Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF DEARBORN HEIGHTS
POLICE AND FIRE RETIREMENT SYSTEM

ANNUAL ACTUARIAL VALUATION REPORT

JULY 1, 2015

TABLE OF CONTENTS

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

One Towne Square
Suite 800
Southfield, MI 48076-3723

248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

March 30, 2015

The Board of Trustees
City of Dearborn Heights Police and Fire Retirement System
Dearborn Heights, Michigan

Dear Board Members:

The results of the July 1, 2015 annual actuarial valuation of the City of Dearborn Heights Police and Fire Retirement System are presented in this report. The purpose of the valuation was to measure the System's funding progress, and to determine the employer contribution for the 2015-2016 fiscal year. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the Retirement System only in its entirety and only with the permission of the System.

The valuation was based upon information, furnished by the City, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not otherwise audited, by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. Mark Buis and Francois Pieterse are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,

Mark Buis

Mark Buis, FSA, EA, FCA, MAAA

Pieterse

Francois Pieterse, ASA, MAAA

MB/FP:bd

2035

SECTION A
VALUATION RESULTS

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions, expressed as level percents of active member payroll, that will accumulate assets during each member's working years which, together with investment income, will be sufficient to pay promised benefits after retirement.

EMPLOYER CONTRIBUTIONS

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Employer Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section C (the normal cost); and

(2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

Computed employer contributions for the fiscal year beginning July 1, 2015 are shown on page A-2.

COMPUTED CONTRIBUTIONS FOR THE FISCAL YEAR BEGINNING JULY 1, 2015

Contributions	Fiscal Year Beginning July 1, 2014	2015
Number Active [1]	74	77
Payroll	$6,016,818	$5,843,512
Projected Payroll	6,227,407	6,048,035
Total Normal Cost Rate	17.46 %	17.98 %
Employee Contribution Rate	4.93 %	4.79 %
Net Employer Normal Cost Rate	12.53 %	13.19 %
Employer Normal Cost (Dollars)	$ 780,294	$ 797,736
Amortization Payment [2]	2,042,589	1,545,878
Net City Contribution	**$2,822,883**	**$2,343,614**
Estimated Percent of Pay Contribution	45.33 %	38.75 %

(1) *Data as of one year prior to the valuation date. Liabilities and normal costs were "rolled forward" from July 1, 2014 to July 1, 2015. Estimated payroll shown above includes only active members who have not applied for DROP.*

(2) *Amortization payment based on a 20-year amortization of Unfunded Accrued Liability as of July 1, 2015 and 21-year amortization of the Unfunded Accrued Liability as of July 1, 2014.*

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY AS OF JULY 1, 2015

	June 30,	
	2014	2015
A. Accrued Liability		
1. For retirees and beneficiaries (including supplemental)*	$ 147,219,367	$ 158,613,865
2. For vested terminated members	187,584	-
3. For present active members		
a. Value of expected future benefit payments	40,097,443	34,232,225
b. Value of future normal costs	9,476,970	8,655,035
c. Active member accrued liability: (a) - (b)	30,620,473	25,577,190
4. Total accrued liability	178,027,424	184,191,055
B. Present Assets (Funding Value)	147,161,177	161,610,610
C. Unfunded Accrued Liability: (A.4) - (B)	30,866,247	22,580,445
D. Funding Ratio: (B) / (A.4)	82.7%	87.7%

* *Accrued Liability for retirees and beneficiaries includes all DROP balances and liability for current DROP members.*

DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS
JULY 1, 2015

Year Ended June 30:	2014	2015	2016	2017	2018	2019
A. Funding Value Beginning of Year	$136,938,266	$141,976,722				
B. Market Value End of Year	154,744,304	178,418,154				
C. Market Value Beginning of Year	139,675,324	154,744,304				
D. Non-Investment Net Cash Flow	(4,797,371)	(6,561,070)				
E. Investment Income						
E1. Market Total: B - C - D	19,866,351	30,234,920				
E2. Amount for Immediate Recognition (7.0%)	9,417,771	9,708,733				
E3. Amount for Phased-In Recognition: E1-E2	10,448,580	20,526,187				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20 x E3	2,089,716	4,105,237				
F2. First Prior Year	(2,505,119)	2,089,716	$ 4,105,237			
F3. Second Prior Year	5,153,830	(2,505,119)	2,089,716	$ 4,105,237		
F4. Third Prior Year	1,616,418	5,153,830	(2,505,119)	2,089,716	$ 4,105,237	
F5. Fourth Prior Year	(5,936,789)	1,616,418	5,153,828	(2,505,118)	2,089,716	$4,105,239
F6. Total Recognized Investment Gain	418,056	10,460,082	8,843,662	3,689,835	6,194,953	4,105,239
G. Preliminary Funding Value End of Year: A + D + E2 + F6	141,976,722	155,584,467				
H. Expected Contributions for Following Year	2,892,014	3,112,539				
I. Expected Disbursements for Following Year	7,485,169	7,812,800				
J. Expected Earnings for Following Year	9,777,610	10,726,404				
K. Funding Value of Assets for Following Year	147,161,177	161,610,610				

ESTIMATED MARKET RATES OF RETURN

Year Ending June 30	Contributions	Investment Earnings	Benefit Payments	Market Value End of Year	Estimated Market Rate of Return
2005	$1,879,688	$ 11,272,292	$5,160,870	$125,531,352	9.72 %
2006	1,114,548	11,920,986	5,365,056	134,403,021	10.63
2007	1,096,665	26,419,378	5,518,480	156,400,584	19.99
2008	1,141,477	(5,183,498)	6,076,854	146,281,709	(3.37)
2009	1,438,858	(31,294,419)	6,112,778	110,313,370	(21.74)
2010	1,707,471	16,787,522	6,495,106	122,313,257	15.56
2011	2,814,198	34,279,782	10,483,799	148,923,438	28.93
2012	2,858,205	(3,264,616)	8,841,703	139,675,324	(2.24)
2013	2,862,144	19,880,949	7,674,113	154,744,304	14.48
2014	**3,743,857**	**29,676,159**	**9,746,166**	**178,418,154**	**19.56**

Derivation of Actuarial Gain (Loss) for the Year Ending June 30, 2015

The actuarial gains or losses realized in the operation of the Retirement System provide an experience test. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation) and sizable year to year fluctuations are common.

(1) UAL* at start of year	$ 30,866,247
(2) Employer normal cost	1,055,987
(3) Actual employer contributions	3,743,857
(4) Interest accrual	2,066,562
(5) Expected UAL before changes	30,244,939
(6) Change due to actuarial assumptions/methods	0
(7) Change from revised benefits	0
(8) Expected UAL after changes	30,244,939
(9) Actual UAL at end of year	22,580,445
(10) Gain (loss): (8) - (9)	7,664,494

* *Unfunded accrued liability.*

RECONCILIATION OF TOTAL BONUS FUNDS
JULY 1, 2015

A.	Fund Balance Beginning of Year	$ 4,630,234
B.	Distributions During Year	521,127
C.	Unadjusted Fund Balance End of Year	4,109,107
D.	Average Balance: (A + C) x .5	4,369,672
E.	Estimated Market Rate of Return for Prior Plan Year	19.56%
F.	Accrued Interest: D x E	854,708
G.	Fund Balance End of Year with Interest	4,963,815
H.	Rate of Return in Excess of 9%, Up to 1%	1%
I.	Market Value of Total Fund as of July 1, 2014	178,418,154
J.	Excess Earnings	1,784,182
K.	Excess Earnings Allocated to Bonus Funds	391,633
L.	Total Fund Balance End of Year: G + K	5,355,448

