

GASB 67/68 Report
For Use in Financial Statement Reporting



ROCKTON POLICE
PENSION FUND

Actuarial Valuation
as of June 1, 2020

LAUTERBACH & AMEN, LLP

GASB Statements 67 and 68 Actuarial Disclosures



Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

GASB 67: ROCKTON POLICE PENSION FUND

Fiscal Year Ending: May 31, 2021
Actuarial Valuation Date: June 1, 2020
Utilizing Data as of May 31, 2020
Measurement Date: May 31, 2021

GASB 68: VILLAGE OF ROCKTON, ILLINOIS

Fiscal Year Ending: May 31, 2021
Actuarial Valuation Date: June 1, 2020
Utilizing Data as of May 31, 2020
Measurement Date: May 31, 2021

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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 Rockton Police Pension Fund, and may include results from the prior Actuary. We did not prepare the Actuarial Valuations for the years prior to June 1, 2015. 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 Rockton Police 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 Rockton Police Pension Fund or the Village of Rockton, Illinois and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,

LAUTERBACH & AMEN, LLP

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

Robert L. Rietz, Jr., FCA, EA, MAAA



PLAN FIDUCIARY NET POSITION

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



STATEMENT OF PLAN FIDUCIARY NET POSITION

	<u>5/31/2020</u>	<u>5/31/2021</u>
Assets		
Cash and Cash Equivalents	\$ 223,584	\$ 284,028
Total Cash	<u>223,584</u>	<u>284,028</u>
Receivables:		
Due from Treasury	394,509	-
Investment Income - Accrued Interest	148	27,558
Total Receivables	<u>394,657</u>	<u>27,558</u>
Investments:		
Fixed Income	3,678,681	4,504,541
Mutual Funds	<u>3,072,253</u>	<u>3,856,649</u>
Total Investments	<u>6,750,934</u>	<u>8,361,190</u>
Total Assets	<u>7,369,175</u>	<u>8,672,776</u>
Liabilities		
Payables:		
Expenses Due/Unpaid	1,267	750
Other	<u>390,237</u>	-
Total Liabilities	<u>391,504</u>	<u>750</u>
Plan Fiduciary Net Position	<u>\$ 6,977,671</u>	<u>\$ 8,672,026</u>

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

	<u>5/31/2021</u>
Additions	
Contributions	
Employer	\$ 421,921
Members	112,012
Total Contributions	<u>533,933</u>
Investment Income	
Net Appreciation in Fair Value of Investments	1,055,790
Interest and Dividends	210,688
Less Investment Expense	<u>(23,563)</u>
Net Investment Income	<u>1,242,915</u>
Total Additions	<u>1,776,848</u>
Deductions	
Benefit Payments and Refunds of Member Contributions	66,992
Administrative Expense	<u>15,501</u>
Total Deductions	<u>82,493</u>
Net Increase in Net Position	<u>1,694,355</u>
Plan Fiduciary Net Position	
Beginning of Year	<u>6,977,671</u>
End of Year	<u>\$ 8,672,026</u>

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

Statement of Total Pension Liability
Statement of Changes in Total Pension Liability
Statement of Changes in Net Pension Liability
Deferred Outflows and Inflows of Resources
Deferred Outflows and Inflows of Resources – Detail
Pension Expense Development



STATEMENT OF TOTAL PENSION LIABILITY

	<u>5/31/2020</u>	<u>5/31/2021</u>
Active Members	\$ 7,409,929	\$ 6,676,192
Inactive Members		
Terminated Members	241,442	1,234,341
Retired Members	1,334,192	1,453,772
Disabled Members	-	-
Other Beneficiaries	-	-
Total Inactive Members	<u>1,575,634</u>	<u>2,688,113</u>
Total Pension Liability	<u>\$ 8,985,563</u>	<u>\$ 9,364,305</u>

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.

After careful consideration, we have elected to transition our client reporting to a new valuation platform. Our new platform, ProVal, is an industry standard tool that encompasses a multitude of actuarial best practices. The driving reason behind our decision to transition to this platform is that it will give us the opportunity to provide additional capabilities to our clients in the near future, including stochastic prediction modeling and sensitivity capabilities. Because this software has slightly different parameters in the underlying coding, there may be a minor variation in actuarial calculations. These variations are well within the acceptable ranges developed for actuarial standards. This is routine in nature and is a regular part of running estimates and projections. As we strive for “best estimates” in the actuarial reporting process, the best due diligence continues to be the process of setting and reviewing assumptions in the actuarial profession. Our commitment to reviewing new information regularly continues to be at the forefront of our reporting.



STATEMENT OF CHANGES IN TOTAL PENSION LIABILITY

	<u>5/31/2021</u>
Changes in Total Pension Liability	
Service Cost	\$ 346,492
Interest	513,248
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	(414,006)
Change in Assumptions	-
Benefit Payments and Refunds	(66,992)
Net Change in Total Pension Liability	378,742
Total Pension Liability - Beginning	8,985,563
Total Pension Liability - Ending (a)	<u>\$ 9,364,305</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 8,672,026</u>
Employer's Net Pension Liability - Ending (a) - (b)	<u>\$ 692,279</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	92.61%
Covered Employee Payroll	\$ 1,182,477
Employer's Net Pension Liability as a Percentage of Covered-Employee Payroll	58.54%

