



**The City of Henderson
Police and Fire Pension Fund**

Actuarial Valuation Report
As of July 1, 2019

For the Plan Year
July 1, 2019 – June 30, 2020





November 13, 2019
Via E-mail

Mr. Robert Gunter, Finance Director
The City of Henderson
Henderson Municipal Center
222 1st Street, First Floor
Henderson, KY 42420-3181

RE: The City of Henderson Police and Fire Pension Fund

Dear Robert:

We is the July 1, 2019 actuarial valuation report for The City of Henderson Police and Fire Pension Fund (Fund). Please note that all references in our report for values prior to July 1, 2006 were prepared by the prior service provider, Mercer in Louisville, KY.

This report contains a detailed description and the results of a valuation of The City of Henderson Police and Fire Pension Fund as of July 1, 2019. The contents of this report recognize the Employee Retirement Income Security Act of 1974 (ERISA), Internal Revenue Service requirements. GASB #67 and #68 are in a separate report.

The following is a brief description of the exhibits and shows how the information is organized.

Plan Assets

Plan assets are funds that have accumulated and will be used to meet future benefit obligations.

Plan Liabilities

The Normal Cost and Unfunded Past Service Liability in Exhibit A compares plan liabilities and plan assets to show how future benefit obligations will be funded.

Plan Contribution Levels

Each year the contribution to the plan consists of two parts, i.e., payment of the Normal Cost and payment toward funding the Unfunded Past Service Liability. A range of contributions is allowed, as shown in Exhibit A, depending on how rapidly the Unfunded Past Service Liability is funded.

Cost of Living Adjustments

The significant increase in plan liabilities assuming a two percent and four percent future cost-of-living adjustment is shown in Exhibit B.

Newport Group

8350 North Central Expressway, Suite 900, Dallas, Texas 75206 | www.newportgroup.com

Mr. Robert Gunter, Finance Director
The City of Henderson
Page Two
November 12, 2019

Please refer to the Exhibit A regarding the range of contributions assuming no future cost-of-living adjustments. The anticipated annual benefit payment for the current year is \$306,200 and this is greater than the amortization of the unfunded past service liability for 20 years. It is recommended that tax revenues should be substantially greater than the anticipated annual benefit payment to reduce the unfunded past service liability.

The information and valuation results shown in this report are, to the best of our knowledge, complete and accurate and are based upon:

1. Employee census data as of July 1, 2019 submitted by The City of Henderson. This data was not audited by us, but appears to be sufficient and reliable for purposes of the report.
2. Financial data as of June 30, 2019 submitted by The City of Henderson. This data was not audited by us, but appears to be sufficient and reliable for purposes of the report.
3. Actuarial assumptions which, individually and in the aggregate, are reasonably related to the experience of the plan and to reasonable expectations and which represent our best estimate of anticipated experience under the plan. The mortality used reflects the significant increase in life expectancy from the latest Society of Actuaries Mortality Tables and projections thereof.
4. Actuarial methods as stated in the report and our interpretation of plan provisions as summarized in the report.

It is our opinion that this Actuarial Report is, to the best of our knowledge, complete and accurate. The actuarial methods and assumptions are applied on an objective basis, are reasonable individually and in the aggregate, and represent the Actuary's best estimate of future experience as required by the Employee Retirement Income Security Act of 1974. Therefore, the information contained in this Actuarial Report fully and fairly discloses the actuarial position of The City of Henderson Police and Fire Pension Fund.

The undersigned actuary has met the Qualification Standards of the American Academy of Actuaries as required to render the actuarial opinion contained herein.

Please let us know if you have any questions regarding this report.

Cordially,



Bob J. Bolin, FSA, MAAA, EA, FCA
Consulting Actuary

Enclosures

Newport Group

8350 North Central Expressway, Suite 900, Dallas, Texas 75206 | www.newportgroup.com

TABLE OF CONTENTS

Valuation Highlights.....	Exhibit A
Impact of Annual Cost-of-Living Adjustments	Exhibit B
Plan Assets	Exhibit C
Statement of Income	Exhibit D
Plan Specifications and Actuarial Assumptions	Exhibit E