FIREFIGHTERS BONUS FUND

	6/30/2013	6/30/2014	6/30/2015
A. Fund Balance Beginning of Year	$ 947,540	$ 852,632	$ 1,290,366
B. Distributions During Year	74,518	84,154	120,825
C. Unadjusted Fund Balance End of Year	873,022	768,478	1,169,541
D. Average Balance: (A + C) x .5	910,281	810,555	1,229,954
E. Estimated Market Rate of Return for Prior Plan Year	(2.24%)	14.48%	19.56%
F. Accrued Interest: D x E	(20,390)	117,368	240,579
G. Fund Balance End of Year with Interest	852,632	885,846	1,410,120
H. Computed Excess Earnings Contribution	-	404,520	444,030
I. Pensions Paid in Prior Plan Year	1,118,337	1,593,998	1,601,089
J. Average Monthly Pensions in Prior Plan Year: I / 12	93,195	132,833	133,424
K. Max. Fund Balance After Excess Earnings Contrib.: 10 x J	931,948	1,328,332	1,334,241
L. Maximum Excess Earnings Contribution*	-	404,520	-
M. Fund Balance End of Year: G + L	852,632	1,290,366	1,410,120

* *The Excess Earnings Contribution in any year cannot cause the Bonus Fund to have a balance in excess of 10 times the total average monthly pension benefit payments paid in the previous year to retirees covered by the Bonus Fund (see Line K).*

POLICE COMMAND BONUS FUND

	6/30/2013	6/30/2014	6/30/2015
A. Fund Balance Beginning of Year	$ 980,747	$ 869,437	$1,132,733
B. Distributions During Year	90,353	97,309	97,309
C. Unadjusted Fund Balance End of Year	890,394	772,128	1,035,424
D. Average Balance: (A + C) x .5	935,571	820,783	1,084,079
E. Estimated Market Rate of Return for Prior Plan Year	(2.24%)	14.48%	19.56%
F. Accrued Interest: D x E	(20,957)	118,849	212,046
G. Fund Balance End of Year with Interest	869,437	890,977	1,247,470
H. Computed Excess Earnings Contribution	-	418,744	526,289
I. Pensions Paid in Prior Plan Year	1,289,473	1,359,280	1,379,301
J. Average Monthly Pensions in Prior Plan Year: I / 12	107,456	113,273	114,942
K. Max. Fund Balance After Excess Earnings Contrib.: 10 x J	1,074,561	1,132,733	1,149,417
L. Maximum Excess Earnings Contribution*	-	241,756	-
M. Fund Balance End of Year: G + L	869,437	1,132,733	1,247,470

* *The Excess Earnings Contribution in any year cannot cause the Bonus Fund to have a balance in excess of 10 times the total average monthly pension benefit payments paid in the previous year to retirees covered by the Bonus Fund (see Line K).*

POLICE PATROL BONUS FUND

	6/30/2013	6/30/2014	6/30/2015
A. Fund Balance Beginning of Year	$322,546	$314,311	$351,890
B. Distributions During Year	1,021	7,398	7,398
C. Unadjusted Fund Balance End of Year	321,525	306,913	344,492
D. Average Balance: (A + C) x .5	322,036	310,612	348,191
E. Estimated Market Rate of Return for Prior Plan Year	(2.24%)	14.48%	19.56%
F. Accrued Interest: D x E	(7,214)	44,977	68,106
G. Fund Balance End of Year with Interest	314,311	351,890	412,598
H. Computed Excess Earnings Contribution	-	385,824	422,230
I. Pensions Paid in Prior Plan Year	182,347	319,687	457,635
J. Average Monthly Pensions in Prior Plan Year: I / 12	15,196	26,641	38,136
K. Max. Fund Balance After Excess Earnings Contrib.: 10 x J	151,956	266,406	381,363
L. Maximum Excess Earnings Contribution*	-	-	-
M. Fund Balance End of Year: G + L	314,311	351,890	412,598

* *The Excess Earnings Contribution in any year cannot cause the Bonus Fund to have a balance in excess of 10 times the total average monthly pension benefit payments paid in the previous year to retirees covered by the Bonus Fund (see Line K).*

