



Agenda
Village of Glen Ellyn
Police Pension Board
Special Meeting
Monday, August 6, 2018
7:30 PM
Police Department Community Room
65 S Park Blvd Glen Ellyn

Individuals with disabilities who plan to attend the hearing and who require certain accommodations in order to allow them to observe and participate, or who have questions regarding the accessibility of the meeting or facilities, are requested to contact the Police Department at least 24 hours before the meeting.

A. Call to Order

B. Public Comment (Non Agenda Items)

C. Approval of Minutes

1. Police Pension Board - Regular Meeting - Apr 18, 2018 7:30 PM

D. Investment Consultant Report & Recommendations

1. Mr. Caparelli from Marquette Associates will present the Second Quarter 2018 report and recommendations to the Board.

E. Approval of Expenses

1. Approve the Expense Vouchers in the amount of \$31,076.90 and Pension Expenses in the amount of \$527,244.39 for a total of \$558,321.29

F. Approval of Membership Changes / Contribution Refunds / Transfers

1. Motion to accept the retirement of Deputy Chief Robert Action, effective June 30, 2018 and approve a monthly pension benefit of \$7,978.58, beginning July 2018.
2. Motion to approve a contribution refund to Dustin Green, payable to Vanguard Fiduciary Trust Company, Custodian of Dustin Green, in the amount of \$20,611.20.
3. Motion to approve a contribution refund to Zachary Bava, payable to Charles Schwab & Co, Inc, fbo Zachary Bava, in the amount of \$5,300.33.
4. Motion to approve a contribution refund to Mallory Bryant in the amount of \$100.13.

G. Election of Officers

H. Actuary Report

1. Motion to accept the 2017 actuary report for the Police Pension Fund

I. Department of Insurance Report

1. Motion to accept the Department of Insurance Report for 2017

J. Other Business

1. Department of Insurance Changes
2. Next Meeting: Wednesday, October 17, 7:30PM, Police Community Room

K. Adjournment

1. Motion to Adjourn



Minutes
Village of Glen Ellyn
Police Pension Board
Regular Meeting
Wednesday, April 18, 2018
7:30 PM
Police Department Community Room
65 S Park Blvd Glen Ellyn

A. Call to Order

Attendee Name	Title	Status
Bill Housey	Trustee	Present
John Adduci	President	Absent
Jim Monson	Trustee	Present
Anthony Terranova	Trustee	Present
James King	Trustee	Present

Also Present: Finance Director Coyle, Investment Consultant Chris Caparelli (Marquette Associate), Recording Secretary Elisa Pollina.

The meeting was called to order by Trustee Housey at 7:30pm.

B. Public Comment (Non Agenda Items)

None.

C. Approval of Minutes

- Police Pension Board - Regular Meeting - Jan 17, 2018 7:30 PM

RESULT:	ACCEPTED [UNANIMOUS]
MOVER:	James King, Trustee
SECONDER:	Jim Monson, Trustee
AYES:	Housey, Monson, Terranova, King
ABSENT:	Adduci

D. Investment Report and Recommendations

- Christopher Caparelli from Marquette Associates will present the First Quarter 2018 Report as well as recommendations for the investment portfolio

Mr. Caparelli reports that the first quarter has seen a record streak end. The S&P finished the quarter -0.8%. Unemployment remains at 4.1%. Inflation has ticked up a bit. CPI rose 2.2% over the trailing 12 months with the core CPI up 1.8%. The Fed's plan of raising interest rates 3 times in 2018 is still on track with the first rate hike occurring in March. We expect to see more quarters like the first with flat to negative gains. The Global economy continues momentum. March PMI readings fell but they remain above expansion territory. Real Estate returns are moving at a

Minutes Acceptance: Minutes of Apr 18, 2018 7:30 PM (Approval of Minutes)

steady pace at a 4-6% range. Overall the fundamentals of the economy are still strong. We expect the economy to be favorable over the next 2 years.

With respect to fund manager status, Mr. Caparelli reports that they were currently putting Great Lakes advisors on alert and will be monitoring them a little closer due to changes. Trustee Housey asks Mr. Caparelli to come to the July meeting with some manager recommendations should a change need to be made away from Great Lakes. Mr. Caparelli agrees and will prepare recommendations for the next meeting.

Trustee King made a motion to accept the Quarterly Investment Report and Trustee Terranova seconded the motion.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	James King, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Monson, Terranova, King
ABSENT:	Adduci

E. Approval of Expenses

1. Approve the Expense Vouchers in the amount of \$10,277.72 and Pension Expenses in the amount of \$527,244.39 for a total of \$537,522.11

Trustee Housey asked if there were any questions on the vouchers. Seeing none, Trustee Monson moved and Trustee Terranova seconded the approval of the Expense Vouchers in the amount of \$10,277.72, and pension expenditures in the amount of \$527,244.39 for a total of \$537,522.11.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Jim Monson, Trustee
SECONDER:	Anthony Terranova, Trustee
AYES:	Housey, Monson, Terranova, King
ABSENT:	Adduci

F. Approval of Membership Changes / Contribution Refunds / Transfers

1. Motion to approve entry into the Police Pension Fund for Kyle Yaegar, effective January 17, 2018.

Trustee Monson motions to approve the entry into the Police Pension fund and Trustee King seconded the approval.

Minutes Acceptance: Minutes of Apr 18, 2018 7:30 PM (Approval of Minutes)

RESULT: **APPROVED [UNANIMOUS]**
MOVER: Jim Monson, Trustee
SECONDER: James King, Trustee
AYES: Housey, Monson, Terranova, King
ABSENT: Adduci

2. Motion to approve Bill Holmer as a new beneficiary of the pension fund, effective January 11, 2018.

Trustee Monson motions to approve Bill Holmer as a new beneficiary of the pension fund and Trustee King seconded the approval.

RESULT: **APPROVED [UNANIMOUS]**
MOVER: Jim Monson, Trustee
SECONDER: James King, Trustee
AYES: Housey, Monson, Terranova, King
ABSENT: Adduci

G. Approval of Fiduciary Liability Insurance Bond

1. Motion to approve renewal of Fiduciary Insurance Policy with Rockwood Company/Travelers Insurance in the amount of \$4,637.00.

Trustee Terranova motions to renew Fiduciary Insurance Policy with Rockwood in the amount of \$4,637.00, Trustee King seconds the motion.

RESULT: **APPROVED [UNANIMOUS]**
MOVER: Anthony Terranova, Trustee
SECONDER: James King, Trustee
AYES: Housey, Monson, Terranova, King
ABSENT: Adduci

H. Other Business

1. Next Meeting: Wednesday, July 18, 7:30 PM, Police Station Community Room

The date and time for the next meeting was discussed. Trustees had a conflict with the 18th of July. Trustees settled on Monday, July 30 at 7:30 pm.

I. Adjournment

1. Motion to Adjourn

Trustee Terranova moved and Trustee King seconded to adjourn the meeting. The meeting was adjourned at 8:06 pm

Minutes Acceptance: Minutes of Apr 18, 2018 7:30 PM (Approval of Minutes)

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Anthony Terranova, Trustee
SECONDER:	James King, Trustee
AYES:	Housey, Monson, Terranova, King
ABSENT:	Adduci



Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 08/06/18 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Vouchers
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 3482)

DOC ID: 3482

**Approve the Expense Vouchers in the amount of \$31,076.90 and
Pension Expenses in the amount of \$527,244.39 for a total of
\$558,321.29**

Please see the information attached.

ATTACHMENTS:

- 2018, July 30 Vouchers (PDF)

**POLICE PENSION FUND
APPROVAL OF VOUCHERS
For the meeting in July 2018**

Expenses	Check Date:	Paid amount	
IPPFA (conference Monson and Terranova)	6/29/2018	\$ 750.00	
Illinois State Treasurer (DOI fee)	5/25/2018	\$ 5,481.95	
Marquette Associates (1Q fees)	4/27/2018	\$ 12,500.00	
Foster & Foster (additional actuarial information)	4/27/2018	\$ 375.00	
Foster & Foster (annual actuarial report)	6/29/2018	\$ 3,000.00	
US Bank (custodial fees - April 2018)	4/3/2018	\$ 625.00	
US Bank (custodial fees - June 2018)	6/28/2018	\$ 625.00	
Great Lakes Advisors, Inc. (Investment Counsel)	4/27/2018	\$ 7,719.95	
		<u><u>\$ 31,076.90</u></u>	<u><u>\$ 31,076.90</u></u>

Pension Expenses	April	May	June	
Service Pensions	\$ 153,722.21	\$ 153,722.21	\$ 153,722.21	
Duty Disability Pensions	\$ 11,333.33	\$ 11,333.33	\$ 11,333.33	
Non-Duty Disability Pensions	\$ -	\$ -	\$ -	
Surviving Spouse Pension	\$ 10,692.59	\$ 10,692.59	\$ 10,692.59	
Total Payroll:	<u><u>\$ 175,748.13</u></u>	<u><u>\$ 175,748.13</u></u>	<u><u>\$ 175,748.13</u></u>	<u><u>\$ 527,244.39</u></u>
Grand Total				<u><u>\$ 558,321.29</u></u>

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

Check Number: 00006940

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



Vendor Number	Check Date	Check Number
450	06/29/2018	00006940

\$750.00

Pay **Seven Hundred Fifty Dollars and 00 cents *******

To The
Order Of

IPPFA
2587 MILLENNIUM DR
UNIT C
ELGIN, IL 60124

**NON-NEGOTIABLE
FILE COPY**

2018 MidAmerican Pension Conference



This page displays your registration selections. Please click Finish to complete your registration. If a payment is required, enter the information below. Fields and options marked with an asterisk are required to complete your registration.
If paying by check, please mail your payment to the IPPFA office at: 2587 Millennium Dr., Unit C in Elgin, IL 60124.

Submit Payment

Please mail all check payments to the IPPFA office at 2587 Millennium Dr., Unit C in Elgin, IL 60124.

ORDERS

James Monson

Agenda Items		
Name	Price	Total
IPPFA Member View Sessions	\$375.00	\$375.00
Order Subtotal:		\$375.00

Anthony Terranova

Agenda Items		
Name	Price	Total
IPPFA Member View Sessions	\$375.00	\$375.00
Order Subtotal:		\$375.00
Total:		\$750.00

Discount Code

Discount Code:
Apply

450-2

Payment Method

If paying by check, please send your payment to the IPPFA at 2587 Millennium Dr., Unit C in Elgin, IL 60124.

☐ Credit Card - Enter your information in the section below.

☒ Check

6940

Enter Check number:

CODE	AMOUNT	APPROVAL	DATE
90000	520600	\$750.00 DF	6/27/18
			6-26-18

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

Welcome, Dale Fabianski. You are currently logged in as an administrator.

2018 MidAmerican Pension Conference

View Confirmation for: James Monson

General Options**Name:**

James Monson

Title:

Trustee

Address:

65 S Park Blvd

Glen Ellyn, Illinois 60137

USA

Number of People Registered:

1

Confirmation Number:**KTNH6R98G25** (needed to modify your registration)**Event Title:**

2018 MidAmerican Pension Conference

Location:

Grand Geneva Resort & Spa

7036 Grand Geneva Way

Lake Geneva, Wisconsin 53147

USA

Phone:

(800) 558-3417

Date:

10/02/2018

Time:

8:00 AM

Current Registration Details**James Monson****Agenda Items**

Registration Item	Cost
IPPFA Member	\$375.00

Order Summaries**Order**

Date	Type	Invoice #	Amt Ordered	Amt Paid	Amt Due
06/26/2018 11:54 AM CT	offline order	2018MA-201806-0846-0879	\$375.00	\$0.00	\$375.00
Total:			\$375.00	\$0.00	\$375.00

Payment Details

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

Welcome, Dale Fablanski. You are currently logged in as an administrator.

