



**Municipal Pensions  
Oversight Board**

**City of Bluefield  
West Virginia  
Firemen's Pension and Relief Fund**

GASB 68 Actuarial Information for the  
Measurement Period Ending  
June 30, 2020

**Bolton**

Submitted by:

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Employee Benefits, Actuarial & Investment Consulting

October 30, 2020

Ms. Kelly Davis  
City Treasurer  
City of Bluefield  
200 Rogers Street  
Bluefield, WV 24701

Chief Adrian Connor  
Pension Board Secretary  
City of Bluefield  
Firemen's Pension and Relief Fund

Re: City of Bluefield Firemen's Pension and Relief Fund  
GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2020

Dear Kelly,

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Bluefield Firemen's Pension and Relief Fund to be included in the City's financial statements for FY 2020. The GASB 67 information has been provided as of June 30, 2020 (the GASB 68 measurement date for FY 2020).

#### Methodology, Reliance and Certification

This report is prepared for the City. The report contains the actuarial information to be included with the City's financial statements for the year ending June 30, 2020 (the City's fiscal year end date) as required by GASB 68. This information has been prepared for use in the financial statements of the City. This information is not intended for, nor should it be used for, any additional purposes.

The total pension liability is based on the July 1, 2019 actuarial valuation rolled forward to June 30, 2020. The methods, assumptions, and participant data used are detailed in the July 1, 2019 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2020 is contained in the July 1, 2018 actuarial valuation report. The discount rate assumption may have changed if a blended rate was used for GASB purposes.

The included calculations are based on the valuation discount rate of 5.00%. The plan's expected gross rate of investment return of 5.00% has been blended with the 2.45% 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, 2020. The development of the blended discount rate is included within this report. Since the plan assets are estimated to be sufficient to cover benefit payments throughout the projection period, the liability discount rate used for this June 30, 2020 measurement date is equal to the plan's expected rate of investment return.

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 fund's current funding ratio, liquidity ratio, equity exposure and expected funded status in 15 years.

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.)

These calculations and comparisons with assets are applicable for the valuation date only. The future is uncertain, and the plan may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

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. Other assumptions may be equally valid. The future is uncertain and the plan's actual experience will differ from the assumptions; the differences may be significant or material because the results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. 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.

The City is responsible for selecting the plan's funding policy based on four 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.

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.

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.

We make every effort to ensure that our calculations are accurately performed. These calculations are complex. Despite our best efforts, we may make a mistake. 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.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

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.



**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, but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

The City is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Bolton Partners, Inc.'s actuaries have not provided any investment advice to the City.

The information in this report was prepared for the internal use of the City, the plan and their auditors in connection with our actuarial valuations of the pension plan as required by GASB 68. This report may not be used for any other purpose; Bolton Partners, Inc. is not responsible for the consequences of any unauthorized use or the reliance on this information by any other party.

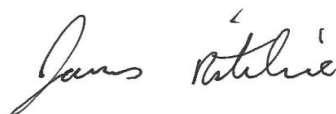
The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, the lower the estimated liability will be. For purposes of estimating the liabilities (future and accrued) in this report, an assumption based on the expected long-term rate of return on plan investments is used. If the plan is expected to become insolvent, the return assumption is blended with a long-term municipal bond rate. Using a lower discount rate assumption, such as a rate solely based on long-term bond yields, could substantially increase the estimated present value of future and accrued liabilities.

This report provides certain financial calculations for use by the auditor. These values 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.

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 undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2019 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 Bluefield, West Virginia Firemen's Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
 for the June 30, 2020 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2020, were as follows:

Total pension liability	\$ 18,977,385
Plan fiduciary net position	(4,362,792)
Employer's net pension liability	<u>\$ 14,614,593</u>
Plan fiduciary net position as a percentage of the total pension liability	22.99%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2019 rolled forward to June 30, 2020 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75 percent
Salary increases	Rates vary by years of service
Single discount rate (BOY)	5.00%
Single discount rate (EOY)	5.00%
Investment rate of return (BOY)	5.00%, net of pension plan investment expense, including inflation
Investment rate of return (EOY)	5.00%, net of pension plan investment expense, including inflation
Long-term municipal bond rate (BOY)	3.13%
Long-term municipal bond rate (EOY)	2.45%
Mortality	RP-2014 Blue Collar Mortality Table with generational projection using Scale MP-2014
Year Fund is projected to be fully funded	2047
Year assets are expected to be depleted for a closed plan	N/A

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2019 actuarial valuation report.

Sensitivity of the net pension liability to changes in the discount rate

	1% Decrease 4.00%	Current Discount Rate 5.00%	1% Increase 6.00%
Employer's net pension liability	\$ 17,657,137	\$ 14,614,593	\$ 12,208,789

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
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Changes in the Net Pension Liability

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
<b>Balances at 6/30/19</b>	\$ 18,517,975	\$ 4,405,173	\$ 14,112,802
<b>Changes for the year:</b>			
Service cost	336,386		336,386
Interest	902,089		902,089
Changes of benefit terms	-		-
Differences between expected and actual experience	173,349		173,349
Changes of assumptions	-		-
Contributions - employer (including Premium Tax Allocation)		717,105	(717,105)
Contributions - member		61,782	(61,782)
Net investment income		131,146	(131,146)
Benefit payments, including refunds of member contributions	(952,414)	(952,414)	-
Administrative expense		-	-
Other		-	-
<b>Net Changes</b>	<u>459,410</u>	<u>(42,381)</u>	<u>501,791</u>
<b>Balances at 6/30/20</b>	<u>\$ 18,977,385</u>	<u>\$ 4,362,792</u>	<u>\$ 14,614,593</u>
Return on Investments		3.0%	

