be fully funded	2059
Year assets are expected to be depleted for a closed plan	2049

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

	1% Decrease 3.22%	Current Discount Rate 4.22%	1% Increase 5.22%
Employer's net pension liability	\$ 38,266,353	\$ 31,664,423	\$ 26,488,233

City of South Charleston, West Virginia Policemen'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

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
<b>Balances at 6/30/23</b>	\$ 35,642,023	\$ 4,443,937	\$ 31,198,086
<b>Changes for the year:</b>			
Service cost	1,289,859		1,289,859
Interest	1,423,147		1,423,147
Changes of benefit terms	-		-
Differences between expected and actual experience	805,992		805,992
Changes of assumptions	(1,081,801)		(1,081,801)
Contributions - employer (including Premium Tax Allocation)		1,104,961	(1,104,961)
Contributions - member		250,313	(250,313)
Net investment income		618,249	(618,249)
Benefit payments, including refunds of member contributions	(1,178,276)	(1,178,276)	-
Administrative expense		(2,663)	2,663
Other		-	-
<b>Net Changes</b>	<u>1,258,921</u>	<u>792,584</u>	<u>466,337</u>
<b>Balances at 6/30/24</b>	<u>\$ 36,900,944</u>	<u>\$ 5,236,521</u>	<u>\$ 31,664,423</u>
Return on Investments		13.6%	

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



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

Note	Description	Amount
A	Service cost	\$ 1,289,859
B	Interest on the total pension liability	1,423,147
A	Changes of benefit terms	-
C	Differences between expected and actual experience	455,061
C	Changes of assumptions	(1,356,712)
A	Employee contributions	(250,313)
D	Projected earnings on pension plan investments	(192,571)
C	Differences between expected and actual earnings on plan investments	(132,275)
A	Pension plan administrative expense	2,663
A	Other changes in fiduciary net position	-
<b>Total Pension Expense</b>		<b>\$ 1,238,859</b>

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

B Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Projected Earnings (a) x (b) x (c)
Beginning total pension liability	\$ 35,642,023	100%	4.06%	\$ 1,447,066
Service cost (end of year)	1,289,859	0%	4.06%	-
Benefit payments, including refunds of employee contributions	(1,178,276)	50%	4.06%	(23,919)
<b>Total interest on the total pension liability</b>				<b>\$ 1,423,147</b>

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning plan fiduciary net position	\$ 4,443,937	100%	4.25%	\$ 188,867
Employer contributions	1,104,961	50%	4.25%	23,480
Employee contributions	250,313	50%	4.25%	5,319
Benefit payments, including refunds of employee contributions	(1,178,276)	50%	4.25%	(25,038)
Administrative expense and other	(2,663)	50%	4.25%	(57)
<b>Total Projected Earnings</b>				<b>\$ 192,571</b>

City of South Charleston, West Virginia Policemen’s Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
 for the June 30, 2024 Measurement Date



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:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 1,973,396	\$ 230,470
Changes of assumptions	583,323	3,723,421
Net difference between projected and actual earnings on pension plan investments	-	318,618
<b>Total</b>	<b>\$ 2,556,719</b>	<b>\$ 4,272,509</b>

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	\$ (1,073,852)
2026	(614,015)
2027	112,372
2028	(140,295)
2029	-
Thereafter	-