2018 MidAmerican Pension Conference

View Confirmation for: Anthony Terranova

General Options

Name:

Anthony Terranova

Title:

Trustee

Address:

65 S Park Blvd

Glen Ellyn, Illinois 60137

USA

Number of People Registered:

1

Confirmation Number:

VZNJBW63RLZ (needed to modify your registration)

Event Title:

2018 MidAmerican Pension Conference

Location:

Grand Geneva Resort & Spa

7036 Grand Geneva Way

Lake Geneva, Wisconsin 53147

USA

Phone:

(800) 558-3417

Date:

10/02/2018

Time:

8:00 AM

Current Registration Details

Anthony Terranova

Agenda Items

Registration Item	Cost
IPPFA Member	\$375.00

Order Summaries

Order

Date	Type	Invoice #	Amt Ordered	Amt Paid	Amt Due
06/26/2018 11:54 AM CT	offline order	2018MA-201806-0847-0878	\$375.00	\$0.00	\$375.00
Total:			\$375.00	\$0.00	\$375.00

Payment Details

2018 MidAmerican Pension Conference**Tuesday, October 02, 2018**

	Name	Company	Title	Confirmation Number
☐	Monson, James	Village of Glen Ellyn Police Pension	Trustee	KTNH6R98G25
☐	Terranova, Anthony	Village of Glen Ellyn Police Pension	Trustee	VZNJBW63RLZ

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

[illegible]

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



GLEN ELLYN
POLICE PENSION FUND
535 DUANE STREET
GLEN ELLYN, ILLINOIS 60137
(630) 469-5000 (630) 547-5353

Vendor Number	Check Date	Check Number
11130	05/25/2018	00006938

\$5,481.95

Pay Five Thousand Four Hundred Eighty One Dollars and 95 cents *****

To The
Order Of

ILLINOIS STATE TREASURER
DEPARTMENT OF INSURANCE
P.O. BOX 7087
SPRINGFIELD, IL 62791

**NON-NEGOTIABLE
FILE COPY**



Make Checks Payable to:
ILLINOIS STATE TREASURER
Send to:
DEPARTMENT OF INSURANCE
P.O. Box 7087
SPRINGFIELD, IL 62791

INVOICE BILLING NO: G31261

INVOICE DATE: 5/10/2018

E.1.a

427-

PAYMENT DUE: July 2, 2018

CASH PAYMENTS NOT ACCEPTED

INTEREST MAY BE ASSESSED AFTER 30 DAYS BY THE
PENSION UNIT



Inv# G31261 \$ 5,481.95
ILLINOIS STATE TREASURER
05/10/2018 # Pages 1 **FP1 DOC6S2379**

GLEN ELLYN POLICE PENSION FUND
Attn: President/Treasurer
535 Duane Street
Glen Ellyn, IL 60137

ITEMIZED BILLINGS:

CODE

Amount

75-(Ann Compl Fee) \$ 5,481.9

CODE	AMOUNT	APPROVAL	DATE	TOTAL: \$ 5,481.9
90000 -	\$5,481.95	@	5/18/18	
520610				

DETACH TOP PORTION AND RETURN WITH REMITTANCE.

GLEN ELLYN POLICE PENSION FUND
FY 2019 Compliance Fee Total Assets \$27,409,746.00

NOTICE
STATE PENSION FUNDS
COMPLIANCE FEE

900 11055

11130

40 ILCS 5/1A-112 provides that any pension fund that is required to file an annual statement is also required to pay an annual compliance fee OF 0.0002 of the total assets of the fund, not to exceed an amount of \$8,000. **The annual compliance fee is due June 30 of the current calendar year.**

The Department is requiring that the annual compliance fee be submitted and paid by check. In order for the Department to meet the State requirements associated with accepting checks, certain procedures must be followed. One such procedure is the issuance of an invoice to each and every pension fund. The invoice number should be referenced on your check upon payment. Detach the top portion of the invoice and return with payment. **Please note** that the invoice indicates "Payment Due Upon Receipt, Interest May Be Assessed After 30 Days" but such language does not affect the due date of June 30 as established in 40 ILCS 5/1A-112 and should be disregarded.

The check should be made payable to the **Illinois State Treasurer** and should be submitted on or before June 30 of the current calendar year. Additionally, the check must be sent to the attention of the Department of Insurance, P.O. Box 7087, Springfield, Illinois 62791 and not the Public Pension Division. Failure to submit the annual compliance fee payment on or before June 30 of the current calendar year or to make payment in the amount owed on the invoice is a violation of 40 ILCS 5/1A-112 and 50 Ill. Adm. Code 4415. If you have any questions regarding the invoice, This invoice serves as your notification pursuant to 50 Ill. Adm. Code 4415.50

INVOICE BILLING NO: G31261
INVOICE DATE: 5/10/2018
TOTAL: \$ 5,481.95

If you have questions regarding this invoice, please contact Tax and Audit at (217) 557-3379.

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

[illegible]

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



GLEN ELLYN
POLICE PENSION FUND
535 DUANE STREET
GLEN ELLYN, ILLINOIS 60137
(630) 469-5000 (630) 547-5353

Vendor Number	Check Date	Check Number
10574	04/27/2018	00006937

\$12,500.00

Pay Twelve Thousand Five Hundred Dollars and 00 cents *****

To The
Order Of

MARQUETTE ASSOCIATES, INC
180 N LASALLE ST
SUITE 3500
CHICAGO, IL 60601

**NON-NEGOTIABLE
FILE COPY**


Marquette Associates

180 N La Salle St, Suite 3500
Chicago, IL 60601

Invoice Date
4/1/18

Invoice #
1804054

10574

Account # 1295

Balance Due \$12,500.00

Glen Ellyn Police
535 Duane St.
Glen Ellyn, IL 60137

Amount paid: \$ _____

Check number: _____

☐ Please check box if address is incorrect or has changed, and indicate change(s) on reverse side.

PL

Glen Ellyn Police
535 Duane St.
Glen Ellyn, IL 60137

Have E-Mail? Please write it here:



MENT

Inv# 1804054 \$12500.00
MARQUETTE ASSOCIATES, INC
04/01/2018 # Pages 1 FP1 DOC6S627

Description	Amount																				
Investment consulting services for the period January 1, 2018 through March 31, 2018.	12,500.00																				
<table><tr><th>CODE</th><th>AMOUNT</th><th>APPROVAL</th><th>DATE</th></tr><tr><td>90000 - 520800</td><td>12,500</td><td>@</td><td>04/10/18</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>		CODE	AMOUNT	APPROVAL	DATE	90000 - 520800	12,500	@	04/10/18												
CODE	AMOUNT	APPROVAL	DATE																		
90000 - 520800	12,500	@	04/10/18																		
Terms: Due on receipt	900 110155																				

Wire Transfer Information:
Send ACH/EFT to: Marquette Associates, Inc.
Bank: The Private Bank
Routing Number: 071006486
Bank Account: 2436043
Please reference the Invoice #.

Billing Inquiries? Call 312.527.5500 X224

Marquette Associates, Inc Attn: Accts Rec, 180 N LaSalle, Ste 3500, Chicago, IL 60601
www.marquetteassociates.com

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

Check Number: 00006936

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



Vendor Number	Check Date	Check Number
10787	04/27/2018	00006936

\$375.00

Pay Three Hundred Seventy Five Dollars and 00 cents *****

To The
Order Of

FOSTER & FOSTER CONSULTING ACTUARIES, INC
ONE OAKBROOK TERRACE
SUITE 720
OAKBROOK TERRACE, IL 60181

**NON-NEGOTIABLE
FILE COPY**



FOSTER & FOSTER

ACTUARIES AND CONSULTANTS

Invoice

Date	Invoice #
1/12/2018	11632

Bill To

Village of Glen Ellyn
535 Duane St.
Glen Ellyn, IL 60137

Phone: (630) 620-0200

Fax: (239) 481-0634

Website: www.foster-foster.com

Village of Glen Ellyn
Police Pension Fund

10787

Description				Amount
Jason Franken				
10/10/2017: Prepare Actuarial Study. (2.50 hours)				
10/13/2017: Attendance at finance committee meeting. (1.00 hours)				
Total for Jason Franken: 3.50 Hours				1,050.00
CODE	AMOUNT	APPROVAL	DATE	
134100-521055	300.00	@	7/20/18 - FC meetg	
134100-521055	375.00		- Split actuarial study	
20000-520820	375.00		- "	



Inv# 11632-1 \$375.00
FOSTER & FOSTER CONSULTING ACTUARIES, INC
01/12/2018 # Pages 1 **FP1 DOC6S628**

Thank you for your business!

Please make all checks payable to:

Foster & Foster, Inc.

184 Shuman Blvd., Ste.305

Naperville, IL 60563

Balance Due \$1,050.00

Check Number: 00006939

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)





FOSTER & FOSTER

ACTUARIES AND CONSULTANTS

10787

Invoice

Date	Invoice #
6/20/2018	12668

Bill To

Village of Glen Ellyn
535 Duane St.
Glen Ellyn, IL 60137

Phone: (630) 620-0200

Fax: (239) 481-0634

Website: www.foster-foster.com

VILLAGE OF GLEN ELLYN POLICE PENSION FUND

Description	Amount																								
January 1, 2018 Police pension valuation, including GASB 67/68 disclosure information.	6,000.00																								
Half Police Pension / Half Village																									
<table><tr><th>CODE</th><th>AMOUNT</th><th>APPROVAL</th><th>DATE</th></tr><tr><td>90000 -</td><td>\$3,000.00</td><td>@</td><td>6/21/18</td></tr><tr><td>520820</td><td></td><td></td><td></td></tr><tr><td>134100 -</td><td>\$3,000.00</td><td></td><td></td></tr><tr><td>521055</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	CODE	AMOUNT	APPROVAL	DATE	90000 -	\$3,000.00	@	6/21/18	520820				134100 -	\$3,000.00			521055								
CODE	AMOUNT	APPROVAL	DATE																						
90000 -	\$3,000.00	@	6/21/18																						
520820																									
134100 -	\$3,000.00																								
521055																									

Thank you for your business!

Please make all checks payable to:

Foster & Foster, Inc.

184 Shuman Blvd., Ste.305

Naperville, IL 60563

Balance Due \$6,000.00

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)

00227401
18-01-B-62-124-01
0101 -11-03078-01

CLIENT INVESTMENT - CD



Page 3 of 13
Period from April 1, 2018 to April 30, 2018

MARKET AND COST RECONCILIATION

	04/30/2018 MARKET	04/30/2018 BOOK VALUE
Beginning Market And Cost	1,253,752.02	4,689.52
Investment Activity		
Interest		6.67
Change In Unrealized Gain/Loss	297.50	.00
Net Accrued Income (Current-Prior)	1,544.71	1,544.71
Total Investment Activity	1,848.88	1,551.38
Plan Expenses		
Trust Fees	27.28	27.28
Total Plan Expenses	27.28	27.28
Net Change In Market And Cost	1,876.16	1,578.66
Ending Market And Cost	1,255,628.18	6,268.18

00227401
18-01-B-62-124-01
0101 -19-03078-01



GLENVIEW POLICE PENSION FUND

Page 3 of 14
Period from April 1, 2018 to April 30, 2018

MARKET AND COST RECONCILIATION

	04/30/2018 MARKET	04/30/2018 BOOK VALUE
Beginning Market And Cost	16,779,860.37	14,673,008.29
Investment Activity		
Interest	586.44	586.44
Dividends	6,389.35	6,389.35
Realized Gain/Loss	.15	.15
Change In Unrealized Gain/Loss	53,945.10	.00
Net Accrued Income (Current-Prior)	- 143.85	- 143.85
Total Investment Activity	60,777.19	6,832.09
Plan Expenses		
Trust Fees	367.15	367.15
Total Plan Expenses	367.15	367.15
Other Activity		
Transfers Out	- 155,000.00	- 155,000.00
Total Other Activity	- 155,000.00	- 155,000.00
Net Change In Market And Cost	- 93,855.66	- 147,800.76
Ending Market And Cost	16,686,004.71	14,525,207.53

00227401
18--01-B-62-124-01
0101 -11-03078-01



GLEN ELLYN POLICE PEN - FIXED INCOME

Page 42 of 55
Period from April 1, 2018 to April 30, 2018

PLAN EXPENSES

DATE	DESCRIPTION	CASH
Administrative Expenses		
Professional Fees		
Professional Fees Paid		
04/27/2018	Paid To Great Lakes Advisors LLC Mgmt Fees For 1/1/18 To 3/31/18	- 7,719.95
Total Professional Fees Paid		- 7,719.95
Total Professional Fees		- 7,719.95
Total Administrative Expenses		- 7,719.95
Trust Fees		
Trust Fees		
04/03/2018	Credited Reversed For Period 02/01/2018 Thru 02/28/2018	230.57
Total Trust Fees		230.57
Total Trust Fees		230.57
Total Plan Expenses		- 7,489.38



GREAT LAKES ADVISORS

A WENTRUST WEALTH MANAGEMENT COMPANY

DUPLICATE INVOICE - DO NOT PAY

Ms. Christina Coyle
ccoyle@glenellyn.org

Date: April 16, 2018

Dear Ms. Christina Coyle:

We have computed our fee as Investment Advisor for billable assets under management of \$10,654,335 at March 31, 2018 for the period from January 1, 2018 to March 31, 2018, for the following account:

Account no:

Account name: GLEN ELLYN POLICE PENSION FUND

Management Fee Calculation Detail

	Breakpoints	Annual Rate	Account Assets	Period Fee
Total Portfolio:	\$0 to \$10,000,000	0.30%	\$10,000,000	\$7,397.26
	\$10,000,000 to \$50,000,000	0.20%	\$654,335	\$322.69
Total			\$10,654,335	\$7,719.95

This copy is for information only. Do not pay.

Payment is due within 30 days of invoice date.

Market value is calculated from Great Lakes Advisors' portfolio accounting system on a trade date basis. Total market value includes investment securities.