PRE-2001 RETIREE BONUS FUNDS

		6/30/2013	6/30/2014	6/30/2015
A.	Fund Balance Beginning of Year	$1,917,384	$1,592,307	$1,855,245
B.	Distributions During Year	285,324	285,324	295,595
C.	Unadjusted Fund Balance End of Year	1,632,060	1,306,983	1,559,650
D.	Average Balance: (A + C) x .5	1,774,722	1,449,645	1,707,448
E.	Estimated Market Rate of Return from Prior Plan Year	(2.24%)	14.48%	19.56%
F.	Accrued Interest: D x E	(39,753)	209,909	333,977
G.	Fund Balance End of Year with Interest	1,592,307	1,516,892	1,893,627
H.	Excess Earnings	-	338,353	391,633
I.	Total Fund Balance End of Year: G + H (Max. 15 x J.2.)*	1,592,307	1,855,245	2,285,260
J.	Maximum Disbursement for Following Fiscal Year			
	1. Total Annual Benefit Payments for Prior Year Pre-7/2001 Retirees	3,641,031	3,547,144	3,537,759
	2. Maximum Total Annual Distribution: (J.1. / 12)	303,419	295,595	294,813

* *The maximum fund balance is 15 times the prior year's average monthly gross benefit distributions.*

COMMENTS, RECOMMENDATION, AND CONCLUSION

Comment 1: Contribution requirements decreased from the prior year, from $2,822,883 to $2,343,614. Decreases were primarily due to favorable investment performance.

Comment 2: The market value rate of investment return on System assets for the year ending June 30, 2014, 19.56%, was above the long term assumed level of 7.0%. However, under the asset valuation method, only a portion of investment gains and losses are recognized in any one year. As a result, the rate of return recognized in this valuation was lower than 19.56% and differences between the market value of assets and funding value of assets will be recognized in future years.

Recommendation: In October of 2014, the Society of Actuaries released a new set of mortality tables (RP 2014 Mortality Tables and MP-2014 Improvement Scale). The current mortality table used in this report is based on the RP2000 mortality study and was last updated in 2011. We recommend that the new tables be adopted for use in the July 1, 2016 valuation.

Conclusion: The City's contribution to the City of Dearborn Heights Police and Fire Retirement System for the fiscal year beginning July 1, 2015 has been computed to be $2,343,614.

SECTION B

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Summary of Benefit Provisions Evaluated or Considered as of June 30, 2015

Service Retirement

Eligibility:
Police: 25 years of service and age 50 (prior to age 50 with City approval). Effective July 1, 2009, 25 years of service.

Police Command: 25 years of service and age 50 (prior to age 50 with City approval). Effective July 1, 2009, 25 years of service.

Fire: 25 years of service and age 50 (prior to age 50 with City approval). Age 55 with 20 years of service.

Benefit Amount:
Police: 2.8% of AFC for first 25 years of service, plus 5% of AFC at 25 years of service, plus 1% of AFC for years of service in excess of 25.

Police Command: 2.8% of AFC for first 25 years of service, plus 5% of AFC at 25 years of service, plus 1.5% of AFC for years of service in excess of 25 (but not more than 30) with a maximum benefit of 82.5% of AFC.

Fire: 2.8% of AFC for first 25 years of service, plus 5% of AFC at 25 years of service, plus 1.5% of AFC for years of service in excess of 25 (but not more than 30) with a maximum benefit of 82.5% of AFC.

Compulsory Retirement

Age 65 or, if requested by the City, age 60.

Average Final Compensation (AFC)

Police: The average of five years of highest compensation in the last 10 years of service. Effective July 1, 2004, the average of three years of highest compensation in the last 10 years of service. Effective July 1, 2009, the average of three years of highest compensation in all of the years of service.

