VILLAGE OF GLENCOE
POLICE PENSION FUND

ACTUARIAL VALUATION
AS OF JANUARY 1, 2022

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2023

GASB 67/68 DISCLOSURE INFORMATION
AS OF DECEMBER 31, 2021

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

April 28, 2022

Ms. Nikki Larson
Village of Glencoe Police Pension Fund

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – Village of Glencoe Police Pension Fund

Dear Ms. Larson:

We are pleased to present to the Village this report of the annual actuarial valuation of the Village of Glencoe Police Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and could produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuations, we did not perform an analysis of the potential range of such future measurements.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the Village, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in the GASB results are based on an actuarial valuation performed as of the valuation date.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Village of Glencoe, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of Glencoe Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: Jason L. Franken
Jason L. Franken, FSA, EA, MAAA

By: Heidi Andorfer
Heidi E. Andorfer, FSA, EA, MAAA

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the Village of Glencoe Police Pension Fund, performed as of January 1, 2022, has been completed and the results are presented in this report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2023.

The contribution requirements, compared with those set forth in the January 1, 2021 actuarial report, are as follows:

Valuation Date	1/1/2022	1/1/2021
Applicable to Fiscal Year Ending	12/31/2023	12/31/2022
Total Recommended Contribution	$3,007,596	$2,850,755
% of Projected Annual Payroll	86.6%	71.7%
Member Contributions (Est.)	(344,025)	(393,963)
% of Projected Annual Payroll	(9.9%)	(9.9%)
Village Recommended Contribution	2,663,571	2,456,792
% of Projected Annual Payroll	76.7%	61.8%

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the January 1, 2021 actuarial valuation report. The increase is attributable to higher administrative expenses than the prior year and the natural increase in the amortization payment due to the use of the payroll growth assumption. The increase was offset in part by favorable plan experience.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included more turnover than expected and an investment return of 7.77% (Actuarial Asset Basis) which exceeded the 6.50% assumption. These gains were offset in part by a loss associated with lower than expected inactive mortality.

CHANGES SINCE PRIOR VALUATION

Plan Changes Since Prior Valuation

There were no plan changes since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

The following assumption was updated due to the funding policy implemented during calendar year 2021:

- The payroll growth assumption was reduced from 3.50% to 3.25%.

The following method was updated due to the funding policy implemented during calendar year 2021, however, it is worth noting that this will not have an impact on the contribution determination until the remaining amortization period reaches 15 years:

- The amortization of the unfunded liability will move to an open methodology amortized over 15 years. This is being phased in by simply decreasing the amortization years by 1 each year until the 15 years is reached. At that point, each year the unfunded liability will be reamortized over the 15 year period. The payment will still assume a 100% funding target.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Asmp/Mthd 1/1/2022	Old Asmp/Mthd 1/1/2022	1/1/2021
A. Participant Data			
Number Included			
Actives	30	30	35
Service Retirees	28	28	27
Beneficiaries	8	8	8
Disability Retirees	5	5	5
Terminated Vested	6	6	2
Total	77	77	77
Total Annual Payroll	$3,471,493	$3,471,493	$3,975,408
Payroll Under Assumed Ret. Age	3,471,493	3,471,493	3,975,408
Annual Rate of Payments to:			
Service Retirees	2,640,997	2,640,997	2,443,746
Beneficiaries	368,587	368,587	368,587
Disability Retirees	328,900	328,900	323,484
Terminated Vested	98,527	98,527	48,411
B. Assets			
Actuarial Value	42,065,510	42,065,510	39,842,412
Market Value	43,429,713	43,429,713	41,132,344
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	21,258,405	21,258,405	23,050,417
Disability Benefits	1,799,082	1,799,082	1,967,670
Death Benefits	253,965	253,965	302,225
Vested Benefits	1,284,619	1,284,619	1,671,303
Service Retirees	42,040,672	42,040,672	39,606,916
Beneficiaries	2,972,448	2,972,448	3,062,095
Disability Retirees	4,536,786	4,536,786	4,532,946
Terminated Vested	862,218	862,218	420,905
Total	75,008,195	75,008,195	74,614,477

C. Liabilities - (Continued)	New Asmp/Mthd 1/1/2022	Old Asmp/Mthd 1/1/2022	1/1/2021
Present Value of Future Salaries	35,597,722	35,597,722	41,902,008
Present Value of Future Member Contributions	3,527,734	3,527,734	4,152,489
Normal Cost (Retirement)	655,137	655,137	710,989
Normal Cost (Disability)	125,163	125,163	129,932
Normal Cost (Death)	14,311	14,311	16,577
Normal Cost (Vesting)	83,048	83,048	100,657
Total Normal Cost	877,659	877,659	958,155
Present Value of Future Normal Costs	7,788,778	7,788,778	8,893,667
Accrued Liability (Retirement)	15,311,353	15,311,353	16,361,008
Accrued Liability (Disability)	705,951	705,951	747,497
Accrued Liability (Death)	99,810	99,810	118,977
Accrued Liability (Vesting)	690,179	690,179	870,466
Accrued Liability (Inactives)	50,412,124	50,412,124	47,622,862
Total Actuarial Accrued Liability	67,219,417	67,219,417	65,720,810
Unfunded Actuarial Accrued Liability (UAAL)	25,153,907	25,153,907	25,878,398
Funded Ratio (AVA / AL)	62.6%	62.6%	60.6%