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 estimated based on the prior Covered-Employee Payroll and expected increases 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 6/1/2020	<u>\$ 8,985,563</u>	<u>\$ 6,977,671</u>	<u>\$ 2,007,892</u>
Changes for the Year:			
Service Cost	346,492	-	346,492
Interest	513,248	-	513,248
Actuarial Experience	(414,006)	-	(414,006)
Change in Assumptions	-	-	-
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	421,921	(421,921)
Contributions - Members	-	112,012	(112,012)
Contributions - Other	-	-	-
Net Investment Income	-	1,242,915	(1,242,915)
Benefit Payments and Refunds	(66,992)	(66,992)	-
Administrative Expense	-	(15,501)	15,501
Prior Period Audit Adjustment	-	-	-
Other Deductions	-	-	-
Net Changes	<u>\$ 378,742</u>	<u>\$ 1,694,355</u>	<u>\$ (1,315,613)</u>
Balances Ending at 5/31/2021	<u>\$ 9,364,305</u>	<u>\$ 8,672,026</u>	<u>\$ 692,279</u>

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:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Total Deferred Amounts</u>
Differences Between Expected and Actual Experience	\$ 184,143	\$ (455,951)	\$ (271,808)
Change in Assumptions	118,200	(226,924)	(108,724)
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	76,134	(766,655)	(690,521)
Contributions Subsequent to the Measurement Date*	-	-	-
Total	<u>\$ 378,477</u>	<u>\$ (1,449,530)</u>	<u>\$ (1,071,053)</u>

*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	
May 31:	
2021	\$ (212,164)
2022	(219,838)
2023	(254,068)
2024	(214,703)
2025	(58,985)
Thereafter	\$ (111,295)



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	5/31/2021 Expense Recognized	5/31/2021 Deferred Balance
Asset Gain	5/31/2021	5.00	\$ (810,712)	5.00	\$ (162,143)	\$ (648,569)
Actuarial Gain	5/31/2021	8.27	(414,006)	8.27	(50,062)	(363,944)
Asset Gain	5/31/2020	5.00	(196,810)	4.00	(39,362)	(118,086)
Change in Assumptions Gain	5/31/2020	12.75	(10,931)	11.75	(858)	(9,215)
Actuarial Gain	5/31/2020	12.75	(16,226)	11.75	(1,273)	(13,680)
Asset Loss	5/31/2019	5.00	171,158	3.00	34,232	68,462
Change in Assumptions Loss	5/31/2019	12.03	115,716	10.03	9,619	86,859
Actuarial Loss	5/31/2019	12.03	166,872	10.03	13,872	125,256
Asset Loss	5/31/2018	5.00	38,372	2.00	7,675	7,672
Change in Assumptions Gain	5/31/2018	11.72	(180,719)	8.72	(15,420)	(119,039)
Actuarial Loss	5/31/2018	11.72	30,843	8.72	2,632	20,315
Asset Gain	5/31/2017	5.00	(43,995)	1.00	(8,799)	-
Change in Assumptions Gain	5/31/2017	11.72	(172,090)	7.72	(14,684)	(98,670)
Actuarial Gain	5/31/2017	11.72	(136,607)	7.72	(11,656)	(78,327)
Change in Assumptions Loss	5/31/2016	10.58	72,411	5.58	6,845	31,341
Actuarial Loss	5/31/2016	10.58	89,104	5.58	8,422	38,572
Total			\$ (1,297,620)		\$ (220,960)	\$ (1,071,053)

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:

	<u>5/31/2021</u>
Pension Expense/(Income) Under GASB 68	
Service Cost	\$ 346,492
Interest	513,248
Changes of Benefit Terms	-
Contributions - Members	(112,012)
Contributions - Other	-
Expected Investment Income	(432,203)
Administrative Expense	15,501
Other Changes	-
Initial Pension Expense/(Income)	<u>\$ 331,026</u>
Recognition of Outflow/(Inflow) of Resources Due to Liabilities	(52,563)
Recognition of Outflow/(Inflow) of Resources Due to Assets	<u>(168,397)</u>
Total Pension Expense/(Income)	<u>\$ 110,066</u>



ACTUARIAL ASSUMPTIONS INFORMATION

Statement of Significant Actuarial Assumptions
Assumption Changes
Notes on Actuarial Assumptions
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	6.00%
Expected Rate of Return on Investments	6.00%
High-Quality 20 Year Tax-Exempt G.O. Bond Rate	2.20%
Projected Individual Pay Increases	3.25% - 12.28%
Projected Total Payroll Increases	3.00%
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 Police Retirement Rates Capped at Age 65
Termination Rates	100% of L&A 2020 Illinois Police Termination Rates
Disability Rates	100% of L&A 2020 Illinois Police Disability Rates
Marital Assumptions	Active Members: 80% Retiree & Disabled Members: Based on Actual Spousal Data

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

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 2.16% to 2.20% 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.



The Discount Rate used in the determination of the Total Pension Liability remained constant at 6.00%. 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	7.07%	8	7.48%
1	7.11%	9	3.50%
2	6.33%	10	3.50%
3	6.22%	15	3.50%
4	12.28%	20	3.50%
5	5.20%	25	3.25%
6	4.20%	30	3.25%
7	4.06%	35	3.25%

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 Police 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 Sex Distinct Raw Rates as developed in the PubS-2010 Study for disabled participants. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

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 Police 2020.



POSTEMPLOYMENT BENEFIT CHANGES

Eligibility for postemployment benefit increases is determined based on the Illinois Pension Code. Tier 1 Police retirees are provided with an annual increase of 3.00% of the current retirement benefits by statute when eligible. Tier 2 Police 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 three years ago 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 a geometric average. The Investment Policy Statement will provide more detail regarding the Fund's policies on asset allocation targets and acceptable ranges.

