GASB 67/68 Report For Use in Financial Statement Reporting



SPRINGFIELD FIREFIGHTERS' PENSION FUND

Actuarial Valuation as of March 1, 2020

LAUTERBACH & AMEN, LLP



Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

GASB 67: SPRINGFIELD FIREFIGHTERS' PENSION FUND

Fiscal Year Ending: February 28, 2021 Actuarial Valuation Date: March 1, 2020 Utilizing Data as of February 29, 2020 Measurement Date: February 28, 2021

GASB 68: CITY OF SPRINGFIELD, ILLINOIS

Fiscal Year Ending: February 28, 2021 Actuarial Valuation Date: March 1, 2020 Utilizing Data as of February 29, 2020 Measurement Date: February 28, 2021

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LAUTERBACH & AMEN, LLP



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ACTUARIAL CERTIFICATION

This certification provides supplemental information as required by the Governmental Accounting Standards Board. The enclosed schedules were prepared by the undersigned to assist in the preparation of the Comprehensive Annual Financial Report. The assumptions and methods used in the preparation of this report meet the parameters set for the disclosures presented in the financial section as required by the Governmental Accounting Standards Board. Additional information is provided solely to assist the Auditors in the preparation of the required footnote disclosures.

The results in this report are based on the census data and financial information submitted by the City of Springfield Firefighters' Pension Fund, and may include results from the prior Actuary. We did not prepare the Actuarial Valuations for the years prior to March 1, 2016. Those valuations were prepared by the prior Actuary whose reports have been furnished to us, and our disclosures are based on those reports. An audit of the prior Actuary's results was not performed, but high-level reviews were completed for general reasonableness, as appropriate, based on the purpose of this valuation. The accuracy of the results is dependent on the precision and completeness of the underlying information.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The City of Springfield Firefighters' Pension Fund selected certain assumptions, while others were the result of guidance and/or judgment from the Plan's Actuary or Advisors. We believe that the assumptions used in this valuation are reasonable and appropriate for the purposes for which they have been used.

To the best of our knowledge, all calculations are in accordance with the applicable accounting requirements, and the procedures followed and presentation of results conform to generally accepted actuarial principles and practices. The undersigned consultants of Lauterbach & Amen, LLP, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render this Actuarial Certification. There is no relationship between the Springfield Firefighters' Pension Fund or the City of Springfield, Illinois and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,

LAUTERBACH & AMEN, LLP

Todd A. Schroeder, ASA, FCA, EA, MAAA

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PLAN FIDUCIARY NET POSITION

Statement of Plan Fiduciary Net Position Statement of Changes in Plan Fiduciary Net Position



STATEMENT OF PLAN FIDUCIARY NET POSITION

Assets		
Cash and Cash Equivalents	\$ 4,456,819	\$ 5,314,410
Total Cash	4,456,819	5,314,410
Receivables:		
Investment Income - Accrued Interest	330,930	302,383
Other	11,839	16,045
Total Receivables	342,769	318,428
Investments:		
U.S. Government and Agency Obligations	-	21,658,326
State and Local Obligations	-	1,814,244
Fixed Income	49,347,591	-
Corporate Bonds	-	27,926,499
Insurance Contracts	13,484,253	13,303,652
Mutual Funds	62,044,889	82,463,603
Common Stock	8,539,742	6,524,688
Total Investments	133,416,475	153,691,012
Total Assets	138,216,063	159,323,850
Liabilities		
Payables:		
Expenses Due/Unpaid	25,325	26,189
Total Liabilities	25,325	26,189
Plan Fiduciary Net Position	\$ 138,190,738	\$ 159,297,661

The Plan Fiduciary Net Position shown above is intended to be in accordance with GAAP and the Governmental Accounting Standards Board. The Fair Value of Investments have been provided by the reporting entity, and the results are being audited by an independent Auditor. The level of the assets has been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the Fair Value of Investments. The Statement of Plan Fiduciary Net Position for 2021 is based on audited financials.



STATEMENT OF CHANGES IN PLAN FIDUCIARY NET POSITION

	 2/28/2021
Additions	 _
Contributions	
Employer	\$ 13,550,355
Members	 1,807,386
Total Contributions	 15,357,741
Investment Income	
Net Appreciation in Fair Value of Investments	19,586,737
Interest and Dividends	2,803,332
Less Investment Expense	 (213,046)
Net Investment Income	 22,177,023
Total Additions	37,534,764
Deductions	
Benefit Payments and Refunds of Member Contributions	16,317,321
Administrative Expense	 110,520
Total Deductions	16,427,841
Net Increase in Net Position	21,106,923
Plan Fiduciary Net Position	
Beginning of Year	 138,190,738
End of Year	\$ 159,297,661

The changes in Plan Fiduciary Net Position shown above is intended to be in accordance with GAAP and the Governmental Accounting Standards Board. The Plan activity has been provided by the reporting entity, and the results are being audited by an independent Auditor. The cash flows have been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the Fair Value of Investments. The Statement of Changes in Plan Fiduciary Net Position for 2021 is based on audited financials.



ACTUARIAL PENSION LIABILITY INFORMATION

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Statement of Changes in Net Pension Liability
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Pension Expense Development



STATEMENT OF TOTAL PENSION LIABILITY

	2/29/2020	2/28/2021
Active Members	\$ 104,997,689	\$ 105,306,368
Inactive Members		
Terminated Members	252,366	1,014,024
Retired Members	191,139,089	218,604,785
Disabled Members	15,677,113	15,716,895
Other Beneficiaries	17,252,632	17,654,746
Total Inactive Members	224,321,200	252,990,450
Total Pension Liability	\$ 329,318,889	\$ 358,296,818

The Total Pension Liability ("TPL") shown above is dependent on several factors such as Plan Provisions and actuarial assumptions used in this report. In addition, the calculation of the TPL may be dependent on the Plan Fiduciary Net Position shown in the prior section of this report. Changes in the Plan Fiduciary Net Position due to any factor, including adjustments on final audit, could change the TPL. The dependence of the TPL on the Plan Fiduciary Net Position is due to the role of the Plan Fiduciary Net Position (and the Plan's Projected Fiduciary Net Position) on the determination of the Discount Rate used for the TPL.

The TPL has been determined for GASB 67/68 reporting purposes only. The resulting TPL is intended to be used in the financial statement reporting of the Plan and/or Employer. The resulting liability is not intended to be a representation of the Plan liability for other purposes, including but not limited to, determination of cash funding requirements and recommendations. The TPL is based on data as of the Actuarial Valuation - Data Date shown in this report. The TPL has been determined as of the Actuarial Valuation Date and based on the assumptions used in this report, and adjusted to the Measurement Date as needed.



STATEMENT OF CHANGES IN TOTAL PENSION LIABILITY

		2/28/2021
Changes in Total Pension Liability		
Service Cost	\$	5,322,103
Interest		22,140,316
Changes of Benefit Terms		-
Differences Between Expected and Actual Experience		(4,952,431)
Change in Assumptions		22,785,262
Benefit Payments and Refunds		(16,317,321)
Net Change in Total Pension Liability		28,977,929
Total Pension Liability - Beginning		329,318,889
Total Pension Liability - Ending (a)	\$	358,296,818
Plan Fiduciary Net Position - Ending (b)	\$	159,297,661
Employer's Net Pension Liability - Ending (a) - (b)	\$	198,999,157
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		44.46%
Covered-Employee Payroll	\$	19,050,536
Employer's Net Pension Liability as a Percentage of Covered-Employee Payro	11	1,044.59%

The Plan Fiduciary Net Position was detailed in the prior section of this report. The Employer's Net Pension Liability is the excess of the Total Pension Liability over the Plan Fiduciary Net Position.

Total Pension Liability may be dependent on the Plan Fiduciary Net Position. Changes in the Plan Fiduciary Net Position could change the determination of the Total Pension Liability. Any changes in the Plan Fiduciary Net Position, including adjustments on final audit, can have an impact on the Employer's Net Pension Liability that extends beyond the dollar-for-dollar change in the Plan Fiduciary Net Position.

Covered-Employee Payroll is based on the Covered-Employee Payroll for the Plan Members during the Fiscal Year.



STATEMENT OF CHANGES IN NET PENSION LIABILITY

The table below illustrates the changes in Net Pension Liability ("NPL") from the prior Measurement Date to the current Measurement Date. Under Statement 68, the difference between the NPL from the prior Measurement Date to the current Measurement Date should be recognized as a component of Pension Expense, unless permitted to be recognized as a Deferred Outflow or Inflow of Resources.