We very much appreciate your business and we look forward to a strong continuing relationship as your Investment Advisor. Our ADV Form Part 2A is always available upon request.

If you would like to receive invoices via e-mail please contact us at mbryla@greatlakesadvisors.com or (312) 553-3708.

Should you have any questions regarding this charge, please contact us at any time.

Sincerely,
Maggie Bryla



MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

Billing Period:	02/01/2018-02/28/2018
Invoice Number:	11079721
Account Number:	
Invoice Date:	06/28/2018
Direct Inquiries To:	ANTHONY LOSINIECKI
Phone:	414-765-6017

GLEN ELLYN POLICE PENSION FUND
ATTN: CHRISTINA COYLE
535 DUANE ST.
GLEN ELLYN, IL 60137

GLEN ELLYN POLICE PENSION FUND

The following is a statement of transactions pertaining to your account. For further information, please review the attached.

STATEMENT SUMMARY

Unpaid Balance from Prior Fee Statements	\$625.00
Payments through 04/03/2018	(\$625.00)
Current Invoice (for detail see attached)	\$625.00
Direct Charges	(\$625.00)
Balance Due	<u>\$0.00</u>

All invoices are due upon receipt.

Advice Only - Do Not Pay

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

Billing period: 02/01/2018 - 02/28/2018
Invoice Number: 11079721
Invoice Date: 06/28/2018
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

GLEN ELLYN POLICE PENSION FUND

Accounts Included 001050998900 001050998902 001050998904
In This Relationship:

CURRENT CHARGES SUMMARIZED FOR ENTIRE RELATIONSHIP				
Detail of Current Charges	Volume	Rate	Portion of Year	Total Fees
ADM001 ADMIN FEE - MV	28,925,554.85	0.0002	8.33%	\$482.09
ADM001 Minimum Adjustment				\$142.91
Subtotal Administrative Fees				\$625.00
TOTAL AMOUNT CHARGED TO ACCOUNT				\$625.00

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

Billing period: 02/01/2018 - 02/28/2018
Invoice Number: 11079721
Invoice Date: 06/28/2018
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

CURRENT CHARGES ALLOCATED

Allocated Activities			Allocation	
Account Number	Basis	Volume	Basis	Fees
ADM001 ADMIN FEE - MV				
001050998900	ADM001 ADMIN FEE - MV	16,992,237.94	58.744726%	\$283.20
001050998902	ADM001 ADMIN FEE - MV	10,671,048.85	36.89142319%	\$177.85
001050998904	ADM001 ADMIN FEE - MV	1,262,268.06	-4.36385081%	\$21.04
		28,925,554.85	100.00%	\$482.09
ADM001 Minimum Adjustment				
001050998900	ADM001 Minimum Adjustment		58.74421788%	\$83.95
001050998902	ADM001 Minimum Adjustment		36.89145181%	\$52.72
001050998904	ADM001 Minimum Adjustment		4.36433031%	\$6.24
			100.00%	\$142.91



MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

Billing period: 02/01/2018 - 02/28/2018
Invoice Number: 11079721
Invoice Date: 06/28/2018
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

GLEN ELLYN POLICE PENSION FUND

CURRENT CHARGES ALLOCATED AND DIRECT DEBIT						
		Portion of				
Account Detail	Volume	Rate	Year	Total Fees	Direct Debit	Net Due
001050998900 GLEN ELLYN POLICE PENSION FUND						
ADM001 ADMIN FEE - MV	16,992,237.94			\$283.20	(\$283.20)	\$0.00
ADM001 Minimum Adjustment				\$83.95	(\$83.95)	\$0.00
Subtotal 001050998900				\$367.15	(\$367.15)	\$0.00
001050998902 GLEN ELLYN POLICE PEN - FIXED INCOME						
ADM001 ADMIN FEE - MV	10,671,048.85			\$177.85	(\$177.85)	\$0.00
ADM001 Minimum Adjustment				\$52.72	(\$52.72)	\$0.00
Subtotal 001050998902				\$230.57	(\$230.57)	\$0.00
001050998904 GLEN ELLYN POLICE PEN - CD						
ADM001 ADMIN FEE - MV	1,262,268.06			\$21.04	(\$21.04)	\$0.00
ADM001 Minimum Adjustment				\$6.24	(\$6.24)	\$0.00
Subtotal 001050998904				\$27.28	(\$27.28)	\$0.00
TOTAL AMOUNT DUE				\$625.00	(\$625.00)	\$0.00

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

Billing period: 02/01/2018 - 02/28/2018
Invoice Number: 11079721
Invoice Date: 06/28/2018
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

GLEN ELLYN POLICE PENSION FUND

CURRENT CHARGES ALLOCATED AND DIRECT DEBIT

Account Number	Account Name	Account Charged	Amount Charged
----------------	--------------	-----------------	----------------

The Following Accounts will Be Charged:

001050998900	GLEN ELLYN POLICE PENSION FUND	001050998900	(\$367.15)
001050998902	GLEN ELLYN POLICE PEN - FIXED INCOME	001050998900	(\$230.57)
001050998904	GLEN ELLYN POLICE PEN - CD	001050998900	(\$27.28)
			(\$625.00)

Attachment: 2018, July 30 Vouchers (3482 : Vouchers July 2018)



Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 08/06/18 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Personnel
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 3481)

DOC ID: 3481

1. Motion to accept the retirement of Deputy Chief Robert Action, effective June 30, 2018 and approve a monthly pension benefit of \$7,978.58, beginning July 2018. 2. Motion to approve a contribution refund to Dustin Green, payable to Vanguard Fiduciary Trust Company, Custodian of Dustin Green, in the amount of \$20,611.20. 3. Motion to approve a contribution refund to Zachary Bava, payable to Charles Schwab & Co, Inc, fbo Zachary Bava, in the amount of \$5,300.33. 4. Motion to approve a contribution refund to Mallory Bryant in the amount of \$100.13.

Membership Changes

1. Deputy Chief Robert Acton retired effective June 30, 2018. His effective benefit date is 7/1/18. Based upon the calculation from the Department of Insurance's Benefit Calculator report, he is due an initial monthly benefit of \$7,978.58 (annually \$95,742.92). The pension calculation will be provided to the Board.

Contribution Refunds

1. Dustin Green, an officer who resigned September 11, 2016, has applied for a refund of his contributions left in the fund. He is requesting his contributions be rolled into an IRA, in the amount of \$20,611.20. Attached is a printout from our payroll system showing the contributions accumulated.
2. Zachary Bava, an officer who resigned on February 14, 2018, has applied for a refund of his contributions left in the fund. He is requesting his contributions be rolled into an IRA, in the amount of \$5,300.33. Attached is a printout from our payroll system showing the contributions accumulated.
3. In July 2017, we refunded Mallory Bryant \$10,972.58 of contributions. With our 2017 DOI filing this year, it was noticed that she is owed an additional \$100.13. When she was originally set up in the payroll system in 2013, she was set up as a Tier 2 employee. She had one month of contributions as a Tier 2 employee until she was changed to a Tier 1 employee. As she was a Tier 1 employee when she requested a refund, we had only looked at Tier 1 contributions to refund. This is an isolated clerical error. Attached is a printout from our payroll system showing the contributions in the two tiers.

Transfers

None.

Action Requested

1. Motion to accept the retirement of Deputy Chief Robert Action, effective June 30, 2018 and approve a monthly pension benefit of \$7,978.58, beginning July 2018.
2. Motion to approve a contribution refund to Dustin Green, payable to Vanguard Fiduciary Trust Company, Custodian of Dustin Green, in the amount of \$20,611.20.
3. Motion to approve a contribution refund to Zachary Bava, payable to Charles Schwab & Co, Inc, fbo Zachary Bava, in the amount of \$5,300.33.
4. Motion to approve a contribution refund to Mallory Bryant in the amount of \$100.13.

ATTACHMENTS:

- Bava Contribution History in MUNIS (PDF)
- Green Contributions MUNIS Report (PDF)
- Additional contribution refund Bryant (PDF)

VILLAGE OF GLEN ELLYN

ACCUMULATOR TOTALS REPORT

LOC/ORG INFORMATION	PAY/				EMPLOYEE	EMPLOYER
	DED	DESC	YEAR	QTR	AMOUNT	AMOUNT
REPORT TOTAL:	2360	POLPN2	1995	INCP	5300.33	0.00

** END OF REPORT - Generated by Christina Coyle **

VILLAGE OF GLEN ELLYN

ACCUMULATOR TOTALS REPORT

LOC/ORG INFORMATION	PAY/				EMPLOYEE	EMPLOYER
	DED	DESC	YEAR	QTR	AMOUNT	AMOUNT
REPORT TOTAL:	2360	POLPN2	1995	INCP	20611.20	0.00

** END OF REPORT - Generated by Christina Coyle **

VILLAGE OF GLEN ELLYN

ACCUMULATOR TOTALS REPORT

LOC/ORG INFORMATION	PAY/ DED	DESC	YEAR	QTR	EMPLOYEE AMOUNT	EMPLOYER AMOUNT
REPORT TOTAL:	2350	POLPN1	1995	INCP	10972.58	0.00
	2360	POLPN2	1995	INCP	100.13	0.00

Refunded July
2017

** END OF REPORT - Generated by Christina Coyle **

Amount to be
refunded



Police Pension Board
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 08/06/18 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

SCHEDULED

AGENDA ITEM (ID # 3480)

DOC ID: 3480

Motion to accept the 2017 actuary report for the Police Pension Fund

Background:

Each year, the police pension fund is required to obtain an actuarial report to provide the necessary disclosures for the annual audit as well as to determine funding for the proceeding fiscal year.

Subject:

Notable items in this report include:

Page 5: The Village required contribution for 2019 will decrease from \$1.96 million to \$1.77 million. This is largely due to the changes in assumptions noted on page 7.

Page 7: This page highlights changes in assumptions from the prior report.

- Mortality assumptions were updated to the most recent available table.
- The assumptions for active deaths and disablements in the line of duty were updated.
- The assumed payroll grown rate was reduced from 4.00% to 3.50%.

Page 9: This page shows the funded status of the plan, which under the new assumptions is 61.1%. The previous 2017 report showed a funded status of 57.5%.

Page 12 (H): This is a schedule which projects the unfunded accrued liability through 2041. The Village has a policy to be 100% funded by 2041 (state requirement is 90% funded by 2041).

Page 12 (I): This analysis highlights that our actual salary increases is trending below the assumption for the past three years. Turnover in the department has reduced salaries at the higher end of the pay spectrum. This also highlights assumed return with actuarial return. The plan is still lagging below the actuarial assumption; however, the return is moving upwards.

Page 32-53: This provides disclosure information which will be in the Village's annual audit report. The funded status of the plan on a GAAP basis is 62.51%. Page 37 highlights the effect that a 1% increase or decrease in the discount rate (or return) would have on the net pension liability.

Page 41: This page highlights the annual money-weighted rate of return for the fund. The return for 2017 was 11.98%.

Page 53: This page shows the actuarial smoothing of differences between projected and actual investment earnings. Favorable return in 2017 will positively offset losses in the previous two years.

Issues

Last year, the actuary had introduced the idea of moving towards a 15 year open amortization period (see information from the prior year attached). Staff has engaged the actuary to provide a recommendation on transitioning to a 15 year open amortization plan. Staff has also specifically

asked if the contribution from the Village was kept at \$1.959 million instead of decreasing the contribution as noted in the report, how far would that take the fund towards moving to a 15 year amortization. Staff anticipates a report from the actuary in September 2018. The report will be presented by the actuary at the October meeting. It is possible that we may need to schedule a special meeting to get feedback before October for the 2019 budget.

Action Requested

Motion to accept the 2017 actuarial report for the Police Pension Fund.

ATTACHMENTS:

- 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (PDF)
- Assumptions and Methods Study v2 2017-10-11 (PDF)

VILLAGE OF GLEN ELLYN
POLICE PENSION FUND
ACTUARIAL VALUATION
AS OF JANUARY 1, 2018
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2019
GASB 67/68 DISCLOSURE INFORMATION
AS OF DECEMBER 31, 2017

May 4, 2018

Ms. Christina Coyle
Finance Director
Village of Glen Ellyn
535 Duane St.
Glen Ellyn, IL 60137

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – Glen Ellyn Police Pension Fund

Dear Ms. Coyle:

We are pleased to present to the Village this report of the annual actuarial valuation of the Glen Ellyn 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 produce significantly different results.

The valuation has 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 reflects 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.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the Board, 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.

Certain schedules should include a 10-year history of information. As provided for in GASB Statements No. 67 and No. 68, this historical information is only presented for the years in which the information was measured. This conforms to the requirements of GASB Statements No. 67 and No. 68.