	New Asmp/Mthd 1/1/2022	Old Asmp/Mthd 1/1/2022	1/1/2021
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	50,412,124	50,412,124	47,622,862
Actives	6,224,313	6,224,313	6,613,753
Member Contributions	3,121,244	3,121,244	3,470,181
Total	59,757,681	59,757,681	57,706,796
Non-vested Accrued Benefits	521,992	521,992	852,485
Total Present Value Accrued Benefits	60,279,673	60,279,673	58,559,281
Funded Ratio (MVA / PVAB)	72.0%	72.0%	70.2%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	0	0	
Plan Experience	0	1,597,161	
Benefits Paid	0	(3,567,189)	
Interest	0	3,690,420	
Other	0	0	
Total	0	1,720,392	

	New Asmp/Mthd	Old Asmp/Mthd	
Valuation Date	1/1/2022	1/1/2022	1/1/2021
Applicable to Fiscal Year Ending	12/31/2023	12/31/2023	12/31/2022
E. Pension Cost			
Normal Cost [1]	$934,707	$934,707	$1,020,435
% of Total Annual Payroll [1]	26.9	26.9	25.7
Administrative Expenses [1]	235,934	235,934	46,849
% of Total Annual Payroll [1]	6.8	6.8	1.2
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 1/1/2022) [1]	1,836,955	1,801,272	1,783,471
% of Total Annual Payroll [1]	52.9	51.9	44.8
Total Recommended Contribution	3,007,596	2,971,913	2,850,755
% of Total Annual Payroll [1]	86.6	85.6	71.7
Expected Member Contributions [1]	(344,025)	(344,025)	(393,963)
% of Total Annual Payroll [1]	(9.9)	(9.9)	(9.9)
Expected Village Contribution	2,663,571	2,627,888	2,456,792
% of Total Annual Payroll [1]	76.7	75.7	61.8
F. Past Contributions			
Plan Years Ending:	12/31/2021		
Total Recommended Contribution	2,890,495		
Village Requirement	2,524,910		
Actual Contributions Made:			
Members (excluding buyback)	365,585		
Village	2,531,908		
Total	2,897,493		
G. Net Actuarial (Gain)/Loss	(438,676)		

[1] Contributions developed as of 1/1/2022 displayed above have been adjusted to account for assumed interest.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

Year	Projected Unfunded Accrued Liability
2022	25,153,907
2023	24,951,956
2024	24,677,178
2028	22,823,288
2033	20,377,436
2037	18,610,866
2041	16,997,445

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

		Actual	Assumed
Year Ended	12/31/2021	4.98%	5.37%
Year Ended	12/31/2020	4.83%	4.89%
Year Ended	2/29/2020	6.76%	5.90%
Year Ended	2/28/2019	4.43%	6.13%
Year Ended	2/28/2018	N/A	N/A

(ii) 5 Year Comparison of Investment Return on Actuarial Value

		Actual MVA	Actual AVA	Assumed
Year Ended	12/31/2021	7.71%	7.77%	6.50%
Year Ended	12/31/2020	15.55%	8.45%	6.50%
Year Ended	2/29/2020	4.84%	4.50%	6.50%
Year Ended	2/28/2019	0.96%	5.15%	6.50%
Year Ended	2/28/2018	N/A	N/A	N/A

DEVELOPMENT OF JANUARY 1, 2022 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of January 1, 2021	$25,878,398
(2)	Sponsor Normal Cost developed as of January 1, 2021	564,192
(3)	Expected administrative expenses for the year ended December 31, 2021	43,990
(4)	Expected interest on (1), (2) and (3)	1,720,198
(5)	Sponsor contributions to the System during the year ended December 31, 2021	2,531,908
(6)	Expected interest on (5)	82,287
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2021, (1)+(2)+(3)+(4)-(5)-(6)	25,592,583
(8)	Change to UAAL due to Assumption/Method Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(438,676)
(10)	Unfunded Accrued Liability as of January 1, 2022	25,153,907
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	25,153,907

Date Established	Years Remaining	1/1/2022 Amount	Amortization Amount
1/1/2022	19	25,153,907	1,724,840

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1)	Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2021	$25,878,398
(2)	Expected UAAL as of January 1, 2022	25,592,583
(3)	Summary of Actuarial (Gain)/Loss, by component:	
	Investment Return (Actuarial Asset Basis)	(500,346)
	Salary Increases	47,378
	Active Decrements	(1,020,229)
	Inactive Mortality	329,950
	Other	704,571
	Change in UAAL due to (Gain)/Loss	(438,676)
	Change to UAAL due to Assumption/Method Change	0
(4)	Actual UAAL as of January 1, 2022	$25,153,907