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
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Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2020

Note	Description	Amount
A	Service cost	\$ 336,386
B	Interest on the total pension liability	902,089
A	Changes of benefit terms	-
C	Differences between expected and actual experience	79,184
C	Changes of assumptions	(385,627)
A	Employee contributions	(61,782)
D	Projected earnings on pension plan investments	(215,922)
C	Differences between expected and actual earnings on plan investments	(13,646)
A	Pension plan administrative expense	-
A	Other changes in fiduciary net position	-
<b>Total Pension Expense</b>		<b>\$ 640,682</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	\$ 18,517,975	100%	5.00%	\$ 925,899
Service cost (End of Year)	336,386	0%	5.00%	-
Benefit payments, including refunds of employee contributions	(952,414)	50%	5.00%	(23,810)
<b>Total interest on the total pension liability</b>				<b>\$ 902,089</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	\$ 4,405,173	100%	5.00%	\$ 220,259
Employer contributions	717,105	50%	5.00%	17,928
Employee contributions	61,782	50%	5.00%	1,545
Benefit payments, including refunds of employee contributions	(952,414)	50%	5.00%	(23,810)
Administrative expense and other	-	50%	5.00%	-
<b>Total Projected Earnings</b>				<b>\$ 215,922</b>

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
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Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2020, 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	\$ 269,524	\$ 42,500
Changes of assumptions	-	161,412
Net difference between projected and actual earnings on pension plan investments	-	1,309
<b>Total</b>	<b>\$ 269,524</b>	<b>\$ 205,221</b>

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

<b>Year ended June 30:</b>	
2021	\$ (130,560)
2022	111,910
2023	65,997
2024	16,956
2025	-
Thereafter	-



City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
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Changes in the Employer's Net Pension Liability and Related Ratios  
 Last 10 Fiscal Years

Total pension liability	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Service cost	\$ 336,386	\$ 305,409	\$ 334,513	\$ 343,894	\$ 198,351	\$ 261,956	\$ 248,401	\$ -	\$ -	\$ -
Interest	902,089	875,828	841,226	840,313	809,292	780,962	763,367	-	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	173,349	279,024	(347,114)	526,188	(117,054)	152,857	-	-	-	-
Changes of assumptions	-	-	(1,318,293)	-	3,162,943	(1,026,161)	-	-	-	-
Benefit payments, including refunds of member contributions	(952,414)	(917,712)	(817,337)	(806,910)	(813,741)	(731,716)	(658,888)	-	-	-
Net change in total pension liability	459,410	542,549	(1,307,005)	903,485	3,239,791	(562,102)	352,880	-	-	-
Total pension liability - beginning	18,517,975	17,975,426	19,282,431	18,378,946	15,139,155	15,701,257	15,348,377	-	-	-
<b>Total pension liability - ending (a)</b>	<b>\$ 18,977,385</b>	<b>\$ 18,517,975</b>	<b>\$ 17,975,426</b>	<b>\$ 19,282,431</b>	<b>\$ 18,378,946</b>	<b>\$ 15,139,155</b>	<b>\$ 15,701,257</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Plan fiduciary net position</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Contributions - employer (including Premium Tax Allocation)	\$ 717,105	\$ 667,271	\$ 630,721	\$ 622,496	\$ 568,649	\$ 730,967	\$ 524,943	\$ -	\$ -	\$ -
Contributions - member	61,782	65,199	57,693	54,175	54,875	55,668	55,381	-	-	-
Net investment income	131,146	187,030	306,364	368,996	88,757	81,671	515,010	-	-	-
Benefit payments, including refunds of member contributions	(952,414)	(917,712)	(817,337)	(806,910)	(813,741)	(731,716)	(658,888)	-	-	-
Administrative expense	-	-	(86)	-	(150)	(670)	-	-	-	-
Other	-	(627)	6,746	836	1,342	-	-	-	-	-
Net change in plan fiduciary net position	\$ (42,381)	\$ 1,161	\$ 184,101	\$ 239,593	\$ (100,268)	\$ 135,920	\$ 436,446	\$ -	\$ -	\$ -
Plan fiduciary net position - beginning	4,405,173	4,404,012	4,219,912	3,980,319	4,080,587	3,944,667	3,503,157	-	-	-
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 4,362,792</b>	<b>\$ 4,405,173</b>	<b>\$ 4,404,012</b>	<b>\$ 4,219,912</b>	<b>\$ 3,980,319</b>	<b>\$ 4,080,587</b>	<b>\$ 3,939,603</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Employer's net pension liability - ending (a)-(b)	<u>\$ 14,614,593</u>	<u>\$ 14,112,802</u>	<u>\$ 13,571,414</u>	<u>\$ 15,062,519</u>	<u>\$ 14,398,627</u>	<u>\$ 11,058,568</u>	<u>\$ 11,761,654</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Plan fiduciary net position as a percentage of the total pension liability	22.99%	23.79%	24.50%	21.88%	21.66%	26.95%	25.09%	0.00%	0.00%	0.00%
Covered payroll	\$ 770,135	\$ 688,341	\$ 657,549	\$ 684,729	\$ 597,873	\$ 707,540	\$ 672,836	\$ -	\$ -	\$ -
Employer's net pension liability as a percentage of covered payroll	1897.67%	2050.26%	2063.94%	2199.78%	2408.31%	1562.96%	1748.07%	0.00%	0.00%	0.00%
Expected average remaining service years of all participants	4.00	4.00	3.42	3.44	3.34	3.69	-	-	-	-

**Notes to Schedule:**

Benefit changes: There were no changes for FY2020.

Changes of assumptions: There were no changes for FY2020.