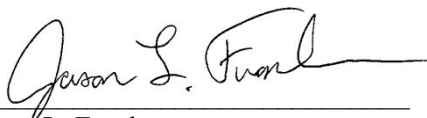
The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Glen Ellyn, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Glen Ellyn 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
Enrolled Actuary #17-6888

JLF/lke
Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the Village of Glen Ellyn Police Pension Fund, performed as of January 1, 2018, 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, 2019.

The contribution requirements, compared with those set forth in the assumptions and methods study dated October 11, 2017, are as follows:

Valuation Date	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2018</u>
Total Recommended Contribution	\$2,116,079	\$2,305,020
% of Projected Annual Payroll	60.7%	65.8%
Member Contributions (Est.)	345,430	346,911
% of Projected Annual Payroll	9.9%	9.9%
Village Recommended Contribution	1,770,649	1,958,109
% of Projected Annual Payroll	50.8%	55.9%

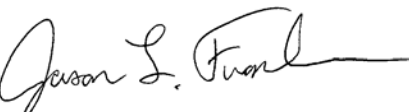
As you can see, the Total Recommended Contribution shows a decrease when compared to the results determined in the assumptions and methods study. The decrease is attributable to the change in assumptions.

Plan experience in total was near expectation. Favorable plan experience resulted from a higher than expected number of active terminations and salary increases that were lower than assumed. Unfavorable plan experience resulted from assets earning a 5.83% investment return (Actuarial basis) which fell short of the 6.50% assumption and inactive mortality being less than expected.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Village to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

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

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

The following assumptions have been changed since the prior valuation:

- The termination, retirement, disability, mortality, and salary increase rates were updated to the rates determined in the State of Illinois Department of Insurance experience study dated October 5, 2017.
- The percentage of active deaths and disablements assumed to occur in the line of duty were updated to 20% and 80%, respectively, in accordance with the experience study.
- The assumed payroll growth was reduced from 4.00% to 3.50%.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
A. Participant Data			
Number Included			
Actives	38	38	40
Service Retirees	28	28	28
Beneficiaries	3	3	4
Disability Retirees	3	3	3
Terminated Vested	<u>7</u>	<u>7</u>	<u>7</u>
Total	79	79	82
Total Annual Payroll	\$3,485,670	\$3,485,670	\$3,500,618
Payroll Under Assumed Ret. Age	3,485,670	3,485,670	3,500,618
Annual Rate of Payments to:			
Service Retirees	1,794,291	1,794,291	1,749,065
Beneficiaries	128,311	128,311	144,378
Disability Retirees	134,595	134,595	132,240
Terminated Vested	0	0	0
B. Assets			
Actuarial Value	30,118,735	30,118,735	28,704,932
Market Value	30,480,565	30,480,565	27,402,987
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	23,234,984	24,570,135	23,728,251
Disability Benefits	1,953,379	2,352,456	2,381,659
Death Benefits	389,536	292,658	311,816
Vested Benefits	1,933,943	2,724,975	2,806,432
Service Retirees	26,667,133	28,023,300	27,590,581
Beneficiaries	1,387,458	1,441,341	1,503,168
Disability Retirees	1,815,481	1,782,361	1,757,519
Terminated Vested	<u>115,046</u>	<u>115,046</u>	<u>24,786</u>
Total	57,496,960	61,302,272	60,104,212

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

C. Liabilities - (Continued)	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
Present Value of Future Salaries	36,843,243	37,723,193	39,413,664
Present Value of Future Member Contributions	3,651,165	3,738,368	3,905,894
Normal Cost (Retirement)	622,881	690,517	700,970
Normal Cost (Disability)	105,894	127,682	128,574
Normal Cost (Death)	16,382	12,295	13,676
Normal Cost (Vesting)	<u>101,337</u>	<u>135,843</u>	<u>140,807</u>
Total Normal Cost	846,494	966,337	984,027
Present Value of Future Normal Costs	8,172,139	9,475,049	10,164,875
Accrued Liability (Retirement)	17,062,127	17,659,015	16,319,771
Accrued Liability (Disability)	893,189	1,032,364	986,897
Accrued Liability (Death)	236,053	180,997	183,885
Accrued Liability (Vesting)	1,148,334	1,592,799	1,572,730
Accrued Liability (Inactives)	<u>29,985,118</u>	<u>31,362,048</u>	<u>30,876,054</u>
Total Actuarial Accrued Liability	49,324,821	51,827,223	49,939,337
Unfunded Actuarial Accrued Liability (UAAL)	19,206,086	21,708,488	21,234,405
Funded Ratio (AVA / AL)	61.1%	58.1%	57.5%

	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	29,985,118	31,362,048	30,876,054
Actives	6,308,890	6,795,538	5,821,021
Member Contributions	<u>3,420,534</u>	<u>3,420,534</u>	<u>3,245,149</u>
Total	39,714,542	41,578,120	39,942,224
Non-vested Accrued Benefits	<u>865,303</u>	<u>943,998</u>	<u>868,200</u>
Total Present Value Accrued Benefits	40,579,845	42,522,118	40,810,424
Funded Ratio (MVA / PVAB)	75.1%	71.7%	67.1%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(1,942,273)	0	
New Accrued Benefits	0	1,269,908	
Benefits Paid	0	(2,141,299)	
Interest	0	2,583,085	
Other	<u>0</u>	<u>0</u>	
Total	(1,942,273)	1,711,694	

Valuation Date	New Assump 1/1/2018	Old Assump 1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2019</u>	<u>12/31/2018</u>

E. Pension Cost

Normal Cost ¹	\$901,516	\$1,029,149	\$1,047,989
% of Total Annual Payroll ¹	25.9	29.5	29.9
Administrative Expenses ¹	18,402	18,402	35,343
% of Total Annual Payroll ¹	0.5	0.5	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018) ¹	1,196,161	1,289,295	1,221,688
% of Total Annual Payroll ¹	34.3	37.0	34.9
Total Recommended Contribution	2,116,079	2,336,846	2,305,020
% of Total Annual Payroll ¹	60.7	67.0	65.8
Expected Member Contributions ¹	345,430	345,430	346,911
% of Total Annual Payroll ¹	9.9	9.9	9.9
Expected Village Contribution	1,770,649	1,991,416	1,958,109
% of Total Annual Payroll ¹	50.8	57.1	55.9

F. Past Contributions

Plan Years Ending:	<u>12/31/2017</u>
Total Recommended Contribution	1,960,262
Village Requirement	1,613,000 ²
Actual Contributions Made:	
Members (excluding buyback)	347,262
Village	<u>1,613,000</u>
Total	1,960,262

G. Net Actuarial (Gain)/Loss

46,396

¹ Contributions developed as of 1/1/2018 displayed above have been adjusted to account for assumed salary increase and interest components.

² Tim Sharpe provided this contribution at 6.50% as of 1/1/2016, to be funded by 12/31/2017.

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

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2018	19,206,086
2019	19,258,320
2020	19,272,085
2025	18,613,764
2031	15,498,351
2036	9,859,948
2041	0

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

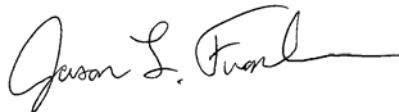
		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	4.92%	5.57%
Year Ended	12/31/2016	0.99%	5.00%
Year Ended	12/31/2015	4.20%	5.00%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	5.64%	6.50%
Year Ended	12/31/2016	4.62%	6.75%
Year Ended	12/31/2015	N/A	N/A

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of the Illinois Pension Code and adhere to the Actuarial Standards of Practice. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or recommended contribution rates have been taken into account in the valuation.



Jason L. Franken, FSA, EA, MAAA
Enrolled Actuary #17-6888

DEVELOPMENT OF JANUARY 1, 2018 AMORTIZATION PAYMENT

(1) Unfunded Actuarial Accrued Liability as of January 1, 2017	\$21,234,405
(2) Sponsor Normal Cost developed as of January 1, 2017	637,116
(3) Expected administrative expenses for the year ended December 31, 2017	33,264
(4) Expected interest on (1), (2) and (3)	1,422,730
(5) Sponsor contributions to the System during the year ended December 31, 2017	1,613,000
(6) Expected interest on (5)	52,423
(7) Expected Unfunded Actuarial Accrued Liability as of December 31, 2017, (1)+(2)+(3)+(4)-(5)-(6)	21,662,092
(8) Change to UAAL due to Assumption Change	(2,502,402)
(9) Change to UAAL due to Actuarial (Gain)/Loss	46,396
(10) Unfunded Accrued Liability as of January 1, 2018	19,206,086
(11) UAAL Subject to Amortization (100% AAL less Actuarial Assets)	19,206,086

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>1/1/2018</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
1/1/2018	23	19,206,086	1,123,156

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2017	\$21,234,405
(2) Expected UAAL as of January 1, 2018	21,662,092
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	247,256
Salary Increases	(181,792)
Active Decrements	(620,132)
Inactive Mortality	541,825
Other	<u>59,239</u>
Change in UAAL due to (Gain)/Loss	46,396
Assumption Changes	<u>(2,502,402)</u>
(4) Actual UAAL as of January 1, 2018	\$19,206,086

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of January 1, 2017	\$ 1,958,109
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(18,840)
Change in Assumed Administrative Expense	(16,941)
Investment Return (Actuarial Asset Basis)	14,685
Salary Increases	(10,797)
New Entrants	-
Active Decrements	(36,830)
Inactive Mortality	32,180
Data Corrections	2,644
Contributions (More) or Less than Recommended	-
Increase in Amortization Payment Due to Payroll Growth Assumption	45,885
Change in Expected Member Contributions	1,481
Assumption Change	(220,767)
Other	<u>19,840</u>
Total Change in Contribution	(187,460)
(3) Contribution Determined as of January 1, 2018	\$1,770,649

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

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 Assump	Old Assump	
Valuation Date	1/1/2018	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2019</u>	<u>12/31/2018</u>
Actuarial Accrued Liability (PUC)	47,021,904	49,943,391	48,028,699
Actuarial Value of Assets	<u>30,118,735</u>	<u>30,118,735</u>	<u>28,704,932</u>
Unfunded Actuarial Accrued Liability (UAAL)	16,903,169	19,824,656	19,323,767
UAAL Subject to Amortization	12,200,979	14,830,317	14,520,897
Normal Cost ¹	\$1,023,056	\$1,126,766	\$1,130,552
% of Total Annual Payroll ¹	29.3	32.3	32.3
Administrative Expenses ¹	18,402	18,402	35,343
% of Total Annual Payroll ¹	0.5	0.5	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018) ¹	759,881	880,792	835,437
% of Total Annual Payroll ¹	21.9	25.3	23.9
Total Required Contribution	1,801,339	2,025,960	2,001,332
% of Total Annual Payroll ¹	51.7	58.1	57.2
Expected Member Contributions ¹	345,430	345,430	346,911
% of Total Annual Payroll ¹	9.9	9.9	9.9
Expected Village Contribution	1,455,909	1,680,530	1,654,421
% of Total Annual Payroll ¹	41.8	48.2	47.3
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 1/1/2018 displayed above have been adjusted to account for assumed salary increase and interest components.

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2018	109,990	2,149,971	2,259,961
2019	205,159	2,073,958	2,279,117
2020	309,766	2,113,697	2,423,463
2021	396,491	2,156,423	2,552,914
2022	478,345	2,187,750	2,666,095
2023	549,358	2,215,382	2,764,740
2024	611,633	2,238,831	2,850,464
2025	676,658	2,257,614	2,934,272
2026	737,314	2,271,267	3,008,581
2027	813,302	2,279,385	3,092,687
2028	907,592	2,281,632	3,189,224
2029	1,063,871	2,277,744	3,341,615
2030	1,270,001	2,267,543	3,537,544
2031	1,460,559	2,250,891	3,711,450
2032	1,673,156	2,227,861	3,901,017
2033	1,889,424	2,198,533	4,087,957
2034	2,137,256	2,163,123	4,300,379
2035	2,368,859	2,121,904	4,490,763
2036	2,577,972	2,075,219	4,653,191
2037	2,771,647	2,023,456	4,795,103
2038	2,965,253	1,967,039	4,932,292
2039	3,157,057	1,906,388	5,063,445
2040	3,315,120	1,841,941	5,157,061
2041	3,464,432	1,796,862	5,261,294
2042	3,672,471	1,727,526	5,399,997
2043	3,825,208	1,655,652	5,480,860
2044	4,016,281	1,581,758	5,598,039
2045	4,140,957	1,506,363	5,647,320
2046	4,284,874	1,429,955	5,714,829
2047	4,407,843	1,352,998	5,760,841
2048	4,525,605	1,275,982	5,801,587
2049	4,665,684	1,199,316	5,865,000
2050	4,750,755	1,123,327	5,874,082
2051	4,821,634	1,048,324	5,869,958
2052	4,880,926	974,510	5,855,436
2053	4,927,748	902,049	5,829,797
2054	4,963,474	831,176	5,794,650
2055	4,988,657	762,159	5,750,816
2056	5,003,076	695,267	5,698,343
2057	5,006,773	630,780	5,637,553

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Lives:

RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct with generational mortality improvement using Scale MP-2016 and a base year of 2013. 10% of active deaths are assumed to be in the line of duty.