Police Command: Effective July 1, 2005, the average of three years of highest compensation in the last 10 years of service. Effective July 1, 2009, the average of three years of highest compensation in all of the years of service.

Fire: The average of three years of highest compensation in the last 10 years of service. Effective July 1, 2011, the average of three years of highest compensation in all of the years of service.

For Police and Police Command: AFC may include up to 75 unused sick days in lieu of a lump sum distribution. Effective July 1, 2009, AFC may include up to 125 unused sick days, up to 240 hours of compensatory time, and up to 244 hours of vacation time in lieu of a lump sum distribution. For those hired on or after July 1, 2011, no sick time, compensatory time, or vacation time may be included in AFC.

For Fire: AFC may include up to 25 twenty-four (24) hour unused sick days in lieu of a lump sum distribution. For those hired on or after July 1, 2011, AFC may include up to 240 hours of sick time, compensatory time, or vacation time.

Summary of Benefit Provisions Evaluated or Considered as of June 30, 2015

Normal Form of Payment

Accrued Normal Retirement Benefit payable for life, with 60% continuing to the eligible spouse upon death of participant. Alternatively, member may elect an actuarially equivalent 100% or 50% survivor benefit.

Vesting

Eligibility:
Termination of employment with 10 or more years of credited service.

Annual Benefit:
Accrued Normal Retirement benefit at date of termination payable upon application on or after the date the member would have been eligible to retire had employment continued.

Duty Disability Retirement

Eligibility:
No minimum service requirement.

Annual Benefit:
Prior to age 55, benefit is 50% of AFC.

On or after attainment of age 55, Accrued Normal Retirement Benefit is payable based on years of service including credit for the period of receipt of a disability pension.

Non-Duty Disability Retirement

Eligibility:
5 years of service.

Annual Benefit:
Accrued Normal Retirement Benefit if disability occurs after age 55. Otherwise, 1% of AFC times years of service prior to age 55, increasing to 2% of AFC times years of service at disability date upon attainment of age 55.

Pre-Retirement Duty Death Benefit

Eligibility:
No minimum service requirement.

Annual Benefit:
An amount equal to that paid under the provisions of the Workers' Compensation Act payable to the spouse, children and/or dependents. This benefit continues during the lifetime of these recipients until the remarriage of the spouse, the attainment of age 18 of a child (or marriage, if earlier), or for as long as the Board determines the need exists in the case of other dependents.

Pre-Retirement Non-Duty Death Benefit

A member with 25 or more years of service may name a beneficiary to receive the 100% survivor benefit which would have been payable had the member retired the day before death.

If a member dies with at least 15 years of service and has not elected an option, the surviving spouse receives the benefit the member would have received had the member retired the day before death, elected the 100% option and nominated the spouse as beneficiary.

If a member with less than 15 years of service dies, salary deductions with interest (not to exceed 2% per annum) will be paid to the designated beneficiary, if any, or to the estate.

Annuity Withdrawal

Fire, Police and Police Command may, at retirement, elect to receive a partial or total refund of the member's total contributions (without interest). If such refund is elected, the member's retirement allowance is reduced actuarially using factors based upon the GA83 Male Mortality Table and interest equal to the PBGC interest rate in effect on July 1, or on last preceding the retirement date.

Workers' Compensation Offset

Any benefits payable from the retirement system may be reduced for benefits paid under the Workers' Compensation Act.

Member Contributions

Police – 5% of salary.
Police Command – 3% of salary.
Fire – 5% of salary, effective August 1, 2007.

Deferred Retirement Option Plan (DROP)

Eligibility – *Effective January 11, 2007 for Police Officers and August 21, 2007 for Firefighters:* Eligible for Normal Retirement or 25 years of service.

Benefit – 100% of the member's accrued benefit at the date of DROP is deposited into an account that receives 5% compound interest annually while the member remains an active member. No member contributions are made while in the DROP and no additional retirement benefits are earned. Employer contributions will include payroll of DROP participants and are not credited to members' accounts. Members may remain in the DROP for a maximum of 60 months (Effective July 1, 2009, 84 months for Police and Police Command) at which time they begin receiving the benefit accrued to the date of DROP into the program and elect an option of distribution of the DROP account (full lump sum, partial lump sum, rollover, lifetime annuity, leave funds in system).