\*Market value of assets as of July 1, 2014, includes \$5,064, excluded from the market value of assets as of June 30, 2014, used for the actuarial valuation report for the fiscal year end June 30, 2014.

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
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Schedule of Employer Contributions  
 Last 10 Fiscal Years

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Actuarially determined contribution	\$ 1,103,935	\$ 1,064,522	\$ 904,672	\$ 965,489	\$ 865,329	\$ 683,027	\$ 702,186	\$ 716,841	\$ -	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	476,376	445,211	416,086	419,150	333,140	366,101	315,699	296,663	-	-
State provided	240,729	222,060	214,635	203,346	235,509	364,866	209,244	210,734	-	-
Contribution deficiency (excess)	<u>\$ 386,830</u>	<u>\$ 397,251</u>	<u>\$ 273,951</u>	<u>\$ 342,993</u>	<u>\$ 296,680</u>	<u>\$ (47,940)</u>	<u>\$ 177,243</u>	<u>\$ 209,444</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 770,135	\$ 688,341	\$ 657,549	\$ 684,729	\$ 597,873	\$ 707,540	\$ 672,836	\$ 719,372	\$ -	\$ -
Contributions as a percentage of covered employee payroll	93.11%	96.94%	95.92%	90.91%	95.11%	103.31%	78.02%	70.53%	N/A	N/A

Notes to Schedule

Valuation date:

Actuarially determined contribution amounts are calculated as of the beginning of the fiscal year (July 1) for the year immediately following the fiscal year. Actuarial valuations are performed every year.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar
Remaining amortization period	31.5 years
Asset valuation method	Market Value
Inflation	2.75 percent
Salary increases	Rates vary by years of service
Investment rate of return	5.00%, net of pension plan investment expense, including inflation
Retirement age	Rates vary by age
Mortality	RP-2014 Blue Collar Mortality Table with generational projection using Scale MP-2014

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
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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.

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments											
Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2016	2017	2018	2019	2020	2021	2022	2023	2024
2016	\$ 130,477	5	\$ 26,095	26,095	26,095	26,095	26,097				
2017	(192,793)	5		\$ (38,559)	(38,559)	(38,559)	(38,559)	(38,557)			
2018	(119,219)	5			\$ (23,844)	(23,844)	(23,844)	(23,844)	(23,843)		
2019	28,524	5				\$ 5,705	5,705	5,705	5,705	5,704	
2020	84,776	5					\$ 16,955	16,955	16,955	16,955	16,956
Net increase (decrease) in pension expense							\$ (13,646)	\$ (39,741)	\$ (1,183)	\$ 22,659	\$ 16,956

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, 2020 (c)	Balances at June 30, 2020	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	\$ 130,477	\$ -	\$ 130,477	\$ -	\$ -
2017	-	192,793	154,236	-	38,557
2018	-	119,219	71,532	-	47,687
2019	28,524	-	11,410	17,114	-
2020	84,776	-	16,955	67,821	-
				\$ 84,935	\$ 86,244

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
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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.

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience																			
Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Prior	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Thereafter
Prior	-	-																	
2011	-	-																	
2012	-	-																	
2013	-	-																	
2014	-	-																	
2015	152,857	3.688682						\$ 41,439	41,439	41,439	28,540								
2016	(117,054)	3.344772							\$ (34,996)	(34,996)	(34,996)	(12,066)							
2017	526,188	3.442455								\$ 152,853	152,853	152,853	67,629						
2018	(347,114)	3.418569									\$ (101,538)	(101,538)	(101,538)	(42,500)					
2019	279,024	4.000000										\$ 69,756	69,756	69,756	69,756				
2020	173,349	4.000000											\$ 43,337	43,337	43,337	43,337	43,338		
Net increase (decrease) in pension expense													\$ 79,184	\$ 70,593	\$ 113,093	\$ 43,338	\$ -	\$ -	\$ -

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, 2020 (c)	Balances at June 30, 2020	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2011	-	-	-	-	-
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	152,857	-	152,857	-	-
2016	-	117,054	117,054	-	-
2017	526,188	-	526,188	-	-
2018	-	347,114	304,614	-	42,500
2019	279,024	-	139,512	139,512	-
2020	173,349	-	43,337	130,012	-
				\$ 269,524	\$ 42,500

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
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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.

Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions																			
Year	Changes of Assumptions	Recognition Period (Years)	Prior	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Thereafter
Prior	\$ -	-																	-
2011	-	-																	-
2012	-	-																	-
2013	-	-																	-
2014	-	-																	-
2015	(1,026,161)	3,688,682						\$ (278,192)	(278,192)	(278,192)	(191,585)								
2016	3,162,943	3,344,772						\$ 945,638	945,638	945,638	326,029								
2017	-	3,442,455																	
2018	(1,318,293)	3,418,569									\$ (385,627)	(385,627)	(385,627)	(161,412)					
2019	-	4,000,000																	
2020	-	4,000,000																	
Net increase (decrease) in pension expense													\$ (385,627)	\$ (161,412)	\$ -	\$ -	\$ -	\$ -	\$ -

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, 2020 (c)	Balances at June 30, 2020	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2011	-	-	-	-	-
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	1,026,161	1,026,161	-	-
2016	3,162,943	-	3,162,943	-	-
2017	-	-	-	-	-
2018	-	1,318,293	1,156,881	-	161,412
2019	-	-	-	-	-
2020	-	-	-	-	-
				\$ -	\$ 161,412