<u>Asset Class</u>	<u>Long-Term Expected Rate of Return</u>	<u>Long-Term Inflation Expectation</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Target Allocation</u>
Large Cap Domestic Equity	9.50%	2.90%	6.60%	31.50%
Small Cap Domestic Equity	11.40%	2.90%	8.50%	9.00%
International Equity	9.30%	2.90%	6.40%	4.50%
Fixed Income	4.30%	2.90%	1.40%	55.00%

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 2.90% 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 May 27, 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 earlier 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% Decrease (5.00%)	Current Discount Rate (6.00%)	1% Increase (7.00%)
Employer's Net Pension Liability	\$2,572,848	\$692,279	(\$781,766)

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	5/31/2019	5/31/2020
Fiscal Year End for Reporting	<u>(FYE 5/31/2020)</u>	<u>(FYE 5/31/2021)</u>
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1	1
Inactive Plan Members Entitled to But Not Yet Receiving Benefits*	1	8
Active Plan Members	<u>15</u>	<u>15</u>
Total	<u>17</u>	<u>24</u>
Payroll of Active Plan Members	<u>\$ 1,133,983</u>	<u>\$ 1,148,036</u>
Average Future Working Career (In Years)		
Active Plan Members	14.45	13.22
Inactive Plan Members	0.00	0.00
Total	12.75	8.27

*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 May 31, 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 Contribution
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 Entry Age Normal Cost Method (level percent of pay). The method allocates Normal Cost Contributions by Members over the working career of the Member as a level percent of pay.

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. The current Employer Contributions are being compared to the Actuarially Determined Contribution as developed in the June 1, 2019 Actuarial Valuation. The period of repayment as of that valuation is 11 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 Village 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:

<u>Fiscal</u> <u>Year</u> <u>End</u>	<u>Employer</u> <u>Contributions</u>	<u>Most</u> <u>Applicable</u> <u>ADC</u>	<u>% of</u> <u>ADC</u>	<u>Covered-</u> <u>Employee</u> <u>Payroll</u>	<u>% of</u> <u>Payroll</u>
5/31/2021	\$421,921	\$425,701	99.11%	\$1,182,477	35.68%
5/31/2020	\$410,275	\$390,535	105.05%	\$1,148,036	35.74%
5/31/2019	\$347,786	\$387,580	89.73%	\$1,111,946	31.28%
5/31/2018	\$312,277	\$317,885	98.24%	\$1,206,692	25.88%
5/31/2017	\$238,378	\$264,653	90.07%	\$1,171,546	20.35%

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.



Informal Funding Policy – Selected

The Informal Funding Policy that has been determined for future contributions is 96.44% 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

	5/31/2021	5/31/2020	5/31/2019	5/31/2018	5/31/2017	5/31/2016	5/31/2015	5/31/2014	5/31/2013	5/31/2012
Total Pension Liability										
Service Cost	\$ 346,492	\$ 334,209	\$ 315,354	\$ 357,711	\$ 337,878	\$ 276,424	\$ 290,278			
Interest	513,248	483,158	435,187	397,283	375,724	332,898	297,537			
Changes of Benefit Terms	-	66,416	-	-	-	-	-			
Differences Between Expected and Actual Experience	(414,006)	(16,226)	166,872	30,843	(136,607)	89,104	-			
Change in Assumptions	-	(10,931)	115,716	(180,719)	(172,090)	72,411	-			
Benefit Payments and Refunds	(66,992)	(65,041)	(184,541)	(55,505)	(19,765)	(5,082)	(23,412)			
Net Change in Total Pension Liability	\$ 378,742	\$ 791,585	\$ 848,588	\$ 549,613	\$ 385,140	\$ 765,755	\$ 564,403			
Total Pension Liability - Beginning	8,985,563	8,193,978	7,345,390	6,795,777	6,410,637	5,644,882	5,080,479			
Total Pension Liability - Ending (a)	\$ 9,364,305	\$ 8,985,563	\$ 8,193,978	\$ 7,345,390	\$ 6,795,777	\$ 6,410,637	\$ 5,644,882			
Plan Fiduciary Net Position										
Contributions - Employer	\$ 421,921	\$ 410,275	\$ 347,786	\$ 312,277	\$ 238,378	\$ 220,029	\$ 255,621			
Contributions - Members	112,012	127,438	111,818	114,635	109,470	105,326	101,979			
Net Investment Income	1,242,915	567,665	168,040	266,374	310,042	84,622	186,693			
Benefit Payments and Refunds	(66,992)	(65,041)	(184,541)	(55,505)	(19,765)	(5,082)	(23,412)			
Administrative Expense	(15,501)	(14,501)	(14,070)	(16,755)	(12,858)	(13,957)	(9,101)			
Net Change in Plan Fiduciary Net Position	\$ 1,694,355	\$ 1,025,836	\$ 429,033	\$ 621,025	\$ 625,267	\$ 390,938	\$ 511,780			
Plan Fiduciary Net Position - Beginning	6,977,671	5,951,835	5,522,802	4,901,777	4,276,510	3,885,571	3,373,791			
Plan Fiduciary Net Position - Ending (b)	\$ 8,672,026	\$ 6,977,671	\$ 5,951,835	\$ 5,522,802	\$ 4,901,777	\$ 4,276,510	\$ 3,885,571			
Employer's Net Pension Liability - Ending (a) - (b)	\$ 692,279	\$ 2,007,892	\$ 2,242,143	\$ 1,822,588	\$ 1,894,000	\$ 2,134,127	\$ 1,759,311			

