

PC-202C
Commonwealth of Pennsylvania
Public Employee Retirement Commission
P. O. Box 1429
Harrisburg, PA 17105-1429

County : ALL

Class : 2

Mun : Pittsburgh

Code # : 02-261-2

Plan Type : F

2013

**ACT 205 ACTUARIAL VALUATION REPORT:
FIRE PENSION PLAN
WITH DEFINED BENEFITS**

FILING DEADLINE: March 31, 2014

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Special Instructions: Where a Deferred Retirement Option Plan (DROP) is operated for members of the pension plan, the participating pension plan members should be reported as retired members in Section IV and Schedule A.

Section I - Identification of Municipality

INSTRUCTIONS: Print or type requested information in the space provided.

Note: In Part A, home rule municipalities should check the box and enter the number of their previous municipal classification.

Item No.

A. Type of Municipality 2 (1)
(Check appropriate box below and enter corresponding number.)

- ☒ City (2)
☐ Borough (3)
☐ Town (3)

- ☐ Township (1st) (4)
☐ Township (2nd) (5)
☐ Authority (6)
☐ COG/Regional Entity (7)

B. Name of Municipality CITY OF PITTSBURGH (2)

C. Name of County ALLEGHENY (3)

Section II - Identification of Pension Plan and Specification of Valuation Date

INSTRUCTIONS: Print or type requested information in space provided.

A. Name of Pension Plan CITY OF PITTSBURGH FIREMEN'S RELIEF AND PENSION FUND (4)

B. Date on which pension plan was established 05 / 25 / 1933 (5)
Mo. Da. Yr.

C. Valuation date for demographic, financial and actuarial data 01 / 01 / 2013 (6)
(Use 1/1/2013 unless otherwise specified in plan document prior to 12/31/1982.) Mo. Da. Yr.

Section III - General Information

INSTRUCTIONS: Respond to each question by entering "yes" or "no" in the space provided.

		Item No.
A. Is Social Security coverage provided for the active members of the pension plan identified in Section II?	NO	(8)
B. Do any active members of the pension plan identified in Section II participate in any other pension plan or plans that receive funding from the municipality?	NO	(9)
C. Do any of the active members of the pension plan identified in Section II work on average less than 35 hours per week?	NO	(10)
D. Does the pension plan identified in Section II include active members who are not employees of the municipality identified in Section I?	NO	(11)
E. Do retired members of the pension plan identified in Section II receive any benefit, such as insurance coverage, that is provided wholly or partially by the municipality and not funded through the pension plan identified in Section II?	YES	(12)

Section IV - Demographic Data as of JANUARY 1, 2013 (Valuation Date)

INSTRUCTIONS: Enter valuation date specified in Section II, Part C, in the space provided above and on each page of Schedule A. Print or type information requested in Part A in the space provided. Enter zero, if applicable. Do not leave blanks or refer to the schedules or exhibits. Complete Schedule A. Then complete the certification in Part B below.

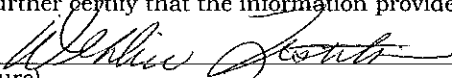
A. Summary of Demographic Data

1. Number of active members on valuation date	584	(13)
2. Total annual payroll of active members as of above valuation date	\$ 52,375,212	(14)
3. Number of members terminated with vested or deferred benefit on valuation date	1	(15)
4. As of valuation date, number of persons receiving:		
a. Retirement benefits		
i. As normal retired members	555	(16i)
ii. As DROP participants	0	(16ii)
iii. Total	555	(16iii)
b. Disability benefits	230	(17)
c. Surviving spouse benefits	325	(18)
d. Surviving child benefits	1	(19)
e. Total (a+b+c+d)	1,111	(20)
5. As of valuation date, total annual benefits payable as:		
a. Retirement benefits		
i. To normal retired members	\$ 19,314,656	(21i)
ii. To DROP participants	\$ 0	(21ii)
iii. Total	\$ 19,314,656	(21iii)
b. Disability benefits	\$ 6,276,663	(22)
c. Surviving spouse benefits	\$ 2,834,709	(23)
d. Surviving child benefits	\$ 5,735	(24)
e. Total (a+b+c+d)	\$ 28,431,763	(25)

B. Certification of Demographic Data

I hereby certify that I have prepared and reviewed the demographic data entered in Part A of this section and in Schedule A; and I further certify that the information provided is to the best of my knowledge true and accurate.