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
 for the June 30, 2020 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Gross Normal Cost (BOY)			Employee Contributions (BOY)			Employer Normal Cost (BOY)			Expenses (BOY)			Employer Contributions (MOY)			Premium Tax Allocation (MOY)		
	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total
2020	\$ 320,368	\$ -	\$ 320,368	\$ 65,881	\$ -	\$ 65,881	\$ 254,487	\$ -	\$ 254,487	\$ 3,966	\$ -	\$ 3,966	\$ 476,378	\$ -	\$ 476,378	\$ 240,729	\$ -	\$ 240,729
2021	\$ 319,557	\$ 16,102	\$ 335,659	\$ 65,805	\$ 3,375	\$ 69,180	\$ 253,752	\$ 12,727	\$ 266,479	\$ 4,076	\$ -	\$ 4,076	\$ 496,683	\$ 13,041	\$ 509,724	\$ 234,494	\$ -	\$ 234,494
2022	\$ 314,972	\$ 42,419	\$ 357,391	\$ 64,998	\$ 8,898	\$ 73,896	\$ 249,974	\$ 33,521	\$ 283,495	\$ 4,112	\$ 76	\$ 4,188	\$ 510,980	\$ 34,425	\$ 545,405	\$ 240,501	\$ -	\$ 240,501
2023	\$ 315,317	\$ 65,750	\$ 381,067	\$ 65,049	\$ 13,800	\$ 78,849	\$ 250,268	\$ 51,950	\$ 302,218	\$ 4,147	\$ 156	\$ 4,303	\$ 530,194	\$ 53,389	\$ 583,583	\$ 248,399	\$ -	\$ 248,399
2024	\$ 317,712	\$ 87,376	\$ 405,088	\$ 65,522	\$ 18,349	\$ 83,871	\$ 252,190	\$ 69,027	\$ 321,217	\$ 4,100	\$ 242	\$ 4,342	\$ 553,460	\$ 70,974	\$ 624,434	\$ 256,513	\$ -	\$ 256,513
2025	\$ 322,188	\$ 107,894	\$ 430,082	\$ 66,404	\$ 22,670	\$ 89,074	\$ 255,784	\$ 85,224	\$ 341,008	\$ 4,213	\$ 248	\$ 4,461	\$ 580,567	\$ 87,577	\$ 668,144	\$ 264,851	\$ -	\$ 264,851
2026	\$ 328,665	\$ 127,315	\$ 455,980	\$ 67,697	\$ 26,765	\$ 94,462	\$ 260,968	\$ 100,550	\$ 361,518	\$ 4,244	\$ 340	\$ 4,584	\$ 611,541	\$ 103,373	\$ 714,914	\$ 273,417	\$ -	\$ 273,417
2027	\$ 336,271	\$ 146,136	\$ 482,407	\$ 69,237	\$ 30,737	\$ 99,974	\$ 267,034	\$ 115,399	\$ 382,433	\$ 4,273	\$ 351	\$ 4,624	\$ 646,358	\$ 118,600	\$ 764,958	\$ 285,966	\$ -	\$ 285,966
2028	\$ 344,959	\$ 164,837	\$ 509,796	\$ 71,011	\$ 34,687	\$ 105,698	\$ 273,948	\$ 130,150	\$ 404,098	\$ 4,391	\$ 360	\$ 4,751	\$ 684,781	\$ 133,724	\$ 818,505	\$ 295,121	\$ -	\$ 295,121
2029	\$ 353,890	\$ 184,040	\$ 537,930	\$ 72,827	\$ 38,746	\$ 111,573	\$ 281,063	\$ 145,294	\$ 426,357	\$ 4,420	\$ 462	\$ 4,882	\$ 726,456	\$ 149,344	\$ 875,800	\$ 304,527	\$ -	\$ 304,527
2030	\$ 363,211	\$ 204,209	\$ 567,420	\$ 74,719	\$ 43,012	\$ 117,731	\$ 288,492	\$ 161,197	\$ 449,689	\$ 4,447	\$ 476	\$ 4,923	\$ 771,452	\$ 165,654	\$ 937,106	\$ 314,192	\$ -	\$ 314,192
2031	\$ 372,358	\$ 225,431	\$ 597,789	\$ 76,596	\$ 47,503	\$ 124,099	\$ 295,762	\$ 177,928	\$ 473,690	\$ 4,569	\$ 489	\$ 5,058	\$ 819,892	\$ 182,811	\$ 1,002,703	\$ 324,122	\$ -	\$ 324,122
2032	\$ 382,505	\$ 247,948	\$ 630,453	\$ 78,650	\$ 52,269	\$ 130,919	\$ 303,855	\$ 198,679	\$ 502,534	\$ 4,495	\$ 604	\$ 5,099	\$ 871,777	\$ 201,115	\$ 1,072,892	\$ 334,326	\$ -	\$ 334,326