Disabled Lives:

RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct, with rates increased by 15% and generational mortality improvement using Scale MP-2016 and a base year of 2013.

The mortality assumptions sufficiently accommodate future mortality improvements.

Interest Rate

6.50% per year compounded annually, net of investment related expenses.

Retirement Age

See table on following page. This is based on an experience study performed in 2017.

Disability Rate

See table on following page. 60% of the disabilities are assumed to be in the line of duty. This is based on an experience study performed in 2017.

Termination Rate

See table on following page. This is based on an experience study performed in 2017.

Salary Increases

Graded schedule based on service. This is based on an experience study performed in 2017.

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%

Inflation

2.50%.

Payroll Growth	3.50% per year.
Cost-of-Living Adjustment	<u>Tier 1:</u> 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. <u>Tier 2:</u> 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.
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.
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.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2041. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

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 equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2041. 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.

STATEMENT OF FIDUCIARY NET POSITION
December 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	46,236
Certificates of Deposit	11,532
Money Market	906,677
Total Cash and Equivalents	964,445
Receivables:	
Accrued Past Due Interest	80,422
Total Receivable	80,422
Investments:	
Investments	14,525,425
Corporate Bonds	5,842,422
U.S. Gov't and Agency Obligations	5,311,510
Stocks	1,248,955
Mutual Funds	1,504,186
Total Investments	28,432,498
Other Assets	1,003,975
Total Assets	30,481,340
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Accounts Payable	775
Total Liabilities	775
Net Assets:	
Active and Retired Members' Equity	30,480,565
NET POSITION RESTRICTED FOR PENSIONS	30,480,565
TOTAL LIABILITIES AND NET ASSETS	30,481,340

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED December 31, 2017
Market Value Basis

ADDITIONS

Contributions:

Member	347,262
Village	1,613,000

Total Contributions	1,960,262
---------------------	-----------

Investment Income:

Net Realized Gain (Loss)	9,527,367
Unrealized Gain (Loss)	(11,670,693)
Net Increase in Fair Value of Investments	(2,143,326)
Interest & Dividends	5,503,194
Less Investment Expense ¹	(83,974)

Net Investment Income	3,275,894
-----------------------	-----------

Total Additions	5,236,156
-----------------	-----------

DEDUCTIONS

Distributions to Members:

Benefit Payments	2,061,481
Refund of Contributions/Transfers	79,818

Total Distributions	2,141,299
---------------------	-----------

Administrative Expenses	17,279
-------------------------	--------

Total Deductions	2,158,578
------------------	-----------

Net Increase in Net Position	3,077,578
------------------------------	-----------

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	27,402,987
-----------------------	------------

End of the Year	30,480,565
-----------------	------------

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

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

ACTUARIAL ASSET VALUATION

December 31, 2017

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five 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.

Plan Year Ending	Gain/(Loss)	Gains/(Losses) Not Yet Recognized				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
12/31/2014	46,111	9,222	0	0	0	0
12/31/2015	(1,829,216)	(731,686)	(365,843)	0	0	0
12/31/2016	(194,370)	(116,622)	(77,748)	(38,874)	0	0
12/31/2017	1,501,145	1,200,916	900,687	600,458	300,229	0
Total		361,830	457,096	561,584	300,229	0

Development of Investment Gain/Loss

Market Value of Assets, 12/31/2016	27,402,987
Contributions Less Benefit Payments & Administrative Expenses	(198,316)
Expected Investment Earnings ¹	1,774,749
Actual Net Investment Earnings	3,275,894
2018 Actuarial Investment Gain/(Loss)	1,501,145

¹ Expected Investment Earnings = 6.50% x (27,402,987 + 0.5 x -198,316)

Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2017	30,480,565
(Gains)/Losses Not Yet Recognized	(361,830)
Actuarial Value of Assets, 12/31/2017	30,118,735

(A) 12/31/2016 Actuarial Assets: 28,704,932

(I) Net Investment Income:

1. Interest and Dividends	5,503,194
2. Realized Gains (Losses)	9,527,367
3. Change in Actuarial Value	(13,334,468)
4. Investment Expenses	(83,974)
Total	1,612,119

(B) 12/31/2017 Actuarial Assets: 30,118,735

Actuarial Asset Rate of Return = (2 x I) / (A + B - I): 5.64%

Market Value of Assets Rate of Return: 12.00%

12/31/2017 Limited Actuarial Assets: 30,118,735

Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis) (247,256)

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
December 31, 2017
Actuarial Asset Basis

INCOME		
Contributions:		
Member	347,262	
Village	1,613,000	
Total Contributions		1,960,262
Earnings from Investments		
Interest & Dividends	5,503,194	
Net Realized Gain (Loss)	9,527,367	
Change in Actuarial Value	(13,334,468)	
Total Earnings and Investment Gains		1,696,093
EXPENSES		
Administrative Expenses:		
Investment Related ¹	83,974	
Other	17,279	
Total Administrative Expenses		101,253
Distributions to Members:		
Benefit Payments	2,061,481	
Refund of Contributions/Transfers	79,818	
Total Distributions		2,141,299
Change in Net Assets for the Year		1,413,803
Net Assets Beginning of the Year		28,704,932
Net Assets End of the Year ²		30,118,735

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

² Net Assets may be limited for actuarial consideration.

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

STATISTICAL DATA ¹

	<u>1/1/2015</u>	<u>1/1/2016</u>	<u>1/1/2017</u>	<u>1/1/2018</u>
<u>Actives - Tier 1</u>				
Number	N/A	32	29	27
Average Current Age	N/A	N/A	40.4	41.9
Average Age at Employment	N/A	N/A	25.4	25.5
Average Past Service	N/A	N/A	15.0	16.4
Average Annual Salary	N/A	N/A	\$98,152	\$102,584
<u>Actives - Tier 2</u>				
Number	N/A	6	11	11
Average Current Age	N/A	N/A	26.9	27.2
Average Age at Employment	N/A	N/A	25.1	24.9
Average Past Service	N/A	N/A	1.8	2.3
Average Annual Salary	N/A	N/A	\$59,474	\$65,082
<u>Service Retirees</u>				
Number	N/A	25	28	28
Average Current Age	N/A	N/A	66.2	67.2
Average Annual Benefit	N/A	\$57,466	\$62,467	\$64,082
<u>Beneficiaries</u>				
Number	N/A	7	4	3
Average Current Age	N/A	N/A	77.3	72.1
Average Annual Benefit	N/A	\$27,646	\$36,095	\$42,770
<u>Disability Retirees</u>				
Number	N/A	3	3	3
Average Current Age	N/A	N/A	61.3	62.3
Average Annual Benefit	N/A	\$43,612	\$44,080	\$44,865
<u>Terminated Vested</u>				
Number	N/A	0	7	7
Average Current Age	N/A	N/A	34.1	35.6
Average Annual Benefit ²	N/A	N/A	N/A	N/A

¹ Foster & Foster does not have enough historical data to include complete data prior to 1/1/2017.
We will add historical data going forward.

² 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	2	1	0	0	0	0	0	0	0	0	0	3
25 - 29	0	2	1	0	0	2	0	0	0	0	0	5
30 - 34	1	0	0	0	1	2	1	0	0	0	0	5
35 - 39	0	0	0	0	0	1	6	5	0	0	0	12
40 - 44	0	0	0	0	0	1	2	3	0	0	0	6
45 - 49	0	0	0	0	0	0	0	0	0	1	0	1
50 - 54	0	0	0	0	0	0	0	0	3	1	0	4
55 - 59	0	0	0	0	0	0	0	0	0	1	1	2
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	3	1	0	1	6	9	8	3	3	1	38

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2017	40
b. Terminations	
i. Vested (partial or full) with deferred benefits	(2)
ii. Non-vested or full lump sum distribution received	(3)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>0</u>
f. Continuing participants	35
g. New entrants	<u>3</u>
h. Total active life participants in valuation	38

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

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	28	4	3	7	42
Retired	0	0	0	0	0
Vested Deferred	0	0	0	2	2
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	(1)	0	0	(1)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	(2)	(2)
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	3	3	7	41

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

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 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 eight consecutive years 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.

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% 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.) 50% 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.

STATEMENT OF FIDUCIARY NET POSITION
December 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	46,236
Certificates of Deposit	11,532
Money Market	906,677
Total Cash and Equivalents	964,445
Receivables:	
Accrued Past Due Interest	80,422
Total Receivable	80,422
Investments:	
Investments	14,525,425
Corporate Bonds	5,842,422
U.S. Gov't and Agency Obligations	5,311,510
Stocks	1,248,955
Mutual Funds	1,504,186
Total Investments	28,432,498
Other Assets	1,003,975
Total Assets	30,481,340
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Accounts Payable	775
Total Liabilities	775
Net Assets:	
Active and Retired Members' Equity	30,480,565
NET POSITION RESTRICTED FOR PENSIONS	30,480,565
TOTAL LIABILITIES AND NET ASSETS	30,481,340

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STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED December 31, 2017
Market Value Basis

ADDITIONS

Contributions:

Member	347,262
Village	1,613,000

Total Contributions	1,960,262
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Investment Income:

Net Realized Gain (Loss)	9,527,367
Unrealized Gain (Loss)	(11,670,693)
Net Increase in Fair Value of Investments	(2,143,326)
Interest & Dividends	5,503,194
Less Investment Expense ¹	(83,974)

Net Investment Income	3,275,894
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Total Additions	5,236,156
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DEDUCTIONS

Distributions to Members:

Benefit Payments	2,061,481
Refund of Contributions/Transfers	79,818

Total Distributions	2,141,299
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Administrative Expenses	17,279
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Total Deductions	2,158,578
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Net Increase in Net Position	3,077,578
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	27,402,987
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End of the Year	30,480,565
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¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended December 31, 2017)

Plan Description

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 Village,
- 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.

Plan Membership as of January 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	34
Inactive Plan Members Entitled to but Not Yet Receiving Benefits	7
Active Plan Members	38
	<u>79</u>

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date Tier 1: Age 50 and 20 years of Credited Service.

Date 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.

Benefit Tier 2: 2.50% per year of service times the average salary for the eight consecutive years 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.

Early Retirement:

Date Tier 1: Age 60 and 8 years of Credited Service.

Date Tier 2: Age 50 with 10 years of Credited Service.

Benefit Tier 1: Normal Retirement benefit with no minimum.

Benefit Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

Disability:

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 Adjustments:

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.

Tier 1: 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.) 50% 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.

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Vesting (Termination):

Vesting Service Requirement: Tier 1: 8 years.

Vesting Service Requirement: Tier 2: 10 years.

Non-Vested Benefit: Refund of Member Contributions.

Vested Benefit: Either the termination benefit, payable upon reaching age 60, 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.

Village: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

Investments

Investment Policy:

The following was the Board's adopted asset allocation policy as of December 31, 2017:

<u>Asset Class</u>	<u>Target Allocation</u>
Fixed Income	35.0%
US Equity	30.0%
International Equity	20.0%
Global Tactical	5.0%
Real Estate - Core	10.0%
<u>Total</u>	<u>100.0%</u>

Concentrations:

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

Rate of Return:

For the year ended December 31, 2017 the annual money-weighted rate of return on Pension Plan investments, net of pension plan investment expense, was 11.98 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the sponsor on December 31, 2017 were as follows:

Total Pension Liability	\$ 48,758,493
Plan Fiduciary Net Position	<u>\$ (30,480,565)</u>
Sponsor's Net Pension Liability	<u>\$ 18,277,928</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	62.51%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2018 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	6.50%
Investment Rate of Return	6.50%

Mortality Rate Healthy Lives:

RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct with generational mortality improvement using Scale MP-2016 and a base year of 2013. 10% of active deaths are assumed to be in the line of duty.

Mortality Rate Disabled Lives:

RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct, with rates increased by 15% and generational mortality improvement using Scale MP-2016 and a base year of 2013.

The other significant assumptions are based upon the most recent actuarial experience study performed by the State of Illinois Department of Insurance dated October 5, 2017.

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.

For 2017, the inflation rate assumption of the investment advisor was 2.25%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the 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 as of December 31, 2017 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Fixed Income	0.4%
US Equity	5.2%
International Equity	5.5%
Global Tactical	3.5%
Real Estate - Core	5.3%

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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 was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 6.50 percent; the municipal bond rate is 3.44 percent (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the The Bond Buyer); and the resulting single discount rate is 6.50 percent.