	Increase (Decrease)					
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)			
Balances Beginning at 3/1/2020	\$ 329,318,889	\$ 138,190,738	\$ 191,128,151			
Changes for the Year:						
Service Cost	5,322,103	-	5,322,103			
Interest	22,140,316	-	22,140,316			
Actuarial Experience	(4,952,431)	-	(4,952,431)			
Change in Assumptions	22,785,262	-	22,785,262			
Changes of Benefit Terms	-	-	-			
Contributions - Employer	-	13,550,355	(13,550,355)			
Contributions - Members	-	1,807,386	(1,807,386)			
Contributions - Other	-	-	-			
Net Investment Income	-	22,177,023	(22,177,023)			
Benefit Payments and Refunds	(16,317,321)	(16,317,321)	-			
Administrative Expense		(110,520)	110,520			
Net Changes	\$ 28,977,929	\$ 21,106,923	\$ 7,871,006			
Balances Ending at 02/28/2021	\$ 358,296,818	\$ 159,297,661	\$ 198,999,157			

The changes in Total Pension Liability shown above are described on the prior page. The Plan Fiduciary Net Position was detailed in the prior section of this report. The Employer's Net Pension Liability is the excess of the Total Pension Liability over the Plan Fiduciary Net Position.



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The table below shows the cumulative amounts to be shown as Deferred Outflows and Inflows of Resources. Changes in Total Pension Liability related to the differences between expected and actual experience, or changes in assumptions regarding future events, are recognized in Pension Expense over the average future working career of all Members (active and inactive) in the Pension Plan. The net difference in projected and actual earnings on Pension Plan investments over the measurement period are recognized over a 5-year period. Amounts not yet recognized are summarized below:

Deferred Outflows Deferred Inflows		Total Deferred			
of Resources		ofResources			Amounts
\$	3,469,581	\$	(4,977,562)	\$	(1,507,981)
	22,595,289		(7,571,165)		15,024,124
	4,737,421		(10,618,493)		(5,881,072)
			_		
\$	30,802,291	\$	(23,167,220)	\$	7,635,071
	\$	of Resources \$ 3,469,581 22,595,289 4,737,421	of Resources	of Resources of Resources \$ 3,469,581 \$ (4,977,562) 22,595,289 (7,571,165) 4,737,421 (10,618,493)	of Resources of Resources \$ 3,469,581 \$ (4,977,562) \$ (22,595,289) 4,737,421 (10,618,493)

^{*}Contributions Subsequent to the Measurement Date may be recognized as a reduction to the Net Pension Liability. The amount is not known as of the date of this report. Subsequent to the Measurement Date, the following amounts will be recognized in Pension Expense in the upcoming years:

Year Ended	
February 28:	
2021	\$ 2,795,158
2022	889,878
2023	89,404
2024	485,670
2025	2,771,922
Thereafter	\$ 603,039



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES - DETAIL

The table below shows the annual detail amounts that have been summarized on the prior page. Under Statement 68, the level of detail shown on the prior page is sufficient for financial statement reporting. The detail shown below is primarily for tracking purposes.

Pension Expense Source	Date Established	Initial Period	Initial Balance	Remaining Period	2/28/2021 Expense Recognized	2/28/2021 Deferred Balance
Asset Gain	2/28/2021	5.00	\$ (12,541,125)	5.00	\$ (2,508,225) \$	(10,032,900)
Change in Assumptions Loss	2/28/2021	6.21	22,785,262	6.21	3,669,125	19,116,137
Actuarial Gain	2/28/2021	6.21	(4,952,431)	6.21	(797,493)	(4,154,938)
Asset Loss	2/29/2020	5.00	3,213,394	4.00	642,679	1,928,036
Change in Assumptions Gain	2/29/2020	6.71	(4,494,064)	5.71	(669,757)	(3,154,550)
Actuarial Loss	2/29/2020	6.71	2,679,231	5.71	399,290	1,880,651
Asset Loss	2/28/2019	5.00	7,023,467	3.00	1,404,694	2,809,385
Change in Assumptions Loss	2/28/2019	7.17	2,400,265	5.17	334,765	1,395,970
Actuarial Loss	2/28/2019	7.17	1,493,791	5.17	208,340	868,771
Asset Gain	2/28/2018	5.00	(2,927,973)	2.00	(585,595)	(585,593)
Change in Assumptions Gain	2/28/2018	7.14	(7,907,441)	4.14	(1,107,485)	(3,477,501)
Actuarial Loss	2/28/2018	7.14	238,569	4.14	33,414	104,913
Asset Gain	2/28/2017	5.00	(7,138,718)	1.00	(1,427,742)	-
Change in Assumptions Gain	2/28/2017	7.14	(3,133,319)	3.14	(438,841)	(939,114)
Actuarial Gain	2/28/2017	7.14	(2,744,644)	3.14	(384,404)	(822,624)
Change in Assumptions Loss	2/29/2016	7.04	14,101,572	2.04	2,003,065	2,083,182
Actuarial Loss	2/29/2016	7.04	4,164,750	2.04	591,584	615,246
Total			\$ 12,260,586		\$ 1,367,414 \$	7,635,071

Each detail amount shown above was established as of the Fiscal Year End shown and the full amount deferred has been determined as of that time. Any events that occur in subsequent Fiscal Years do not have an impact on the prior Fiscal Year. The bases are established independently each year.



PENSION EXPENSE DEVELOPMENT

The table below displays the Pension Expense development for the current year. The Pension Expense includes items that change the Net Pension Liability from one year to the next, netted out for amounts that are deferred under GASB pronouncement, plus any amounts that are being recognized that were deferred previously.

See below for the Pension Expense development:

	 2/28/2021
Pension Expense/(Income) Under GASB 68	
Service Cost	\$ 5,322,103
Interest	22,140,316
Changes of Benefit Terms	-
Contributions - Members	(1,807,386)
Contributions - Other	-
Expected Investment Income	(9,635,898)
Administrative Expense	 110,520
Initial Pension Expense/(Income)	\$ 16,129,655
Recognition of Outflow/(Inflow) of Resources Due to Liabilities	3,841,603
Recognition of Outflow/(Inflow) of Resources Due to Assets	 (2,474,189)
Total Pension Expense/(Income)	\$ 17,497,069



ACTUARIAL ASSUMPTIONS INFORMATION

Statement of Significant Actuarial Assumptions
Assumption Changes
Notes on Actuarial Assumptions
Postemployment Benefit Changes
Expected Return on Pension Plan Investments
Municipal Bond Rate
Discount Rate
Sensitivity of the Discount Rate



STATEMENT OF SIGNIFICANT ACTUARIAL ASSUMPTIONS

Actuarial Assumptions (Economic)

Discount Rate Used for the Total Pension Liability	6.49%
Expected Rate of Return on Investments	7.00%
High-Quality 20 Year Tax-Exempt G.O. Bond Rate	2.44%
Projected Individual Pay Increases	3.75% - 16.54%
Projected Total Payroll Increases	3.25%
Consumer Price Index (Urban)	2.25%
Inflation Rate	2.25%

Actuarial Assumptions (Demographic)

Mortality Rates* Pub-2010 Adjusted for Plan Status, Demographics, and Illinois Public Pension Data, as Described

Retirement Rates 100% of L&A 2020 Illinois Firefighters Retirement Rates Capped at Age 65

Termination Rates 100% of L&A 2020 Illinois Firefighters Termination Rates

Disability Rates 100% of L&A 2020 Illinois Firefighters Disability Rates

Marital Assumptions Active Members: 80%

Retiree & Disabled Members: Based on Actual Spousal Data

The actuarial assumptions (economic) rates shown above are assumed to be annual rates, compounded on an annual basis. For more information on the selection of the actuarial assumptions, please see the Actuarial Assumption Summary document prepared for the Plan, available upon request.

ASSUMPTION CHANGES

The assumptions were changed from the prior year.

The High-Quality 20 Year Tax-Exempt General Obligation ("G.O.") Bond Rate assumption was changed from 2.27% to 2.44% for the current year. The underlying index used is The Bond Buyer 20-Bond G.O. Index as discussed in more detail later in this section. The choice of Index is unchanged from the prior year. The rate has been updated to the current Fiscal Year End based on changes in market conditions as reflected in the Index. The change was made to reflect our understanding of the requirements of GASB under Statement 67 and Statement 68.

^{*}See the *Notes on Actuarial Assumptions* section of this report for further details on Mortality Rates.



The Discount Rate used in the determination of the Total Pension Liability was changed from 7.00% to 6.49%. The Discount Rate is impacted by a couple of metrics. Any change in the underlying High-Quality 20 Year Tax Exempt G.O. Bond Rate will impact the blended Discount Rate.

The above stated assumption changes were made to better reflect the future anticipated experience of the Plan.

In addition, there are changes that can be made that impact the projection of the Plan Fiduciary Net Position. For example, changes in the Formal or Informal Funding Policy can impact the Discount Rate. Actual changes in the Plan Fiduciary Net Position from one year to the next can impact the projections as well.