(Signature)



(Name)

Debbie Lestitian

(Date)

3/28/14

(Title)

Acting Executive Director

(Telephone)

(412) 255-8955

Acting Finance Director

Section V - Financial Data as of JANUARY 1, 2013 (Valuation Date)

INSTRUCTIONS: Enter valuation date specified in Section II, Part C, in the space provided above and on each page of Schedule B. Print or type the data requested in Part A, rounded to the nearest dollar, in the space provided. Enter zero, if applicable. Do not leave blanks or refer to exhibits. Complete Schedule B. Then complete the certification in Part B below.

Note: The asset values provided in Part A of this section and in Schedule B must include all the assets of the pension plan regardless of custodial arrangements involving administrative agencies.

A. Summary of Financial Data

	Item No.
1. MARKET VALUE OF ASSETS, <i>excluding the cash surrender values of individual insurance and annuity contracts</i> , on the above valuation date	\$ <u>199,706,235</u> (26)
2. CASH SURRENDER VALUE of individual insurance and annuity contracts on the above valuation date or nearest anniversary date	\$ <u>0</u> (27)
3. TOTAL FUND ASSETS (1 + 2) on the above valuation date	\$ <u>199,706,235</u> (28)
4. TOTAL EARNINGS, including investment income, realized capital gains/losses, unrealized capital gains/losses, and dividends on insurance/annuity contracts for the year ended on the above valuation date	\$ <u>21,130,222</u> (29)
5. MEMBER CONTRIBUTIONS to plan for the year ended on the above valuation date (Include employee contributions treated as employer contributions pursuant to Section 414(h) of the Internal Revenue Code.)	\$ <u>3,704,596</u> (30)
6. MUNICIPAL CONTRIBUTIONS to plan for the year ended on valuation date (6a + 6b)	\$ <u>15,563,313</u> (31)
a. State Aid Portion \$ <u>6,203,826</u> b. Local Portion \$ <u>9,359,487</u>	
7. ACTUAL MUNICIPAL DEPOSIT for the year ended on the valuation date (6 + 7a - 7b)	\$ <u>15,563,313</u> (32)
a. Contributions Receivable at beginning of year \$ <u>0</u> b. Contributions Receivable at End of year \$ <u>0</u> ¹	
8. TOTAL MONTHLY BENEFIT PAYMENTS for the year ended on the above valuation date	\$ <u>28,667,452</u> (33)
9. ANNUAL INSURANCE OR ANNUITY PREMIUM PAYMENTS, <i>excluding single premium annuity purchases</i> , for the year ended on the above valuation date	\$ <u>0</u> (34)
10. ADMINISTRATIVE EXPENSES paid from the assets of the pension plan for the year ended on the above valuation date	\$ <u>643,537</u> (35)
11. MINIMUM MUNICIPAL OBLIGATION to the pension plan for the year ended on the valuation date (Enter amount reported in Item 12 or Item 14 on page 12, whichever is applicable.)	\$ <u>11,272,650</u> (36)

¹ A funding deficiency occurs when the actual municipal deposit is less than the Minimum Municipal Obligation. If a funding deficiency has been partially or fully rectified, complete Schedule B, Section V and Section VI, and include the specified documentation.

B. Certification of Financial Data

I hereby certify that I have prepared and reviewed the financial data entered in Part A of this section and in Schedule B; and I further certify that the information provided is to the best of my knowledge true and accurate.

Debbie Lestitian
(Signature)

3/28/14
(Date)

Debbie Lestitian
(Name)

Acting Executive Director (412) 255-8955
(Title) Acting Finance Director (Telephone)

Section VI - Actuarial Data as of JANUARY 1, 2013 (Valuation Date)

INSTRUCTIONS: Enter valuation date specified in Section II, Part C, in the space provided above and on each page of Schedule C. Complete Part A and Part B below in accordance with the instructions provided. Complete Schedule C. Then complete the certification in Part C below.

Note: The asset values provided in Part A of this section must include all the assets of the pension plan regardless of custodial arrangements involving administrative agencies.

A. Summary of Actuarial Data

INSTRUCTIONS: Print or type the data requested, rounded to the nearest dollar, in the space provided. Enter zero or negative values, if applicable. Do not leave blanks or refer to exhibits.