	1% Decrease 5.50%	Current Discount Rate 6.50%	1% Increase 7.50%
Sponsor's Net Pension Liability	\$ 25,808,890	\$ 18,277,928	\$ 12,218,068

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SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	12/31/2017	12/31/2016
Total Pension Liability		
Service Cost	936,254	843,298
Interest	3,206,540	3,118,867
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	(176,284)	540,079
Changes of Assumptions	(705,405)	(1,243,789)
Benefit Payments, Including Refunds of Employee Contributions	(2,141,299)	(1,963,819)
Net Change in Total Pension Liability	1,119,806	1,294,636
Total Pension Liability - Beginning	47,638,687	46,344,051
Total Pension Liability - Ending (a)	<u>\$ 48,758,493</u>	<u>\$ 47,638,687</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,613,000	1,692,000
Contributions - Employee	347,262	347,368
Net Investment Income	3,275,894	1,532,183
Benefit Payments, Including Refunds of Employee Contributions	(2,141,299)	(1,963,819)
Administrative Expense	(17,279)	(16,122)
Net Change in Plan Fiduciary Net Position	3,077,578	1,591,610
Plan Fiduciary Net Position - Beginning	27,402,987	25,811,377
Plan Fiduciary Net Position - Ending (b)	<u>\$ 30,480,565</u>	<u>\$ 27,402,987</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 18,277,928</u>	<u>\$ 20,235,700</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	62.51%	57.52%
Covered Employee Payroll	\$ 3,485,670	\$ 3,500,618
Net Pension Liability as a Percentage of covered Employee Payroll	524.37%	578.06%

Notes to Schedule:*Changes in Assumptions:*

For measurement date 12/31/2017, amounts reported as changes of assumptions resulted from the following changes:

- The termination, retirement, disability, mortality, and salary increase rates were updated to the rates determined in the State of Illinois Department of Insurance experience study dated October 5, 2017.
- The percentage of active deaths and disablements assumed to occur in the line of duty were updated to 20% and 80%, respectively, in accordance with the experience study.
- The investment rate of return was lowered from 6.75% to 6.50% per year compounded annually, net of investment related expenses.

For measurement date 12/31/2016, amounts reported as changes of assumptions resulted from the following changes:

- The disabled mortality assumption was updated from the RP 2014 Mortality Table with a blue collar adjustment, projected to the valuation date using improvement scale MP-2015 to the RP 2014 Disabled Mortality Table, projected to the valuation date using improvement scale MP-2015.
- The salary scale was updated from 5.00% to a service-based schedule.

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SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	12/31/2015	12/31/2014
Total Pension Liability		
Service Cost	826,042	815,297
Interest	2,792,133	2,711,148
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	(140,172)	(974,878)
Changes of Assumptions	3,859,798	56,671
Benefit Payments, Including Refunds of Employee Contributions	(1,762,736)	(1,139,863)
Net Change in Total Pension Liability	5,575,065	1,468,375
Total Pension Liability - Beginning	40,768,986	39,300,611
Total Pension Liability - Ending (a)	<u>\$ 46,344,051</u>	<u>\$ 40,768,986</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,153,000	981,000
Contributions - Employee	344,953	235,457
Net Investment Income	(11,813)	1,170,112
Benefit Payments, Including Refunds of Employee Contributions	(1,762,736)	(1,139,863)
Administrative Expense	(14,633)	(15,339)
Net Change in Plan Fiduciary Net Position	(291,229)	1,231,367
Plan Fiduciary Net Position - Beginning	26,102,606	24,871,239
Plan Fiduciary Net Position - Ending (b)	<u>\$ 25,811,377</u>	<u>\$ 26,102,606</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 20,532,674</u>	<u>\$ 14,666,380</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	55.70%	64.03%
Covered Employee Payroll	\$ 3,548,022	\$ 3,521,045
Net Pension Liability as a Percentage of covered Employee Payroll	578.71%	416.53%

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

	12/31/2017	12/31/2016	12/31/2015	12/31/2014
Actuarially Determined Contribution	1,613,000	1,192,842	1,152,455	980,948
Contributions in Relation to the				
Actuarially Determined Contribution	1,613,000	1,692,000	1,153,000	981,000
Contribution Deficiency (Excess)	\$ -	\$ (499,158)	\$ (545)	\$ (52)
Covered Employee Payroll	\$ 3,485,670	\$ 3,500,618	\$ 3,548,022	\$ 3,521,045
Contributions as a Percentage of				
Covered Employee Payroll	46.28%	48.33%	32.50%	27.86%

Notes to Schedule:

Valuation Date: 01/01/2016

Actuarially Determined Contribution is calculated as of January 1, two years prior year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Funding Method:	Entry Age Normal.
Amortization Method:	Level percentage of pay, closed.
Remaining Amortization Period:	25 Years (as of 1/1/2016).
Asset Valuation Method:	5-year Average Market Value (PA 096-1495).
Investment Return:	6.75% net of investment expenses.
Salary Increases:	5.00%.
Mortality:	RP 2014 Mortality Table (BCHA) projected to 2016 using improvement scale MP-2015.
Withdrawal:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Disability:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Retirement:	Based on studies of the Fund and the Department of Insurance, Sample Rates below (100% by age 70).
Marital Status:	80% Married, Female spouses Marital Status 3 years younger.

Sample Annual Rates Per 100

Participants:

Age	Withdrawal	Disability	Retirement
20	10.00	0.05	
25	7.50	0.05	
30	5.00	0.22	
35	3.00	0.26	
40	2.00	0.40	
45	2.00	0.65	
50	3.50	0.95	20.00
55	3.50	1.30	25.00
60	3.50	1.65	33.00
65	3.50	2.00	50.00
70			100.00

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SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

	12/31/2017	12/31/2016	12/31/2015	12/31/2014
Annual Money-Weighted Rate of Return Net of Investment Expense	11.98%	6.17%	0.23%	4.37%

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended December 31, 2017)

General Information about the Pension Plan

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 Village,
- 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.

Plan Membership as of January 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	34
Inactive Plan Members Entitled to but Not Yet Receiving Benefits	7
Active Plan Members	38
	<u>79</u>

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date Tier 1: Age 50 and 20 years of Credited Service.

Date 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.

Benefit Tier 2: 2.50% per year of service times the average salary for the eight consecutive years 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.

Early Retirement:

Date Tier 1: Age 60 and 8 years of Credited Service.

Date Tier 2: Age 50 with 10 years of Credited Service.

Benefit Tier 1: Normal Retirement benefit with no minimum.

Benefit Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

Disability:

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 Adjustments:

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.

Tier 1: 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.) 50% 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.

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Vesting (Termination):

Vesting Service Requirement: Tier 1: 8 years.

Vesting Service Requirement: Tier 2: 10 years.

Non-Vested Benefit: Refund of Member Contributions.

Vested Benefit: Either the termination benefit, payable upon reaching age 60, 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.

Village: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

Net Pension Liability

The measurement date is December 31, 2017.

The measurement period for the pension expense was January 1, 2017 to December 31, 2017.

The reporting period is January 1, 2017 through December 31, 2017.

The Sponsor's Net Pension Liability was measured as of December 31, 2017.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2018 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	6.50%
Investment Rate of Return	6.50%

Mortality Rate Healthy Lives:

RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct with generational mortality improvement using Scale MP-2016 and a base year of 2013. 10% of active deaths are assumed to be in the line of duty.

Mortality Rate Disabled Lives:

RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct, with rates increased by 15% and generational mortality improvement using Scale MP-2016 and a base year of 2013.

The other significant assumptions are based upon the most recent actuarial experience study performed by the State of Illinois Department of Insurance dated October 5, 2017.

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.

For 2017, the inflation rate assumption of the investment advisor was 2.25%.

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

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Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of December 31, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Fixed Income	35.0%	0.4%
US Equity	30.0%	5.2%
International Equity	20.0%	5.5%
Global Tactical	5.0%	3.5%
Real Estate - Core	10.0%	5.3%
Total	100.0%	

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 was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 6.50 percent; the municipal bond rate is 3.44 percent (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the The Bond Buyer); and the resulting single discount rate is 6.50 percent.

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at December 31, 2016	\$ 47,638,687	\$ 27,402,987	\$ 20,235,700
Changes for a Year:			
Service Cost	936,254	-	936,254
Interest	3,206,540	-	3,206,540
Differences Between Expected and Actual Experience	(176,284)	-	(176,284)
Changes of Assumptions	(705,405)	-	(705,405)
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	1,613,000	(1,613,000)
Contributions - Employee	-	347,262	(347,262)
Net Investment Income	-	3,275,894	(3,275,894)
Benefit Payments, Including Refunds of Employee Contributions	(2,141,299)	(2,141,299)	-
Administrative Expense	-	(17,279)	17,279
New Changes	1,119,806	3,077,578	(1,957,772)
Balances at December 31, 2017	\$ 48,758,493	\$ 30,480,565	\$ 18,277,928

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	5.50%	6.50%	7.50%
Sponsor's Net Pension Liability	\$ 25,808,890	\$ 18,277,928	\$ 12,218,068

Pension Plan Fiduciary Net Position.

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

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PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS

For the year ended December 31, 2017, the Sponsor will recognize a pension expense of \$2,522,068.

On December 31, 2017, 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 Expected and Actual Experience	360,052	214,297
Changes of Assumptions	1,855,777	1,417,032
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	-	352,608
Total	<u>\$ 2,215,829</u>	<u>\$ 1,983,937</u>

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:

2018	\$ 484,001
2019	\$ 484,001
2020	\$ (24,698)
2021	\$ (564,463)
2022	\$ (146,949)
Thereafter	\$ -

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

GASB 68

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	12/31/2017	12/31/2016
Total Pension Liability		
Service Cost	936,254	843,298
Interest	3,206,540	3,118,867
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	(176,284)	540,079
Changes of Assumptions	(705,405)	(1,243,789)
Benefit Payments, Including Refunds of Employee Contributions	(2,141,299)	(1,963,819)
Net Change in Total Pension Liability	1,119,806	1,294,636
Total Pension Liability - Beginning	47,638,687	46,344,051
Total Pension Liability - Ending (a)	<u>\$ 48,758,493</u>	<u>\$ 47,638,687</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,613,000	1,692,000
Contributions - Employee	347,262	347,368
Net Investment Income	3,275,894	1,532,183
Benefit Payments, Including Refunds of Employee Contributions	(2,141,299)	(1,963,819)
Administrative Expense	(17,279)	(16,122)
Net Change in Plan Fiduciary Net Position	3,077,578	1,591,610
Plan Fiduciary Net Position - Beginning	27,402,987	25,811,377
Plan Fiduciary Net Position - Ending (b)	<u>\$ 30,480,565</u>	<u>\$ 27,402,987</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 18,277,928</u>	<u>\$ 20,235,700</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	62.51%	57.52%
Covered Employee Payroll	\$ 3,485,670	\$ 3,500,618
Net Pension Liability as a Percentage of covered Employee Payroll	524.37%	578.06%

Notes to Schedule:*Changes in Assumptions:*

For measurement date 12/31/2017, amounts reported as changes of assumptions resulted from the following changes:

- The termination, retirement, disability, mortality, and salary increase rates were updated to the rates determined in the State of Illinois Department of Insurance experience study dated October 5, 2017.
- The percentage of active deaths and disablements assumed to occur in the line of duty were updated to 20% and 80%, respectively, in accordance with the experience study.
- The investment rate of return was lowered from 6.75% to 6.50% per year compounded annually, net of investment related expenses.

For measurement date 12/31/2016, amounts reported as changes of assumptions resulted from the following changes:

- The disabled mortality assumption was updated from the RP 2014 Mortality Table with a blue collar adjustment, projected to the valuation date using improvement scale MP-2015 to the RP 2014 Disabled Mortality Table, projected to the valuation date using improvement scale MP-2015.
- The salary scale was updated from 5.00% to a service-based schedule.