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



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

Total pension liability	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Service cost	\$ 1,289,859	\$ 1,267,171	\$ 1,435,399	\$ 1,641,213	\$ 1,494,784	\$ 1,334,339	\$ 1,293,506	\$ 1,452,634	\$ 844,315	\$ 770,721
Interest	1,423,147	1,282,421	1,095,911	1,234,911	1,203,810	1,136,491	1,101,668	983,495	1,009,150	1,046,913
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	805,992	1,990,736	(21,369)	(1,109,611)	469,555	465,074	(326,827)	(114,902)	(1,122,758)	(551,459)
Changes of assumptions	(1,081,801)	(516,936)	(6,093,764)	(551,561)	2,041,623	116,447	(273,301)	(3,460,883)	6,786,401	1,290,559
Benefit payments, including refunds of member contributions	(1,178,276)	(1,368,284)	(1,157,614)	(1,142,046)	(1,070,847)	(993,959)	(966,927)	(931,208)	(908,898)	(914,821)
Net change in total pension liability	1,258,921	2,655,108	(4,741,437)	72,906	4,138,925	2,058,392	828,119	(2,070,864)	6,608,210	1,641,913
Total pension liability - beginning	35,642,023	32,986,915	37,728,352	37,655,446	33,516,521	31,458,129	30,630,010	32,700,874	26,092,664	24,450,751
<b>Total pension liability - ending (a)</b>	<b>\$ 36,900,944</b>	<b>\$ 35,642,023</b>	<b>\$ 32,986,915</b>	<b>\$ 37,728,352</b>	<b>\$ 37,655,446</b>	<b>\$ 33,516,521</b>	<b>\$ 31,458,129</b>	<b>\$ 30,630,010</b>	<b>\$ 32,700,874</b>	<b>\$ 26,092,664</b>
<b>Plan fiduciary net position</b>	<b>2024</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Contributions - employer (including Premium Tax Allocation)	\$ 1,104,961	\$ 979,910	\$ 1,015,962	\$ 1,277,663	\$ 930,991	\$ 858,028	\$ 890,023	\$ 769,020	\$ 783,418	\$ 1,031,025
Contributions - member	250,313	248,223	227,034	191,751	184,742	158,248	158,248	145,280	143,722	131,662
Net investment income	618,249	385,948	(491,814)	801,982	222,488	114,488	154,866	156,124	(21,092)	83,283
Benefit payments, including refunds of member contributions	(1,178,276)	(1,368,284)	(1,157,614)	(1,142,046)	(1,070,847)	(993,959)	(966,927)	(931,208)	(908,898)	(914,821)
Administrative expense	(2,663)	(2,400)	(2,400)	(2,400)	(2,400)	(2,400)	(2,400)	(2,738)	(9,425)	(2,716)
Other	-	-	-	-	-	-	-	-	2,294	35
Net change in plan fiduciary net position	\$ 792,584	\$ 243,397	\$ (408,832)	\$ 1,126,950	\$ 264,974	\$ 134,405	\$ 233,810	\$ 136,478	\$ (9,981)	\$ 328,468
Plan fiduciary net position - beginning	4,443,937	4,200,540	4,609,372	3,482,422	3,217,448	3,083,043	2,849,233	2,748,447	2,730,353	2,401,885
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 5,236,521</b>	<b>\$ 4,443,937</b>	<b>\$ 4,200,540</b>	<b>\$ 4,609,372</b>	<b>\$ 3,482,422</b>	<b>\$ 3,217,448</b>	<b>\$ 3,083,043</b>	<b>\$ 2,884,925</b>	<b>\$ 2,720,372</b>	<b>\$ 2,730,353</b>
Employer's net pension liability - ending (a)-(b)	\$ 31,664,423	\$ 31,198,086	\$ 28,786,375	\$ 33,118,980	\$ 34,173,024	\$ 30,299,073	\$ 28,375,086	\$ 27,745,085	\$ 29,980,502	\$ 23,362,311
Plan fiduciary net position as a percentage of the total pension liability	14.19%	12.47%	12.73%	12.22%	9.25%	9.60%	9.80%	9.42%	8.32%	10.46%
Covered payroll	\$ 2,820,362	\$ 2,658,342	\$ 2,249,629	\$ 2,280,309	\$ 2,348,074	\$ 2,098,591	\$ 1,963,972	\$ 1,828,610	\$ 1,676,156	\$ 1,661,650
Employer's net pension liability as a percentage of covered payroll	1122.71%	1173.59%	1279.61%	1452.39%	1455.36%	1443.78%	1444.78%	1517.28%	1788.65%	1405.97%
Expected average remaining service years of all participants	5.00	5.00	5.00	5.00	7.00	6.00	6.45	6.19	6.10	5.97

**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. Additionally, the discount rate changed from 4.06% to 4.22%.

\*The Plan Fiduciary Net Position as of July 1, 2022 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2022 as provided in the prior GASB report. A difference of \$3,106 has been excluded from investment income for the measurement period ending June 30, 2023.