2033	\$ 386,101	\$ 271,295	\$ 657,396	\$ 79,455	\$ 57,216	\$ 136,671	\$ 306,646	\$ 214,079	\$ 520,725	\$ 4,619	\$ 620	\$ 5,239	\$ 928,008	\$ 219,986	\$ 1,147,994	\$ 349,322	\$ -	\$ 349,322
2034	\$ 373,536	\$ 304,416	\$ 677,952	\$ 77,373	\$ 64,241	\$ 141,614	\$ 296,163	\$ 240,175	\$ 536,338	\$ 4,641	\$ 742	\$ 5,383	\$ 981,506	\$ 246,848	\$ 1,228,354	\$ 360,235	\$ -	\$ 360,235
2035	\$ 360,454	\$ 352,257	\$ 712,711	\$ 75,270	\$ 74,401	\$ 149,671	\$ 285,184	\$ 277,856	\$ 563,040	\$ 4,769	\$ 762	\$ 5,531	\$ 1,028,859	\$ 285,480	\$ 1,314,339	\$ 371,448	\$ -	\$ 371,448
2036	\$ 350,562	\$ 392,211	\$ 742,773	\$ 73,700	\$ 82,886	\$ 156,586	\$ 276,862	\$ 309,325	\$ 586,187	\$ 4,677	\$ 1,006	\$ 5,683	\$ 1,088,373	\$ 317,970	\$ 1,406,343	\$ 382,969	\$ -	\$ 382,969
2037	\$ 334,324	\$ 438,583	\$ 772,907	\$ 70,873	\$ 92,741	\$ 163,614	\$ 263,451	\$ 345,842	\$ 609,293	\$ 4,691	\$ 1,148	\$ 5,839	\$ 1,149,256	\$ 355,531	\$ 1,504,787	\$ 394,807	\$ -	\$ 394,807
2038	\$ 309,630	\$ 486,754	\$ 796,384	\$ 66,274	\$ 102,983	\$ 169,257	\$ 243,356	\$ 383,771	\$ 627,127	\$ 4,820	\$ 1,064	\$ 5,884	\$ 1,215,810	\$ 394,312	\$ 1,610,122	\$ 406,970	\$ -	\$ 406,970
2039	\$ 273,371	\$ 549,200	\$ 822,571	\$ 59,264	\$ 116,273	\$ 175,537	\$ 214,107	\$ 432,927	\$ 647,034	\$ 4,832	\$ 1,214	\$ 6,046	\$ 1,277,999	\$ 444,832	\$ 1,722,831	\$ 419,468	\$ -	\$ 419,468
2040	\$ 221,264	\$ 617,109	\$ 838,373	\$ 48,708	\$ 130,730	\$ 179,438	\$ 172,556	\$ 486,379	\$ 658,935	\$ 4,841	\$ 1,493	\$ 6,334	\$ 1,343,546	\$ 499,883	\$ 1,843,429	\$ 452,066	\$ -	\$ 452,066
2041	\$ 164,276	\$ 701,994	\$ 866,270	\$ 36,696	\$ 148,816	\$ 185,512	\$ 127,580	\$ 553,178	\$ 680,758	\$ 4,847	\$ 1,661	\$ 6,508	\$ 1,403,969	\$ 568,500	\$ 1,972,469	\$ 465,848	\$ -	\$ 465,848
2042	\$ 125,706	\$ 779,456	\$ 905,162	\$ 28,535	\$ 165,336	\$ 193,871	\$ 97,171	\$ 614,120	\$ 711,291	\$ 4,849	\$ 1,838	\$ 6,687	\$ 1,479,418	\$ 631,124	\$ 2,110,542	\$ 480,008	\$ -	\$ 480,008
2043	\$ 99,759	\$ 845,327	\$ 945,086	\$ 23,127	\$ 179,421	\$ 202,548	\$ 76,632	\$ 665,906	\$ 742,538	\$ 4,982	\$ 1,889	\$ 6,871	\$ 1,574,040	\$ 684,240	\$ 2,258,280	\$ 513,252	\$ -	\$ 513,252
2044	\$ 80,444	\$ 901,563	\$ 982,007	\$ 19,148	\$ 191,494	\$ 210,642	\$ 61,296	\$ 710,069	\$ 771,365	\$ 4,842	\$ 2,082	\$ 6,924	\$ 1,686,674	\$ 729,686	\$ 2,416,360	\$ 528,750	\$ -	\$ 528,750
2045	\$ 65,783	\$ 952,227	\$ 1,018,010	\$ 16,128	\$ 202,398	\$ 218,526	\$ 49,655	\$ 749,829	\$ 799,484	\$ 4,833	\$ 2,281	\$ 7,114	\$ 1,814,878	\$ 770,627	\$ 2,585,505	\$ 544,675	\$ -	\$ 544,675
