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VILLAGE OF ORLAND HILLS
POLICE PENSION FUND

UPDATE ACTUARIAL VALUATION
AS OF MAY 1, 2013 FOR THE
FISCAL YEAR ENDING APRIL 30, 2014

November 6, 2013

ACTUARIAL STATEMENT

Tepfer Consulting Group, Ltd. was retained by the **Village of Orland Hills** to perform an independent actuarial valuation for the Police Pension Fund. This valuation is permitted under 40 ILCS 5/22, Section 503.2.

The actuarial valuation was performed for the year ended April 30, 2014 and indicates a **statutorily required contribution in accordance with 40 ILCS 5/3, Section 125 of $158,087 or 22.32% of member payroll, a recommended minimum contribution of $206,221 or 29.12% of payroll, and an Annual Required Contribution in accordance with paragraph 36f of Statement No. 25 of the Governmental Accounting Standards Board of $197,068 or 27.82% of payroll.** These contributions are net of contributions made by active member police officers during the fiscal year.

The results shown in this report have been calculated under the supervision of a qualified Actuary as defined in appropriate State statutes. All results are based upon demographic data submitted by the Police Pension Fund, financial data submitted by the Police Pension Fund, applications of actuarial assumptions, and generally accepted actuarial methods.

In our opinion, all calculations and procedures are in conformity with generally accepted actuarial principles and practices; and the results presented comply with the requirements of the applicable State statute, Actuarial Standards Board, or Statements of Governmental Accounting Standards, as applicable.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and future expectations, and represent a reasonable and adequate approach to the financing of the retirement program. The costs, actuarial liabilities and other information presented in this report, in our opinion, fully and fairly disclose the actuarial position of the plan.

I, Arthur H. Tepfer, am an Enrolled Actuary in good standing under the Employee Retirement Income Security Act of 1974. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. I certify that the results presented in this report are accurate and correct to the best of my knowledge.

TCG PUBLIC CONSULTING, LTD.

Arthur H. Tepfer, A.S.A., M.A.A.A.
Enrolled Actuary #11-02352

November 6, 2013

RESULTS OF VALUATION

The following exhibits present the results of our actuarial valuation of the **Village of Orland Hills Police Pension Fund** for the fiscal year May 1, 2013 through April 30, 2014.

Exhibit 1 indicates that the recommended minimum contribution, calculated using the Entry Age Normal Cost method (EANC), from the Village is $206,221 or 29.12% of total participating payroll. **Under the Entry Age Normal actuarial cost method selected, this percentage of payroll should remain reasonably level over the lifetime of the plan.**

Exhibit 1 also indicates that the statutory minimum contribution, calculated using the Projected Unit Credit method (PUC), from the Village is $158,087 or 22.32% of total participating payroll. **Under the Projected Unit Credit actuarial cost method selected, this percentage of payroll should increase over the lifetime of the plan.**

Exhibits 2 and 3 provide specific information used to develop the recommended minimum and statutorily required Village contribution and GASB Annual Required Contribution (ARC).. The Annual Required Contribution as of May 1, 2013 has been determined under the Governmental Accounting Standards Board Statement No. 25 and is required disclosure for the fiscal year ending April 30, 2014. The Entry Age Normal Cost and the Actuarial Accrued Liability were determined using the Entry Age Normal Cost Actuarial Cost Method.

The Entry Age Normal Cost has been determined as a level percentage of projected payroll of the active members of the group. The amortization method for the Unfunded Actuarial Accrued Liability is determined as a level percentage of payroll amount over a closed Amortization Period as permitted in Governmental Accounting Standards Board Statement No. 25.

Contribution amounts presented in this report have not been adjusted for interest to the date of payment. All values were determined on the basis of the actuarial assumptions and methods as more fully described in Appendix 1 of this report.

Exhibit 4 presents a brief description of the demographic characteristics of the current member group.

Exhibit 5 shows information relating to the pension assets.

GENERAL VALUATION RESULTS FOR FISCAL YEAR
MAY 1, 2013 THROUGH APRIL 30, 2014

Recommended Minimum Contribution

1.	Entry Age Normal Cost:	$ 163,816
2.	Unfunded Actuarial Accrued Liability (or Surplus):	1,685,643
3.	Actuarial Value of Assets:	2,998,066
4.	Annual Salaries of Active Police Officers:	684,325
5.	Recommended Minimum Contribution from the Village:	206,221
	Contribution Percentage:	29.12%*

Statutory Minimum Contribution

1.	Projected Unit Credit Normal Cost:	$ 160,161
2.	Unfunded Actuarial Accrued Liability (or Surplus):	1,396,161
3.	Actuarial Value of Assets:	2,998,066
4.	Annual Salaries of Active Police Officers:	684,325
5.	Statutory Minimum Contribution from the Village:	158,087
	Contribution Percentage:	22.32%*

* Projected for the fiscal year ending April 30, 2014.