\*After the June 30, 2020 GASB report was published, the asset reconciliation for the period July 1, 2019 through June 30, 2020 was updated pursuant to the financial audit. The differences for each of the line items between the pre- and post-audit reconciliations were added to the associated line items for the fiscal year ending June 30, 2021 reconciliation.

\*The Plan Fiduciary Net Position as of July 1, 2019 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2019 as provided in the prior GASB report. The difference of \$100,322 has been included as investment income for the measurement period ending June 30, 2020.

\*The Plan Fiduciary Net Position as of July 1, 2017, excludes \$35,692, which was included in the Plan Fiduciary Net Position as of June 30, 2017.

\*The Plan Fiduciary Net Position as of July 1, 2016, includes \$28,075, which was excluded from the Plan Fiduciary Net Position as of June 30, 2016.

City of South Charleston, West Virginia Policemen's Pension and Relief Fund  
 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	\$ 2,844,924	\$ 2,486,837	\$ 2,418,709	\$ 2,536,034	\$ 2,330,590	\$ 2,406,663	\$ 2,155,867	\$ 2,018,460	\$ 1,860,008	\$ 1,390,926
Contributions in relation to the actuarially determined contribution										
Employer provided	616,047	575,745	538,079	770,968	483,979	458,206	500,499	383,643	358,545	416,670
State provided	488,914	404,165	477,883	506,695	447,012	399,822	389,524	385,377	424,873	614,355
Contribution deficiency (excess)	<u>\$ 1,739,963</u>	<u>\$ 1,506,927</u>	<u>\$ 1,402,747</u>	<u>\$ 1,258,371</u>	<u>\$ 1,399,599</u>	<u>\$ 1,548,635</u>	<u>\$ 1,265,844</u>	<u>\$ 1,249,440</u>	<u>\$ 1,076,590</u>	<u>\$ 359,901</u>
Covered payroll	\$ 2,820,362	\$ 2,658,342	\$ 2,249,629	\$ 2,280,309	\$ 2,348,074	\$ 2,098,591	\$ 1,963,972	\$ 1,828,610	\$ 1,676,156	\$ 1,661,650
Contributions as a percentage of covered employee payroll	39.18%	36.86%	45.16%	56.03%	39.65%	40.89%	45.32%	42.05%	46.74%	62.05%

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	15 to 26.5 years
Asset valuation method	4-year smoothed market
Inflation	2.50%
Salary increases	Rates vary by years of service
Investment rate of return	4.25%, 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

City of South Charleston, West Virginia Policemen's Pension and Relief Fund  
 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.

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments				
			2024	2025	2026	2027	2028
2020	\$ (76,747)	5	(15,351)				
2021	(637,962)	5	(127,592)	(127,594)			
2022	689,475	5	137,895	137,895	137,895		
2023	(210,454)	5	(42,091)	(42,091)	(42,091)	(42,090)	
2024	(425,678)	5	\$ (85,136)	(85,136)	(85,136)	(85,136)	(85,134)
Net increase (decrease) in pension expense			\$ (132,275)	\$ (116,926)	\$ 10,668	\$ (127,226)	\$ (85,134)

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

Year	Investment Earnings Less than Projected (a)	Investment Earnings Greater than Projected (b)	Amounts Recognized in Pension Expense Through June 30, 2024 (c)	Balances at June 30, 2024	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2020	\$ -	\$ 76,747	\$ 76,747	\$ -	\$ -
2021	-	637,962	510,368	-	127,594
2022	689,475	-	413,685	275,790	-
2023	-	210,454	84,182	-	126,272
2024	-	425,678	85,136	-	340,542
				\$ 275,790	\$ 594,408

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



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.