	Item No.
1. ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS as of valuation date	\$ <u>481,227,765</u> (40)
2. ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COST as of valuation date	\$ <u>85,904,161</u> (41)
3. ACTUARIAL ACCRUED LIABILITY as of valuation date	\$ <u>395,323,604</u> (42)
4. ACTUARIAL VALUE OF ASSETS, including aggregate insurance/annuity cash surrender value, as of valuation date	\$ <u>224,050,549</u> (43)
5. UNFUNDED ACTUARIAL ACCRUED LIABILITY as of valuation date (+ or -)	\$ <u>171,273,055</u> (44)
6. NORMAL COST (employer & employee), <i>excluding administrative expenses</i> , payable as of valuation date for the plan year beginning on valuation date:	
a. As a dollar amount	\$ <u>7,466,493</u> (45)
b. As a percentage of total annual payroll	<u>14.256</u> % (46)
7. AVERAGE ADMINISTRATIVE EXPENSES payable from the assets of the pension plan in the prior plan year and the plan year beginning on valuation date ¹	\$ <u>628,503</u> (47)
8. ANNUAL COVERED PAYROLL of active members as of valuation date	\$ <u>52,375,212</u> (48)
9. AMORTIZATION CONTRIBUTIONS	
a. For amortization of initial unfunded actuarial accrued liability established 1/1/85. ²	
1) Amortization period remaining (years)	<u>25</u> (49)
2) Amortization contribution calculated as a level dollar amount for the plan year beginning on valuation date	\$ <u>4,333,255</u> (50)
3) Amortization contribution calculated as a level percentage of payroll for the plan year beginning on valuation date ³	\$ <u>N/A</u> (51)
b. For amortization of all increases or decreases in unfunded actuarial accrued liability occurring after 1/1/85 or the initial UAL's establishment. ²	
1) Aggregated amortization period (years)	<u>15</u> (52)
2) Aggregated amortization contribution calculated as a level dollar amount for the plan year beginning on valuation date	\$ <u>6,891,171</u> (53)
c. Modified Total Amortization Requirement ⁴	\$ <u>N/A</u> (54)
d. Total Amortization Requirement (Item 50 + Item 53 or Item 51 + Item 53 or Item 54, whichever is applicable)	\$ <u>11,224,426</u> (55)
10. ACTUAL OR ESTIMATED MEMBER CONTRIBUTIONS to the pension plan for the year beginning on the valuation date	\$ <u>3,704,596</u> (56)

Section VI - Actuarial Data (Cont'd)

INSTRUCTIONS: If insurance/annuity contracts are maintained pre-retirement to fund a portion of the benefits provided by the pension plan at retirement, enter the information requested in Items 57-67 below. Otherwise, do not complete Items 57-67.

Note: For Item 67, include "side fund" amortization contribution for the initial UAL established 1/1/85 and the aggregated "side fund" amortization contribution for increases and decreases in the UAL occurring after 1/1/85. Attach a facsimile of Schedule C, Section II, to support the entry for Item 67.

A. Summary of Actuarial Data (Cont'd)

	Item No.
11. ACTUARIAL PRESENT VALUE OF INSURANCE/ANNUITY CONTRACT CASH VALUES AT RETIREMENT as of valuation date	(57)
12. ADJUSTED ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS as of valuation date (Item 40 - Item 57)	(58)
13. ADJUSTED ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COST as of valuation date	(59)
14. ADJUSTED ACTUARIAL ACCRUED LIABILITY as of valuation date	(60)
15. ACTUARIAL VALUE OF ASSETS, excluding aggregate insurance/annuity cash surrender value, as of valuation date	(61)
16. ADJUSTED UNFUNDED ACTUARIAL ACCRUED LIABILITY as of valuation date (+ or -)	(62)
17. ADJUSTED NORMAL COST, excluding administrative expenses, payable as of valuation date for the plan year beginning on valuation date	(63)
18. ANNUAL INSURANCE/ANNUITY PREMIUM PAYMENTS for the plan year beginning on valuation date	(64)
19. GROSS ADJUSTED NORMAL COST for the plan year beginning on valuation date (Item 63 + Item 64):	
a. As a dollar amount	(65)
b. As a percentage of payroll	(66)
20. ADJUSTED AMORTIZATION CONTRIBUTION calculated as a level dollar amount for the plan year beginning on valuation date	(67)

¹ The average of the prior year's administrative expenses and the estimated administrative expenses for the current year. If the amount entered exceeds the prior year's expenses (Section V, Part A, Item 35) by more than 10%, attach an exhibit detailing the administrative expenses for the year beginning on the valuation date.