SUMMARY OF SPECIFIC VALUATION RESULTS

	Number	Actuarial Present Value of Projected Benefits	Entry Age Normal Cost	Projected Unit Credit Normal Cost
1. Active Police Officers:	11			
Retirement Pension:		$2,537,579	$123,192	$125,552
Survivors Pension:		112,053	7,292	6,729
Disability Pension:		301,906	26,038	22,005
Withdrawal Pension:		82,447	7,294	5,875
TOTAL	11	$3,033,985	$163,816	$160,161
2. Inactive Police Officers and Survivors:				
Normal Retirees:	2	$1,364,163		
Widows (Survivors):	0	0		
Children (Survivors):	0	0		
Disabled Retirees:	3	1,507,874		
Deferred Vested:	0	0		
Terminated/Separated:	2	51,747		
TOTAL	7	$2,923,784		

SUMMARY OF SPECIFIC VALUATION RESULTS
(Continued)

		Entry Age Normal (EAN)	Projected Unit Credit (PUC)
3.	Total Actuarial Present Value of Projected Benefits:	$5,957,769	N/A
4.	Actuarial Present Value of Future Normal Costs:	1,274,060	N/A
5.	Actuarial Accrued Liability: [(3) - (4)]	4,683,709	4,394,227
6.	Actuarial Value of Assets:	2,998,066	2,998,066
7.	Unfunded Actuarial Accrued Liability (or Surplus) [(5) - (6)]	1,685,643	1,396,161
8.	Funded Ratio Percentage: [(6) ÷ (5)] x 100	64.01%	68.23%

DEVELOPMENT OF RECOMMENDED MINIMUM VILLAGE CONTRIBUTION

		Fiscal Year May 1, 2013 through April 30, 2014
1.	Entry Age Normal Cost:	$163,816
2.	Recommended Minimum Payment to Amortize 90 % of the Entry Age Normal Unfunded Accrued Liability as a level dollar amount over 27.00068 Years from May 1, 2013:	92,894
3.	Interest on (1) and (2):	17,328
4.	Credit for Surplus:	0
5.	Total Recommended Minimum Contribution for Fiscal Year 2014: [(1) + (2) + (3) + (4)], but not less than Statutorily Required	274,038
6.	Active Member Contributions (9.91% of Salaries):	67,817
7.	Net Recommended Minimum Village Contribution: [(5) - (6)]	206,221

DEVELOPMENT OF STATUTORILY REQUIRED VILLAGE CONTRIBUTION
(NOTE THAT THIS CONTRIBUTION CALCULATION IS NOT RECOMMENDED)

		Fiscal Year May 1, 2013 through April 30, 2014
1.	Projected Unit Credit Normal Cost:	$160,161
2.	Minimum Payment to Amortize 90% of the Projected Unit Credit Unfunded Accrued Liability as a level percentage of payroll over 27.00068 Years from May 1, 2013:	51,459
3.	Interest on (1) and (2):	14,284
4.	Credit for Surplus:	0
5.	Total Statutorily Required Contribution for Fiscal Year 2014: [(1) + (2) + (3) + (4)]	225,904
6.	Active Member Contributions (9.91% of Salaries):	67,817
7.	Net Statutorily Required Village Contribution: [(5) - (6)]	158,087

GASB STATEMENT NO. 25 DISCLOSURE INFORMATION

DEVELOPMENT OF THE ANNUAL REQUIRED CONTRIBUTION OF THE MUNICIPALITY

		Fiscal Year May 1, 2013 through April 30, 2014
1.	Entry Age Normal Cost	$163,816
2.	Actuarial Accrued Liability	4,683,709
3.	Actuarial Value of Assets	2,998,066
4.	Unfunded Actuarial Accrued Liability	1,685,643
5.	Payment to Amortize Unfunded Actuarial Accrued Liability Over 40 Years from Effective Date of Application of GASB 25 (24 years remaining)	101,069
6.	Total Annual Required Contribution for Fiscal Year April 30, 2014: [(1) + (5)]	264,885
7.	Active Member Contributions (9.91% of Salaries):	67,817
8.	Annual Required Contribution (ARC) payable at the beginning of the current fiscal year: [(6) - (7)]	197,068