City of Henderson Police and Fire Pension Fund

Exhibit A

Valuation Highlights for 2016 vs. 2019 Plan year

	<u>Current Year July 1, 2016</u>	<u>Current Year July 1, 2019</u>
1. Basic data included in Valuation		
a. Active employees	0	0
b. Individuals receiving benefits	18	14
c. Terminated with vested benefits	0	0
d. Total Participants	18	14
2. Covered Payroll of Active Participants	\$0	\$0
3. Monthly Retirement Income for Costs		
a. Active employees	0	0
b. Terminated with vested benefits	0	0
c. Individuals receiving benefits	\$28,264	\$25,523
d. Total retirement income	<u>28,264</u>	<u>25,523</u>
4. Funding Valuation using Salary Increases		
a. Normal Cost as of Valuation Date	0	0
b. Past Service Liability	3,742,590	3,548,574
c. Value of Plan Assets	(9,570)	(3,627)
d. Unfunded Past Service Liability	3,752,160	3,552,201
5. Contribution Range		
a. Normal Cost plus 10 year amortization of Unfunded Past Service Liability	462,607	437,954
b. Normal Cost plus 15 year amortization of Unfunded Past Service Liability*	337,473	319,489
c. Normal Cost plus 20 year amortization of Unfunded Past Service Liability	276,091	261,377

*The plan sponsor has adopted a funding policy of amortizing the unfunded past service liability over 15 years. This includes any changes in assumptions or experience gains or losses.

City of Henderson Police and Fire Pension Fund

Exhibit B

Impact of Annual Cost-of-Living Adjustments on July 1, 2019 Valuation Results

	No COLA	2% COLA	4% COLA
Past Service Liability	3,548,574	4,349,508	5,488,956
Value of Plan Assets	(\$3,627)	(\$3,627)	(\$3,627)
Unfunded Past Service Liability	\$3,552,201	\$4,353,135	\$5,492,583
Amortization of Unfunded Past Service Liability for the period indicated			
10 years	\$437,954	\$536,702	\$677,186
15 Years	\$319,489	\$391,526	\$494,009
20 Years	\$261,377	\$320,311	\$404,154

City of Henderson Police and Fire Pension Fund

Exhibit C

Statement of Net Assets FYE June 30, 2019

<u>Item</u>		
ASSETS		
Cash		\$699.12
Investments		0.00
Receivables		
Due from General Fund		0.00
Accrued Interest		<u>0.00</u>
Total Assets		\$699.12
LIABILITIES		
Accounts Payable		\$4,326.42
Due to Other Funds		<u>0.00</u>
Total Liabilities		4,326.42
NET ASSETS		(\$3,627.30)

<p>City of Henderson Police and Fire Pension Fund</p> <p>Exhibit D</p> <p>Statement of Income July 1, 2018 through June 30, 2019</p>

Item	
INCOME	
Contributions	
Employer	\$0.00
Employee	0.00
Tax Revenue	0.00
Transfer from General Fund	352,000.00
Transfer from General Fund - Employee	0.00
Investment Income	15.74
Total Income	\$352,015.74
EXPENSES	
All Benefits Paid	(352,210.75)
Professional Services	0.00
Trust Fees	0.00
Total Expenses	(\$352,210.75)
NET INCOME	(\$195.01)
Adjustment for prior year receivables	0.00
Ending Assets June 30, 2019	\$699.12

THE CITY OF HENDERSON
POLICE AND FIRE PENSION FUND

EXHIBIT E

PLAN SPECIFICATIONS

Effective Date: June 30, 1946

Governing Provisions: Kentucky Revised Statutes 95.621 to 95.629

Eligibility: Police and firefighters hired on or prior to August 1, 1988 remain covered by this plan unless the employee elected to transfer pension coverage to the County Employees Retirement System (CERS). All police and firefighters hired after August 1, 1988 are covered under CERS.

Retirement Date: Anytime after completion of at least twenty (20) years of service.

Retirement Benefit: 50% of final monthly salary plus 2% of final monthly salary per year of service between 20 and 25, plus 3% of final monthly salary per year of service between 25 and 30.

Vesting: Rights in a service retirement monthly benefit vest upon completion of twenty (20) years of service. A participant withdrawing from service prior to twenty (20) years of service will receive a refund of his contributions, without interest.

Death Benefits: The surviving spouse is entitled to immediate income equal to 50% of the participant's last rate of pay regardless of the length of the participant's service if death is due to occupational causes; otherwise one year of service is required. This death benefit ceases at the spouse's death or remarriage. In addition, \$ 24 per month is payable to the spouse for each minor child until each child attains age eighteen (18).

If no spouse survives or if the spouse remarries, each minor child is entitled to \$ 24 until the child reaches age eighteen (18).