GASB 68

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	12/31/2015	12/31/2014
Total Pension Liability		
Service Cost	826,042	815,297
Interest	2,792,133	2,711,148
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	(140,172)	(974,878)
Changes of Assumptions	3,859,798	56,671
Benefit Payments, Including Refunds of Employee Contributions	(1,762,736)	(1,139,863)
Net Change in Total Pension Liability	5,575,065	1,468,375
Total Pension Liability - Beginning	40,768,986	39,300,611
Total Pension Liability - Ending (a)	<u>\$ 46,344,051</u>	<u>\$ 40,768,986</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,153,000	981,000
Contributions - Employee	344,953	235,457
Net Investment Income	(11,813)	1,170,112
Benefit Payments, Including Refunds of Employee Contributions	(1,762,736)	(1,139,863)
Administrative Expense	(14,633)	(15,339)
Net Change in Plan Fiduciary Net Position	(291,229)	1,231,367
Plan Fiduciary Net Position - Beginning	26,102,606	24,871,239
Plan Fiduciary Net Position - Ending (b)	<u>\$ 25,811,377</u>	<u>\$ 26,102,606</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 20,532,674</u>	<u>\$ 14,666,380</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	55.70%	64.03%
Covered Employee Payroll	\$ 3,548,022	\$ 3,521,045
Net Pension Liability as a Percentage of covered Employee Payroll	578.71%	416.53%

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

	12/31/2017	12/31/2016	12/31/2015	12/31/2014
Actuarially Determined Contribution	1,613,000	1,192,842	1,152,455	980,948
Contributions in Relation to the				
Actuarially Determined Contributions	1,613,000	1,692,000	1,153,000	981,000
Contribution Deficiency (Excess)	\$ -	\$ (499,158)	\$ (545)	\$ (52)
Covered Employee Payroll	\$ 3,485,670	\$ 3,500,618	\$ 3,548,022	\$ 3,521,045
Contributions as a Percentage of				
Covered Employee Payroll	46.28%	48.33%	32.50%	27.86%

Notes to Schedule:

Valuation Date: 01/01/2016

Actuarially Determined Contribution is calculated as of January 1, two years prior year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Funding Method:	Entry Age Normal.
Amortization Method:	Level percentage of pay, closed.
Remaining Amortization Period:	25 Years (as of 1/1/2016).
Asset Valuation Method:	5-year Average Market Value (PA 096-1495).
Investment Return:	6.75% net of investment expenses.
Salary Increases:	5.00%.
Mortality:	RP 2014 Mortality Table (BCHA) projected to 2016 using improvement scale MP-2015.
Withdrawal:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Disability:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Retirement:	Based on studies of the Fund and the Department of Insurance, Sample Rates below (100% by age 70).
Marital Status:	80% Married, Female spouses Marital Status 3 years younger.

Sample Annual Rates Per 100

Participants:	Age	Withdrawal	Disability	Retirement
	20	10.00	0.05	
	25	7.50	0.05	
	30	5.00	0.22	
	35	3.00	0.26	
	40	2.00	0.40	
	45	2.00	0.65	
	50	3.50	0.95	20.00
	55	3.50	1.30	25.00
	60	3.50	1.65	33.00
	65	3.50	2.00	50.00
	70			100.00

GASB 68

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR DECEMBER 31, 2017

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 20,235,700	\$ 1,128,142	\$ 4,226,874	
Total Pension Liability Factors:				
Service Cost	936,254	-	-	936,254
Interest	3,206,540	-	-	3,206,540
Changes in Benefit Terms	-	-	-	-
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	(176,284)	176,284	-	-
Current Year Amortization	-	(53,639)	(90,013)	36,374
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	(705,405)	705,405	-	-
Current Year Amortization	-	(324,863)	(668,007)	343,144
Benefit Payments	(2,141,299)	-	-	(2,141,299)
Net Change	1,119,806	503,187	(758,020)	2,381,013
Plan Fiduciary Net Position:				
Contributions - Employer	1,613,000	-	-	-
Contributions - Employee	347,262	-	-	(347,262)
Projected Net Investment Income	1,774,749	-	-	(1,774,749)
Difference Between Projected and Actual Earnings on Pension Plan Investments	1,501,145	1,501,145	-	-
Current Year Amortization	-	(300,229)	(404,717)	104,488
Benefit Payments	(2,141,299)	-	-	2,141,299
Administrative Expenses	(17,279)	-	-	17,279
Net Change	3,077,578	1,200,916	(404,717)	141,055
Ending Balance	\$ 18,277,928	\$ 2,832,245	\$ 3,064,137	\$ 2,522,068

Attachment: 2017/2018 Actuarial Valuation Report - Glen Ellyn Police (3480 : Actuary Report 2017)

GASB 68

AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Year Base Established	Differences Between Expected and Actual Experience	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2017	\$ (176,284)	6	\$ (29,379)	\$ (29,381)	\$ (29,381)	\$ (29,381)	\$ (29,381)	\$ (29,381)	\$ -	\$ -	\$ -	\$ -
2016	\$ 540,079	6	\$ 90,013	\$ 90,013	\$ 90,013	\$ 90,013	\$ 90,013	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ (140,172)	5.78	\$ (24,260)	\$ (24,260)	\$ (24,260)	\$ (18,872)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 36,374	\$ 36,372	\$ 36,372	\$ 41,760	\$ 60,632	\$ (29,381)	\$ -	\$ -	\$ -	\$ -

GASB 68

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Year Base Established	Change of Assumptions	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
2017	\$ (705,405)	6	\$ (117,565)	\$ (117,568)	\$ (117,568)	\$ (117,568)	\$ (117,568)	\$ (117,568)	\$ -	\$ -	\$ -	\$ -	
2016	\$ (1,243,789)	6	\$ (207,298)	\$ (207,298)	\$ (207,298)	\$ (207,298)	\$ (207,298)	\$ -	\$ -	\$ -	\$ -	\$ -	
2015	\$ 3,830,149	5.78	\$ 668,007	\$ 668,007	\$ 668,007	\$ 519,763	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Increase (Decrease) in Pension Expense			\$ 343,144	\$ 343,141	\$ 343,141	\$ 194,897	\$ (324,866)	\$ (117,568)	\$ -	\$ -	\$ -	\$ -	

GASB 68

AMORTIZATION SCHEDULE - INVESTMENTS

			Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments									
Year Base Established	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2017	\$ (1,501,145)	5	\$ (300,229)	\$ (300,229)	\$ (300,229)	\$ (300,229)	\$ (300,229)	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 194,370	5	\$ 38,874	\$ 38,874	\$ 38,874	\$ 38,874	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 1,829,215	5	\$ 365,843	\$ 365,843	\$ 365,843	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 104,488	\$ 104,488	\$ 104,488	\$ (261,355)	\$ (300,229)	\$ -	\$ -	\$ -	\$ -	\$ -

October 11, 2017

Ms. Christina Coyle, CPA
Finance Director
Village of Glen Ellyn
535 Duane Street
Glen Ellyn, IL 60137

Re: Valuation Assumptions and Methods – Glen Ellyn Police Pension Fund

Dear Ms. Christina Coyle:

We are pleased to present to this study of the valuation assumptions and methods for the Glen Ellyn Police Pension Fund. As requested, we have provided the following:

1. Discussion of reasonable investment return assumptions and GASB long-term rate of return assumption.
2. Calculation of liabilities and contribution requirement using a 6.25% interest rate.
3. Discussion and calculation of the contribution requirement using an alternative funding model.
4. Discussion and calculation contribution requirement under various payroll growth assumptions.

The study was performed to discuss various assumptions and methods and illustrate the impact on the contribution requirement. Please note that this study may not be applicable for any other purposes.

This study has 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 reflects laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. 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.

In conducting the study, we have relied on personnel, plan design, asset information and the actuarial assumptions and methods reflected and described in the Actuarial Assumptions section of the January 1, 2017 Actuarial Valuation Report.

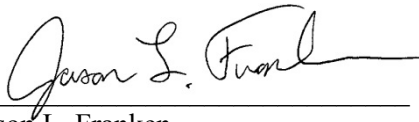
The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Glen Ellyn Police Pension Fund, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of Glen Ellyn. Thus, there is no relationship existing that might affect our capacity to prepare this study.

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
Enrolled Actuary #17-6888

JLF/lke
Enclosures

1. Discussion of reasonable investment return assumptions and GASB long-term rate of return assumption.

As part of the GASB reporting requirements, funds must include a summary of the plan's target asset allocation and expected long-term rates of return for each asset class, as provided by the plan's investment consultant. These rates of return, as reported on page 41 of the January 1, 2017 actuarial valuation report and summarized below, are reported net of inflation. Based on these rates and the target allocation, the long-term rate of return before inflation would be 4.43%. The valuation of assets and liabilities must also incorporate an inflation component. The January 1, 2017 actuarial valuation reflects assumed inflation of 2.50%. The applicable expected long-term rate of return including the inflation component would be 6.93%. Therefore, the current asset allocation and expected returns would support the current 6.75% discount rate.

Asset Class	Target Allocation	Long Term Expected Rate of Return	Weighted Average Returns
Equity Funds	40%	6.50%	2.600%
Corporate Fixed Income	15%	4.50%	0.675%
GSE Bonds	40%	3.00%	1.200%
Money Funds, CD's	<u>5%</u>	-1.00%	-0.050%
Total	100%		
Expected Rate of Return, Net of Inflation	100%		4.43%
Inflation			<u>2.50%</u>
Total Expected Rate of Return			6.93%

2. Calculation of liabilities and contribution requirement at 6.50% and 6.25%.

Exhibits 1 and 2 on the following pages show liabilities and contribution requirements using interest rates of 6.50% and 6.25%. The liabilities are shown in Exhibit 1 and corresponding contribution requirements are shown in Exhibit 2. A change to 6.50% increases liability about 3.6%. This corresponds to a decrease in the funding ratio by 2.1%. A change to 6.25% increases liability approximately 7.5% and decreases the funded ratio by 4.2%. The contribution requirements increases from \$1,817,304 in the current valuation to \$1,958,109 with an interest rate of 6.50% and to \$2,105,900 under the 6.25% scenario (See Scenarios 1 and 2; increases of 7.7% and 15.9%, respectively).

Exhibit 1 – Summary of Accrued Liability at Multiple Interest Rates

		Scenario 1	Scenario 2
	Current		
	Valuation	d=6.50%	d=6.25%
Valuation Date	1/1/2017	1/1/2017	1/1/2017
Interest Rate	6.75%	6.50%	6.25%
Total Annual Payroll	3,500,618	3,500,618	3,500,618
Payroll Under Assumed Ret. Age	3,500,618	3,500,618	3,500,618
Actuarial Value	28,704,932	28,704,932	28,704,932
Market Value	27,402,987	27,402,987	27,402,987
Total Normal Cost	915,826	984,027	1,058,163
Increase in Normal Cost		68,201	142,337
Total Actuarial Accrued Liability	48,188,078	49,939,337	51,793,377
Increase in Liability		1,751,259	3,605,299
Unfunded Actuarial Accrued Liability (UAAL)	19,483,146	21,234,405	23,088,445
Funded Ratio (AVA / AL)	59.6%	57.5%	55.4%

Attachment: Assumptions and Methods Study v2 2017-10-11 (3480 : Actuary Report 2017)

Exhibit 2 – Summary of Contribution Requirements Under Various Assumptions and Methods

		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Current					
	Valuation	d=6.50%	d=6.25%	15-Year Open Amortization	Payroll Growth = 0%	Payroll Growth = 2%
Valuation Date	1/1/2017	1/1/2017	1/1/2017	1/1/2017	1/1/2017	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>	<u>12/31/2018</u>
Interest Rate	6.75%	6.50%	6.25%	6.75%	6.75%	6.75%
Amortization Years	24	24	24	15	24	24
Payroll Growth Assumption	4.00%	4.00%	4.00%	4.00%	0.00%	2.00%
Pension Cost						
Normal Cost (with interest)	\$977,644	\$1,047,989	\$1,124,298	\$977,644	\$977,644	\$977,644
% of Total Annual Payroll	27.9	29.9	32.1	27.9	27.9	27.9
Administrative Expenses (with interest)	35,509	35,343	35,343	35,509	35,509	35,509
% of Total Annual Payroll	1.0	1.0	1.0	1.0	1.0	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability						
(as of 1/1/2017, with interest)	1,151,062	1,221,688	1,293,170	1,653,942	1,661,610	1,392,510
% of Total Annual Payroll	32.9	34.9	36.9	47.2	47.5	39.8
Total Required Contribution	2,164,215	2,305,020	2,452,811	2,667,095	2,674,763	2,405,663
% of Total Annual Payroll	61.8	65.8	70.0	76.1	76.4	68.7
Expected Member Contributions	346,911	346,911	346,911	346,911	346,911	346,911
% of Total Annual Payroll	9.9	9.9	9.9	9.9	9.9	9.9
Expected Village Contribution	1,817,304	1,958,109	2,105,900	2,320,184	2,327,852	2,058,752
% of Total Annual Payroll	51.9	55.9	60.1	66.2	66.5	58.8
Dollar Change from Current Valuation:		140,805	288,596	502,880	510,548	241,448

3. Discussion and calculation of contribution requirement using alternative funding methodology.

The contribution requirement generally consists of the normal cost, plus an amortization of the unfunded actuarial accrued liability. The funding methodology includes the actuarial funding method used to determine the normal cost and actuarial accrued liability and the assumed amortization period. Currently, the normal cost and actuarial accrued liability for the Glen Ellyn Police Pension Fund reflects the Entry Age Normal cost method. This method creates a level, predictable contribution pattern over a member's career and is the method used by over 90% of public pension funds.

The current valuation reflects the closed amortization period ending in 2040 per Statute. As of January 1, 2017, the fund has 24 years remaining. With a closed amortization, the funding period decreases with each successive valuation. As a result, the contribution requirement increases dramatically, with more volatility as the target funding year is reached.

Alternatively, a 15- year open, or rolling, amortization period would produce a more stable contribution pattern. With an open period, the amortization payment would be determined based on the same number of years each year.

The effect of the amortization period on contribution requirements is shown in Scenario 3 in Exhibit 2. Scenario 3 reflects a 15-year open amortization period. The change from the current methodology increases the required contribution by \$502,880 (27.7%).