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



SCHEDULE OF TOTAL PENSION LIABILITY AND RELATED RATIOS

	<u>5/31/2021</u>	<u>5/31/2020</u>	<u>5/31/2019</u>	<u>5/31/2018</u>	<u>5/31/2017</u>	<u>5/31/2016</u>	<u>5/31/2015</u>	<u>5/31/2014</u>	<u>5/31/2013</u>	<u>5/31/2012</u>
Total Pension Liability - Ending (a)	\$ 9,364,305	\$ 8,985,563	\$ 8,193,978	\$ 7,345,390	\$ 6,795,777	\$ 6,410,637	\$ 5,644,882			
Plan Fiduciary Net Position - Ending (b)	\$ 8,672,026	\$ 6,977,671	\$ 5,951,835	\$ 5,522,802	\$ 4,901,777	\$ 4,276,510	\$ 3,885,571			
Employer's Net Pension Liability - Ending (a) - (b)	\$ 692,279	\$ 2,007,892	\$ 2,242,143	\$ 1,822,588	\$ 1,894,000	\$ 2,134,127	\$ 1,759,311			
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	92.61%	77.65%	72.64%	75.19%	72.13%	66.71%	68.83%			
Covered Employee Payroll	\$ 1,182,477	\$ 1,148,036	\$ 1,111,946	\$ 1,206,692	\$ 1,171,546	\$ 1,049,824	\$ 994,789			
Employer's Net Pension Liability as a Percentage of Covered-Employee Payroll	58.54%	174.90%	201.64%	151.04%	161.67%	203.28%	176.85%			

Covered-Employee Payroll shown above for the current year is estimated based on the prior Covered-Employee Payroll and expected increases for the Plan Members during the Fiscal Year.



SCHEDULE OF CONTRIBUTIONS

	5/31/2021	5/31/2020	5/31/2019	5/31/2018	5/31/2017	5/31/2016	5/31/2015	5/31/2014	5/31/2013	5/31/2012
Actuarially Determined Contribution	\$ 425,701	\$ 390,535	\$ 387,580	\$ 317,885	\$ 264,653	\$ 223,068	\$ 245,078			
Contributions in Relation to the Actuarially Determined Contribution	421,921	410,275	347,786	312,277	238,378	220,029	255,621			
Contribution Deficiency/(Excess)	\$ 3,780	\$ (19,740)	\$ 39,794	\$ 5,608	\$ 26,275	\$ 3,039	\$ (10,543)			
Covered-Employee Payroll	\$ 1,182,477	\$ 1,148,036	\$ 1,111,946	\$ 1,206,692	\$ 1,171,546	\$ 1,049,824	\$ 994,789			
Contributions as a Percentage of Covered-Employee Payroll	35.68%	35.74%	31.28%	25.88%	20.35%	20.96%	25.70%			

NOTES TO SCHEDULE OF CONTRIBUTIONS

The Actuarially Determined Contribution shown above for the current year is the Recommended Contribution from the June 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	Entry Age Normal
Amortization Method	Level % Pay (Closed)
Equivalent Single Amortization Period	100% Funded Over 11 Years
Asset Valuation Method	5-Year Smoothed Market Value
Inflation (CPI-U)	2.50%
Total Payroll Increases	3.00%
Individual Pay Increases	3.50% - 12.53%
Expected Rate of Return on Investments	6.00%
Mortality Rates	RP-2014 Adjusted for Plan Status, Collar, and Illinois Public Pension Data, as Appropriate
Retirement Rates	100% of L&A 2016 Illinois Police Retirement Rates Capped at Age 65
Termination Rates	100% of L&A 2016 Illinois Police Termination Rates
Disability Rates	100% of L&A 2016 Illinois Police Disability Rates



GASB METHODS AND PROCEDURES

GASB Methods and Procedures



GASB METHODS AND PROCEDURES

	<u>Statement 67</u> <u>Pension Plan Financials</u>	<u>Statement 68</u> <u>Employer Financials</u>
Fiscal Year End for Reporting	May 31, 2021	May 31, 2021
Measurement Date	May 31, 2021	May 31, 2021
Actuarial Valuation Date	June 1, 2020	June 1, 2020
Actuarial Valuation - Data Date	May 31, 2020	May 31, 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	8.27 Years	8.27 Years
Change in Assumptions	8.27 Years	8.27 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