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of January 1, 2021	$ 2,456,792
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(85,728)
Change in Assumed Administrative Expense	189,085
Investment Return (Actuarial Asset Basis)	(35,830)
Salary Increases	3,393
New Entrants	-
Active Decrements	(73,059)
Inactive Mortality	23,628
Contributions (More) or Less than Recommended	(517)
Increase in Amortization Payment Due to Payroll Growth Assumption	62,421
Change in Expected Member Contributions	49,938
Assumption/Method Change	35,683
Other	37,765
Total Change in Contribution	206,779
(3) Contribution Determined as of January 1, 2022	$2,663,571

STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

	New Asmp/Mthd	Old Asmp/Mthd	
Valuation Date	1/1/2022	1/1/2022	1/1/2021
Applicable to Fiscal Year Ending	12/31/2023	12/31/2023	12/31/2022
Actuarial Accrued Liability (PUC)	65,394,252	65,394,252	63,908,535
Actuarial Value of Assets	42,065,510	42,065,510	39,842,412
Unfunded Actuarial Accrued Liability (UAAL)	23,328,742	23,328,742	24,066,123
UAAL Subject to Amortization	16,789,317	16,789,317	17,675,270
Normal Cost [1]	$1,026,262	$1,026,262	$1,077,940
% of Total Annual Payroll [1]	29.6	29.6	27.1
Administrative Expenses [1]	235,934	235,934	46,849
% of Total Annual Payroll [1]	6.8	6.8	1.2
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 1/1/2022) [1]	1,226,100	1,202,283	1,218,133
% of Total Annual Payroll [1]	35.3	34.6	30.6
Total Required Contribution	2,488,296	2,464,479	2,342,922
% of Total Annual Payroll [1]	71.7	71.0	58.9
Expected Member Contributions [1]	(344,025)	(344,025)	(393,963)
% of Total Annual Payroll [1]	(9.9)	(9.9)	(9.9)
Expected Village Contribution	2,144,271	2,120,454	1,948,959
% of Total Annual Payroll [1]	61.8	61.1	49.0

Assumptions and Methods:

Actuarial Cost Method	Projected Unit Credit
Amortization Method	90% Funding by 2040

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

[1] Contributions developed as of 1/1/2022 displayed above have been adjusted to account for assumed interest.

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2022	90,170	3,483,940	3,574,110
2023	210,645	3,374,484	3,585,129
2024	325,569	3,440,788	3,766,357
2025	427,714	3,497,278	3,924,992
2026	517,405	3,550,397	4,067,802
2027	611,372	3,618,832	4,230,204
2028	693,998	3,664,006	4,358,004
2029	769,022	3,704,150	4,473,172
2030	862,029	3,738,700	4,600,729
2031	942,352	3,767,143	4,709,495
2032	1,023,502	3,788,985	4,812,487
2033	1,104,528	3,803,784	4,908,312
2034	1,203,120	3,811,115	5,014,235
2035	1,353,205	3,810,581	5,163,786
2036	1,490,044	3,801,741	5,291,785
2037	1,663,158	3,784,179	5,447,337
2038	1,834,439	3,757,500	5,591,939
2039	2,000,576	3,771,435	5,772,011
2040	2,168,035	3,727,214	5,895,249
2041	2,310,589	3,672,246	5,982,835
2042	2,475,658	3,605,833	6,081,491
2043	2,619,208	3,575,249	6,194,457
2044	2,777,854	3,485,116	6,262,970
2045	2,972,716	3,381,721	6,354,437
2046	3,205,112	3,264,765	6,469,877
2047	3,407,493	3,134,279	6,541,772
2048	3,552,339	2,990,673	6,543,012
2049	3,711,905	2,834,841	6,546,746
2050	3,912,233	2,668,273	6,580,506
2051	4,047,809	2,493,012	6,540,821
2052	4,140,955	2,311,509	6,452,464
2053	4,211,705	2,126,504	6,338,209
2054	4,262,469	1,940,819	6,203,288
2055	4,298,290	1,757,142	6,055,432
2056	4,321,749	1,578,091	5,899,840
2057	4,332,083	1,406,118	5,738,201
2058	4,328,252	1,243,402	5,571,654
2059	4,312,818	1,091,757	5,404,575
2060	4,287,009	952,581	5,239,590
2061	4,250,356	826,782	5,077,138

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	6.50% per year compounded annually, net of investment related expenses. We will continue to monitor this assumption in light of the investment allocation and projected returns for each class.
Mortality Rate	***Active Lives:*** PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2021. 10% of active deaths are assumed to be in the line of duty. ***Inactive Lives:*** PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2021. ***Beneficiaries:*** PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2021. ***Disabled Lives:*** PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2021. The mortality assumptions sufficiently accommodate anticipated future mortality improvements.
Retirement Age	See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.
Disability Rate	See table later in this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.
Termination Rate	See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.
Inflation	2.50%.
Cost-of-Living Adjustment	Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55. Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.

Salary Increases	See table below. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.