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Experience						
			2024	2025	2026	2027	2028	2029	Thereafter
2016	(1,122,758)	6.098031							
2017	(114,902)	6.188496							
2018	(326,827)	6.447419	(22,681)						
2019	465,074	6.000000	77,514						
2020	469,555	7.000000	67,079	67,079	67,081				
2021	(1,109,611)	5.000000	(221,922)	(221,923)					
2022	(21,369)	5.000000	(4,274)	(4,274)	(4,273)				
2023	1,990,736	5.000000	398,147	398,147	398,147	398,148			
2024	805,992	5.000000	\$ 161,198	161,198	161,198	161,198	161,200		
Net increase (decrease) in pension expense			\$ 455,061	\$ 400,227	\$ 622,153	\$ 559,346	\$ 161,200	\$ -	\$ -

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

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense Through June 30, 2024 (c)	Balances at June 30, 2024	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	-	1,122,758	1,122,758	-	-
2017	-	114,902	114,902	-	-
2018	-	326,827	326,827	-	-
2019	465,074	-	465,074	-	-
2020	469,555	-	335,395	134,160	-
2021	-	1,109,611	887,688	-	221,923
2022	-	21,369	12,822	-	8,547
2023	1,990,736	-	796,294	1,194,442	-
2024	805,992	-	161,198	644,794	-
			\$ 1,973,396	\$ 230,470	

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



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.

Year	Changes of Assumptions	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions						
			2024	2025	2026	2027	2028	2029	Thereafter
2016	6,786,401	6.098031							
2017	(3,460,883)	6.188496							
2018	(273,301)	6.447419	(18,967)						
2019	116,447	6.000000	19,407						
2020	2,041,623	7.000000	291,660	291,660	291,663				
2021	(551,561)	5.000000	(110,312)	(110,313)					
2022	(6,093,764)	5.000000	(1,218,753)	(1,218,753)	(1,218,752)				
2023	(516,936)	5.000000	(103,387)	(103,387)	(103,387)	(103,388)			
2024	(1,081,801)	5.000000	\$ (216,360)	(216,360)	(216,360)	(216,360)	(216,361)		
Net increase (decrease) in pension expense			<u>\$ (1,356,712)</u>	<u>\$ (1,357,153)</u>	<u>\$ (1,246,836)</u>	<u>\$ (319,748)</u>	<u>\$ (216,361)</u>	<u>\$ -</u>	<u>\$ -</u>

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

Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense Through June 30, 2024 (c)	Balances at June 30, 2024	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	6,786,401	-	6,786,401	-	-
2017	-	3,460,883	3,460,883	-	-
2018	-	273,301	273,301	-	-
2019	116,447	-	116,447	-	-
2020	2,041,623	-	1,458,300	583,323	-
2021	-	551,561	441,248	-	110,313
2022	-	6,093,764	3,656,259	-	2,437,505
2023	-	516,936	206,774	-	310,162
2024	-	1,081,801	216,360	-	865,441
				<u>\$ 583,323</u>	<u>\$ 3,723,421</u>