SUMMARY OF DEMOGRAPHIC INFORMATION AS OF MAY 1, 2013

	Number	Projected Annual Salaries (Fiscal Year 2014)
Active Police Officers:	11	$684,325

	Number	Total Monthly Benefits
Normal Retirees:	2	$ 7,052
Survivors (Widows):	0	0
Survivors (Children):	0	0
Disabled Retirees:	3	6,944
Deferred Vested:	0	0
Terminated/Separated:	2	51,747 *

* Return of Contributions

The actuarial valuation was performed as of May 1, 2013 to determine contribution requirements for fiscal year 2014.

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

1.	Market Value of Assets, May 1, 2012**				$ 2,548,724
2.	Actual Income and Disbursements in prior year weighted for timing				
	Item	**Amount**		**Weight for Timing**	**Weighted Amount**
	Contributions Received During 2012-2013	248,153		50.00%	124,077
	Miscellaneous Revenue	0		50.00%	0
	Benefit Payments and Expenses Made During 2012-2013	188,308		(50.00)%	(94,154)
	Total				29,923
3.	Market Value of assets adjusted for actual income disbursements [(1) + 2(d)]				2,578,647
4.	Assumed rate of return on plan assets for the year				6.75%
5.	Expected return on assets [(3) x (4)]				174,059
6.	Market Value of Assets, May 1, 2012				2,548,724
7.	Income (less investment income) for prior year				248,153
8.	Disbursements paid in prior year				188,308
9.	Market Value of Assets, May 1, 2013				$2,674,853
10.	Actual Return [(9) + (8) – (7) – (6)]				66,284
11.	Investment Gain/(Loss) for Prior Year [(10) – (5)]				(107,774)

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Continued)

12. Market Value of Assets, May 1, 2013: $2,674,853

13. Deferred investment gains and (losses) for last 4 years:

	Plan Year Beginning	Gain/(Loss)	Percent Deferred	Deferred Amount
a)	2013**	$ (107,774)	80%	$ (86,220)
b	2012	$ (394,988)	60%	$ (236,993)
c)	2011	$ 0	40%	$ 0
d)	2010	$ 0	20%	$ 0
e)	Total	$ (502,762)		$ (323,212)

14. Actuarial value of plan assets for funding,, May 1, 2013: Item (12) less item 13(e): $ 2,998,066

15. Taxes receivable: 0

16. Actuarial value of plan assets for GASB reporting May 1, 2013 item (14) less item (15)*: $ 2,998,066

Notes: * excluding taxes receivable

* *The calculated value is determined by adjusting the market value of assets to reflect investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last five years at the rate of 20% per year.

ACTUARIAL ASSUMPTIONS

(Economic)

Investment Return
6.75% per annum, compounded annually (net of expenses).

Salary Increases
Representative values of assumed salary increases are as follows:

Age	Increase %
25	4.8611
30	2.9848
35	2.0341
40	1.5239
45	1.3083
50	1.1846
55	1.1220

An additional inflation allowance of 1.50% per year is added to the above.

Payroll Growth
It was assumed that payroll will grow 3.50% per year.

Actuarial Asset Basis
The Pension Fund previously used an actuarial value of assets for both government accounting and funding purposes. Starting with the actuarial valuation as of May 1, 2013, the actuarial value of assets recognizes future gains and losses based on a 5-year smoothed market method as prescribed by Statute.

In a 5-year smoothed market method, the current market value of assets is reduced (increased) for the current year and each of three succeeding years, by a portion of the gain/(loss) in market value during the prior year. Such gain/(loss) is determined as the excess/(deficit) of the current market value of assets over the market value of assets as of the prior year, increased to reflect interest at the actuarial rate and adjusted to reflect contributions and benefit payments during the prior year. The portion of such gain/(loss) by which the current market value of assets is reduced (increased) shall be 80% in the current year, 60% in the first succeeding year. 40% in the second succeeding year and 20% in the third succeeding year.

In the first year of application of this statutory smoothing method, the actuarial value of assets on 5/1/2012 was replaced by the market value of assets as of the same date

Additionally, in accordance with government accounting standards, the actuarial value of assets is adjusted to remove any contributions receivable on the reporting date.

Expenses
None assumed.

(Demographic)

Mortality
Active Lives
RP-2000 Combined Healthy Mortality Table (male) with blue collar adjustment and with a 200% load for participants under age 50 and 125% for participants age 50 and over. Five percent (5%) of deaths amongst active police officers are assumed to be in the performance of their duty.