NOTES ON ACTUARIAL ASSUMPTIONS

Projected Individual Pay Increases

Projected individual pay increases include a long-term average increase for inflation, average annual increases for promotions, and any additional increases for a step program. Projected individual pay increases for active Members hired at age 40 or older are assumed annual increases at the ultimate rate reduced by 50 basis points, without adjustments in early service years. Sample rates are as follows:

Service	Rate	Service	Rate
0	16.54%	8	3.75%
1	14.75%	9	5.70%
2	13.36%	10	3.75%
3	3.75%	15	3.75%
4	6.50%	20	3.75%
5	3.75%	25	3.75%
6	3.75%	30	3.75%
7	3.75%	35	3.75%

Actuarial Assumptions (Demographic)

Active Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis. 50% of active Member deaths are assumed to be in the Line of Duty.

Retiree Mortality follows the L&A Assumption Study for Firefighters 2020. These rates are experience weighted with the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study improved to 2017 using MP-2019 Improvement Rates. These rates are then improved fully generationally using MP-2019 Improvement Rates.

Disabled Mortality follows the L&A Assumption Study for Firefighters 2020. These rates are experience weighted with the Sex Distinct Raw Rates as developed in the PubS-2010 Study for disabled participants improved to 2017 using MP-2019 Improvement Rates. These rates are then improved fully generationally using MP-2019 Improvement Rates.

Spouse Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study for contingent survivors. For all rates not provided there (ages 45 and younger) the PubG-2010 Study for general employees was used. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

Other actuarial assumptions (demographic) rates are based on a review of the L&A Assumption Study for Firefighters 2020.



POSTEMPLOYMENT BENEFIT CHANGES

Eligibility for postemployment benefit increases is determined based on the Illinois Pension Code. Tier 1 Firefighter retirees are provided with an annual increase of 3.00% of the current retirement benefits by statute when eligible. Tier 2 Firefighter retirees are provided postemployment benefit increases based on the lesser of 3.00% of the original retirement benefits or one-half of the Consumer Price Index (Urban) for the prior September.

The CPI-U for September 1990 was 132.7. The CPI-U for September 2020 was 260.28. The average increase in the CPI-U for September 1990 through September 2020 was 2.28% (on a compounded basis).



EXPECTED RETURN ON PENSION PLAN INVESTMENTS

The Long-Term Expected Rate of Return is intended to represent the best estimate of future real rates of return and is shown for each of the major asset classes in the investment policy. The Expected Rates of Return shown below were provided last year by the investment professionals that work with the Pension Fund. The table below illustrates the best estimate of Long-Term Expected Real Rates of Return developed for each of the major asset classes, adjusted for expected inflation.

There are multiple approaches seen to providing these rates. Typically, the information is either based on capital market projections, or historical rates seen for the asset classes. We do not provide an opinion on the reasonableness of the returns provided nor the reasonableness of the approach used in the determination of the rates provided. The information provided is shown below for convenience.

The rates provided in the table below are based on an arithmetic average. The Investment Policy Statement will provide more detail regarding the Fund's policies on asset allocation targets and acceptable ranges.

Asset Class	Long-Term Expected Rate of Return	Long-Term Inflation Expectation	Long-Term Expected Real Rate of Return	Target Allocation
Fixed Income	4.30%	2.20%	2.10%	35.00%
U.S. Equity	7.80%	2.20%	5.60%	34.00%
International Equity	8.00%	2.20%	5.80%	18.00%
Global Tactical	5.90%	2.20%	3.70%	3.00%
Real Estate - Core	7.20%	2.20%	5.00%	10.00%
Cash	2.90%	2.20%	0.70%	0.00%

Long-Term Expected Real Rates of Return under GASB are expected to reflect the period of time that begins when a Plan Member begins to provide service to the employer and ends at the point when all benefits to the Plan Member have been paid. The rates provided above are intended to estimate those figures.

The Long-Term Inflation Expectation is 2.20% and is included in the Long-Term Expected Rates of Return. The Long-Term Inflation Expectation is from the same source as the Long-Term Expected Real Rates of Return, and is not necessarily reflective of the inflation measures used for other purposes in the report.

Geometric rates of return are equal to arithmetic rates of return when the annual returns exhibit no volatility over time. When arithmetic returns are volatile on a year-to-year basis, the actual realized geometric returns over time will be lower. Higher volatility results in a greater difference.



MUNICIPAL BOND RATE

The Municipal Bond Rate assumption is based on the Bond Buyer 20-Bond G.O. Index. The rate shown earlier in this section of the report is the February 25, 2021 rate. The 20-Bond G.O. Index is based on an average of certain general obligation municipal bonds maturing in 20 years and having an average rating equivalent of Moody's Aa2 and Standard & Poor's AA.

The 20-Bond G.O. Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.

The indices represent theoretical yields rather than actual price or yield quotations. Municipal bond traders are asked to estimate what a current-coupon bond for each issuer in the indices would yield if the bond was sold at par value. The indices are simple averages of the average estimated yields of the bonds.

DISCOUNT RATE

The Discount Rate used in the determination of the Total Pension Liability is based on a combination of the Expected Rate of Return on Plan Investments and the Municipal Bond Rate.

Cash flow projections were used to determine the extent to which the Plan's Projected Fiduciary Net Position will be able to cover Projected Benefit Payments. To the extent that Projected Benefit Payments are covered by the Plan's Projected Fiduciary Net Position, the Expected Rate of Return on Plan Investments is used to determine the portion of the Net Pension Liability associated with those payments. To the extent that Projected Benefit Payments are not covered by the Plan's Projected Fiduciary Net Position, the Municipal Bond Rate is used to determine the portion of the Net Pension Liability associated with those payments.

Projected Benefit Payments are determined during the actuarial process based on the assumptions. More details on the assumptions are earlier in this section of the report. The expected contributions are based on the funding policy of the Plan. The funding policy is discussed in more detail in the *Funding Policy* section of this report.



SENSITIVITY OF THE DISCOUNT RATE

The Employer's Net Pension Liability has been determined using the Discount Rate listed in this section of the report. Below is a table illustrating the sensitivity of the Employer's Net Pension Liability to the Discount Rate assumption.

	1%	Current	1%
	Decrease	Discount Rate	Increase
	(5.49%)	(6.49%)	(7.49%)
Employer's Net Pension Liability	\$251,404,029	\$198,999,157	\$156,429,156

The sensitivity of the Employer's Net Pension Liability to the Discount Rate is based primarily on two factors:

- 1. The duration of the Plan's Projected Benefit Payments. Younger Plans with benefit payments further in the future will be more sensitive to changes in the Discount Rate.
- 2. The Percent Funded of the Plan (ratio of the Plan Fiduciary Net Position to the Total Pension Liability). The higher the Percent Funded, the higher the sensitivity to the Discount Rate.



PARTICIPANT DATA

Participant Demographic Data & Average Future Working Career



PARTICIPANT DEMOGRAPHIC DATA & AVERAGE FUTURE WORKING CAREER

The chart below summarizes the Member count, payroll, and average future working career as of:

Actuarial Valuation - Data Date Fiscal Year End for Reporting	2/28/2019 (FYE 02/29/2020)	2/29/2020 (FYE 02/28/2021)
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	253	251
Inactive Plan Members Entitled to But Not Yet Receiving Benefits*	1	2
Active Plan Members	211	217
Total	465	470
Payroll of Active Plan Members	\$ 18,462,666	\$ 18,563,064
Average Future Working Career (In Years)		
Active Plan Members	14.80	13.44
Inactive Plan Members	0.00	0.00
Total	6.71	6.21

^{*}Inactive Plan Members Entitled to But Not Yet Receiving Benefits for the current Fiscal Year End includes non-vested terminated Members entitled to a refund of Employee Contributions who were not included as of the prior Fiscal Year End.

Member counts shown above are as of the Actuarial Valuation Date for the two most recent Fiscal Years. Payroll of Active Plan Members is the pensionable salary for active Plan Members as of the Actuarial Valuation – Data Date. For the Fiscal Year Ending February 28, 2021, a beginning of year Actuarial Valuation Date was used along with a rollforward of liabilities to the end of the Fiscal Year based on assumptions and standard rollforward techniques.

The average future working career is measured as of the Actuarial Valuation Date and is based on the demographic assumptions used in the preparation of this report.



FUNDING POLICY

Components of the Actuarially Determined Contributions
Formal Funding Policy
Informal Funding Policy
Funding Policy – Other Considerations



COMPONENTS OF THE ACTUARIALLY DETERMINED CONTRIBUTION

The Actuarially Determined Contribution ("ADC") includes the determination of the Normal Cost Contribution for active Plan Members, as well as a provision for the payment towards Unfunded Liability.