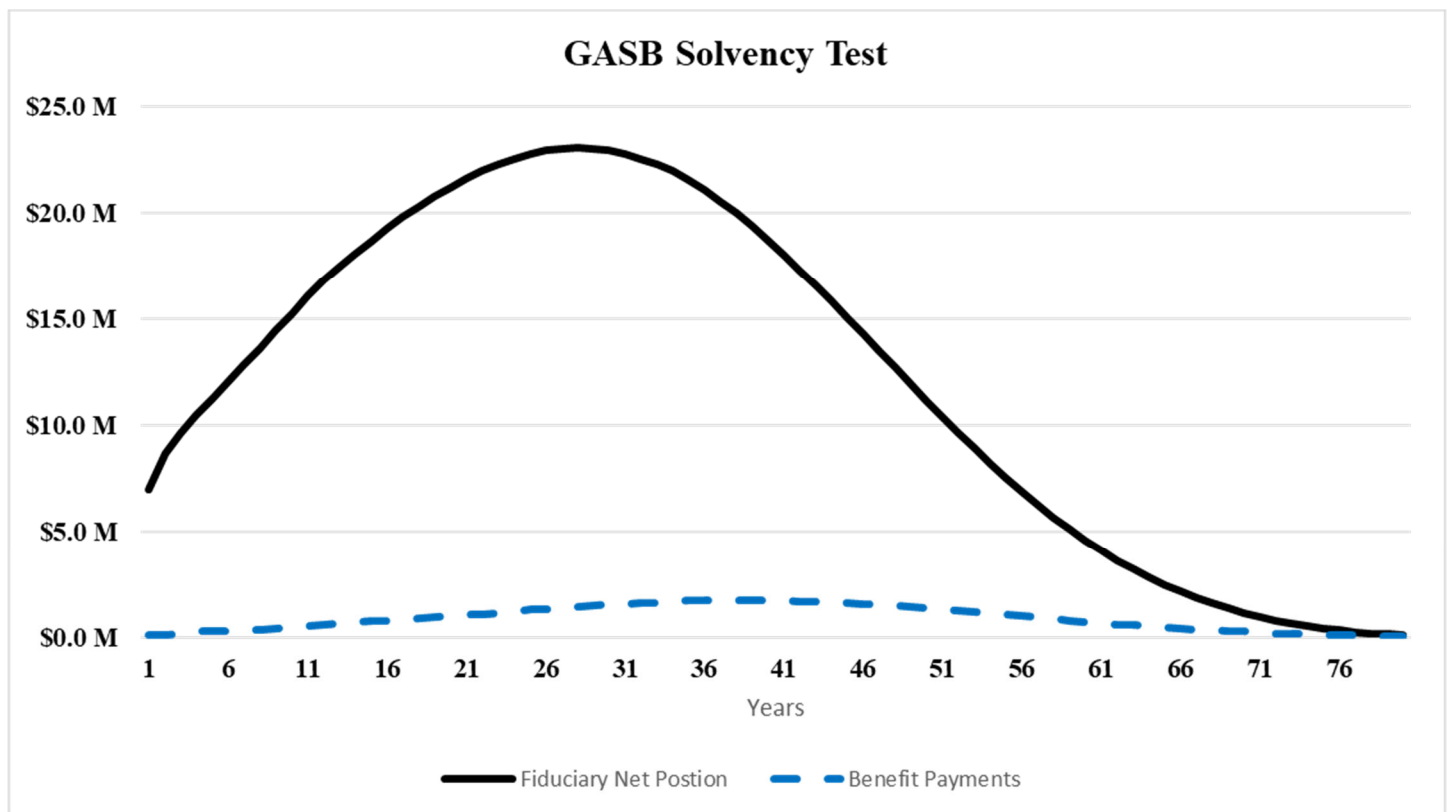
Notes to Actuarial Present Value of Projected Benefit Payments



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.



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

Year	Projected Pensionable Payroll			Projected Contributions			
	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)
1	\$ 1,148,036	\$ -	\$ 1,148,036	\$ 112,012	\$ 421,921	\$ -	\$ 533,933
2	1,132,499	49,978	1,182,477	112,231	437,427	-	549,658
3	1,126,281	91,670	1,217,952	111,614	307,259	-	418,873
4	1,108,810	145,680	1,254,490	109,883	307,012	-	416,895
5	1,041,173	250,952	1,292,125	103,180	310,875	-	414,055
6	1,028,095	302,794	1,330,889	101,884	290,925	-	392,809
7	1,016,615	354,200	1,370,815	100,747	289,712	-	390,459
8	993,682	418,258	1,411,940	98,474	289,129	-	387,603
9	974,328	479,970	1,454,298	96,556	286,344	-	382,900
10	960,319	537,607	1,497,927	95,168	284,405	-	379,573
11	935,044	607,821	1,542,865	92,663	178,388	-	271,051
12	901,572	687,579	1,589,151	89,346	168,620	-	257,966
13	847,147	789,678	1,636,825	83,952	161,690	-	245,642
14	811,311	874,619	1,685,930	80,401	146,401	-	226,802
15	779,277	957,231	1,736,508	77,226	137,141	-	214,367
16	736,799	1,051,804	1,788,603	73,017	130,551	-	203,568
17	704,178	1,138,084	1,842,261	69,784	117,712	-	187,496
18	675,373	1,222,156	1,897,529	66,929	110,217	-	177,146
19	640,239	1,314,216	1,954,455	63,448	104,797	-	168,245
20	620,727	1,392,361	2,013,089	61,514	95,184	-	156,698
21	595,619	1,477,862	2,073,481	59,026	90,483	-	149,509
22	554,347	1,581,339	2,135,686	54,936	86,603	-	141,539
23	526,776	1,672,980	2,199,756	52,204	77,500	-	129,704
24	501,828	1,763,921	2,265,749	49,731	72,716	-	122,447
25	443,018	1,890,704	2,333,721	43,903	69,775	-	113,678
26	390,252	2,013,481	2,403,733	38,674	60,075	-	98,749
27	342,903	2,132,942	2,475,845	33,982	51,589	-	85,571
28	310,587	2,239,533	2,550,120	30,779	42,786	-	73,565
29	280,340	2,346,284	2,626,624	27,782	38,754	-	66,536
30	253,232	2,452,190	2,705,423	25,095	34,980	-	60,075