Non-Active Lives
RP-2000 Combined Healthy Mortality Table (male) with blue collar adjustment and with a 200% load for participants under age 50 and 125% for participants age 50 and over.

Termination
Illustrative rates of withdrawal from the plan for reasons other than death or disability are as follows:

Age	Rate of Withdrawal
25	.0734
30	.0416
35	.0223
40	.0119
45	.0102

It is assumed that terminated police officers will not be rehired.

Disability Rates
Incidence of disability amongst police officers eligible for disability benefits:

Age	Rate
25	.0013
30	.0026
35	.0044
40	.0071
45	.0108
50	.0159

15% of disabilities amongst active police officers are assumed to be in the performance of their duty.

Retirement Rates
Retirements are assumed to occur between the ages of 50 and 69 in accordance with the following table:

Age	Rate of Retirement	Age	Rate of Retirement
50	.36	60	.22
51	.22	61	.30
52	.18	62	.39
53	.19	63	.48
54	.19	64	.57
55	.20	65	.65
56	.20	66	.74
57	.20	67	.83
58	.21	68	.91
59	.21	69	1.00

(Additional)

Marital Status
85% of police officers are assumed to be married.

Spouse's Age
Wives are assumed to be 3 years younger than their husbands.

Actuarial Cost Method:
Projected Unit Credit for statutory minimum
Entry Age Normal for recommended and GASB reporting

SUMMARY OF PRINCIPAL PLAN PROVISIONS

Definitions

Tier 1 – For Police Officers first entering Article 3 prior to January 1, 2011

Tier 2 – For Police Officers first entering Article 3 after December 31, 2010

Police Officer (3-106): Any person appointed to the police force and sworn and commissioned to perform police duties.

Persons excluded from Fund (3-109): Part-time officers, special police officer, night watchmen, traffic guards, clerks and civilian employees of the department. Also, police officers who fail to pay the required fund contributions or who elect the Self-Managed Plan option.

Creditable Service (3-110): Time served by a police officer, excluding furloughs in excess of 30 days, but including leaves of absences for illness or accident and periods of disability where no disability pension payments have been received and also including up to 3 years during which disability payments have been received provided contributions are made.

Pension (3-111)

Normal Pension Age
Tier 1 - Age 50 with 20 or more years of creditable service.

Tier 2 - Age 55 with 10 or more years of creditable service.

Normal Pension Amount
Tier 1 - 50% of the greater of the annual salary held in the year preceding retirement or the annual salary held on the last day of service, plus 2½% of such annual salary for service from 20 to 30 year (maximum 25%)].

Tier 2 - 2½% of Final Average salary for each year of service. Final Average Salary is the highest salary based on the highest consecutive 96 months of the final 120 months of service

Early Retirement at age 50 with 10 or more years of service but with a penalty of ½% for each month prior to age 55.

Annual Salary capped at $106,800 increased yearly by the lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3%.

Minimum Monthly Benefit: $1,000

Maximum Benefit Percentage: 75% of salary

Termination Retirement Pension Date
Separation of service after completion of between 8 and 20 years of creditable service.

Termination Pension Amount
Commencing at age 60, 2½% of annual salary held in the year preceding termination times years of creditable service or refund of contributions, or for persons terminating on or after July 1, 1987, 2½% of annual salary held on the last day of service times years of credible service, whichever is greater.

Pension Increase

Non-Disabled
Tier 1 - 3% increase of the original pension amount after attainment of age 55 for each year elapsed since retirement, followed by an additional 3% of the original pension amount on each January thereafter. Effective July 1, 1993, 3% of the amount of pension payable at the time of the increase including increases previously granted, rather than 3% of the originally granted pension amount.

SUMMARY OF PRINCIPAL PLAN PROVISIONS
(Continued)

Tier 2 - The lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3% increase of the original pension amount after attainment of age 60, followed by an additional 3% of the original pension amount on each January 1 thereafter.

Disabled
3% increase of the original pension amount after attainment of age 60 for each year he or she received pension payments, followed by an additional 3% of the original pension amount in each January 1 thereafter.

Pension to Survivors (3-112)

Death of Retired Member
Tier 1 - 100% of pension amount to surviving spouse (or dependent children).

Tier 2 – 66 2/3% of pension amount to surviving spouse (or dependent children), subject to the following increase: the lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3%.increase of the original pension amount after attainment of age 60, followed by an additional 3% of the original pension amount on each January 1 thereafter.