Salary Scale	
Service	Rate
0	11.00%
1	10.75%
2	8.75%
3	8.50%
4	7.00%
5	6.25%
6	5.25%
7	4.25%
8 - 16	4.00%
17 - 32	3.75%
32+	3.50%

Marital Status	80% of Members are assumed to be married.
Spouse's Age	Males are assumed to be three years older than females.
Funding Method	Entry Age Normal Cost Method.
Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method. Ultimately, the amortization period will be a 15-year rolling methodology, with a phase in to 15 years as follows:

2022	19 Year Amortization
2023	18 Year Amortization
2024	17 Year Amortization
2025	16 Year Amortization
2026 and Later	15 Year Amortization

The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

Payroll Growth	3.25% per year.
Administrative Expenses	Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.

Decrement Tables

% Terminating During the Year		% Becoming Disabled During the Year		% Retiring During the Year (Tier 1)		% Retiring During the Year (Tier 2)	
Age	Rate	Age	Rate	Age	Rate	Age	Rate
20	14.00%	20	0.000%	50 - 51	15%	50 - 54	5%
25	10.40%	25	0.030%	52 - 54	20%	55	40%
30	5.60%	30	0.140%	55 - 64	25%	56 - 64	25%
35	3.10%	35	0.260%	65 - 69	40%	65 - 69	40%
40	1.90%	40	0.420%	70+	100%	70+	100%
45	1.50%	45	0.590%				
50	1.50%	50	0.710%				
56+	0.00%	55	0.900%				
		60	1.150%				

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Recommended Contribution is the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period of 19 years in the 2022 valuation. This amortization period will ultimately grade down to 15 years in the 2026 valuation, at which point the methodology will maintain a 15-year rolling amortization each year. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals:

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- <u>Investment Return</u>: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.

- <u>Salary Increases</u>: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.

- <u>Payroll Growth</u>: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.

- <u>Demographic Assumptions:</u> Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

- <u>Contribution Risk</u>: This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the

Board’s funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 89.7% on March 1, 2019 to 63.8% on January 1, 2022, indicating that the plan has been rapidly maturing.

- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 75.0%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.

- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 59.9% on March 1, 2019 to 62.6% on January 1, 2022, due mainly to consistent funding of recommended contributions and favorable plan experience.

- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, stayed approximately the same from March 1, 2019 to January 1, 2022. The current Net Cash Flow Ratio of -1.9% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	1/1/2022	1/1/2021	3/1/2020	3/1/2019
Support Ratio				
Total Actives	30	35	36	35
Total Inactives	47	42	42	39
Actives / Inactives	63.8%	83.3%	85.7%	89.7%
Asset Volatility Ratio				
Market Value of Assets (MVA)	43,429,713	41,132,344	36,514,860	35,601,607
Total Annual Payroll	3,471,493	3,975,408	3,904,683	3,728,360
MVA / Total Annual Payroll	1,251.0%	1,034.7%	935.2%	954.9%
Accrued Liability (AL) Ratio				
Inactive Accrued Liability	50,412,124	47,622,862	48,191,728	43,538,172
Total Accrued Liability	67,219,417	65,720,810	64,452,082	60,959,818
Inactive AL / Total AL	75.0%	72.5%	74.8%	71.4%
Funded Ratio				
Actuarial Value of Assets (AVA)	42,065,510	39,842,412	37,325,699	36,491,419
Total Accrued Liability	67,219,417	65,720,810	64,452,082	60,959,818
AVA / Total Accrued Liability	62.6%	60.6%	57.9%	59.9%
Net Cash Flow Ratio				
Net Cash Flow [1]	(839,714)	(107,483)	(789,187)	(605,103)
Market Value of Assets (MVA)	43,429,713	41,132,344	36,514,860	35,601,607
Ratio	-1.9%	-0.3%	-2.2%	-1.7%

[1] Determined as total contributions minus benefit payments and administrative expenses.

STATEMENT OF FIDUCIARY NET POSITION
December 31, 2021

ASSETS	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	781,912
Money Market	2,860,903
Total Cash and Equivalents	3,642,815
Receivables:	
Miscellaneous Receivables	2,552
Accrued Past Due Interest	89,297
Total Receivable	91,849
Investments:	
Corporate Bonds	6,268,511
U.S. Gov't and Agency Obligations	6,440,091
Stocks	9,388,695
Mutual Funds	17,620,755
Total Investments	39,718,052
Total Assets	43,452,716
LIABILITIES	
Liabilities:	
Payable:	
Accounts Payable	23,003
Total Liabilities	23,003
Net Assets:	
Active and Retired Members' Equity	43,429,713
NET POSITION RESTRICTED FOR PENSIONS	43,429,713
TOTAL LIABILITIES AND NET ASSETS	43,452,716

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED December 31, 2021
Market Value Basis