After an employee attains thirty years of service, the allowed DROP participation period will be reduced by one month for every month beyond 30 years of service.

POLICE AND FIRE ACTIVE MEMBERS AS OF JULY 1, 2014
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service on Valuation Date						Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	No.	Valuation Payroll
20-24	3						3	$ 103,848
25-29	9						9	343,494
30-34	9	5	2				16	1,057,740
35-39	2	6	6	1			15	1,191,424
40-44	2	1	4	6	3		16	1,256,410
45-49				8	5		13	1,205,862
50-54				1	2	1	4	387,704
55-59				1			1	99,423
Totals	**25**	**12**	**12**	**17**	**10**	**1**	**77**	**$ 5,645,905**

While not used in the financial computations, the following group averages are computed and shown because of their general interest. The amounts shown above do not include DROP members.

Age:	37.8 years
Service:	10.9 years
Annual Pay:	$73,323

POLICE AND FIRE ACTIVE MEMBERS
THREE-YEAR SUMMARY

	As of July 1st of the Indicated Year		
	2014	**2013***	**2012***
Active Members	77	74	66
Valuation Payroll	$ 5,645,905	$ 6,016,818	$ 5,668,970
Average Compensation	$ 73,323	$ 81,308	$ 85,893
Average Age (yrs.)	37.8	40.2	40.7
Average Service (yrs.)	10.9	14.6	15.3

* *Includes one year of pay growth at 3.5% and an additional year of service accrual.*

POLICE AND FIRE
INACTIVE MEMBERS AS OF JULY 1, 2014
TABULATED BY ATTAINED AGE

Attained Age	No.	Estimated Deferred Allowance
	0	$0
Totals	**0**	**$0**

POLICE AND FIRE
DROP MEMBERS AS OF JULY 1, 2014
TABULATED BY ATTAINED AGE

	Totals	
Attained Age	No.	DROP Payment
43	1	$ 86,890
45	7	578,862
46	1	77,465
47	3	256,364
48	7	532,314
49	6	484,772
50	4	301,664
51	6	457,880
52	1	77,170
53	3	249,574
55	2	180,460
56	1	84,884
Totals	**42**	**$3,368,299**

Average Age at DROP: 46.3 years
Average Age as of 2014: 49.5 years

POLICE AND FIRE
RETIREES AND BENEFICIARIES AS OF JULY 1, 2014
TABULATED BY ATTAINED AGE

Attained Age	Totals No.	Totals Annual Allowances
40	1	$ 34,623
41	1	17,711
45	2	107,703
46	4	172,395
47	2	118,604
48	5	334,127
49	1	66,247
50	2	95,451
51	5	246,099
52	3	138,391
53	5	261,888
54	4	237,259
55	7	432,129
56	2	21,287
57	1	6,024
58	7	514,372
59	5	221,257
60	11	509,695
61	5	167,523
62	6	278,221
63	4	202,711
64	6	280,106
65	10	404,829
66	7	228,729
67	6	174,251
68	3	115,087
69	5	149,088
70	10	296,372
71	5	154,573
72	14	442,059
73	5	130,810
74	10	258,360
75	7	191,934
76	8	209,111
77	2	34,643
78	5	126,337
79	5	94,404
80 and over	14	272,914
Totals	**206**	**$7,812,800**

Average Age at Retirement: 48.3 years
Average Age as of 2014: 65.9 years

SECTION C
ASSUMPTIONS AND METHODS

ACTUARIAL ASSUMPTIONS

The rate of investment return (net of expenses) used was 7.0% per year, compounded annually. This assumption is used to discount the value of future payments.

The rates of salary increase used are in accordance with the following table.