² Initial unfunded actuarial accrued liability may be established later than 1/1/1985 if coincidental with the establishment of the pension plan or with the initiation of a new amortization schedule authorized by Act 82 of 1998.

³ Enter N/A unless municipality has been certified to use level percentage of payroll amortization pursuant to Section 607 of Act 205.

⁴ If the municipality has formally elected to apply the limit on the amortization contribution under section 202(b)(4), enter the modified total amortization requirement calculated as the amount required to amortize the unfunded actuarial accrued liability over ten years. Otherwise, enter N/A.

Section VI - Actuarial Data (Cont'd)**B. Additional Information**

INSTRUCTIONS: Print or type the information requested in the space provided. Enter "N/A" if applicable. Do not leave blanks or refer to exhibits.

1. MAJOR ECONOMIC ACTUARIAL ASSUMPTIONS Item No.

- a. Interest or investment earnings rate 7.50 % (68)
- b. Salary projection 5.75 % (69)

2. ADMINISTRATIVE ARRANGEMENT (Enter corresponding number. ⇨) 1 (70)

- | | |
|---|---|
| <input type="checkbox"/> 1 - Self administered fund | <input type="checkbox"/> 4 - Insured deposit administration contract |
| <input type="checkbox"/> 2 - Bank or other trust fund | <input type="checkbox"/> 5 - Immediate participation guarantee contract |
| <input type="checkbox"/> 3 - Split-funded plan - Insurance plus side fund | <input type="checkbox"/> 6 - Pennsylvania Municipal Retirement System |
| <input type="checkbox"/> 7 - Other (Describe) _____ | |

3. COST FOR ACTUARIAL SERVICES to be billed or charged for completing this reporting form and for preparing the associated actuarial valuation report \$ 12,217 (71)

C. Certification of Actuarial Data

I hereby certify that I have prepared and reviewed the actuarial data and information entered in Part A and Part B of this section and in Schedule C and that the data and information provided is to the best of my knowledge true and accurate.

I further certify that I have five years of actuarial experience with public pension plans and that I am (Check appropriate box.)

☒ a member of the American Academy of Actuaries enrolled in 2008.

☒ an enrolled actuary pursuant to the Employee Retirement Income Security Act of 1974, No. 11-6163.

Note to Actuary: Complete Schedule D, Actuary's Review of Required Exhibits and Data, found on Page 19.

David Stimpson
(Signature)

3-28-2014
(Date)

DAVID H. STIMPSON, E.A., F.C.A., M.A.A.A
(Name)

(412) 394-9660 (72)
(Telephone)

MOCKENHAUPT BENEFITS GROUP
(Name of Firm)

(73)

David.Stimpson@MBGbenefits.com
(E-mail Address)


(74)

Section VII - Certification of Report by the Chief Administrative Officer of the Municipality

INSTRUCTIONS: Ensure that Schedule A, Schedule B and Schedule C are completed and attached to the reporting form. Review the information entered in each section of the reporting form and the information provided in the schedules. Then complete the certification below and return the original reporting form to the Commission. **Retain a copy of the completed reporting form for audit compliance purposes.**

Note: To be completed by the person officially designated as the Chief Administrative Officer of the municipality under Act 205 of 1984.

I hereby certify that to the best of my knowledge the information provided in this report is complete, true and accurate.


(Signature of Chief Administrative Officer)

3/28/14
(Date)

Debbie Lestitian
(Name of Chief Administrative Officer) (Print or type)

(412) 255-8955
(Telephone)

debbie.lestitian@pittsburghpa.gov ✓
(E-Mail Address) (Optional)

Inquiries regarding completion or submission of the reporting form may be directed to:

**Commonwealth of Pennsylvania
Public Employee Retirement Commission**

Mailing Address
P. O. Box 1429
Harrisburg, PA 17105-1429

Phone: (717) 783-6100
Fax: (717) 787-9531
E-mail: perc@state.pa.us

SCHEDULE A - Demographic Data as of JANUARY 1, **2013**
 Page 1 of 2 (Valuation Date)

CITY OF PITTSBURGH
 (Municipality)

ALLEGHENY
 (County)

INSTRUCTIONS: Print or type the requested information in the space provided. For totals, enter zero if applicable. Refer to attachments or exhibits only to explain or support data entered on the schedule. If you need additional space, make a photocopy of this page and insert behind this page.