<u>ADDITIONS</u>		
Contributions:		
Member	365,585	
Miscellaneous Member Revenue	51,516	
Village	2,531,908	
Total Contributions		2,949,009
Investment Income:		
Net Realized Gain (Loss)	1,990,948	
Unrealized Gain (Loss)	257,839	
Net Increase in Fair Value of Investments		2,248,787
Interest & Dividends		1,009,540
Less Investment Expense [1]		(121,244)
Net Investment Income		3,137,083
Total Additions		6,086,092
<u>DEDUCTIONS</u>		
Distributions to Members:		
Benefit Payments	3,287,497	
Refund of Contributions/Transfers	279,692	
Total Distributions		3,567,189
Administrative Expenses		221,534
Total Deductions		3,788,723
Net Increase in Net Position		2,297,369
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		41,132,344
End of the Year		43,429,713

[1] Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
December 31, 2021

Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2021	43,429,713
(Gains)/Losses Not Yet Recognized	(1,364,203)
Actuarial Value of Assets, 12/31/2021	42,065,510
12/31/2021 Limited Actuarial Assets:	42,065,510

Development of Investment Gain/Loss

Market Value of Assets, 12/31/2020	41,132,344
Contributions Less Benefit Payments & Administrative Expenses	(839,714)
Expected Investment Earnings[1]	2,646,312
Actual Net Investment Earnings	3,137,083
2021 Actuarial Investment Gain/(Loss)	490,771

[1] Expected Investment Earnings = 6.50% x (41,132,344 + 0.5 x -839,714)

Gains/(Losses) Not Yet Recognized

Plan Year		Amounts Not Yet Recognized by Valuation Year				
Ending	Gain/(Loss)	2021	2022	2023	2024	2025
2/28/2018	1,045,542	34,851	0	0	0	0
2/28/2019	(1,968,510)	(459,319)	(65,617)	0	0	0
2/29/2020	(586,016)	(253,940)	(136,737)	(19,534)	0	0
12/31/2020	2,749,990	1,649,994	1,099,996	549,998	0	0
12/31/2021	490,771	392,617	294,463	196,308	98,154	0
Total		1,364,203	1,192,105	726,772	98,154	0

Development of Asset Returns

(A) 12/31/2020 Actuarial Assets:	39,842,412
(I) Net Investment Income:	
1. Interest and Dividends	1,009,540
2. Realized Gains (Losses)	1,990,948
3. Change in Actuarial Value	183,568
4. Investment Expenses	(121,244)
Total	3,062,812
(B) 12/31/2021 Actuarial Assets:	42,065,510
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	7.77%
Market Value of Assets Rate of Return:	7.71%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	500,346

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
December 31, 2021
Actuarial Asset Basis

INCOME		
Contributions:		
Member	365,585	
Miscellaneous Member Revenue	51,516	
Village	2,531,908	
Total Contributions		2,949,009
Earnings from Investments		
Interest & Dividends	1,009,540	
Net Realized Gain (Loss)	1,990,948	
Change in Actuarial Value	183,568	
Total Earnings and Investment Gains		3,184,056
EXPENSES		
Administrative Expenses:		
Investment Related[1]	121,244	
Other	221,534	
Total Administrative Expenses		342,778
Distributions to Members:		
Benefit Payments	3,287,497	
Refund of Contributions/Transfers	279,692	
Total Distributions		3,567,189
Change in Net Assets for the Year		2,223,098
Net Assets Beginning of the Year		39,842,412
Net Assets End of the Year[2]		42,065,510

[1] Investment Related expenses include investment advisory, custodial and performance monitoring fees.
[2] Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	1/1/2022	1/1/2021	3/1/2020	3/1/2019
Actives - Tier 1				
Number	15	17	18	20
Average Current Age	46.7	46.2	45.1	45.2
Average Age at Employment	27.8	27.5	27.9	28.2
Average Past Service	18.9	18.7	17.2	17.0
Average Annual Salary	$138,107	$134,521	$128,899	$124,360
Actives - Tier 2				
Number	15	18	18	15
Average Current Age	31.5	30.6	29.7	28.4
Average Age at Employment	27.1	26.0	26.1	25.8
Average Past Service	4.4	4.6	3.6	2.6
Average Annual Salary	$93,325	$93,809	$88,028	$82,744
Service Retirees				
Number	28	27	27	25
Average Current Age	65.9	65.0	64.2	63.9
Average Annual Benefit	$94,321	$90,509	$90,234	$85,969
Beneficiaries				
Number	8	8	8	7
Average Current Age	73.9	72.9	72.1	76.7
Average Annual Benefit	$46,073	$46,073	$46,073	$52,756
Disability Retirees				
Number	5	5	5	5
Average Current Age	64.0	63.0	62.1	61.1
Average Annual Benefit	$65,780	$64,697	$64,697	$63,613
Terminated Vested				
Number	6	2	2	2
Average Current Age	38.7	48.4	40.2	39.2
Average Annual Benefit [1]	$32,842	$24,206	$19,640	$19,640