THE CITY OF HENDERSON
POLICE AND FIRE PENSION FUND

EXHIBIT E

PLAN SPECIFICATIONS, CONTINUED

- Death Benefits (cont.): If neither a spouse nor minor children survive the participant, then dependent parents are entitled to 25% of the participant's salary.
- These benefits are also payable upon the death of a retired participant.
- Disability Benefits: Benefit equal to 50% of the participant's final monthly salary. Upon his death, his survivors receive benefits under the death benefit provisions.
- Employee Contributions: Each active participant contributes at the same rate as required by the Social Security Administration (currently 7.65%).

City of Henderson Police and Fire Pension Fund

Plan Summary Assumptions Fiscal

Year: 7/1/2019 to 6/30/2020

Measurement Date: 7/1/2019

Discount Rates	Pre-Retirement: 4.00%
	Post-Retirement: 4.00%
Pre-Retirement	
Turnover	None
Mortality	Male-RP2014 Male Employee Mortality Female-RP 2014 Female Employee Mortality
Generational Scale	Male-2018 Generational Mortality Improvement Scales - Male Female-2018 Generational Mortality Improvement Scales - Female
Assumed Ret Age	Normal retirement age 60 and 20 years of service
Post-Retirement	
Mortality	Male-RP2014 Male Annuitant Base table Female-RP2014 Female Annuitant Base Mortality
Generational Scale	Male-2018 Generational Mortality Improvement Scales - Male Female-2018 Generational Mortality Improvement Scales - Female
Actuarial Equivalence	Pre-Retirement Mortality: 1994 GAR mortality table prescribed by the Secretary 2002
	Post-Retirement Mortality: 1994 GAR mortality table prescribed by the Secretary 2002
Assumed Benefit Form	Life Annuity increasing 4% each year
Assumed Spouse's Age	Spouse assumed to be the same age as participant
	Participant is assumed to be married to current spouse at retirement if spouse's date of birth is known
Actuarial Cost Method	Projected Unit Credit
Asset Long Term Rate of Return	0.00%



November 13, 2019

VIA E-mail

Mr. Robert Gunter, Finance Director
The City of Henderson
Henderson Municipal Center
222 1st Street, First Floor
Henderson, KY 42420-3181

RE: GASB 67 for City of Henderson Police & Fire Pension Fund at June 30, 2019

Attached are information and exhibits for preparing the notes to the Financial Statements for the City of Henderson.

Value of Investments: Investments are reported at fair market value.

Plan Description: This is a single employer defined benefit plan that provides pensions for police and firefighters that were hired prior to August 1, 1988.

Plan membership at June 30, 2019 is as follows:

Inactive members or beneficiaries receiving benefits:	14
Inactive members entitled to future benefits:	0
Active members:	<u>0</u>
Total	14

Benefits Provided: The Plan provides retirement, disability and death benefits. Plan members receive a benefit of 50% of final monthly salary for completion of 20 years of service with increases for service greater than 20. Retirement is upon the completion of 20 years of service. Early and late retirement benefits are actuarially adjusted.

Contributions: The City contributes the cost calculated by an independent Actuary. Such actuarially determined cost is the estimated amount necessary to **finance any unfunded accrued liability over 15 years. For the year ending June 30, 2019**, the City contributed \$352,000.

Investment Categories:

<u>Asset Class</u>	<u>Allocation</u>
Cash	100.0%

Newport Group

8350 North Central Expressway, Suite 900, Dallas, Texas 75206 | www.newportgroup.com

Rates of Return: For the year ended June 30, 2019, the annual money-weighted rate of return on pension plan investments, net of expense, was 0.00%.

Allocated Insurance Contracts: There are none.

Deferred Retirement Option Programs: None.

Net Pension Liability as of June 30, 2019:

Total Pension Liability	\$4,349,508
Plan Fiduciary Net Position	(3,627)
City's Net Pension Liability	4,353,135
Plan Fiduciary Net Position as a percentage of the total pension liability	0.08%

Primary Actuarial Assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2019 using the following primary assumptions:

Inflation:	None
C.O.L.A.:	2%
Mortality:	RP-2014 Base Mortality Table with MP-2018 Improvement scale

Discount Rate: The discount rate used to measure the total pension liability was 4.0%. The projection of cash flows used to determine the discount rate assumed that City contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the City, calculated using the discount rate of 4.0%, as well as what the City's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.0%) or 1-percentage-point higher (5.0%) than the current rate:

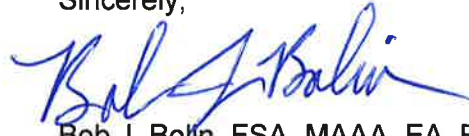
	1% Decrease 3.0%	Current Discount 4.0%	1% Increase 5.0%
City Net Pension Liability	\$4,864,737	\$4,353,135	\$3,930,780

Mr. Robert Gunter, Finance Director
The City of Henderson
Page 3
November 13, 2019

GASB 67 requires that the Actuary use realistic assumptions, therefore, the mortality experience uses the updated projection scale MP-2018, and a 2% COLA was assumed on future benefit payments.

If you or your Board members have any questions, please contact me.

Sincerely,



Bob J. Bolin, FSA, MAAA, EA, FCA
Actuary / Principal

BJB/mht

Newport Group

8350 North Central Expressway, Suite 900, Dallas, Texas 75206 | www.newportgroup.com

City of Henderson Police and Fire Pension Fund

FOR FISCAL YEAR ENDING June 30, 2019

Schedule of Changes in the Net Pension Liability and Related Ratios

	2019	2016
Total Pension Liability		
Service cost	\$0	(\$3,658)
Interest	175,064	183,171
Changes of benefit terms	0	0
Differences between expected and actual experience	(26,054)	(38,869)
Changes of assumptions*	0	0
Benefit Payments	(352,211)	(382,823)
Net change in total pension liability	<u>(203,201)</u>	<u>(242,179)</u>
Total pension liability--beginning	4,552,709	4,770,687
Total pension liability--ending (a)	4,349,508	4,528,508
Plan Fiduciary Net Position		
Contributions---Employer	352,000	386,000
Contributions---Employee	0	0
Net investment income(c)	0	188
Benefit Payments	(352,211)	(382,823)
Administration expenses	0	(3,658)
Other	0	2
Net change in plan fiduciary net position	(195)	(291)
Plan fiduciary net position--beginning	(3,432)	(9,279)
Plan fiduciary net position--ending (b)	(3,627)	(9,570)
Net Pension Liability (a) - (b)	4,353,135	4,538,078
Plan fiduciary net position as a percentage of the total pension liability	-0.08%	-0.21%
Covered employee payroll	0	0
Net Pension Liability as a percentage of covered employee payroll	N/A	N/A

* Mortality assumption updated in 2018 and a 2% COLA was assumed

City of Henderson Police and Fire Pension Fund

FOR FISCAL YEAR ENDING June 30, 2019

	GASB67 Measurement	06/30/2019	06/30/2016
Input			
Interest Rate for liability		4%	4%
Contributions by employer		352,000	386,000
Employee contributions		0	0
Benefits paid		352,211	382,823
Plan expenses		0	-3,658
Plan Assets at Fair Value EOY		(3,627)	(9,570)
Assets BOY		(3,432)	(9,279)
Interest cost		175,064	183,171
Service Cost (Normal Cost)		0	0
Total Pension Liability BOY		4,552,709	4,770,687
Total Pension Liability EOY		4,349,508	4,528,508
Change in assumptions		0	0
Plan amendment		0	0
		175064.1	183171

**City of Henderson Police and Fire Pension Fund
Computation of Pension Expense -- June 30, 2019**

Components of Total Pension Expense

Service cost	0
Interest on Total Pension Liability	
(a) Total Pension Liability	\$4,552,709
(b) Expected distributions, weighted for timing	176,106
(c) Average expected Liability (a) - (b)	4,376,604
(d) Discount Rate	4%
(e) Interest Cost (d) x (c)	175,064
Differences between expected and actual experience	48,571
Changes of assumptions	0
Projected earnings on pension plan investments	0
Differences between projected and actual earnings on plan investments	0
Pension plan administrative expense	0
Other changes in fiduciary net position	
Total pension expense	223,635
Interest Rate	4%

City of Henderson Police and Fire Pension Fund
 Amortization Schedules--June 30, 2015
 06/30/2015