The actuarial funding method used in the determination of the Normal Cost and the Actuarial Accrued Liability is the Projected Unit Credit Cost Method. The method allocates Normal Cost Contributions by Members over the working career of the Member.

Unfunded Liability is the excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Actuarially Determined Contribution includes a payment towards Unfunded Liability existing at the Actuarial Valuation Date. The payment towards Unfunded Liability is set up as a level percent of payroll payment that is expected to increase during the payment period and target 90% funding. The current Employer Contributions are being compared to the Actuarially Determined Contribution as developed in the March 1, 2019 Actuarial Valuation. The period of repayment as of that valuation is 21 years.

The Actuarial Value of Assets smooths gains and losses on the Market Value of Assets over a 5-year period.

Under no circumstances will the Actuarially Determined Contribution be less than the amount determined as the Statutory Minimum Contribution under Illinois State Statutes.

FORMAL FUNDING POLICY

There is no Formal Funding Policy that exists between the Pension Board and the City at this time.

INFORMAL FUNDING POLICY

In determining the most appropriate Informal Funding Policy, GASB provides the following guidance in the Statement:

Application of professional judgment should consider the most recent five-year contribution history of the employers and nonemployer contributing entities as a key indicator of future contributions from those sources and should reflect all other known events and conditions.... the amount of projected cash flows for contributions from employers and nonemployer contributing entities should be limited to an average of contributions from those sources over the most recent five-year period and may be modified based on consideration of subsequent events. For this purpose, the basis for the average (for example, percentage of covered payroll contributed or percentage of Actuarially Determined Contributions made) should be a matter of professional judgment.



In our review of Informal Funding Policy, the following factors are considered and described herein:

- 1. Five-Year Contribution History of the Employer (with a focus on the average contributions from those sources)
- 2. Other Known Events and Conditions
- 3. Consideration of Subsequent Events

Five-Year Contribution History of the Employer

Employer Contributions (under the Informal Funding Policy) should be limited to the average over the most recent five years. In determining the basis for the average, we reviewed three possibilities: (a) the average dollar contribution; (b) the average percent of pensionable pay; and (c) the average percent of the Actuarially Determined Contribution. Please see the table below for a summary of these values:

Fiscal		Most		Covered-	
Year	Employer	Applicable	% of	Employee	% of
End	Contributions	ADC	ADC	Payroll	Payroll
2/28/2021	\$13,550,355	\$13,232,121	102.41%	\$19,050,536	71.13%
2/29/2020	\$12,508,920	\$12,508,920	100.00%	\$19,027,608	65.74%
2/28/2019	\$11,916,494	\$11,916,494	100.00%	\$19,807,840	60.16%
2/28/2018	\$11,184,141	\$11,184,141	100.00%	\$19,991,231	55.95%
2/28/2017	\$10,395,154	\$10,395,154	100.00%	\$19,361,967	53.69%

When compared to the other policies reviewed, history suggests that a contribution as a percent of the Actuarially Determined Contribution is the least volatile, and as a result, the most stable contribution method under an Informal Funding Policy.

Other Known Events and Conditions

GASB has a provision for consideration of any other known events or conditions in the most recent five-year history in applying judgement for the Informal Funding Policy. There are no events or conditions that have been considered in the development of the Informal Funding Policy.

Consideration of Subsequent Events

GASB has a provision for modification based on consideration of subsequent events in development of the Informal Funding Policy. There are no subsequent events that have been considered in the development of the Informal Funding Policy.



<u>Informal Funding Policy – Selected</u>

The Informal Funding Policy that has been determined for future contributions is 100.48% of the Actuarially Determined Contribution. This represents the full future contributions expected to be made.

FUNDING POLICY - OTHER CONSIDERATIONS

Under GASB, the future contribution amount is not intended to include dollars contributed on behalf of future employees. Contributions are only intended to cover contributions towards the Normal Cost of current employees as of the Actuarial Valuation Date as well as payment of Unfunded Liability on behalf of the current employees. Contributions under the funding policy have been adjusted as necessary to exclude dollars that would be anticipated to be contributed on behalf of future employees hired after the Actuarial Valuation Date.

The contribution level may not pay off the Unfunded Liability during the active working career of current employees. In that case, contributions will persist beyond the working career of current employees. To the extent that a portion of the above total contribution is anticipated to pay contributions for the Normal Cost of future employees, the amount has been netted out. The remaining amount is anticipated to be paid towards the Unfunded Liability existing for current employees.

The Actuarially Determined Contribution is determined annually based on the parameters previously discussed. The funding methods and procedures are assumed to continue into the future. The tax levy in the next December is assumed to be the Actuarially Determined Contribution. Funding is assumed to go into the Plan during the next full Fiscal Year.



SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability
Schedule of Total Pension Liability and Related Ratios
Schedule of Contributions
Notes to Schedule of Contributions



SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY

	2/28/2021	2/29/2020	2/28/2019	2/28/2018	2/28/2017	2/28/2016	2/28/2015	2/28/2014	2/28/2013	2/28/2012
Total Pension Liability										
Service Cost	\$ 5,322,103	\$ 5,197,220	\$ 5,205,445	\$ 5,283,043	\$ 4,951,770	\$ 5,111,168	\$ 5,438,758			
Interest	22,140,316	21,253,481	20,465,858	19,736,353	19,481,955	17,506,592	17,749,350			
Changes of Benefit Terms	-	1,976,795	-	-	-	-	-			
Differences Between Expected and Actual Experience	(4,952,431)	2,679,231	1,493,791	238,569	(2,744,644)	4,164,750	-			
Change in Assumptions	22,785,262	(4,494,064)	2,400,265	(7,907,441)	(3,133,319)	14,101,572	-			
Benefit Payments and Refunds	(16,317,321)	(16,034,348)	(15,723,823)	(14,928,475)	(14,577,712)	(13,670,346)	(12,922,751)			
Net Change in Total Pension Liability	\$ 28,977,929	\$ 10,578,315	\$ 13,841,536	\$ 2,422,049	\$ 3,978,050	\$ 27,213,736	\$ 10,265,357			
Total Pension Liability - Beginning	329,318,889	318,740,574	304,899,038	302,476,989	298,498,939	271,285,203	261,019,846			
Total Pension Liability - Ending (a)	\$ 358,296,818	\$ 329,318,889	\$ 318,740,574	\$ 304,899,038	\$ 302,476,989	\$ 298,498,939	\$ 271,285,203			
Plan Fiduciary Net Position										
Contributions - Employer	\$ 13,550,355	\$ 12,508,920	\$ 11,916,494	\$ 11,184,141	\$ 10,395,154	\$ 9,786,645	\$ 9,973,179			
Contributions - Members	1,807,386	1,818,701	1,700,670	1,696,447	1,718,845	1,696,300	1,704,162			
Contributions - Other	-	-	-	-	-	-	7,144,916			
Net Investment Income	22,177,023	6,097,536	2,271,252	11,568,713	14,904,623	(5,946,400)	(12,922,751)			
Benefit Payments and Refunds	(16,317,321)	(16,034,348)	(15,723,823)	(14,928,475)	(14,577,712)	(13,670,346)	(133,317)			
Administrative Expense	(110,520)	(133,450)	(132,495)	(165,250)	(137,137)	(109,969)				
Net Change in Plan Fiduciary Net Position	\$ 21,106,923	\$ 4,257,359	\$ 32,098	\$ 9,355,576	\$ 12,303,773	\$ (8,243,770)	\$ 5,766,189			
Plan Fiduciary Net Position - Beginning	138,190,738	133,933,379	133,901,281	124,545,705	112,241,932	120,485,702	114,719,513			
Plan Fiduciary Net Position - Ending (b)	\$ 159,297,661	\$ 138,190,738	\$ 133,933,379	\$ 133,901,281	\$ 124,545,705	\$ 112,241,932	\$ 120,485,702			
Employer's Net Pension Liability - Ending (a) - (b)	\$ 198,999,157	\$ 191,128,151	\$ 184,807,195	\$ 170,997,757	\$ 177,931,284	\$ 186,257,007	\$ 150,799,501			

The current year information was developed in the completion of this report.