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

Year	Projected Pensionable Payroll			Projected Contributions			
	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	\$ 212,634	\$ 2,573,951	\$ 2,786,585	\$ 21,072	\$ 32,785	\$ -	\$ 53,857
32	185,773	2,684,410	2,870,183	18,410	26,532	-	44,942
33	160,521	2,795,768	2,956,288	15,908	23,180	-	39,088
34	137,645	2,907,332	3,044,977	13,641	20,029	-	33,670
35	117,739	3,018,587	3,136,326	11,668	17,175	-	28,843
36	82,476	3,147,940	3,230,416	8,173	17,026	-	25,199
37	70,042	3,257,287	3,327,329	6,941	10,291	-	17,232
38	58,242	3,368,907	3,427,148	5,772	8,740	-	14,512
39	48,338	3,481,625	3,529,963	4,790	7,267	-	12,057
40	17,038	3,618,824	3,635,862	1,688	9,023	-	10,711
41	14,612	3,730,326	3,744,938	1,448	2,126	-	3,574
42	12,263	3,845,022	3,857,286	1,215	1,823	-	3,038
43	9,999	3,963,005	3,973,004	991	1,530	-	2,521
44	8,121	4,084,073	4,092,195	805	1,248	-	2,053
45	-	4,214,960	4,214,960	-	1,866	-	1,866
46	-	4,341,409	4,341,409	-	-	-	-
47	-	4,471,651	4,471,651	-	-	-	-
48	-	4,605,801	4,605,801	-	-	-	-
49	-	4,743,975	4,743,975	-	-	-	-
50	-	4,886,294	4,886,294	-	-	-	-
51	-	5,032,883	5,032,883	-	-	-	-
52	-	5,183,870	5,183,870	-	-	-	-
53	-	5,339,386	5,339,386	-	-	-	-
54	-	5,499,567	5,499,567	-	-	-	-
55	-	5,664,554	5,664,554	-	-	-	-
56	-	5,834,491	5,834,491	-	-	-	-
57	-	6,009,526	6,009,526	-	-	-	-
58	-	6,189,811	6,189,811	-	-	-	-
59	-	6,375,506	6,375,506	-	-	-	-
60	-	6,566,771	6,566,771	-	-	-	-

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

Year	Projected Pensionable Payroll			Projected Contributions			
	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)
61	\$ -	\$ 6,763,774	\$ 6,763,774	\$ -	\$ -	\$ -	\$ -
62	-	6,966,687	6,966,687	-	-	-	-
63	-	7,175,688	7,175,688	-	-	-	-
64	-	7,390,958	7,390,958	-	-	-	-
65	-	7,612,687	7,612,687	-	-	-	-
66	-	7,841,068	7,841,068	-	-	-	-
67	-	8,076,300	8,076,300	-	-	-	-
68	-	8,318,589	8,318,589	-	-	-	-
69	-	8,568,147	8,568,147	-	-	-	-
70	-	8,825,191	8,825,191	-	-	-	-
71	-	9,089,947	9,089,947	-	-	-	-
72	-	9,362,645	9,362,645	-	-	-	-
73	-	9,643,524	9,643,524	-	-	-	-
74	-	9,932,830	9,932,830	-	-	-	-
75	-	10,230,815	10,230,815	-	-	-	-
76	-	10,537,739	10,537,739	-	-	-	-
77	-	10,853,872	10,853,872	-	-	-	-
78	-	11,179,488	11,179,488	-	-	-	-
79	-	11,514,872	11,514,872	-	-	-	-
80	-	11,860,319	11,860,319	-	-	-	-

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

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)
1	\$ 6,977,671	\$ 533,933	\$ 66,992	\$ 15,501	\$ 1,242,915	\$ 8,672,026
2	8,672,026	549,658	119,004	15,850	532,766	9,619,596
3	9,619,596	418,874	148,849	16,206	584,790	10,458,205
4	10,458,205	416,895	257,443	16,571	631,779	11,232,864
5	11,232,864	414,056	282,785	16,944	677,402	12,024,592
6	12,024,592	392,809	306,370	17,325	723,549	12,817,256
7	12,817,256	390,459	337,591	17,715	770,090	13,622,498
8	13,622,498	387,603	366,572	18,114	817,437	14,442,852
9	14,442,852	382,900	403,719	18,521	865,391	15,268,904
10	15,268,904	379,573	441,302	18,938	913,714	16,101,951
11	16,101,951	271,051	509,159	19,364	958,393	16,802,872
12	16,802,872	257,966	570,515	19,800	998,202	17,468,725
13	17,468,725	245,642	621,544	20,245	1,036,239	18,108,818
14	18,108,818	226,802	671,909	20,701	1,072,555	18,715,565
15	18,715,565	214,367	731,878	21,166	1,106,774	19,283,662
16	19,283,662	203,568	783,565	21,643	1,138,971	19,820,992
17	19,820,992	187,496	830,432	22,130	1,169,308	20,325,234
18	20,325,234	177,147	883,882	22,627	1,197,633	20,793,505
19	20,793,505	168,245	931,358	23,137	1,224,023	21,231,277
20	21,231,277	156,698	984,622	23,657	1,248,329	21,628,025
21	21,628,025	149,509	1,044,954	24,189	1,270,092	21,978,484
22	21,978,484	141,539	1,089,180	24,734	1,289,538	22,295,647
23	22,295,647	129,704	1,132,571	25,290	1,306,894	22,574,384
24	22,574,384	122,447	1,190,761	25,859	1,321,638	22,801,849
25	22,801,849	113,678	1,273,550	26,441	1,332,522	22,948,057
26	22,948,057	98,749	1,325,395	27,036	1,339,273	23,033,647
27	23,033,647	85,571	1,366,267	27,644	1,342,769	23,068,076
28	23,068,076	73,565	1,405,041	28,266	1,343,292	23,051,627
29	23,051,627	66,535	1,459,228	28,902	1,340,450	22,970,481
30	22,970,481	60,075	1,535,826	29,553	1,333,070	22,798,248