2046	\$ 56,688	\$ 1,001,728	\$ 1,058,416	\$ 14,258	\$ 213,054	\$ 227,312	\$ 42,430	\$ 788,674	\$ 831,104	\$ 4,820	\$ 2,346	\$ 7,166	\$ 1,955,994	\$ 810,496	\$ 2,766,490	\$ 561,037	\$ -	\$ 561,037
2047	\$ 45,726	\$ 1,050,972	\$ 1,096,698	\$ 11,754	\$ 223,657	\$ 235,411	\$ 33,972	\$ 827,315	\$ 861,287	\$ 4,953	\$ 2,410	\$ 7,363	\$ 903,922	\$ 850,156	\$ 1,754,078	\$ -	\$ -	\$ -
2048	\$ 31,828	\$ 1,106,230	\$ 1,138,058	\$ 8,527	\$ 235,544	\$ 244,071	\$ 23,301	\$ 870,686	\$ 893,987	\$ 4,781	\$ 2,784	\$ 7,565	\$ 28,658	\$ 894,972	\$ 923,630	\$ -	\$ -	\$ -
2049	\$ 25,849	\$ 1,161,280	\$ 1,187,129	\$ 7,121	\$ 247,384	\$ 254,505	\$ 18,728	\$ 913,896	\$ 932,624	\$ 4,754	\$ 2,864	\$ 7,618	\$ 23,944	\$ 939,329	\$ 963,273	\$ -	\$ -	\$ -
2050	\$ 17,432	\$ 1,216,220	\$ 1,233,652	\$ 4,967	\$ 259,197	\$ 264,164	\$ 12,465	\$ 957,023	\$ 969,488	\$ 4,722	\$ 3,105	\$ 7,827	\$ 17,494	\$ 983,762	\$ 1,001,256	\$ -	\$ -	\$ -
2051	\$ 10,888	\$ 1,276,621	\$ 1,287,509	\$ 3,113	\$ 272,178	\$ 275,291	\$ 7,775	\$ 1,004,443	\$ 1,012,218	\$ 4,685	\$ 3,357	\$ 8,042	\$ 12,652	\$ 1,032,605	\$ 1,045,257	\$ -	\$ -	\$ -
2052	\$ 7,904	\$ 1,336,187	\$ 1,344,091	\$ 2,259	\$ 284,979	\$ 287,238	\$ 5,645	\$ 1,051,208	\$ 1,056,853	\$ 4,814	\$ 3,281	\$ 8,095	\$ 10,599	\$ 1,080,449	\$ 1,091,048	\$ -	\$ -	\$ -
2053	\$ 5,683	\$ 1,396,745	\$ 1,402,428	\$ 1,626	\$ 297,991	\$ 299,617	\$ 4,057	\$ 1,098,754	\$ 1,102,811	\$ 4,770	\$ 3,548	\$ 8,318	\$ 8,927	\$ 1,129,436	\$ 1,138,363	\$ -	\$ -	\$ -
2054	\$ 3,965	\$ 1,459,107	\$ 1,463,072	\$ 1,137	\$ 311,386	\$ 312,523	\$ 2,828	\$ 1,147,721	\$ 1,150,549	\$ 4,720	\$ 3,649	\$ 8,369	\$ 7,618	\$ 1,179,713	\$ 1,187,331	\$ -	\$ -	\$ -
2055	\$ 2,777	\$ 1,523,155	\$ 1,525,932	\$ 799	\$ 325,143	\$ 325,942	\$ 1,978	\$ 1,198,012	\$ 1,199,990	\$ 4,663	\$ 3,936	\$ 8,599	\$ 6,690	\$ 1,231,533	\$ 1,238,223	\$ -	\$ -	\$ -
2056	\$ 1,918	\$ 1,587,932	\$ 1,589,850	\$ 553	\$ 339,074	\$ 339,627	\$ 1,365	\$ 1,248,858	\$ 1,250,223	\$ 4,600	\$ 4,047	\$ 8,647	\$ 5,999	\$ 1,283,746	\$ 1,289,745	\$ -	\$ -	\$ -
2057	\$ 819	\$ 1,652,433	\$ 1,653,252	\$ 251	\$ 352,958	\$ 353,209	\$ 568	\$ 1,299,475	\$ 1,300,043	\$ 4,530	\$ 4,355	\$ 8,885	\$ 5,111	\$ 1,335,921	\$ 1,341,032	\$ -	\$ -	\$ -
2058	\$ 550	\$ 1,715,957	\$ 1,716,507	\$ 168	\$ 366,631	\$ 366,799	\$ 382	\$ 1,349,326	\$ 1,349,708	\$ 4,452	\$ 4,677	\$ 9,129	\$ 4,843	\$ 1,387,325	\$ 1,392,168	\$ -	\$ -	\$ -
2059	\$ 369	\$ 1,782,889	\$ 1,783,258	\$ 113	\$ 381,018	\$ 381,131	\$ 256	\$ 1,401,871	\$ 1,402,127	\$ 4,574	\$ 4,602	\$ 9,176	\$ 4,837	\$ 1,441,092	\$ 1,445,929	\$ -	\$ -	\$ -
2060	\$ -	\$ 1,850,228	\$ 1,850,228	\$ -	\$ 395,511	\$ 395,511	\$ -	\$ 1,454,717	\$ 1,454,717	\$ 4,486	\$ 4,942	\$ 9,428	\$ 4,486	\$ 1,495,583	\$ 1,500,069	\$ -	\$ -	\$ -