SCHEDULE OF TOTAL PENSION LIABILITY AND RELATED RATIOS

	2/28/2021	2/29/2020	2/28/2019	2/28/2018	2/28/2017	2/28/2016	2/28/2015	2/28/2014	2/28/2013	2/28/2012
Total Pension Liability - Ending (a)	\$ 358,296,818	\$ 329,318,889	\$ 318,740,574	\$ 304,899,038	\$ 302,476,989	\$ 298,498,939	\$ 271,285,203			
Plan Fiduciary Net Position - Ending (b)	\$ 159,297,661	\$ 138,190,738	\$ 133,933,379	\$ 133,901,281	\$ 124,545,705	\$ 112,241,932	\$ 120,485,702			
Employer's Net Pension Liability - Ending (a) - (b)	\$ 198,999,157	\$ 191,128,151	\$ 184,807,195	\$ 170,997,757	\$ 177,931,284	\$ 186,257,007	\$ 150,799,501			
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	44.46%	41.96%	42.02%	43.92%	41.18%	37.60%	44.41%			
Covered-Employee Payroll	\$ 19,050,536	\$ 19,027,608	\$ 19,807,840	\$ 19,991,231	\$ 19,361,967	\$ 16,982,730	\$ 16,985,797			
Employer's Net Pension Liability as a Percentage of Covered-Employee Payroll	1,044.59%	1,004.48%	933.00%	855.36%	918.97%	1,096.74%	887.80%			

Covered-Employee Payroll shown above for the current year is based on the Covered-Employee Payroll for the Plan Members during the Fiscal Year.



SCHEDULE OF CONTRIBUTIONS

	2/28/2021	2/29/2020	2/28/2019	2/28/2018	2/28/2017	2/29/2016	2/28/2015	2/28/2014	2/28/2013	2/29/2012
Actuarially Determined Contribution	\$ 13,232,121	\$ 12,508,920	\$ 11,916,494	\$ 11,184,141	\$ 10,395,154	\$ 9,786,645	\$ 9,473,179			
Contributions in Relation to the Actuarially Determined Contribution	13,550,355	12,508,920	11,916,494	11,184,141	10,395,154	9,786,645	9,473,179			
Contribution Deficiency/(Excess)	\$ (318,234)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
Covered-Employee Payroll	\$ 19,050,536	\$ 19,027,608	\$ 19,807,840	\$ 19,991,231	\$ 19,361,967	\$ 16,982,730	\$ 16,985,797			
Contributions as a Percentage of	71.13%	65.74%	60.16%	55.95%	53.69%	57.63%	55.77%			

NOTES TO SCHEDULE OF CONTRIBUTIONS

The Actuarially Determined Contribution shown above for the current year is the Statutory Minimum Contribution from the March 1, 2019 Actuarial Valuation completed by Lauterbach & Amen, LLP for the December 2019 tax levy. The methods and assumptions shown below are based on the same Actuarial Valuation. For more detail on the age-based and service-based rates disclosed below, please see the Actuarial Valuation.

Actuarial Cost Method Projected Unit Credit

Amortization Method Level % Pay

Equivalent Single Amortization Period 90% Funded Over 21 Years
Asset Valuation Method 5-Year Smoothed Market Value

Inflation (CPI-U) 2.50% Total Payroll Increases 3.25%

Individual Pay Increases 4.00% - 16.79%

Expected Rate of Return on Investments 7.00%

Mortality Rates RP-2014 Adjusted for Plan Status, Collar, and Illinois Public Pension Data, as Appropriate

Retirement Rates 100% of L&A 2016 Illinois Firefighters Retirement Rates Capped at Age 65

Termination Rates 100% of L&A 2016 Illinois Firefighters Termination Rates Disability Rates 100% of L&A 2016 Illinois Firefighters Disability Rates



GASB METHODS AND PROCEDURES

GASB Methods and Procedures



GASB METHODS AND PROCEDURES

	Statement 67 Pension Plan Financials	Statement 68 Employer Financials
Fiscal Year End for Reporting	February 28, 2021	February 28, 2021
Measurement Date	February 28, 2021	February 28, 2021
Actuarial Valuation Date	March 1, 2020	March 1, 2020
Actuarial Valuation - Data Date	February 29, 2020	February 29, 2020
Asset Valuation Method	Market Value	Market Value
Actuarial Cost Method	Entry Age Normal (Level %)	Entry Age Normal (Level %)

Methodology Used in the Determination of Deferred Outflows and Inflows of Resources

Amortization Method	Straight Line	Straight Line
Amortization Period		
Actuarial Experience	6.21 Years	6.21 Years
Change in Assumptions	6.21 Years	6.21 Years
Asset Experience	5.00 Years	5.00 Years



SUPPLEMENTARY TABLES

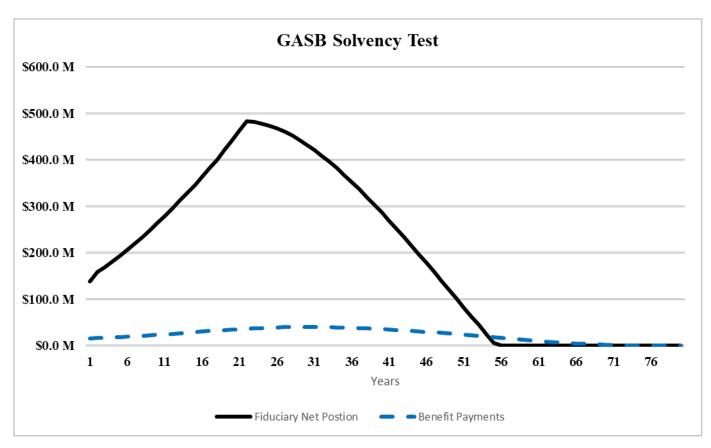
GASB Projections – Summary and Procedure
GASB Projections – Limitations
Projection of Contributions
Notes to Projection of Contributions
Projection of the Pension Plan's Fiduciary Net Position
Notes to Projection of the Pension Plan's Fiduciary Net Position
Actuarial Present Value of Projected Benefit Payments
Notes to Actuarial Present Value of Projected Benefit Payments



GASB PROJECTIONS - SUMMARY AND PROCEDURE

GASB requires a solvency test to use in the determination of the Discount Rate each year. The Plan Fiduciary Net Position is projected forward. To the extent that the Plan Fiduciary Net Position is anticipated to be greater than \$0, Projected Benefit Payments are discounted based on the Expected Rate of Return on Plan Investments.

If the Plan Fiduciary Net Position is anticipated to reach \$0 prior to the payment of Projected Benefit Payments for employees who are in the Plan as of the Actuarial Valuation Date, then the remaining Projected Benefit Payments are discounted using the High-Quality Municipal Bond Rate, as described in the *Actuarial Assumptions Information* section of this report. The chart below is a high-level summary of the projections:



The Plan's Projected Fiduciary Net Position is anticipated to cover Projected Benefit Payments in full for the current employees through 2074.



GASB Projections – Limitations

Projections of any type require assumptions about future events. The projections required for GASB reporting are deterministic in nature. That means that values are projected forward under one set of assumptions which can be thought of as the average result. Actual results could vary, and projections of one deterministic assumption set do not necessarily provide a framework for making risk management or funding policy decisions. Projections that deal with risk management are outside the scope of this report.

In addition, GASB requirements create results that are specific only to financial statement reporting, and should not be used or interpreted for other purposes. For example, GASB cash flow projections do not entail the total expected cash flows of the Plan, but rather a subset of cash flows specific to employees who are in the Plan as of the Actuarial Valuation Date. While the likely expectation may be that future employees are hired to replace the current employees, cash flows attributable to their benefits are not considered. Under GASB, when the Plan Fiduciary Net Position reaches \$0, that represents the Plan Fiduciary Net Position for the assets attributable to the current employees.

Also, GASB mandates certain assumptions that are made in the projection process. Most notably, Projected Contributions under an Informal Funding Policy. In proposing an Informal Funding Policy, GASB suggests a focus be placed on the average contributions over the past 5 years. Projected Contributions in this section may be based on the five-year average, unless a Formal Funding Policy is in place.

Contributions reflecting an Informal Funding Policy are applied under GASB, whether or not the projected results dictate a need for more or less contributions. This would not be the case with other uses for projections. Any events that are taken into account (past or future) in the Informal Funding Policy are discussed in the *Funding Policy* section of this report.

Projections further into the future are more sensitive to assumption changes. For projections that run out close to 80 years, a small change in an assumption may have a dramatic impact on the projections. If the solvency of the Plan as determined by GASB remains constant, then dramatic changes in the projection results may not necessarily lead to big changes in the determination of the Total Pension Liability.

We recommend the projections are not used for any other purposes, other than providing information for purposes of the financial statement report.

The following pages provide the detail behind the chart shown on the prior page.