Death While in Service (Not in line of duty)
With 20 years of creditable service, the pension amount earned as of the date of death.

With between 10 and 20 years of creditable service, 50% of the salary attached to the rank for the year prior to the date of death.

Death in Line of Duty
100% of the salary attached to the rank for the last day of service year prior to date of death.

Minimum Survivor Pension
$1,000 per month to all surviving spouses.

Disability Pension - Line of Duty (3-114.1)

Eligibility
Suspension or retirement from police service due to sickness, accident or injury while on duty.

Pension
Greater of 65% of salary attached to rank at date of suspension or retirement and the retirement pension available. Minimum $1,000 per month.

Disability Pension - Not on Duty (3-114.2)

Eligibility
Suspension or retirement from police service for any cause other than while on duty.

Pension
50% of salary attached to rank at date of suspension or retirement. Minimum $1,000 per month.

Other Provisions

Marriage After Retirement (3-120)
No surviving spouse benefit available.

Refund (3-124)
At death prior to completion of 10 years of service, contributions are returned without interest to widow.

At termination with less than 20 years of service, contributions are refunded upon request.

Contributions by Police Officers (3-125.1)
Beginning January 1, 2001, 9.91% of salary including longevity, but excluding overtime pay, holiday pay, bonus pay, merit pay or other cash benefit.

GLOSSARY

Actuarial Accrued Liability
See ***Entry Age Normal Cost*** *Method and* ***Projected Unit Credit Cost*** *Method.*

Actuarial Assumptions
The economic and demographic predictions used to estimate the present value of the plan's future obligations. They include estimates of investment earnings, salary increases, mortality, withdrawal and other related items. The *Actuarial Assumptions* are used in connection with the *Actuarial Cost Method* to allocate plan costs over the working lifetimes of plan participants.

Actuarial Cost Method
The method used to allocate the projected obligations of the plan over the working lifetimes of the plan participants. Also referred to as an *Actuarial Funding Method.*

Actuarial Funding Method
See *Actuarial Cost Method*

Actuarial Gain (Loss)
The excess of the actual *Unfunded Actuarial Accrued Liability* over the expected *Unfunded Actuarial Accrued Liability* represents an *Actuarial Loss.* If the expected *Unfunded Actuarial Accrued Liability* is greater, an *Actuarial Gain* has occurred.

Actuarial Present Value
The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of *Actuarial Assumptions*.

Actuarial Value of Assets
The asset value derived by using the plan's *Asset Valuation Method.*

Asset Valuation Method
A valuation method designed to smooth random fluctuations in asset values. The objective underlying the use of an asset valuation method is to provide for the long-term stability of employer contributions.

Employee Retirement Income Security Act of 1974 (ERISA)
The primary federal legislative act establishing funding, participation, vesting, benefit accrual, reporting, and disclosure standards for pension and welfare plans.

Entry Age Normal Cost Method
One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The portion of this *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost*. The portion of this *Actuarial Present Value* not provided for at a valuation date by the *Actuarial Present Value* of future *Normal Costs* is called the *Actuarial Accrued Liability*.

Normal Cost
The portion of the *Present Value of Projected Plan Benefits* that is allocated to a particular plan year by the *Actuarial Cost Method*. See *Entry Age Normal Cost Method* for a description of the Normal Cost under the *Entry Age Normal Cost Method.* See *Projected Unit Credit Cost Method* for a description of the Normal Cost under the *Projected Unit Credit Cost Method.*

Present Value of Future Normal Costs
The present value of future normal costs determined based on the *Actuarial Cost Method* for the plan. Under the *Entry Age Normal Cost Method*, this amount is equal to the excess of the *Present Value of Projected Plan Benefits* over the sum of the *Actuarial Value of Assets* and *Unfunded Actuarial Accrued Liability.*

Present Value of Projected Plan Benefits
The present value of future plan benefits reflecting projected credited service and salaries. The present value is determined based on the plan's actuarial assumptions.

GLOSSARY
(Continued)

Projected Unit Credit Cost Method
One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated by a consistent formula to valuation years. The *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost*. The *Actuarial Present Value* of benefits allocated to all periods prior to a valuation year is called the *Actuarial Accrued Liability*.

Statement No. 25 of the Governmental Accounting Standards Board (GASB No. 25)
The accounting statement that established the standards of financial accounting and reporting for the financial statements of defined benefit pension plans.

Unfunded Actuarial Accrued Liability
The excess of the *Actuarial Accrued Liability* over the *Actuarial Value of Assets.*

NOTES