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
 for the June 30, 2020 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	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
2020	\$ 18,683,069	\$ -	\$ 18,683,069	\$ 4,405,173	23.58%	\$ 67,508	\$ 717,107	\$ 902,917	\$ 3,966	\$ 217,239
2021	\$ 19,026,195	\$ -	\$ 19,026,195	\$ 4,500,144	23.65%	\$ 67,430	\$ 731,177	\$ 947,628	\$ 4,076	\$ 221,226
2022	\$ 19,342,010	\$ 16,772	\$ 19,358,782	\$ 4,568,273	23.62%	\$ 66,603	\$ 751,481	\$ 971,948	\$ 4,112	\$ 224,512
2023	\$ 19,643,881	\$ 61,586	\$ 19,705,467	\$ 4,634,809	23.59%	\$ 66,655	\$ 778,593	\$ 988,475	\$ 4,147	\$ 228,101
2024	\$ 19,944,272	\$ 132,414	\$ 20,076,686	\$ 4,715,536	23.64%	\$ 67,140	\$ 809,973	\$ 1,002,771	\$ 4,100	\$ 232,572
2025	\$ 20,247,549	\$ 228,536	\$ 20,476,085	\$ 4,818,350	23.80%	\$ 68,044	\$ 845,418	\$ 1,014,558	\$ 4,213	\$ 238,317
2026	\$ 20,558,611	\$ 349,823	\$ 20,908,434	\$ 4,951,359	24.08%	\$ 69,369	\$ 884,958	\$ 1,025,075	\$ 4,244	\$ 245,716
2027	\$ 20,881,250	\$ 496,181	\$ 21,377,431	\$ 5,122,083	24.53%	\$ 70,947	\$ 932,324	\$ 1,034,254	\$ 4,273	\$ 255,233
2028	\$ 21,218,602	\$ 668,055	\$ 21,886,657	\$ 5,342,060	25.18%	\$ 72,765	\$ 979,902	\$ 1,041,092	\$ 4,391	\$ 267,280
2029	\$ 21,574,937	\$ 866,527	\$ 22,441,464	\$ 5,616,524	26.03%	\$ 74,625	\$ 1,030,983	\$ 1,048,484	\$ 4,420	\$ 282,128
2030	\$ 21,950,892	\$ 1,093,496	\$ 23,044,388	\$ 5,951,356	27.11%	\$ 76,564	\$ 1,085,644	\$ 1,055,831	\$ 4,447	\$ 300,085
2031	\$ 22,347,903	\$ 1,351,483	\$ 23,699,386	\$ 6,353,371	28.43%	\$ 78,488	\$ 1,144,014	\$ 1,062,870	\$ 4,569	\$ 321,498
2032	\$ 22,767,156	\$ 1,643,190	\$ 24,410,346	\$ 6,829,932	30.00%	\$ 80,592	\$ 1,206,103	\$ 1,066,095	\$ 4,495	\$ 346,833
2033	\$ 23,214,722	\$ 1,971,428	\$ 25,186,150	\$ 7,392,870	31.85%	\$ 81,417	\$ 1,277,330	\$ 1,077,197	\$ 4,619	\$ 376,482
2034	\$ 23,677,066	\$ 2,338,525	\$ 26,015,591	\$ 8,046,283	33.98%	\$ 79,284	\$ 1,341,741	\$ 1,112,210	\$ 4,641	\$ 409,826
2035	\$ 24,113,456	\$ 2,756,277	\$ 26,869,733	\$ 8,760,283	36.33%	\$ 77,129	\$ 1,400,307	\$ 1,141,554	\$ 4,769	\$ 446,191
2036	\$ 24,527,861	\$ 3,242,098	\$ 27,769,959	\$ 9,537,587	38.88%	\$ 75,520	\$ 1,471,342	\$ 1,183,021	\$ 4,677	\$ 485,749
2037	\$ 24,910,108	\$ 3,790,554	\$ 28,700,662	\$ 10,382,500	41.68%	\$ 72,623	\$ 1,544,063	\$ 1,217,645	\$ 4,691	\$ 528,864
2038	\$ 25,258,939	\$ 4,410,980	\$ 29,669,919	\$ 11,305,715	44.76%	\$ 67,911	\$ 1,622,780	\$ 1,273,015	\$ 4,820	\$ 575,481
2039	\$ 25,542,545	\$ 5,108,275	\$ 30,650,820	\$ 12,294,052	48.13%	\$ 60,728	\$ 1,697,467	\$ 1,331,984	\$ 4,832	\$ 625,109
2040	\$ 25,741,834	\$ 5,900,546	\$ 31,642,380	\$ 13,340,539	51.82%	\$ 49,911	\$ 1,795,612	\$ 1,420,615	\$ 4,841	\$ 677,401
2041	\$ 25,805,556	\$ 6,797,472	\$ 32,603,028	\$ 14,438,007	55.95%	\$ 37,602	\$ 1,869,817	\$ 1,510,472	\$ 4,847	\$ 731,583
2042	\$ 25,720,550	\$ 7,822,739	\$ 33,543,289	\$ 15,561,690	60.50%	\$ 29,240	\$ 1,959,426	\$ 1,565,487	\$ 4,849	\$ 788,415
2043	\$ 25,534,422	\$ 8,972,769	\$ 34,507,191	\$ 16,768,436	65.67%	\$ 23,698	\$ 2,087,292	\$ 1,598,057	\$ 4,982	\$ 850,966
2044	\$ 25,278,369	\$ 10,234,714	\$ 35,513,083	\$ 18,127,353	71.71%	\$ 19,621	\$ 2,215,424	\$ 1,618,144	\$ 4,842	\$ 921,482
2045	\$ 24,968,649	\$ 11,590,332	\$ 36,558,981	\$ 19,660,894	78.74%	\$ 16,526	\$ 2,359,553	\$ 1,628,485	\$ 4,833	\$ 1,001,387
2046	\$ 24,617,453	\$ 13,022,953	\$ 37,640,406	\$ 21,405,042	86.95%	\$ 14,610	\$ 2,517,031	\$ 1,629,147	\$ 4,820	\$ 1,092,420
2047	\$ 24,238,469	\$ 14,527,418	\$ 38,765,887	\$ 23,395,135	96.52%	\$ 12,044	\$ 903,922	\$ 1,638,690	\$ 4,953	\$ 1,151,787
2048	\$ 23,819,247	\$ 16,104,174	\$ 39,923,421	\$ 23,819,246	100.00%	\$ 8,738	\$ 28,658	\$ 1,645,912	\$ 4,781	\$ 1,151,122
2049	\$ 23,357,071	\$ 17,761,245	\$ 41,118,316	\$ 23,357,071	100.00%	\$ 7,297	\$ 23,944	\$ 1,638,013	\$ 4,754	\$ 1,128,057
2050	\$ 22,873,602	\$ 19,501,428	\$ 42,375,030	\$ 22,873,602	100.00%	\$ 5,090	\$ 17,494	\$ 1,640,449	\$ 4,722	\$ 1,103,610
2051	\$ 22,354,626	\$ 21,327,951	\$ 43,682,577	\$ 22,354,626	100.00%	\$ 3,190	\$ 12,652	\$ 1,633,998	\$ 4,685	\$ 1,077,655
2052	\$ 21,809,440	\$ 23,249,833	\$ 45,059,273	\$ 21,809,440	100.00%	\$ 2,315	\$ 10,599	\$ 1,619,056	\$ 4,814	\$ 1,050,689
2053	\$ 21,249,172	\$ 25,269,396	\$ 46,518,568	\$ 21,249,173	100.00%	\$ 1,666	\$ 8,927	\$ 1,601,604	\$ 4,770	\$ 1,023,051
2054	\$ 20,676,442	\$ 27,390,973	\$ 48,067,415	\$ 20,676,443	100.00%	\$ 1,165	\$ 7,618	\$ 1,581,849	\$ 4,720	\$ 994,859
2055	\$ 20,093,514	\$ 29,620,555	\$ 49,714,069	\$ 20,093,516	100.00%	\$ 819	\$ 6,690	\$ 1,560,032	\$ 4,663	\$ 966,221
2056	\$ 19,502,548	\$ 31,963,997	\$ 51,466,545	\$ 19,502,551	100.00%	\$ 567	\$ 5,999	\$ 1,536,325	\$ 4,600	\$ 937,236
2057	\$ 18,905,425	\$ 34,421,454	\$ 53,326,879	\$ 18,905,429	100.00%	\$ 257	\$ 5,111	\$ 1,511,769	\$ 4,530	\$ 907,959
2058	\$ 18,302,454	\$ 36,989,189	\$ 55,291,643	\$ 18,302,457	100.00%	\$ 172	\$ 4,843	\$ 1,484,279	\$ 4,452	\$ 878,482
2059	\$ 17,697,221	\$ 39,657,676	\$ 57,354,897	\$ 17,697,223	100.00%	\$ 116	\$ 4,837	\$ 1,455,368	\$ 4,574	\$ 848,930
2060	\$ 17,091,161	\$ 42,429,570	\$ 59,520,731	\$ 17,091,164	100.00%	\$ -	\$ 4,486	\$ 1,425,739	\$ 4,486	\$ 819,349