Year Originated	Description	Amount	Remaining Life	Amortization	Remaining 06/30/2014	Remaining 06/30/2015	Remaining 06/30/2016	Remaining 06/30/2019
Deferred Inflows:								
06/30/2014	Difference in Expected and Actual Experience:	-731,214.00	15.300	(47,792)	-683,422.00	-635,630.00	-587,838.00	-47,792.00
06/30/2014	Difference in Actual Investment Earnings and Estimat	N/A	-	-	0.00	0.00	0.00	-444,462.00
Deferred Outflows:								
06/30/2014	Changes in Actuarial Assumptions:	N/A	-	-	0.00	0.00	0.00	
06/30/2015	Changes in Actuarial Assumptions:	0.00			0.00	0.00		
06/30/2015	Difference in Expected and Actual Experience:	-85,140.84	15.000	(5,676)	-79,464.84	-73,788.84	-73,788.84	-5,676.00
06/30/2015	Difference in Actual Investment Earnings and Estimat	N/A	5.000	-	0.00	0.00		-56,760.84
06/30/2016	Difference in Expected and Actual Experience:	38,823.00	15.000	2,591			36,278.00	2,591.00
06/30/2016	Difference in Actual Investment Earnings and Estimate:							33,687.00
06/30/2019	Difference in Expected and Actual Experience:	26,054.00	11.300	2,306			-50,877.00	2,305.66
								23,748.34
								-48,571.34
					Deferred Inflows:	06/30/2015	06/30/2016	06/30/2019
						-635,630.00	-587,838.00	-444,462.00
					Deferred Outflows:	0.00	0.00	
					Difference in Expected and Actual Experience:	-53,468.00	-50,877.00	-48,571.34
					Difference in Actual Investment Earnings and Estimate:	0.00	0.00	
					Changes in Actuarial Assumptions:	0.00	0.00	
					Change in Deferred Inflows:	0.00		
					Change in Deferred Outflows:	0.00		

City of Henderson Police and Fire Pension Fund
Schedule of Contributions
Last 10 Years

	2019	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially Determined Contribution	\$ 337,473	\$ 355,293	\$ 362,840	\$ 396,671	\$ 401,983	\$ 384,553	\$ 405,070	\$ 385,099	\$ 370,618	\$ 375,317	\$ 363,343
Contribution in relation to the actuarially determined contribution	\$ 352,000	\$ 386,000	\$ 399,000	\$ 412,000	\$ 418,000	\$ 418,000	\$ 424,775	\$ 16,083	\$ 291,013	\$ 424,749	\$ 392,639
Contribution deficiency (excess)	\$ (14,527)	\$ (30,707)	\$ (36,160)	\$ (15,329)	\$ (16,017)	\$ (33,447)	\$ (19,705)	\$ 369,016	\$ 79,605	\$ (49,432)	\$ (29,296)

Covered Payroll

Contribution as a percentage of covered employee payroll

Notes:

Methods and Assumptions:

- Actuarial Cost Method Entry Age
- Asset Valuation Method Market Value
- Withdrawal none
- Salary Increases N/A
- Investment Rate of Return 4%
- Retirement Age 20 years
- Mortality In the 2019 actuarial valuation, the assumed life expectancies are according to the RP2014 Mortality Table, projected by Scale MP2018.
- COLA 2%

City of Henderson Police and Fire Pension Fund

Plan Summary and FASB Assumptions

Fiscal Year: 7/1/2019 to 6/30/2020

Measurement Date: 7/1/2019

For FASB

Discount Rates	Pre-Retirement: 4.00% Post-Retirement: 4.00%
Pre-Retirement	
Turnover	None
Mortality	Male-RP2014 Male Employee Mortality Female-RP 2014 Female Employee Mortality
Generational Scale	Male-2018 Generational Mortality Improvement Scales - Male Female-2018 Generational Mortality Improvement Scales - Female
Assumed Ret Age	Normal retirement age 60 and 20 years of service
Post-Retirement	
Mortality	Male-RP2014 Male Annuitant Base table Female-RP2014 Female Annuitant Base Mortality
Generational Scale	Male-2018 Generational Mortality Improvement Scales - Male Female-2018 Generational Mortality Improvement Scales - Female
Actuarial Equivalence	Pre-Retirement Interest: 0.01% Pre-Retirement Mortality: 1994 GAR mortality table prescribed by the Secretary 2002 Post-Retirement Interest: 0.01% Post-Retirement Mortality: 1994 GAR mortality table prescribed by the Secretary 2002
Assumed Benefit Form	Life Annuity increasing 2% each year
Assumed Spouse's Age	Spouse assumed to be the same age as participant Participant is assumed to be married to current spouse at retirement if spouse's date of birth is known
Actuarial Cost Method	Projected Unit Credit
Asset Long Term Rate of Return	0.00%