[1] Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	1	0	0	1	1	2	0	0	0	0	0	5
30 - 34	2	0	1	0	0	4	0	0	0	0	0	7
35 - 39	0	0	1	0	0	1	4	1	0	0	0	7
40 - 44	0	0	0	0	0	1	0	2	0	0	0	3
45 - 49	0	0	0	0	0	0	0	0	0	0	0	0
50 - 54	0	0	0	0	0	0	0	1	4	0	0	5
55 - 59	0	0	0	0	0	1	0	0	0	1	1	3
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	2	1	1	9	4	4	4	1	1	30

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2021	35
b. Terminations	
i. Vested (partial or full) with deferred benefits	(4)
ii. Non-vested or full lump sum distribution received	0
iii. Transferred service to other fund	(3)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. Continuing participants	27
g. New entrants	3
h. Total active life participants in valuation	30

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving Benefits	Receiving Death Benefits	Receiving Disability Benefits	Vested Deferred	Total
a. Number prior valuation	27	8	5	2	42
Retired	1	0	0	0	1
Vested Deferred	0	0	0	4	4
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	0	0	0	0
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	28	8	5	6	47

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund	The Plan is established and administered as prescribed by "Article 3. Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.
Plan Administration	The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of: a.) Two members appointed by the Municipality, b.) Two active Members of the Police Department elected by the Membership, and c.) One retired Member of the Police Department elected by the Membership.
Credited Service	Complete years of service as a sworn police officer employed by the Municipality.
Normal Retirement	
Date	**Tier 1**: Age 50 and 20 years of Credited Service. **Tier 2:** Age 55 with 10 years of Credited Service.
Benefit	**Tier 1:** 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is $1,000 per month. **Tier 2**: 2.50% per year of service times the average salary for the 48 consecutive months of service within the last 60 months of service in which the total salary was the highest prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is $1,000 per month. For Tier 2 participants, the salary is capped at a rate of $106,800 as of 2011, indexed annually at a rate of CPI-U, but not to exceed 3.00%.
Form of Benefit	**Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity. **Tier 2**: Same as above, but with 66 2/3% of benefit continued to spouse.

Early Retirement

Date	**Tier 1**: Age 60 and 8 years of Credited Service. **Tier 2:** Age 50 with 10 years of Credited Service.
Benefit	**Tier 1:** Normal Retirement benefit with no minimum. **Tier 2**: Normal Retirement benefit, reduced 6.00% each year before age 55, with no minimum benefit.
Form of Benefit	Same as Normal Retirement

Disability Benefit

Eligibility	Total and permanent as determined by the Board of Trustees.
Benefit Amount	A maximum of: a.) 65% of salary attached to the rank held by Member on last day of service, and; b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately. For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustment

Tier 1:

Retirees: An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Disabled Retirees: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

Service Incurred	100% of salary attached to rank held by Member on last day of service.
Non-Service Incurred	A maximum of: a.) 54% of salary attached to the rank held by Member on last day of service, and; b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50. For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination)

Vesting Service Requirement	**Tier 1:** 8 years. **Tier 2**: 10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

Contributions

Employee	9.91% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

SUMMARY

	2022		2021	
Valuation Date		1/1/2022		1/1/2021
Measurement Date		12/31/2021		12/31/2020
Plan Membership:				
Inactives Currently Receiving Benefits		41		40
Inactives Not Yet Receiving Benefits		6		2
Active Plan Members		30		35
Total		77		77
Covered Payroll	$	3,471,493	$	3,975,408
Net Pension Liability				
Total Pension Liability	$	66,737,122	$	65,232,192
Plan Fiduciary Net Position		43,429,713		41,132,343
Net Pension Liability	$	23,307,409	$	24,099,849
Plan Fiduciary Net Position As a Percentage of Total Pension Liability		65.08%		63.06%
Net Pension Liability As a Percentage of Covered Payroll		671.39%		606.22%
Total Pension Expense	$	2,169,483	$	1,578,982
Development of Single Discount Rate				
Single Discount Rate		6.50%		6.50%
Long-Term Expected Rate of Return		6.50%		6.50%
High-quality Municipal Bond Rate		2.25%		1.93%
Number of Years Future Benefit Payments Are Expected to be Paid		99		99

SCHEDULE OF CHANGES IN NET PENSION LIABILITY
PLAN AND VILLAGE REPORTING

GASB 68 Reporting Period Ending	12/31/2021	12/31/2020
Measurement Date	12/31/2021	12/31/2020
Total Pension Liability		
Service Cost	967,542	836,351
Interest	4,187,049	3,441,689
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	(133,988)	(444,035)
Changes of Assumptions	-	-
Contributions - Buy Back	51,516	-
Benefit Payments, Including Refunds of Employee Contributions	(3,567,189)	(2,608,689)
Net Change in Total Pension Liability	1,504,930	1,225,316
Total Pension Liability - Beginning	65,232,192	64,006,876
Total Pension Liability - Ending (a)	$ 66,737,122	$ 65,232,192
Plan Fiduciary Net Position		
Contributions - Employer	2,531,908	2,209,846
Contributions - Employee	365,585	335,349
Contributions - Buy Back	51,516	-
Net Investment Income	3,137,084	4,733,870
Benefit Payments, Including Refunds of Employee Contributions	(3,567,189)	(2,608,689)
Administrative Expense	(221,534)	(52,893)
Net Change in Plan Fiduciary Net Position	2,297,370	4,617,483
Plan Fiduciary Net Position - Beginning	41,132,344	36,514,860
Adjustment to beginning of year	(1)	-
Plan Fiduciary Net Position - Ending (b)	$ 43,429,713	$ 41,132,343
Net Pension Liability - Ending (a) - (b)	$ 23,307,409	$ 24,099,849
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	65.08%	63.06%
Covered Payroll	$ 3,471,493	$ 3,975,408
Net Pension Liability as a Percentage of Covered Payroll	671.39%	606.22%