This assumption is used to project a member's current salary over his or her future working lifetime.

Sample Ages	Base (Economic)	Merit and Longevtity	Annual Rate of Salary Increase
20	3.50 %	1.00 %	4.50 %
25	3.50	1.00	4.50
30	3.50	1.00	4.50
35	3.50	0.75	4.25
40	3.50	0.50	4.00
45	3.50	0.25	3.75
50	3.50	0.00	3.50
55	3.50	0.00	3.50
60	3.50	0.00	3.50

The mortality table used was the RP-2000 Healthy Life Mortality Table for males and females, set forward 1 year for men, adjusted for mortality improvements to 2020.

Sample	Actuarial Present Value of $1 Monthly for Life		Future Life Expectancy (Years)	
Ages	**Men**	**Women**	**Men**	**Women**
50	$151.07	$154.61	31.81	34.63
55	142.18	146.80	27.11	29.88
60	131.07	137.08	22.58	25.31
65	117.93	125.53	18.35	21.02
70	102.88	112.39	14.46	17.06
75	85.61	97.66	10.91	13.47
80	67.54	81.35	7.86	10.23

The mortality assumption is used to measure the probabilities of members dying before retirement and the probabilities of each pension payment being made after retirement.

The rates of retirement are used to measure the probability of eligible members retiring during a given year and are shown below.

In the first year that an individual is eligible to participate in the DROP, 90% of such members were assumed to elect the DROP and 10% are assumed to retire (not elect the DROP). Following DROP election and participation, members are assumed to retire from active employment and commence benefits with the following probabilities:

Retirement Eligibility	Police and Police Command	Fire
1st year eligible	15 %	10 %
2nd year eligible	10	5
3rd year eligible	10	5
4th year eligible	10	5
5th year eligible	50	100
6th year eligible	75	100
7th year eligible	100	100

Rates of separation from active membership are used to measure the probabilities of members remaining in employment. These rates do not apply to members eligible to retire and do not include separation on account of death or disability.

Sample Ages	Percent of Active Members Separating within the Next Year	
	Male	Female
20	14.9 %	24.9 %
25	9.9	14.9
30	6.9	9.9
35	4.9	6.9
40	2.8	4.9
45	1.6	2.8
50	0.4	1.6
55	0.0	0.4
60	0.0	0.0
65	0.0	0.0

Sample rates of becoming disabled are as follows:

Sample Ages	Percent of Active Members Becoming Disabled within the Next Year	
	Male	Female
25	0.17 %	0.12 %
30	0.22	0.21
35	0.30	0.31
40	0.44	0.46
45	0.66	0.68
50	1.09	1.11
55	1.88	1.80
60	2.72	1.90

ACTUARIAL COST METHOD

An actuarial cost method is a procedure for allocating the actuarial present value of pension plan benefits to time periods. The method used for this valuation is known as the individual entry-age actuarial cost method and has the following characteristics.

(i) The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate to the value of the member's pension at time of retirement.

(ii) Each annual normal cost is a constant percentage of the member's year by year projected compensation.

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation between the entry age of the member and the assumed exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting accrued assets from the actuarial accrued liability determines the unfunded actuarial accrued liability.

ASSET VALUATION METHOD

Valuation Assets used for funding purposes are derived as follows: prior year valuation assets are increased by contribution and expected investment income and reduced by refunds, benefit payments and expenses. To this amount is added 20% of the difference between expected and actual investment income for each of the previous five years.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	90% of participants are assumed to be married for purposes of death benefits. In each case the male was assumed to be 3 years older than the female.
Pay Increase Timing:	Beginning of year.
Decrement Timing:	Beginning of year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age of nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of the benefit payable.
Active Member Group Size:	The number of active members was assumed to remain constant.
Adjustments:	Age and Service Retirement Present Values were adjusted by 5% to account for the additional amount included in the AFC due to unused sick time for all groups and an additional 5% for uniform allowance, compensatory time and vacation time for Police Patrol and Police Command groups.