PROJECTION OF CONTRIBUTIONS – YEARS 1 TO 30

	Proj	jected Pensionable P	ayroll	Projected Contributions					
Year	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Contributions from Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Payroll of Future Employees (f) - Notes	Total Contributions $\underline{(g) = (d) + (e) + (f)}$		
1	\$ 18,563,081	\$ -	\$ 18,563,081	\$ 1,807,386	\$13,550,355	\$ -	\$ 15,357,741		
2	18,954,833	211,548	19,166,381	1,792,179	14,227,230	-	16,019,409		
3	19,247,270	542,019	19,789,289	1,819,829	15,700,187	-	17,520,016		
4	19,446,344	986,097	20,432,440	1,838,652	16,199,338	-	18,037,990		
5	19,479,845	1,616,650	21,096,495	1,841,819	16,700,603	-	18,542,422		
6	19,401,731	2,380,400	21,782,131	1,834,434	17,192,192	-	19,026,626		
7	19,229,835	3,260,215	22,490,050	1,818,181	17,681,504	-	19,499,685		
8	18,940,533	4,280,444	23,220,977	1,790,827	18,176,009	-	19,966,836		
9	18,534,504	5,441,155	23,975,658	1,752,437	18,669,547	-	20,421,984		
10	17,981,266	6,773,601	24,754,867	1,700,129	19,165,998	-	20,866,127		
11	17,472,117	8,087,283	25,559,401	1,651,989	19,661,735	-	21,313,724		
12	16,933,390	9,456,691	26,390,081	1,601,052	20,196,797	-	21,797,849		
13	16,327,807	10,919,952	27,247,759	1,543,794	20,757,847	-	22,301,641		
14	15,492,809	12,640,502	28,133,311	1,464,845	21,349,383	-	22,814,228		
15	14,661,181	14,386,462	29,047,643	1,386,215	21,922,774	-	23,308,989		
16	13,837,176	16,154,516	29,991,692	1,308,305	22,542,519	-	23,850,824		
17	12,942,257	18,024,164	30,966,422	1,223,690	23,213,822	-	24,437,512		
18	12,051,743	19,921,087	31,972,831	1,139,492	23,914,208	-	25,053,700		
19	11,150,679	21,861,269	33,011,948	1,054,297	24,663,718	-	25,718,015		
20	10,208,538	23,876,298	34,084,836	965,217	25,473,197	-	26,438,414		
21	9,313,324	25,879,269	35,192,593	880,575	22,848,075	-	23,728,650		
22	8,408,624	27,927,728	36,336,352	795,035	1,489,521	-	2,284,556		
23	7,440,227	30,077,057	37,517,284	703,473	1,340,017	-	2,043,490		
24	6,447,722	32,288,873	38,736,595	609,632	1,176,064	-	1,785,696		
25	5,620,847	34,374,688	39,995,535	531,451	995,538	-	1,526,989		
26	4,761,681	36,533,708	41,295,390	450,217	869,794	-	1,320,011		
27	3,981,222	38,656,268	42,637,490	376,425	729,345	-	1,105,770		
28	3,235,345	40,787,863	44,023,208	305,902	611,783	-	917,685		
29	2,612,110	42,841,853	45,453,962	246,975	490,756	-	737,731		
30	2,025,672	44,905,544	46,931,216	191,527	401,582	-	593,109		

Column d – Contributions from current employees to the Plan (employees in the Plan as of the Actuarial Valuation Date). Column e – Employer Contributions to the Plan excluding contributions for employees hired after the Actuarial Valuation Date. Column f – Contributions from future employees to the extent that contributions are assumed to be greater than their Normal Cost.



PROJECTION OF CONTRIBUTIONS - YEARS 31 TO 60

	Proj	ected Pensionable P	ayroll	Projected Contributions						
Year	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Contributions from Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Payroll of Future Employees (f) - Notes	Total Contributions $(g) = (d) + (e) + (f)$			
31	\$ 1,613,498	\$ 46,842,983	\$ 48,456,481	\$ 152,556	\$ 300,786	\$ -	\$ 453,342			
32	1,246,263	48,785,054	50,031,316	117,834	241,406	-	359,240			
33	909,377	50,747,958	51,657,334	85,982	190,380	-	276,362			
34	620,941	52,715,257	53,336,198	58,710	143,511	-	202,221			
35	424,419	54,645,205	55,069,624	40,129	97,446	-	137,575			
36	262,571	56,596,816	56,859,387	24,826	70,135	-	94,961			
37	154,151	58,553,166	58,707,317	14,575	44,557	-	59,132			
38	85,778	60,529,527	60,615,305	8,110	26,638	-	34,748			
39	58,777	62,526,525	62,585,302	5,557	13,430	-	18,987			
40	29,170	64,590,154	64,619,324	2,758	10,600	-	13,358			
41	21,962	66,697,491	66,719,452	2,076	4,193	-	6,269			
42	9,239	68,878,595	68,887,835	874	4,140	-	5,014			
43	-	71,126,689	71,126,689	-	2,263	-	2,263			
44	-	73,438,307	73,438,307	-	-	-	-			
45	-	75,825,052	75,825,052	-	_	-	-			
46	-	78,289,366	78,289,366	-	-	-	-			
47	-	80,833,770	80,833,770	-	-	-	-			
48	-	83,460,868	83,460,868	-	-	-	-			
49	-	86,173,346	86,173,346	-	-	-	-			
50	-	88,973,980	88,973,980	-	-	-	-			
51	-	91,865,634	91,865,634	-	-	-	-			
52	-	94,851,267	94,851,267	-	-	-	-			
53	-	97,933,933	97,933,933	-	-	-	-			
54	-	101,116,786	101,116,786	-	-	-	-			
55	-	104,403,082	104,403,082	-	-	-	-			
56	-	107,796,182	107,796,182	-	-	-	-			
57	-	111,299,558	111,299,558	-	-	-	-			
58	-	114,916,793	114,916,793	-	-	-	-			
59	-	118,651,589	118,651,589	-	-	-	-			
60	-	122,507,766	122,507,766	-	-	-	-			

Column d – Contributions from current employees to the Plan (employees in the Plan as of the Actuarial Valuation Date). Column e – Employer Contributions to the Plan excluding contributions for employees hired after the Actuarial Valuation Date. Column f – Contributions from future employees to the extent that contributions are assumed to be greater than their Normal Cost.



PROJECTION OF CONTRIBUTIONS - YEARS 61 TO 80

		Proj	jected Pensionable P	Projected Contributions								
Year	Cu Emp	roll for urrent bloyees (a)	Payroll for Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Contributi from Curr Employe (d) - Not	rent	Empl Contrib for Cu Empl (e) - N	outions arrent oyees	Relate Payroll C	butions ted to of Future oyees Notes	Cont	Fotal ributions $(1 + (e) + (f))$
61	\$	_	\$ 126,489,268	\$ 126,489,268	\$	_	\$	_	\$	_	\$	_
62		_	130,600,169	130,600,169		-		-		_		_
63		-	134,844,675	134,844,675		-		-		-		-
64		-	139,227,127	139,227,127		-		-		-		-
65		-	143,752,008	143,752,008		-		-		-		-
66		-	148,423,949	148,423,949		-		-		-		-
67		-	153,247,727	153,247,727		-		-		-		-
68		-	158,228,278	158,228,278		-		-		-		-
69		-	163,370,697	163,370,697		-		-		-		-
70		-	168,680,245	168,680,245		-		-		-		-
71		-	174,162,353	174,162,353		-		-		-		-
72		-	179,822,629	179,822,629		-		-		-		-
73		-	185,666,865	185,666,865		-		-		-		-
74		-	191,701,038	191,701,038		-		-		-		-
75		-	197,931,321	197,931,321		-		-		-		-
76		-	204,364,089	204,364,089		-		-		-		-
77		-	211,005,922	211,005,922		-		-		-		-
78		-	217,863,615	217,863,615		-		-		-		-
79		-	224,944,182	224,944,182		-		-		-		-
80		-	232,254,868	232,254,868		-		-		-		-

NOTES TO PROJECTION OF CONTRIBUTIONS

Total Employee Payroll is projected to increase annually at the Projected Total Payroll Increases rate shown in the *Actuarial Assumptions Information* section of this report. Payroll for current employees (employees in the Plan as of the Actuarial Valuation Date) are projected on an employee-by-employee basis, using the Projected Individual Pay Increases and probability of remaining an employee in the future.

Employer Contributions are related to current employees in the Plan as of the Actuarial Valuation Date. To the extent that Projected Contributions under the Funding Policy are made to cover the Normal Cost of benefit payments for future employees, those contributions are excluded for purposes of these projections and this report.