☐ Check here if there are no retired members.

☐ Check here if there are no members terminated with vesting.

**PART I - DEMOGRAPHIC DATA FOR
INDIVIDUAL RETIRED MEMBERS**

Member	Current Age	Monthly Pension Payable	Retire-ment Age	Type *	Years of Service	Gender (M/F)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

**PART II - DEMOGRAPHIC DATA FOR
INDIVIDUAL MEMBERS TERMINATED WITH VESTING**

Member	Current Age	Monthly Pension Payable	Retire-ment Age	Years of Service	Gender (M/F)
1	50	3,551	50		M
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

* Type: Blank = Member, S = Spouse/Child, D = Disability, DR = DROP

SCHEDULE A - Demographic Data as of JANUARY 1, 2013 CITY OF PITTSBURGH ALLEGHENY
 Page 2 of 2 (Valuation Date) (Municipality) (County)

Part III - Active Member Data ¹ - ☐ Check here if there are no active members.

Member	Age	Years of Service	Total Annual Payroll	Gender (M/F)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Member	Age	Years of Service	Total Annual Payroll	Gender (M/F)
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				

¹ Plans with active members of 50 or more must e-mail an Excel spreadsheet containing the specified active member data to the Commission at pero@state.pa.us. When submitting your data, specify the municipality, county, and plan type (police, fire, or nonuniformed) in the first line of the spreadsheet.

SCHEDULE B - Financial Data as of JANUARY 1, 2013 **CITY OF PITTSBURGH** **ALLEGHENY**
Page 1 of 5 (Valuation Date) (Municipality) (County)

INSTRUCTIONS: Print or type the requested information in the space provided. Round to the nearest dollar. Enter zero, if applicable. Refer to attachments or exhibits only to explain or support data entered on the schedule.

Section I - Statement of Net Assets Available for Benefits

	As of the Above Valuation Date	As of the Previous Year (2012)	Item No.
A. Assets:			
1. Cash	\$	\$	(1)
2. Accrued Interest and Dividends Receivable	\$	\$	(2)
3. Receivables (Specify)			
Employee Contributions	\$	\$	(3)
Employer Contributions	\$	\$	(4)
State Aid	\$	\$	(5)
Other	\$	\$	(6)
.....	\$	\$	(7)
4. Investments at Market Value (Specify)			
Money Markets and Other Cash Investments	\$	\$	(8)
Mutual Funds	\$	\$	(9)
Stocks and Other Equities	\$	\$	(10)
Bonds and Other Fixed Income	\$	\$	(11)
5. Other Assets (Specify)			
Insurance Contract/Group Annuity	\$	\$	(12)
Other <u>PARTICIPATION IN AGGREGATE TRUST</u>	\$ 199,706,235	\$ 188,485,691	(13)
.....	\$	\$	(14)
6. Insurance/Annuity Cash Surrender Value (Individual Policies) ..	\$	\$	(15)
Total Fund Assets	\$ 199,706,235	\$ 188,485,691	(16)
B. Current Liabilities:			
1. Accounts Payable and Accrued Administrative Expenses	\$	\$	(17)
2. Other Current Liabilities			
Benefits Payable	\$	\$	(18)
Other	\$	\$	(19)
.....	\$	\$	(20)
Total Current Liabilities	\$	\$	(21)
C. Net Assets Available for Benefits (Market Value) as of valuation date ..	\$ 199,706,235	\$ 188,485,691	(22)

SCHEDULE B - Financial Data as of	JANUARY 1	, 2013	CITY OF PITTSBURGH	ALLEGHENY
Page 2 of 5	(Valuation Date)		(Municipality)	(County)

Section II - Statement of Revenues, Expenses and Change in Fund Assets.