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



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Actuarial Accrued Liability (BOY)			Closed Group Asset Projection						
	Current Members	Future Members	Total Members	Fiduciary Net Position (BOY)	Funded Ratio (BOY)	Projected EEC Contributions (MOY)	Projected ER Contrib + Premium Tax (MOY)	Projected BP (MOY)	Projected Admin Expenses (MOY)	Projected Investment Earnings
2024	\$ 35,246,138	\$ -	\$ 35,246,138	\$ 4,443,937	12.61%	\$ 250,313	\$ 1,104,960	\$ 1,178,276	\$ 2,663	\$ 618,249
2025	\$ 36,727,312	\$ -	\$ 36,727,312	\$ 5,236,520	14.26%	\$ 235,440	\$ 1,218,489	\$ 1,396,832	\$ 2,522	\$ 223,700
2026	\$ 38,011,919	\$ 87,166	\$ 38,099,085	\$ 5,514,795	14.51%	\$ 228,203	\$ 1,201,965	\$ 1,428,242	\$ 2,490	\$ 234,367
2027	\$ 39,281,756	\$ 261,742	\$ 39,543,498	\$ 5,748,598	14.63%	\$ 224,604	\$ 1,215,474	\$ 1,428,963	\$ 2,455	\$ 244,498
2028	\$ 40,591,795	\$ 523,996	\$ 41,115,791	\$ 6,001,757	14.79%	\$ 219,340	\$ 1,304,278	\$ 1,448,884	\$ 2,417	\$ 256,595
2029	\$ 41,910,220	\$ 867,592	\$ 42,777,812	\$ 6,330,669	15.11%	\$ 210,138	\$ 1,312,595	\$ 1,511,494	\$ 2,376	\$ 269,240
2030	\$ 43,163,586	\$ 1,304,836	\$ 44,468,422	\$ 6,608,772	15.31%	\$ 202,134	\$ 1,313,417	\$ 1,568,728	\$ 2,366	\$ 279,705
2031	\$ 44,360,775	\$ 1,857,436	\$ 46,218,211	\$ 6,832,934	15.40%	\$ 198,267	\$ 1,327,851	\$ 1,588,180	\$ 2,354	\$ 289,045
2032	\$ 45,565,419	\$ 2,514,164	\$ 48,079,583	\$ 7,057,563	15.49%	\$ 194,177	\$ 1,359,443	\$ 1,637,809	\$ 2,376	\$ 298,126
2033	\$ 46,747,312	\$ 3,271,004	\$ 50,018,316	\$ 7,269,125	15.55%	\$ 186,816	\$ 1,386,626	\$ 1,717,870	\$ 2,360	\$ 305,851
2034	\$ 47,857,573	\$ 4,139,695	\$ 51,997,268	\$ 7,428,188	15.52%	\$ 176,602	\$ 1,412,988	\$ 1,828,112	\$ 2,342	\$ 310,633
2035	\$ 48,846,093	\$ 5,135,287	\$ 53,981,380	\$ 7,497,957	15.35%	\$ 165,743	\$ 1,431,426	\$ 1,947,911	\$ 2,361	\$ 311,238
2036	\$ 49,692,828	\$ 6,274,994	\$ 55,967,822	\$ 7,456,092	15.00%	\$ 156,996	\$ 1,473,557	\$ 2,049,490	\$ 2,380	\$ 308,024
2037	\$ 50,423,559	\$ 7,567,100	\$ 57,990,659	\$ 7,342,799	14.56%	\$ 145,839	\$ 1,525,452	\$ 2,174,903	\$ 2,357	\$ 301,429
2038	\$ 51,004,289	\$ 9,006,765	\$ 60,011,054	\$ 7,138,258	14.00%	\$ 136,696	\$ 1,583,286	\$ 2,252,780	\$ 2,331	\$ 292,123
2039	\$ 51,488,850	\$ 10,619,652	\$ 62,108,502	\$ 6,895,252	13.39%	\$ 133,307	\$ 1,683,020	\$ 2,292,019	\$ 2,389	\$ 282,995
2040	\$ 51,940,698	\$ 12,387,063	\$ 64,327,761	\$ 6,700,166	12.90%	\$ 124,860	\$ 1,745,604	\$ 2,366,014	\$ 2,404	\$ 274,286
2041	\$ 52,297,780	\$ 14,320,633	\$ 66,618,413	\$ 6,476,497	12.38%	\$ 109,648	\$ 1,799,308	\$ 2,492,772	\$ 2,373	\$ 262,924
2042	\$ 52,469,963	\$ 16,449,127	\$ 68,919,090	\$ 6,153,232	11.73%	\$ 94,271	\$ 1,878,624	\$ 2,603,682	\$ 2,432	\$ 248,196