City of Bluefield, West Virginia Firemen's Pension and Relief Fund  
 Actuarial Information to Include in the Financial Statements  
 for the June 30, 2020 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Calculation of Single Equivalent Rate					
Fiscal Year	"Funded" Portion of BP	"Unfunded" Portion of BP	PV of "Funded" BP	PV of "Unfunded" BP	PV of BP Using a Single DR
2020	\$ 902,917	\$ -	\$ 881,157	\$ -	\$ 881,157
2021	\$ 947,628	\$ -	\$ 880,753	\$ -	\$ 880,753
2022	\$ 971,948	\$ -	\$ 860,339	\$ -	\$ 860,339
2023	\$ 988,475	\$ -	\$ 833,303	\$ -	\$ 833,303
2024	\$ 1,002,771	\$ -	\$ 805,100	\$ -	\$ 805,100
2025	\$ 1,014,558	\$ -	\$ 775,775	\$ -	\$ 775,775
2026	\$ 1,025,075	\$ -	\$ 746,492	\$ -	\$ 746,492
2027	\$ 1,034,254	\$ -	\$ 717,311	\$ -	\$ 717,311
2028	\$ 1,041,092	\$ -	\$ 687,670	\$ -	\$ 687,670
2029	\$ 1,048,484	\$ -	\$ 659,574	\$ -	\$ 659,574
2030	\$ 1,055,831	\$ -	\$ 632,567	\$ -	\$ 632,567
2031	\$ 1,062,870	\$ -	\$ 606,461	\$ -	\$ 606,461
2032	\$ 1,066,095	\$ -	\$ 579,335	\$ -	\$ 579,335
2033	\$ 1,077,197	\$ -	\$ 557,493	\$ -	\$ 557,493
2034	\$ 1,112,210	\$ -	\$ 548,204	\$ -	\$ 548,204
2035	\$ 1,141,554	\$ -	\$ 535,874	\$ -	\$ 535,874
2036	\$ 1,183,021	\$ -	\$ 528,894	\$ -	\$ 528,894
2037	\$ 1,217,645	\$ -	\$ 518,451	\$ -	\$ 518,451
2038	\$ 1,273,015	\$ -	\$ 516,216	\$ -	\$ 516,216
2039	\$ 1,331,984	\$ -	\$ 514,408	\$ -	\$ 514,408
2040	\$ 1,420,615	\$ -	\$ 522,511	\$ -	\$ 522,511
2041	\$ 1,510,472	\$ -	\$ 529,106	\$ -	\$ 529,106
2042	\$ 1,565,487	\$ -	\$ 522,264	\$ -	\$ 522,264
2043	\$ 1,598,057	\$ -	\$ 507,743	\$ -	\$ 507,743
2044	\$ 1,618,144	\$ -	\$ 489,643	\$ -	\$ 489,643
2045	\$ 1,628,485	\$ -	\$ 469,307	\$ -	\$ 469,307
2046	\$ 1,629,147	\$ -	\$ 447,140	\$ -	\$ 447,140
2047	\$ 1,638,690	\$ -	\$ 428,342	\$ -	\$ 428,342
2048	\$ 1,645,912	\$ -	\$ 409,743	\$ -	\$ 409,743
2049	\$ 1,638,013	\$ -	\$ 388,359	\$ -	\$ 388,359
2050	\$ 1,640,449	\$ -	\$ 370,415	\$ -	\$ 370,415
2051	\$ 1,633,998	\$ -	\$ 351,389	\$ -	\$ 351,389
2052	\$ 1,619,056	\$ -	\$ 331,596	\$ -	\$ 331,596
2053	\$ 1,601,604	\$ -	\$ 312,402	\$ -	\$ 312,402
2054	\$ 1,581,849	\$ -	\$ 293,856	\$ -	\$ 293,856
2055	\$ 1,560,032	\$ -	\$ 276,003	\$ -	\$ 276,003
2056	\$ 1,536,325	\$ -	\$ 258,865	\$ -	\$ 258,865
2057	\$ 1,511,769	\$ -	\$ 242,598	\$ -	\$ 242,598
2058	\$ 1,484,279	\$ -	\$ 226,844	\$ -	\$ 226,844
2059	\$ 1,455,368	\$ -	\$ 211,834	\$ -	\$ 211,834
2060	\$ 1,425,739	\$ -	\$ 197,639	\$ -	\$ 197,639