STATEMENT OF CHANGES IN NET PENSION LIABILITY
VILLAGE REPORTING

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a)-(b)
Balances at December 31, 2020	$ 65,232,192	$ 41,132,344	$ 24,099,848
Adjustment to beginning of year	-	(1)	1
Changes for a Year:			
Service Cost	967,542	-	967,542
Interest	4,187,049	-	4,187,049
Differences Between Expected and Actual Experience	(133,988)	-	(133,988)
Changes of Assumptions	-	-	-
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	2,531,908	(2,531,908)
Contributions - Employee	-	365,585	(365,585)
Contributions - Buy Back	51,516	51,516	-
Net Investment Income	-	3,137,084	(3,137,084)
Benefit Payments, Including Refunds of Employee Contributions	(3,567,189)	(3,567,189)	-
Administrative Expense	-	(221,534)	221,534
Net Changes	1,504,930	2,297,370	(792,440)
Balances at December 31, 2021	$ 66,737,122	$ 43,429,713	$ 23,307,409

Sensitivity of Net Pension Liability to changes in the Discount Rate:

	1% Decrease 5.50%	Current Discount Rate 6.50%	1% Increase 7.50%
Sponsor's Net Pension Liability	$ 32,524,440	$ 23,307,409	$ 15,770,979

Pension Plan Fiduciary Net Position

Detailed information about the Pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
YEAR-END DECEMBER 31, 2021

For the year ended December 31, 2021, the Sponsor will recognize a pension expense of $2,169,483.
On December 31, 2021, the Sponsor reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between actual and expected experience	765,690	1,208,734
Changes of assumptions	905,900	0
Net difference between projected and actual earnings on pension plan investments	0	1,455,867
Total	$1,671,590	$2,664,601

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

Year-ended December 31:	
2022	$52,763
2023	($295,124)
2024	($487,119)
2025	($251,197)
2026	($12,334)
Thereafter	$0

COMPONENTS OF PENSION EXPENSE
YEAR-END DECEMBER 31, 2021

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	$ 24,099,848	$ 4,193,224	$ 3,630,228	
Total Pension Liability Factors:				
Service Cost	967,542	-	-	967,542
Interest	4,187,049	-	-	4,187,049
Changes in Benefit Terms	-	-	-	-
Contributions - Buy Back	51,516			51,516
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	(133,988)	133,988	-	-
Current Year Amortization	-	(466,887)	(284,266)	(182,621)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	-	-	-	-
Current Year Amortization	-	(45,831)	(450,208)	404,377
Benefit Payments, Including Refunds of Employee Contributions	(3,567,189)	-	-	-
Net Change	1,504,930	(378,730)	(734,474)	5,427,863
Plan Fiduciary Net Position:				
Contributions - Employer	2,531,908	-	-	-
Contributions - Employee	365,585	-	-	(365,585)
Contributions - Buy Back	51,516			(51,516)
Projected Net Investment Income	2,646,312	-	-	(2,646,312)
Difference Between Projected and Actual Earnings on Pension Plan Investments	490,772	490,772	-	-
Current Year Amortization	-	(927,406)	(510,905)	(416,501)
Benefit Payments, Including Refunds of Employee Contributions	(3,567,189)	-	-	-
Administrative Expenses	(221,534)	-	-	221,534
Net Change	2,297,370	(436,634)	(510,905)	(3,258,380)
Adjustment to beginning of year	(1)	-	-	-
Ending Balance	$ 23,307,409	$ 3,377,860	$ 2,384,849	$ 2,169,483

AMORTIZATION SCHEDULE – EXPERIENCE

Year Base Established	Differences Between Expected and Actual Experience	Recognition Period (Years)	2021	2022	2023	2024	2025	Thereafter
			Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience					
2021	$ (133,988)	5	$ (26,796)	$ (26,798)	$ (26,798)	$ (26,798)	$ (26,798)	$ -
CY2020	$ (444,035)	6	$ (74,006)	$ (74,006)	$ (74,006)	$ (74,006)	$ (74,006)	$ (12,334)
FY2020	$ 1,419,368	6	$ 236,561	$ 236,561	$ 236,561	$ 236,561	$ 39,427	$ -
2019	$ (2,196,512)	6	$ (366,085)	$ (366,085)	$ (366,085)	$ (61,014)	$ -	$ -
2018	$ 121,102	5.6	$ 21,625	$ 16,580	$ -	$ -	$ -	$ -
2017	$ 1,050,686	4.7	$ 26,080	$ -	$ -	$ -	$ -	$ -
Net Increase (Decrease) in Pension Expense			(182,621)	(213,748)	(230,328)	74,743	(61,377)	(12,334)