SECTION D
FINANCIAL REPORTING

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date July 1,	Actuarial Value of Assets (1)	Actuarial Accrued Liability (AAL) (2)	Unfunded AAL (UAAL) (2 – 1)	Funded Ratio (Percent) (1)/(2)	Covered Payroll (3)	UAAL as a Percentage of Covered Payroll
1995	$ 54,093,743	$ 58,375,893	$ 4,282,150	92.66	$ 6,590,311	64.98 %
1996	58,355,463	63,154,576	4,799,113	92.40	7,195,633	66.69
1997	64,112,309	67,138,675	3,026,366	95.49	7,487,978	40.42
1998	70,723,406	71,783,620	1,060,214	98.52	7,923,628	13.38
1999	78,903,103	76,216,724	(2,686,379)	103.52	8,500,123	(31.60)
2000	86,178,705	79,968,280	(6,210,425)	107.77	8,706,539	(71.33)
2001	91,879,860	84,734,677	(7,145,183)	108.43	9,112,748	(78.41)
2002	98,858,861	90,946,241	(7,912,620)	108.70	9,651,854	(81.98)
2003	92,930,343	91,993,127	(937,216)	101.02	9,650,586	(9.71)
2004	98,965,335	94,151,970	(4,813,365)	105.11	9,406,277	(51.17)
2005	113,426,227	103,382,549	(10,043,678)	109.72	9,693,623	(103.61)
2006	122,582,685	108,484,408	(14,098,277)	113.00	9,818,415	(143.59)
2007	131,679,408	114,822,112	(16,857,296)	114.68	10,421,556	(161.75)
2008	139,106,447	120,395,854	(18,710,593)	115.54	10,344,194	(180.88)
2009	143,886,459	130,566,593	(13,319,866)	110.20	10,401,824	(128.05)
2010	137,586,060	136,780,310	(805,750)	100.59	10,512,186	(7.66)
2011	139,124,010	153,317,413	14,193,403	90.74	8,126,002	174.67
2012	140,277,195	165,132,570	24,855,375	84.95	6,378,919	389.65
2013	141,640,217	170,563,168	28,922,951	83.04	5,668,970	510.20
2014	147,161,177	178,027,424	30,866,247	82.66	6,016,818	513.00
2015	**161,610,610**	**184,191,055**	**22,580,445**	**87.74**	**5,645,905**	**399.94**

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Beginning July 1,	Computed Dollar Contribution	Actual Annual Contribution
2004	$ 878,998	$ 878,998
2005	301,308	301,308
2006	0	0
2007	192,943	192,943
2008	348,426	348,426
2009	653,785	653,785
2010	1,754,731	1,754,731
2011	2,025,227	2,025,227
2012	2,368,862	2,368,862
2013	2,585,170	2,585,170
2014	2,822,883	N/A
2015	2,343,614	N/A

This information is presented in draft form for review by the City's auditor. Please let us know if there are any items the auditor changes so that we may maintain consistency with the City's financial statements.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Valuation Date	July 1, 2015
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level Percent of Pay, 20 years, Closed
Asset Valuation Method	Market value with 5-year smoothing of gains and losses
Principal Actuarial Assumptions:	
Net Investment Return	7.0%
Projected Salary Increases	3.5% to 4.5%
Payroll growth	3.5%
Cost-of-living adjustments	Provided through Bonus Fund

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
One Towne Square
Suite 800
Southfield, MI 48076-3723
248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

March 30, 2015

Mr. John J. Riley II
City Treasurer
City of Dearborn Heights
6045 Fenton
Dearborn Heights, Michigan 48127

Dear Mr. Riley:

Enclosed are 20 copies of the July 1, 2015 actuarial valuation report. We look forward to meeting with you and the Retirement Board to discuss the valuation report.

If you have any questions, please call me.

Sincerely,

Mark Buis

Mark Buis

MB:bd
Enclosures