2043	\$ 52,464,947	\$ 18,796,699	\$ 71,261,646	\$ 5,768,209	10.99%	\$ 79,656	\$ 1,955,926	\$ 2,700,329	\$ 2,397	\$ 231,120
2044	\$ 52,288,958	\$ 21,366,179	\$ 73,655,137	\$ 5,332,185	10.20%	\$ 62,395	\$ 2,024,842	\$ 2,820,063	\$ 2,408	\$ 211,157
2045	\$ 51,898,962	\$ 24,175,288	\$ 76,074,250	\$ 4,808,109	9.26%	\$ 50,144	\$ 2,126,991	\$ 2,893,069	\$ 2,468	\$ 189,237
2046	\$ 51,357,693	\$ 27,220,477	\$ 78,578,170	\$ 4,278,943	8.33%	\$ 42,140	\$ 2,243,022	\$ 2,944,597	\$ 2,426	\$ 167,937
2047	\$ 50,702,515	\$ 30,460,325	\$ 81,162,840	\$ 3,785,019	7.47%	\$ 33,798	\$ 2,380,576	\$ 2,994,759	\$ 2,434	\$ 148,607
2048	\$ 49,931,333	\$ 33,903,489	\$ 83,834,822	\$ 3,350,808	6.71%	\$ 27,145	\$ 2,546,604	\$ 3,030,684	\$ 2,495	\$ 132,748
2049	\$ 49,062,604	\$ 37,549,990	\$ 86,612,594	\$ 3,024,125	6.16%	\$ 21,084	\$ 2,706,439	\$ 3,055,948	\$ 2,446	\$ 121,567
2050	\$ 48,105,615	\$ 41,383,236	\$ 89,488,851	\$ 2,814,822	5.85%	\$ 15,550	\$ 2,888,690	\$ 3,082,645	\$ 2,507	\$ 115,826
2051	\$ 47,059,113	\$ 45,379,382	\$ 92,438,495	\$ 2,749,735	5.84%	\$ 11,395	\$ 3,081,428	\$ 3,084,150	\$ 2,511	\$ 116,993
2052	\$ 45,951,197	\$ 49,545,739	\$ 95,496,936	\$ 2,872,890	6.25%	\$ 7,999	\$ 3,409,348	\$ 3,086,750	\$ 2,514	\$ 128,997
2053	\$ 44,780,914	\$ 53,885,696	\$ 98,666,610	\$ 3,329,971	7.44%	\$ 3,973	\$ 3,667,724	\$ 3,084,424	\$ 2,454	\$ 153,822
2054	\$ 43,548,848	\$ 58,391,074	\$ 101,939,922	\$ 4,068,612	9.34%	\$ 2,072	\$ 8,141,985	\$ 3,059,561	\$ 2,515	\$ 279,784
2055	\$ 42,283,139	\$ 63,040,332	\$ 105,323,471	\$ 9,430,377	22.30%	\$ 1,224	\$ 8,525,463	\$ 3,023,692	\$ 2,513	\$ 516,460
2056	\$ 40,997,236	\$ 67,827,150	\$ 108,824,386	\$ 15,447,319	37.68%	\$ 702	\$ 8,932,651	\$ 2,982,574	\$ 2,510	\$ 781,597
2057	\$ 39,696,801	\$ 72,756,875	\$ 112,453,676	\$ 22,177,185	55.87%	\$ 394	\$ 9,365,015	\$ 2,937,184	\$ 2,437	\$ 1,077,658
2058	\$ 38,386,351	\$ 77,832,178	\$ 116,218,529	\$ 29,680,630	77.32%	\$ 200	\$ 8,891,704	\$ 2,888,592	\$ 2,429	\$ 1,387,619
2059	\$ 37,069,131	\$ 83,044,086	\$ 120,113,217	\$ 37,069,133	100.00%	\$ 99	\$ 2,654	\$ 2,837,136	\$ 2,419	\$ 1,515,783
2060	\$ 35,748,113	\$ 88,397,214	\$ 124,145,327	\$ 35,748,114	100.00%	\$ 43	\$ 2,510	\$ 2,783,306	\$ 2,407	\$ 1,460,768
2061	\$ 34,425,720	\$ 93,904,145	\$ 128,329,865	\$ 34,425,722	100.00%	\$ 22	\$ 2,444	\$ 2,727,456	\$ 2,392	\$ 1,405,739
2062	\$ 33,104,078	\$ 99,567,587	\$ 132,671,665	\$ 33,104,079	100.00%	\$ 4	\$ 2,385	\$ 2,669,932	\$ 2,375	\$ 1,350,778
2063	\$ 31,784,937	\$ 105,378,020	\$ 137,162,957	\$ 31,784,939	100.00%	\$ -	\$ 2,356	\$ 2,610,833	\$ 2,356	\$ 1,295,957
2064	\$ 30,470,061	\$ 111,339,279	\$ 141,809,340	\$ 30,470,063	100.00%	\$ -	\$ 2,334	\$ 2,550,322	\$ 2,334	\$ 1,241,347