AMORTIZATION SCHEDULE – CHANGES OF ASSUMPTIONS

Year Base Established	Effects of Changes in Assumptions	Recognition Period (Years)	2021	2022	2023	2024	2025	Thereafter
			Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions					
2019	$ 2,403,214	6	$ 400,536	$ 400,536	$ 400,536	$ 66,756	$ -	$ -
2018	$ 278,147	5.6	$ 49,672	$ 38,072	$ -	$ -	$ -	$ -
2017	$ (1,846,358)	4.7	$ (45,831)	$ -	$ -	$ -	$ -	$ -
Net Increase (Decrease) in Pension Expense			$ 404,377	$ 438,608	$ 400,536	$ 66,756	$ -	$ -

AMORTIZATION SCHEDULE – INVESTMENTS

Year Base Established	Differences Between Projected and Actual Earnings	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Differences Between Projected and Actual Earnings on Pension Plan Investments 2021	2022	2023	2024	2025	Thereafter
2021	$ (490,772)	5	$ (98,156)	$ (98,154)	$ (98,154)	$ (98,154)	$ (98,154)	$ -
CY2020	$ (2,749,990)	5	$ (549,998)	$ (549,998)	$ (549,998)	$ (549,998)	$ (91,666)	$ -
FY2020	$ 586,016	5	$ 117,203	$ 117,203	$ 117,203	$ 19,534	$ -	$ -
2019	$ 1,968,510	5	$ 393,702	$ 393,702	$ 65,617	$ -	$ -	$ -
2018	$ (1,045,539)	5	$ (209,108)	$ (34,850)	$ -	$ -	$ -	$ -
2017	$ (2,104,317)	5	$ (70,144)	$ -	$ -	$ -	$ -	$ -
Net Increase (Decrease) in Pension Expense			$ (416,501)	$ (172,097)	$ (465,332)	$ (628,618)	$ (189,820)	$ -

SCHEDULE OF CONTRIBUTIONS

Plan Year-End	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
12/31/2021	2,524,910	2,531,908	(6,998)	3,471,493	72.93%
12/31/2020	2,199,634	2,209,846	(10,212)	3,975,408	55.59%

The following assumptions were used to determine the Actuarially Determined Contribution for the plan year ending December 31, 2021:

Calculation Timing	The Actuarially Determined Contribution is calculated using a March 1, 2020 valuation date.
Interest Rate	6.50%
Mortality Rate	***Active Lives:*** PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2019. 10% of active deaths are assumed to be in the line of duty. ***Inactive Lives:*** PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2019. ***Beneficiaries:*** PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2019. ***Disabled Lives:*** PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2019.
Assumptions	All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the March 1, 2020 Actuarial Valuation Report for the Village of Glencoe Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS

For the year ended December 31, 2021, the annual money-weighted return on Pension Plan investments, net of pension plan investment expense, was 7.91 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Plan Year-End	Annual Money-Weighted Rate of Return Net of Investment Expense
12/31/2021	7.91%
12/31/2020	13.42%

ASSUMPTIONS – GASB PENSION LIABILITY AND PENSION EXPENSE

The GASB 67/GASB 68 Pension Liability as of December 31, 2021 and GASB 68 Pension Expense were determined as follows:

Valuation Date	January 1, 2022
Measurement Date	December 31, 2021
GASB 68 Expense Measurement Period	January 1, 2021 - December 31, 2021
Reporting Period	January 1, 2021 - December 31, 2021
Discount Rate	6.50%
Inflation	2.50%
Salary Increases	Service-based rates
Other Assumptions	A summary of complete assumptions can be found in the accompanying Actuarial Valuation as of January 1, 2022 for the Village of Glencoe Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

NOTES TO THE FINANCIAL STATEMENTS

Support for Long-Term Expected Rate of Return

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation adopted as of December 31, 2021, are unknown.

Concentrations

It is unknown if the Plan held investments in any one organization that represent 5 percent or more of the Pension Plan's fiduciary net position.

Discount Rate

The Discount Rate used to measure the Total Pension Liability was 6.50 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments (6.50 percent) was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.50 percent. The municipal bond rate is 2.25 percent (based on the daily rate closest to, but not later than the measurement date of the S&P Municipal Bond 20 Year High Grade Rate Index). The resulting single discount rate is 6.50 percent.

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund	The Plan is established and administered as prescribed by "Article 3. Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.
Plan Administration	The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of: a.) Two members appointed by the Municipality, b.) Two active members of the Police Department elected by the Membership. c.) One retired member of the Police Department elected by the Membership.
Benefits Provided	The Plan provides retirement, termination, disability and death benefits. A summary of the benefit provisions can be found in the accompanying Actuarial Valuation as of January 1, 2022 for the Village of Glencoe Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.