Contributions are based on the Funding Policy as described in the *Funding Policy* section of this report. The contributions do not factor in changes in the Funding Policy based on an assumed Employer decision; if, the projections were to play out in this fashion. The only future events that are considered were outlined in the *Funding Policy* section of this report. Contributions from future employees have not been included. It is assumed that contributions made by future employees will not exceed the Normal Cost of their participation in the Plan. In addition, Employer Contributions on behalf of future employees have not been included per the GASB parameters.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION - YEARS 1 TO 30

	Projected						Projected		
	Beginning Projected		Projected	ojected Projected Projected			Ending		
	Fiduciary Net	Total	Benefit	Administrativ	ve Investment	F	iduciary Net		
	Position	Contributions	Payments	Expense	Earnings	Position			
Year	(a)	(b)	(c)	(d)	(e)	(f) = (a)+(b)-(c)-(d)+(e)		
1	\$ 138,190,738	\$ 15,357,741	\$ 16,317,321	\$ 110,52		\$	159,297,661		
2	159,297,661	16,019,409	16,995,893	113,00			169,320,874		
3	169,320,874	17,520,016	17,529,178	115,54			181,044,260		
4	181,044,260	18,037,989	18,152,298	118,14			193,476,764		
5	193,476,764	18,542,422	18,891,679	120,80			206,533,621		
6	206,533,621	19,026,626	19,667,835	123,52			220,199,474		
7	220,199,474	19,499,685	20,566,541	126,30			234,378,514		
8	234,378,514	19,966,837	21,581,959	129,14			248,979,693		
9	248,979,693	20,421,984	22,602,838	132,05			264,014,413		
10	264,014,413	20,866,126	23,635,403	135,02			279,489,471		
11	279,489,471	21,313,724	24,685,429	138,06			295,421,125		
12	295,421,125	21,797,849	25,789,911	141,16	8 20,534,816		311,822,710		
13	311,822,710	22,301,641	27,022,450	144,34	5 21,657,309		328,614,866		
14	328,614,866	22,814,228	28,188,837	147,59	2 22,809,764		345,902,428		
15	345,902,428	23,308,989	29,360,430	150,91	3 23,996,088		363,696,161		
16	363,696,161	23,850,824	30,576,091	154,30	9 25,217,946		382,034,531		
17	382,034,531	24,437,512	31,731,052	157,78	1 26,481,621		401,064,831		
18	401,064,831	25,053,701	32,833,299	161,33	1 27,796,606		420,920,507		
19	420,920,507	25,718,015	33,890,070	164,96	1 29,172,640		441,756,132		
20	441,756,132	26,438,414	34,883,097	168,67	2 30,621,462		463,764,239		
21	463,764,239	23,728,650	35,800,474	172,46	7 32,034,947		483,554,894		
22	483,554,894	2,284,556	36,730,692	176,34	8 32,637,056		481,569,466		
23	481,569,466	2,043,491	37,612,173	180,31	6 32,458,648		478,279,116		
24	478,279,116	1,785,696	38,349,041	184,37	3 32,193,368		473,724,766		
25	473,724,766	1,526,989	39,007,324	188,52	1 31,842,324		467,898,233		
26	467,898,233	1,320,011	39,548,236	192,76	3 31,408,142		460,885,387		
27	460,885,387	1,105,769	40,013,958	197,10	0 30,893,292		452,673,390		
28	452,673,390	917,685	40,349,173	201,53	5 30,299,982		443,340,349		
29	443,340,349	737,731	40,570,692	206,07	0 29,632,458		432,933,777		
30	432,933,777	593,109	40,622,263	210,70	6 28,896,969		421,590,886		

Column b – Contributions on behalf of current employees in the Plan as of the Actuarial Valuation Date.

Column d – Based on the average Administrative Expense in recent years, and projected to increase in the future.

Column e – Based on the Expected Rate of Return on Plan Investments, and does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION - YEARS 31 TO 60

	Projected							Projected	
	Beginning	Projected	cted Projected		rojected	Projected	Ending		
	Fiduciary Net	Total	Benefit	Adı	ministrative	Investment	F	iduciary Net	
	Position	Contributions	Payments	I	Expense	Earnings		Position	
Year	(a)	(b)	(c)		(d)	(e)	(f) = (a	(f) = (a)+(b)-(c)-(d)+(e)	
31	\$421,590,886	\$ 453,342	\$ 40,576,529	\$	215,447	\$ 28,099,510	\$	409,351,763	
32	409,351,763	359,240	40,433,387		220,295	27,244,318		396,301,639	
33	396,301,639	276,361	40,182,848		225,251	26,336,504		382,506,405	
34	382,506,405	202,221	39,822,619		230,319	25,380,673		368,036,361	
35	368,036,361	137,575	39,374,743		235,501	24,381,002		352,944,693	
36	352,944,693	94,961	38,849,761		240,800	23,341,282		337,290,375	
37	337,290,375	59,132	38,249,148		246,218	22,265,058		321,119,199	
38	321,119,199	34,749	37,567,670		251,758	21,155,880		304,490,400	
39	304,490,400	18,988	36,843,607		242,650	20,016,974		287,440,104	
40	287,440,104	13,358	36,058,687		229,587	18,851,185		270,016,373	
41	270,016,373	6,269	35,230,584		216,216	17,660,728		252,236,571	
42	252,236,571	5,014	34,351,122		202,562	16,447,357		234,135,258	
43	234,135,258	2,263	33,414,377		188,645	15,213,441		215,747,940	
44	215,747,940	-	32,424,864		174,492	13,961,378		197,109,962	
45	197,109,962	-	31,380,969		160,132	12,693,759		178,262,620	
46	178,262,620	-	30,281,761		145,592	11,413,426		159,248,692	
47	159,248,692	-	29,126,756		130,908	10,123,390		140,114,419	
48	140,114,419	-	27,916,363		116,111	8,826,873		120,908,817	
49	120,908,817	-	26,652,776		101,241	7,527,227		101,682,027	
50	101,682,027	-	25,340,150		86,334	6,227,815		82,483,358	
51	82,483,358	-	23,984,347		71,431	4,931,883		63,359,463	
52	63,359,463	-	22,593,251		56,567	3,642,419		44,352,064	
53	44,352,064	-	21,175,902		41,777	2,362,026		25,496,411	
54	25,496,411	-	19,741,801		27,092	1,092,838		6,820,356	
55	6,820,356	-	18,302,057		12,534	-		-	
56	-	-	16,868,224		-	-		-	
57	_	-	15,451,572		-	-		_	
58	_	-	14,063,366		-	-		_	
59	_	-	12,714,202		-	-		_	
60	-	-	11,413,964		-	-		_	

Column b – Contributions on behalf of current employees in the Plan as of the Actuarial Valuation Date.

Column d – Based on the average Administrative Expense in recent years, and projected to increase in the future.

Column e – Based on the Expected Rate of Return on Plan Investments, and does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position (a)		Projected Total Contributions (b)		Projected Benefit Payments (c)	Projected Administrative Expense (d)		Projected Investment Earnings (e)		Projected Ending Fiduciary Net Position (f) = (a)+(b)-(c)-(d)+(e)	
61	\$	-	\$	-	\$ 10,171,716	\$	_	\$	-	\$	-
62		-		-	8,995,471		-		-		-
63		_		-	7,891,397		-		-		-
64		_		-	6,864,441		-		-		-
65		-		-	5,918,393		-		-		-
66		-		-	5,055,360		-		-		-
67		-		-	4,275,945		-		-		-
68		-		-	3,579,477		-		-		-
69		_		-	2,964,050		-		-		-
70		_		-	2,426,522		-		-		-
71		-		-	1,962,901		-		-		-
72		-		-	1,568,205		-		-		-
73		-		-	1,236,682		-		-		=
74		-		-	962,173		-		-		-
75		-		-	738,228		-		-		-
76		-		-	558,216		-		-		-
77		-		-	415,784		-		-		-
78		-		-	304,930		-		-		-
79		-		-	220,096		-		-		-
80		-		-	156,265		-		-		-

NOTES TO PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION

Projected Total Contributions are Employee and Employer Contributions projected to be made under the Funding Policy on behalf of current employees in the Plan as of the Actuarial Valuation Date. The amounts shown are detailed earlier in this section.

Projected Benefit Payments shown represents current employees as of the Actuarial Valuation Date. The Plan will pay benefits in the future on behalf of employees hired after the Actuarial Valuation Date, but those benefit payments are not projected for this purpose.

Projected Investment Earnings are based on the Expected Rate of Return on Plan Investments. Administrative Expense are typically not charged on a per employee basis. Administrative Expenses shown are not projected to distinguish between current and future employees.

The Projected Fiduciary Net Position represents assets held or projected to be held on behalf of current employees in the Plan as of the Actuarial Valuation Date. The Plan will hold assets in the future on behalf of employees hired after the Actuarial Valuation Date, but those assets are not projected for this purpose.



ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS - YEARS 1 TO 30

			Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments			
Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (7.00%)	Present Value of "Unfunded" Benefit Payments (2.44%)	Present Value of Benefit Payments Using the Single Discount Rate (6.49%)	
1	\$ 138,190,738	\$ 16,317,321	\$ 16,317,321	\$ -	\$ 15,774,550	\$ -	\$ 15,812,278	
2	159,297,661	16,995,893	16,995,893	-	15,355,654	_	15,466,098	
3	169,320,874	17,529,178	17,529,178	_	14,801,376	_	14,979,230	
4	181,044,260	18,152,298	18,152,298	_	14,324,794	_	14,566,349	
5	193,476,764	18,891,679	18,891,679	_	13,932,965	_	14,235,766	
6	206,533,621	19,667,835	19,667,835	_	13,556,444	_	13,917,396	
7	220,199,474	20,566,541	20,566,541	_	13,248,500	-	13,666,392	
8	234,378,514	21,581,959	21,581,959	-	12,993,092	-	13,467,118	
9	248,979,693	22,602,838	22,602,838	-	12,717,474	-	13,244,572	
10	264,014,413	23,635,403	23,635,403	-	12,428,454	-	13,005,563	
11	279,489,471	24,685,429	24,685,429	-	12,131,403	-	12,755,515	
12	295,421,125	25,789,911	25,789,911	-	11,845,037	-	12,514,063	
13	311,822,710	27,022,450	27,022,450	-	11,599,186	-	12,313,014	
14	328,614,866	28,188,837	28,188,837	-	11,308,270	-	12,061,685	
15	345,902,428	29,360,430	29,360,430	-	11,007,727	-	11,797,349	
16	363,696,161	30,576,091	30,576,091	-	10,713,550	-	11,537,060	
17	382,034,531	31,731,052	31,731,052	-	10,390,876	-	11,243,171	
18	401,064,831	32,833,299	32,833,299	-	10,048,435	-	10,924,713	
19	420,920,507	33,890,070	33,890,070	-	9,693,321	-	10,589,103	
20	441,756,132	34,883,097	34,883,097	-	9,324,625	-	10,235,119	
21	463,764,239	35,800,474	35,800,474	-	8,943,785	-	9,864,108	
22	483,554,894	36,730,692	36,730,692	-	8,575,864	-	9,503,626	
23	481,569,466	37,612,173	37,612,173	-	8,207,170	-	9,138,603	
24	478,279,116	38,349,041	38,349,041	-	7,820,522	-	8,749,779	
25	473,724,766	39,007,324	39,007,324	-	7,434,360	-	8,357,567	
26	467,898,233	39,548,236	39,548,236	-	7,044,348	-	7,957,049	
27	460,885,387	40,013,958	40,013,958	-	6,661,030	-	7,560,101	
28	452,673,390	40,349,173	40,349,173	-	6,277,414	-	7,158,827	
29	443,340,349	40,570,692	40,570,692	-	5,898,950	-	6,759,442	
30	432,933,777	40,622,263	40,622,263	-	5,520,046	-	6,355,558	

The Projected Fiduciary Net Position and Benefit Payments are based on current employees in the Plan as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position is shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS - YEARS 31 TO 60

			Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments				
Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (7.00%)	Present Value of "Unfunded" Benefit Payments (2.44%)	Present Value of Benefit Payments Using the Single Discount Rate (6.49%)		
31	\$ 421,590,886	\$ 40,576,529	\$ 40,576,529	\$ -	\$ 5,153,113	\$ -	\$ 5,961,502		
32	409,351,763	40,433,387	40,433,387	-	4,799,004	-	5,578,431		
33	396,301,639	40,182,848	40,182,848	_	4,457,260	_	5,205,996		
34	382,506,405	39,822,619	39,822,619	-	4,128,319	-	4,844,892		
35	368,036,361	39,374,743	39,374,743	-	3,814,849	-	4,498,453		
36	352,944,693	38,849,761	38,849,761	-	3,517,744	-	4,167,974		
37	337,290,375	38,249,148	38,249,148	-	3,236,785	-	3,853,449		
38	321,119,199	37,567,670	37,567,670	-	2,971,136	-	3,554,130		
39	304,490,400	36,843,607	36,843,607	-	2,723,245	-	3,273,198		
40	287,440,104	36,058,687	36,058,687	-	2,490,868	-	3,008,231		
41	270,016,373	35,230,584	35,230,584	-	2,274,452	-	2,760,021		
42	252,236,571	34,351,122	34,351,122	-	2,072,594	-	2,527,113		
43	234,135,258	33,414,377	33,414,377	-	1,884,182	-	2,308,385		
44	215,747,940	32,424,864	32,424,864	-	1,708,771	-	2,103,508		
45	197,109,962	31,380,969	31,380,969	-	1,545,568	-	1,911,717		
46	178,262,620	30,281,761	30,281,761	-	1,393,860	-	1,732,326		
47	159,248,692	29,126,756	29,126,756	-	1,252,987	-	1,564,702		
48	140,114,419	27,916,363	27,916,363	-	1,122,353	-	1,408,282		
49	120,908,817	26,652,776	26,652,776	-	1,001,450	-	1,262,596		
50	101,682,027	25,340,150	25,340,150	-	889,841	-	1,127,255		
51	82,483,358	23,984,347	23,984,347	-	787,131	-	1,001,918		
52	63,359,463	22,593,251	22,593,251	-	692,970	-	886,286		
53	44,352,064	21,175,902	21,175,902	-	607,007	-	780,061		
54	25,496,411	19,741,801	19,741,801	-	528,877	-	682,912		
55	6,820,356	18,302,057	6,820,356	11,481,701	170,762	3,086,133	594,523		
56	-	16,868,224	-	16,868,224	-	4,425,968	514,552		
57	-	15,451,572	-	15,451,572	-	3,957,692	442,613		
58	-	14,063,366	-	14,063,366	-	3,516,325	378,296		
59	-	12,714,202	-	12,714,202	-	3,103,268	321,161		
60	-	11,413,964	-	11,413,964	-	2,719,550	270,746		

The Projected Fiduciary Net Position and Benefit Payments are based on current employees in the Plan as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position is shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS – YEARS 61 TO 80

			Projected I	Benefit Payments	Actuarial Present Values of Projected Benefit Payments				
Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (7.00%)	Present Value of "Unfunded" Benefit Payments (2.44%)	Present Value of Benefit Payments Using the Single Discount Rate (6.49%)		
61	\$ -	\$ 10,171,716	\$ -	\$ 10,171,716	\$ -	\$ 2,365,839	\$ 226,574		
62	-	8,995,471	-	8,995,471	-	2,042,421	188,162		
63	-	7,891,397	-	7,891,397	-	1,749,064	155,007		
64	-	6,864,441	-	6,864,441	-	1,485,209	126,618		
65	-	5,918,393	-	5,918,393	-	1,250,019	102,514		
66	-	5,055,360	-	5,055,360	-	1,042,306	82,229		
67	-	4,275,945	-	4,275,945	-	860,609	65,312		
68	-	3,579,477	-	3,579,477	-	703,272	51,342		
69	-	2,964,050	-	2,964,050	-	568,486	39,924		
70	-	2,426,522	-	2,426,522	-	454,307	30,692		
71	-	1,962,901	-	1,962,901	-	358,751	23,314		
72	-	1,568,205	-	1,568,205	-	279,788	17,491		
73	-	1,236,682	-	1,236,682	-	215,384	12,953		
74	-	962,173	-	962,173	-	163,584	9,464		
75	-	738,228	-	738,228	-	122,520	6,818		
76	-	558,216	-	558,216	-	90,438	4,842		
77	-	415,784	-	415,784	-	65,758	3,386		
78	-	304,930	-	304,930	-	47,077	2,332		
79	-	220,096	-	220,096	-	33,170	1,581		
80	-	156,265	-	156,265	-	22,990	1,054		

NOTES TO THE ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS

The Projected Fiduciary Net Position and Benefit Payments are based on current employees in the Plan as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position is shown in more detail earlier in this section.

The Funded and Unfunded Portion of Benefit Payments are split based on the time that the Projected Fiduciary Net Position is to reach \$0 (based on assets for current employees).

The Present Value ("PV") of the Funded and Unfunded Portion of Benefit Payments are determined separately. The PV of the Funded Portion of Benefit Payments uses the Expected Rate of Return on Plan Investments. The PV of the Unfunded Portion of Benefit Payments are determined using the High-Quality Municipal Bond Rate as of the Measurement Date, as described in the *Actuarial Assumptions Information* section of this report.

The Discount Rate used for GASB purposes is the rate such that when applied to the Total Projected Benefit Payments results in a Present Value that equals the sum of the Present Value of the Funded and Unfunded Portion of Benefit Payments. The Discount Rate is rounded to four decimal places; therefore, the resulting Present Value comparisons may show a slight difference due to rounding.



Lauterbach & Amen, LLP

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