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



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Calculation of Single Equivalent Discount Rate (DR)				
	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Portion of Benefit Payments	Present Value of "Unfunded" Portion of Benefit Payments	Present Value of Benefit Payments Using a Single DR
2024	\$ 1,178,276	\$ -	\$ 1,154,008	\$ -	\$ 1,154,180
2025	\$ 1,396,832	\$ -	\$ 1,312,291	\$ -	\$ 1,312,877
2026	\$ 1,428,242	\$ -	\$ 1,287,098	\$ -	\$ 1,288,056
2027	\$ 1,428,963	\$ -	\$ 1,235,250	\$ -	\$ 1,236,537
2028	\$ 1,448,884	\$ -	\$ 1,201,410	\$ -	\$ 1,203,020
2029	\$ 1,511,494	\$ -	\$ 1,202,231	\$ -	\$ 1,204,201
2030	\$ 1,568,728	\$ -	\$ 1,196,887	\$ -	\$ 1,199,205
2031	\$ 1,588,180	\$ -	\$ 1,162,329	\$ -	\$ 1,164,927
2032	\$ 1,637,809	\$ -	\$ 1,149,785	\$ -	\$ 1,152,698
2033	\$ 1,717,870	\$ -	\$ 1,156,825	\$ -	\$ 1,160,100
2034	\$ 1,828,112	\$ -	\$ 1,180,876	\$ -	\$ 1,184,572
2035	\$ 1,947,911	\$ -	\$ 1,206,964	\$ -	\$ 1,211,102
2036	\$ 2,049,490	\$ -	\$ 1,218,134	\$ -	\$ 1,222,674
2037	\$ 2,174,903	\$ -	\$ 1,239,975	\$ -	\$ 1,244,967
2038	\$ 2,252,780	\$ -	\$ 1,232,015	\$ -	\$ 1,237,343
2039	\$ 2,292,019	\$ -	\$ 1,202,373	\$ -	\$ 1,207,933
2040	\$ 2,366,014	\$ -	\$ 1,190,590	\$ -	\$ 1,196,451
2041	\$ 2,492,772	\$ -	\$ 1,203,238	\$ -	\$ 1,209,521
2042	\$ 2,603,682	\$ -	\$ 1,205,538	\$ -	\$ 1,212,194
2043	\$ 2,700,329	\$ -	\$ 1,199,315	\$ -	\$ 1,206,296
2044	\$ 2,820,063	\$ -	\$ 1,201,433	\$ -	\$ 1,208,785
2045	\$ 2,893,069	\$ -	\$ 1,182,288	\$ -	\$ 1,189,878
2046	\$ 2,944,597	\$ -	\$ 1,154,289	\$ -	\$ 1,162,044
2047	\$ 2,994,759	\$ -	\$ 1,126,093	\$ -	\$ 1,133,997
2048	\$ 3,030,684	\$ -	\$ 1,093,143	\$ -	\$ 1,101,143
2049	\$ -	\$ 3,055,948	\$ -	\$ 1,132,376	\$ 1,065,375
2050	\$ -	\$ 3,082,645	\$ -	\$ 1,098,653	\$ 1,031,177
2051	\$ -	\$ 3,084,150	\$ -	\$ 1,057,217	\$ 989,916
2052	\$ -	\$ 3,086,750	\$ -	\$ 1,017,706	\$ 950,643
2053	\$ 3,084,424	\$ -	\$ 903,504	\$ -	\$ 911,472
2054	\$ 3,059,561	\$ -	\$ 859,685	\$ -	\$ 867,524
2055	\$ 3,023,692	\$ -	\$ 814,970	\$ -	\$ 822,646
2056	\$ 2,982,574	\$ -	\$ 771,115	\$ -	\$ 778,610
2057	\$ 2,937,184	\$ -	\$ 728,422	\$ -	\$ 735,721
2058	\$ 2,888,592	\$ -	\$ 687,167	\$ -	\$ 694,259
2059	\$ 2,837,136	\$ -	\$ 647,411	\$ -	\$ 654,287
2060	\$ 2,783,306	\$ -	\$ 609,235	\$ -	\$ 615,889
2061	\$ 2,727,456	\$ -	\$ 572,671	\$ -	\$ 579,098
2062	\$ 2,669,932	\$ -	\$ 537,739	\$ -	\$ 543,936
2063	\$ 2,610,833	\$ -	\$ 504,399	\$ -	\$ 510,364
2064	\$ 2,550,322	\$ -	\$ 472,623	\$ -	\$ 478,354