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

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)
31	\$ 22,798,248	\$ 53,857	\$ 1,565,948	\$ 30,218	\$ 1,321,626	\$ 22,577,566
32	22,577,566	44,942	1,593,146	30,897	1,307,281	22,305,745
33	22,305,745	39,088	1,615,736	31,593	1,290,097	21,987,602
34	21,987,602	33,670	1,691,272	32,303	1,268,559	21,566,255
35	21,566,255	28,843	1,717,446	33,030	1,242,326	21,086,948
36	21,086,948	25,199	1,725,392	33,773	1,213,198	20,566,180
37	20,566,180	17,232	1,728,976	34,533	1,181,582	20,001,485
38	20,001,485	14,511	1,727,279	35,310	1,147,647	19,401,054
39	19,401,054	12,057	1,749,665	36,105	1,110,852	18,738,194
40	18,738,194	10,711	1,735,107	36,917	1,071,452	18,048,333
41	18,048,333	3,574	1,716,857	37,748	1,030,369	17,327,671
42	17,327,671	3,038	1,694,531	36,954	987,807	16,587,031
43	16,587,031	2,521	1,667,908	35,428	944,197	15,830,414
44	15,830,414	2,052	1,641,465	33,864	899,627	15,056,765
45	15,056,765	1,866	1,605,477	32,265	854,330	14,275,218
46	14,275,218	-	1,565,536	30,641	808,628	13,487,669
47	13,487,669	-	1,521,654	29,002	762,740	12,699,754
48	12,699,754	-	1,473,950	27,356	716,946	11,915,394
49	11,915,394	-	1,422,592	25,713	671,475	11,138,564
50	11,138,564	-	1,367,789	24,082	626,558	10,373,250
51	10,373,250	-	1,309,868	22,472	582,425	9,623,335
52	9,623,335	-	1,249,136	20,889	539,299	8,892,610
53	8,892,610	-	1,185,993	19,342	497,397	8,184,671
54	8,184,671	-	1,121,051	17,839	456,914	7,502,694
55	7,502,694	-	1,054,874	16,387	418,024	6,849,456
56	6,849,456	-	988,039	14,992	380,876	6,227,301
57	6,227,301	-	921,143	13,660	345,594	5,638,092
58	5,638,092	-	854,864	12,395	312,268	5,083,101
59	5,083,101	-	789,886	11,200	280,953	4,562,969
60	4,562,969	-	726,765	10,076	251,673	4,077,800

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	\$ 4,077,800	\$ -	\$ 665,913	\$ 9,026	\$ 224,420	\$ 3,627,281
62	3,627,281	-	607,676	8,049	199,165	3,210,721
63	3,210,721	-	552,363	7,143	175,858	2,827,073
64	2,827,073	-	500,150	6,307	154,431	2,475,047
65	2,475,047	-	451,073	5,539	134,804	2,153,240
66	2,153,240	-	404,983	4,835	116,900	1,860,322
67	1,860,322	-	361,763	4,193	100,641	1,595,007
68	1,595,007	-	321,347	3,609	85,952	1,356,002
69	1,356,002	-	283,655	3,083	72,758	1,142,023
70	1,142,023	-	248,523	2,609	60,987	951,878
71	951,878	-	215,863	2,187	50,571	784,399
72	784,399	-	185,685	1,814	41,439	638,339
73	638,339	-	157,993	1,486	33,516	512,376
74	512,376	-	132,854	1,202	26,721	405,040
75	405,040	-	110,259	958	20,966	314,789
76	314,789	-	90,163	752	16,160	240,033
77	240,033	-	72,547	580	12,208	179,115
78	179,115	-	57,369	438	9,013	130,321
79	130,321	-	44,517	323	6,474	91,955
80	91,955	-	33,831	232	4,495	62,388