Note, because the determination of the contribution requirements reflects a one-year period, the impact is simply the result of changing from a 24-year amortization to a 15-year amortization. The impact of the change from a closed period to an open period will be borne through a more stable contribution pattern and a steady pay-down of the unfunded accrued liability.

The graphs below illustrate the general patterns of amortization payments and unfunded liability using the current amortization method (closed period ending in 2040) and the alternate 15-year open amortization period. The different trend lines represent different payroll growth assumptions. Note, the graphs are for illustrative purposes only and do not represent projections specific to the Glen Ellyn Police plan.

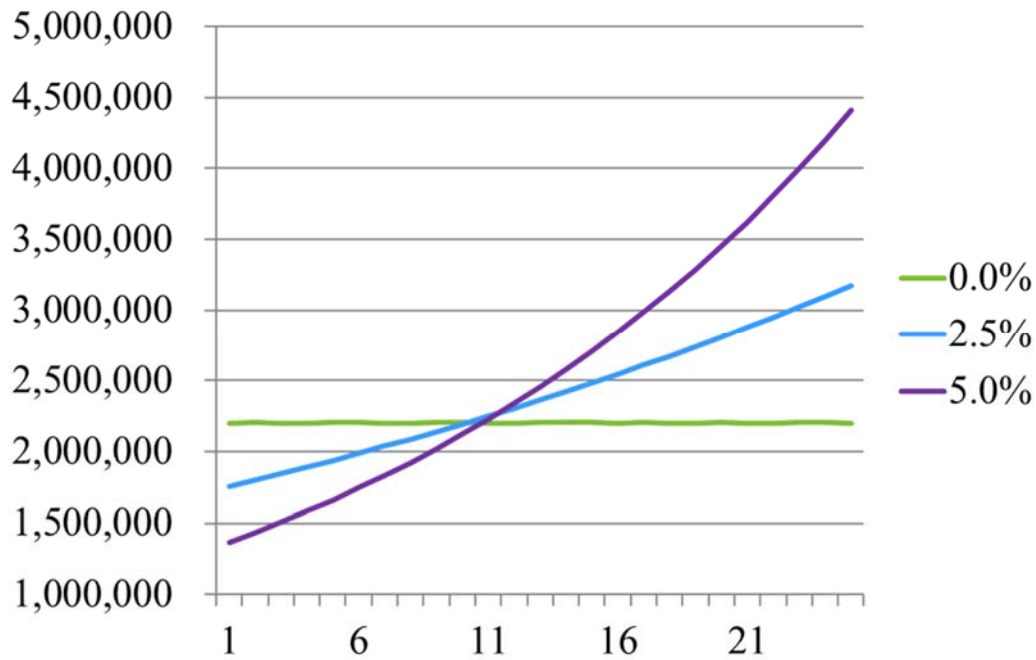
Notes regarding amortization payments (Graphs 1 and 2):

- Graph 1: Closed Amortization
 - The amortization payment amounts increase steadily over a 24-year period for all payroll growth scenarios except 0%.
 - Also note the higher variance of contribution amounts for a 5% payroll growth assumption vs. a 0% payroll growth assumption.
- Graph 2: Open Amortization
 - The amortization payment amounts over the same period decrease for all payroll growth scenarios.
 - For the open amortization, the 0% payroll growth assumption produces amortization payments that vary more significantly over the projected period.

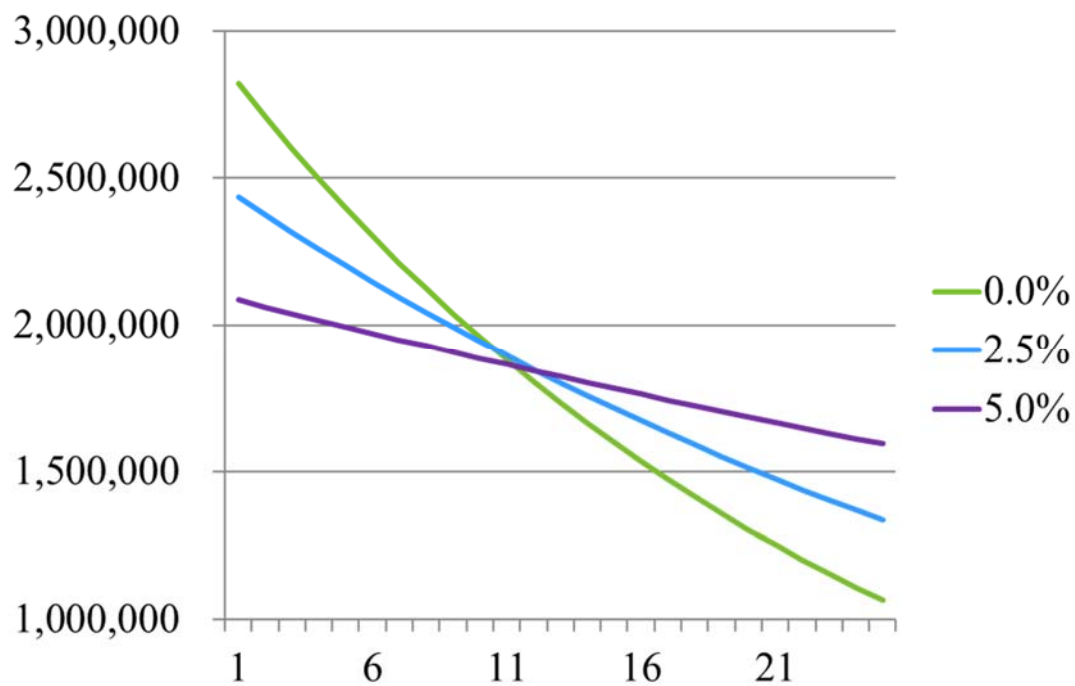
Notes regarding unfunded liabilities (Graphs 3 and 4):

- Graph 3: Closed Amortization - The unfunded liabilities increase for a time before beginning to be paid down when using higher payroll growth assumptions.
- Graph 4: Open Amortization - The unfunded liabilities begin to be paid down immediately under all payroll growth assumptions.

Graph 1: Amortization Payments - 24-Year Closed

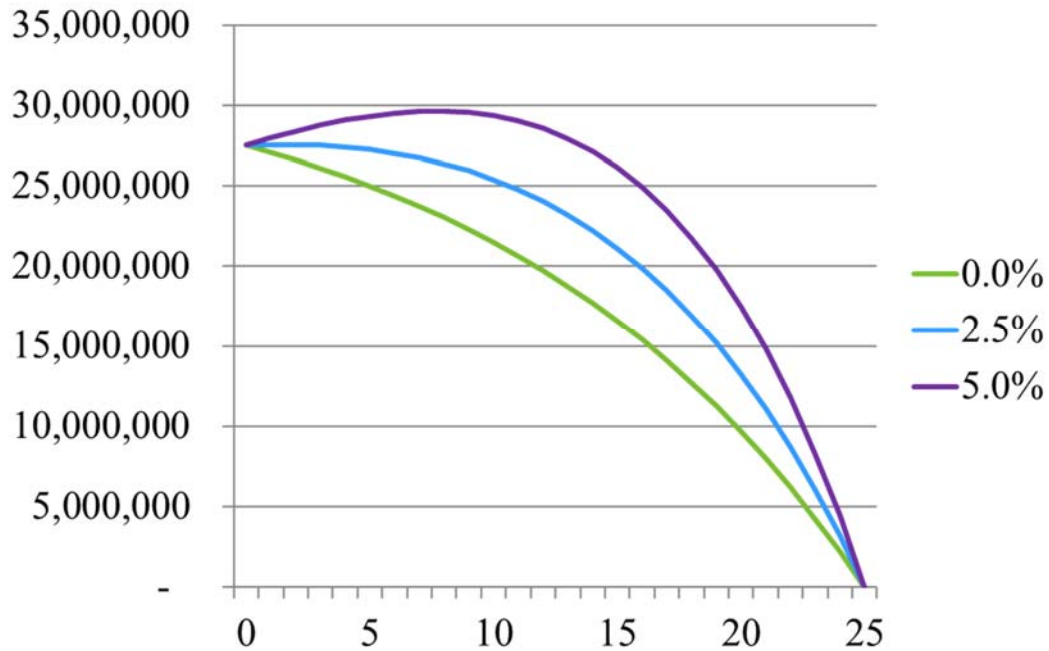


Graph 2: Amortization Payments – 15-Year Open

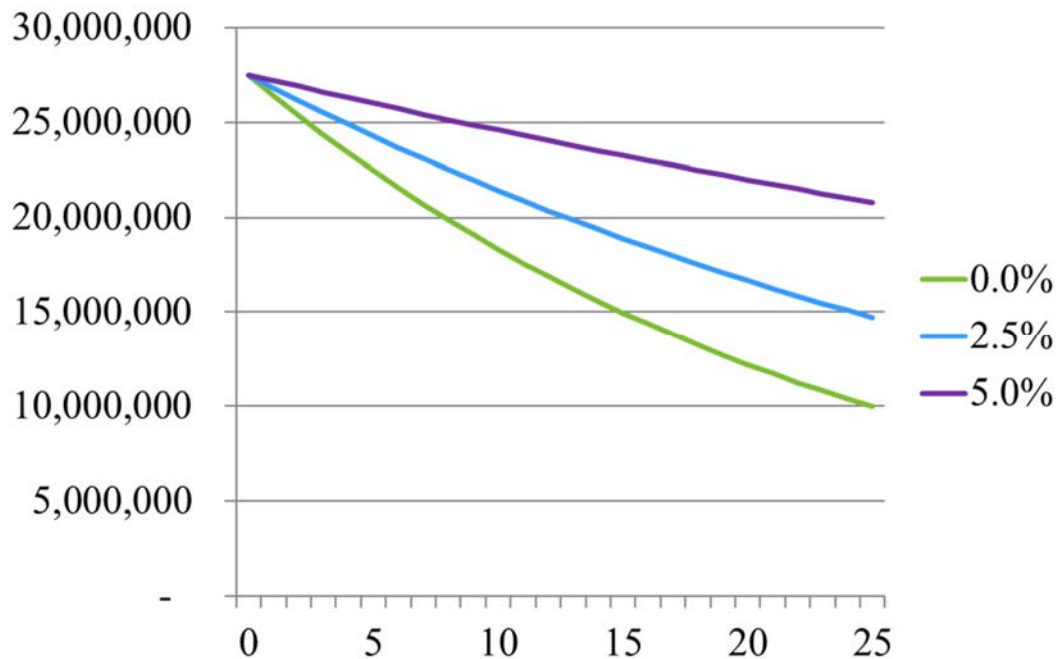


Note: graphs are for illustrative purposes only and do not represent actual values for the Village of Glen Ellyn Police Pension Fund.

Graph 3: Unfunded Liabilities – 24-Year Closed



Graph 4: Unfunded Liabilities – 15-Year Open



Note: graphs are for illustrative purposes only and do not represent actual values for the Village of Glen Ellyn Police Pension Fund.

4. Discussion and calculation contribution requirement under various payroll growth assumptions.

The payroll growth assumption reflects a prediction about how the total payroll of the fund will increase. This includes the effects of salary increases as well as any changes in the payroll due to changes in the active population through terminations, retirements and hiring. It is a distinct assumption from the salary scale assumption. The salary scale assumption reflects assumed patterns of salary increases for each individual member currently active in the valuation.

The payroll growth assumption is used in the calculation of the amortization payment.

The valuation currently reflects a payroll growth assumption of 4.00%. Scenarios 4 and 5 of Exhibit 2 show contribution requirements using a 0.00% and 2.00%, respectively. Changing from a 4.00% payroll growth assumption to a 0.00% assumption would increase the January 1, 2017 contribution requirement \$510,548 (28.1%). Whereas changing from a 4.00% payroll growth assumption to a 2.00% assumption would increase the January 1, 2017 contribution requirement \$241,448 (13.3%).

Additional observations regarding how the amortization payment and unfunded liabilities would generally change over time under various payroll growth assumptions can be seen in Graphs 1 through 4 on the previous pages:

- 24-Year Closed Amortization Period
 - The amortization amount with a 0.0% payroll growth assumption is a level dollar amount over the course of the projection.
 - The amortization amounts with a non-zero payroll growth assumption start out smaller than under the 0.0% assumption and increase over time. The higher the assumption, the more the payment will increase overtime.
 - The higher the payroll growth assumption the longer it takes to begin paying down the unfunded liability.
- 15-Year Open Amortization Period
 - The higher 5.0% payroll growth assumption produces the more stable amortization payment and decreases slightly over time. However, it also provides for a slower paying down of the unfunded liability.
 - The 0.0% payroll growth assumption produces higher initial amortization payments that decrease steadily over time. With the higher initial payments, the unfunded liability gets paid down faster and results in a lower unfunded liability at the end of the projection period.