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

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (6.00%)	Present Value of "Unfunded" Benefit Payments (2.20%)	Present Value of Benefit Payments Using the Single Discount Rate (6.00%)
1	\$ 6,977,671	\$ 66,992	\$ 66,992	\$ -	\$ 65,068	\$ -	\$ 65,068
2	8,672,026	119,004	119,004	-	109,044	-	109,044
3	9,619,596	148,849	148,849	-	128,671	-	128,671
4	10,458,205	257,443	257,443	-	209,947	-	209,947
5	11,232,864	282,785	282,785	-	217,561	-	217,561
6	12,024,592	306,370	306,370	-	222,363	-	222,363
7	12,817,256	337,591	337,591	-	231,155	-	231,155
8	13,622,498	366,572	366,572	-	236,791	-	236,791
9	14,442,852	403,719	403,719	-	246,025	-	246,025
10	15,268,904	441,302	441,302	-	253,706	-	253,706
11	16,101,951	509,159	509,159	-	276,148	-	276,148
12	16,802,872	570,515	570,515	-	291,910	-	291,910
13	17,468,725	621,544	621,544	-	300,019	-	300,019
14	18,108,818	671,909	671,909	-	305,972	-	305,972
15	18,715,565	731,878	731,878	-	314,415	-	314,415
16	19,283,662	783,565	783,565	-	317,566	-	317,566
17	19,820,992	830,432	830,432	-	317,510	-	317,510
18	20,325,234	883,882	883,882	-	318,817	-	318,817
19	20,793,505	931,358	931,358	-	316,926	-	316,926
20	21,231,277	984,622	984,622	-	316,086	-	316,086
21	21,628,025	1,044,954	1,044,954	-	316,466	-	316,466
22	21,978,484	1,089,180	1,089,180	-	311,188	-	311,188
23	22,295,647	1,132,571	1,132,571	-	305,270	-	305,270
24	22,574,384	1,190,761	1,190,761	-	302,787	-	302,787
25	22,801,849	1,273,550	1,273,550	-	305,508	-	305,508
26	22,948,057	1,325,395	1,325,395	-	299,948	-	299,948
27	23,033,647	1,366,267	1,366,267	-	291,696	-	291,696
28	23,068,076	1,405,041	1,405,041	-	282,994	-	282,994
29	23,051,627	1,459,228	1,459,228	-	277,272	-	277,272
30	22,970,481	1,535,826	1,535,826	-	275,308	-	275,308

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

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (6.00%)	Present Value of "Unfunded" Benefit Payments (2.20%)	Present Value of Benefit Payments Using the Single Discount Rate (6.00%)
31	\$ 22,798,248	\$ 1,565,948	\$ 1,565,948	\$ -	\$ 264,819	\$ -	\$ 264,819
32	22,577,566	1,593,146	1,593,146	-	254,168	-	254,168
33	22,305,745	1,615,736	1,615,736	-	243,181	-	243,181
34	21,987,602	1,691,272	1,691,272	-	240,141	-	240,141
35	21,566,255	1,717,446	1,717,446	-	230,054	-	230,054
36	21,086,948	1,725,392	1,725,392	-	218,037	-	218,037
37	20,566,180	1,728,976	1,728,976	-	206,122	-	206,122
38	20,001,485	1,727,279	1,727,279	-	194,264	-	194,264
39	19,401,054	1,749,665	1,749,665	-	185,643	-	185,643
40	18,738,194	1,735,107	1,735,107	-	173,678	-	173,678
41	18,048,333	1,716,857	1,716,857	-	162,124	-	162,124
42	17,327,671	1,694,531	1,694,531	-	150,958	-	150,958
43	16,587,031	1,667,908	1,667,908	-	140,176	-	140,176
44	15,830,414	1,641,465	1,641,465	-	130,145	-	130,145
45	15,056,765	1,605,477	1,605,477	-	120,086	-	120,086
46	14,275,218	1,565,536	1,565,536	-	110,470	-	110,470
47	13,487,669	1,521,654	1,521,654	-	101,296	-	101,296
48	12,699,754	1,473,950	1,473,950	-	92,567	-	92,567
49	11,915,394	1,422,592	1,422,592	-	84,284	-	84,284
50	11,138,564	1,367,789	1,367,789	-	76,450	-	76,450
51	10,373,250	1,309,868	1,309,868	-	69,069	-	69,069
52	9,623,335	1,249,136	1,249,136	-	62,138	-	62,138
53	8,892,610	1,185,993	1,185,993	-	55,658	-	55,658
54	8,184,671	1,121,051	1,121,051	-	49,632	-	49,632
55	7,502,694	1,054,874	1,054,874	-	44,059	-	44,059
56	6,849,456	988,039	988,039	-	38,931	-	38,931
57	6,227,301	921,143	921,143	-	34,241	-	34,241
58	5,638,092	854,864	854,864	-	29,978	-	29,978
59	5,083,101	789,886	789,886	-	26,132	-	26,132
60	4,562,969	726,765	726,765	-	22,683	-	22,683

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

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (6.00%)	Present Value of "Unfunded" Benefit Payments (2.20%)	Present Value of Benefit Payments Using the Single Discount Rate (6.00%)
61	\$ 4,077,800	\$ 665,913	\$ 665,913	\$ -	\$ 19,607	\$ -	\$ 19,607
62	3,627,281	607,676	607,676	-	16,880	-	16,880
63	3,210,721	552,363	552,363	-	14,475	-	14,475
64	2,827,073	500,150	500,150	-	12,365	-	12,365
65	2,475,047	451,073	451,073	-	10,520	-	10,520
66	2,153,240	404,983	404,983	-	8,911	-	8,911
67	1,860,322	361,763	361,763	-	7,509	-	7,509
68	1,595,007	321,347	321,347	-	6,293	-	6,293
69	1,356,002	283,655	283,655	-	5,240	-	5,240
70	1,142,023	248,523	248,523	-	4,331	-	4,331
71	951,878	215,863	215,863	-	3,549	-	3,549
72	784,399	185,685	185,685	-	2,880	-	2,880
73	638,339	157,993	157,993	-	2,312	-	2,312
74	512,376	132,854	132,854	-	1,834	-	1,834
75	405,040	110,259	110,259	-	1,436	-	1,436
76	314,789	90,163	90,163	-	1,108	-	1,108
77	240,033	72,547	72,547	-	841	-	841
78	179,115	57,369	57,369	-	627	-	627
79	130,321	44,517	44,517	-	459	-	459
80	91,955	33,831	33,831	-	329	-	329

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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