	As of the Above Valuation Date	As of the Previous Year (2012)	Item No.
A. Net Assets at Beginning of Year (Market Value)	\$ 188,485,691	\$ 188,721,694	(1)
B. Gross Revenues (unreduced by any fees, costs or expenses):			
Member Contributions	\$ 3,704,596	\$ 3,562,550	(2)
Total Municipal Contributions			
a. State Aid Portion	\$ 6,203,826	\$ 9,106,716	(3)
b. Local Portion	\$ 9,359,487	\$ 8,440,820	(4)
Interest Earnings/Dividend Income	\$ 1,574,983	\$ 2,027,250	(5)
Realized/Unrealized Capital Gains/Losses	\$ 19,555,239	\$ 3,186,938	(6)
Other Revenues or Credits (Specify)			
TRANSFER FROM WILKINSBURG ..	\$ 0	\$ 1,903,004	(7)
PASS THROUGH CONTRIBUTIONS ..	\$ 315,400	\$ 361,800	(8)
.....	\$ 0	\$ 0	(9)
Total Revenues	\$ 40,713,531	\$ 28,589,078	(10)
C. Expenses			
Total Benefit Payments (Lump-Sum)	\$ 0	\$ 0	(11)
Total Benefit Payments (Monthly)	\$ 28,352,052	\$ 27,797,457	(12)
Annuity Purchases (Lump-Sum)	\$ 0	\$ 0	(13)
Insurance Premiums	\$ 0	\$ 0	(14)
Refund of Member Contributions	\$ 181,999	\$ 41,469	(15)
Lump-Sum Drop Account Payments	\$ 0	\$ 0	(16)
Actuarial Costs	\$ 29,300	\$ 40,234	(17)
Investment Costs	\$ 233,416	\$ 118,558	(18)
All Other Expenses or Debits (Specify)			
PASS THROUGH PAYMENTS ..	\$ 315,400	\$ 361,800	(19)
OTHER ADMINISTRATIVE EXPENSES ..	\$ 380,821	\$ 465,563	(20)
Total Expenses	\$ 29,492,988	\$ 28,825,081	(21)
D. Net Assets at End of Year (Market Value)	\$ 199,706,235	\$ 188,485,691	(22)

SCHEDULE B - Financial Data as of**JANUARY 1**, 2013**CITY OF PITTSBURGH****ALLEGHENY**

Page 3 of 5

(Valuation Date)

(Municipality)

(County)

Section III - Presentation of the Determination of the Minimum Municipal Obligation (MMO) for the Year Ended on Valuation Date.

INSTRUCTIONS: Enter data reflecting the minimum municipal obligation developed in the fall of 2011 for the plan year beginning in 2012.
[Section 302(C) of Act 205 of 1984.]

Item No.

A. IDENTIFICATION OF THE ACTUARIAL VALUATION REPORT (AVR) used to determine funding requirement. (Enter valuation date - 2011 or earlier year.)		01 / 01 / 2011 Mo. Da. Yr.	(1)
B. DEVELOPMENT OF MINIMUM MUNICIPAL OBLIGATION under Section 302(c) of Act 205 of 1984. (If the asset value exceeded the present value of future benefits in the actuarial valuation report identified in Part A, check the box, skip Item 2 through Item 10, and complete Item 11 and Item 12, if applicable.) <input type="checkbox"/>			
1. TOTAL ANNUAL PAYROLL projected for year ended on valuation date	\$	49,461,083	(2)
2. TOTAL NORMAL COST, expressed as a percentage of total annual payroll, derived from actuarial valuation report identified in item 1		11.849%	(3)
3. TOTAL PROJECTED NORMAL COST for year ended on valuation date (Item 2 x Item 3)	\$	5,860,644	(4)
4. TOTAL AMORTIZATION REQUIREMENT for year ended on valuation date ¹	\$	7,971,360	(5)
5. TOTAL ADMINISTRATIVE EXPENSES projected for year ended on valuation date	\$	791,377	(6)
6. TOTAL FINANCIAL REQUIREMENTS (Item 4 + Item 5 + Item 6)	\$	14,623,381	(7)
7. MEMBER CONTRIBUTIONS projected for year ended on valuation date	\$	3,350,731	(8)
8. FUNDING ADJUSTMENT determined pursuant to Section 302(c)(2) of Act 205 of 1984 for year ended on valuation date ²	\$	0	(9)
9. MINIMUM MUNICIPAL OBLIGATION (MMO) for year ended on valuation date (Item 7 - Item 8 - Item 9)	\$	11,272,650	(10)
10. DELINQUENT MMO PLUS INTEREST from plan year beginning in 2011	\$	0	(11)
11. TOTAL MMO for year ended on valuation date (Item 10 + Item 11)	\$	11,272,650	(12)
C. AMORTIZATION CONTRIBUTION REDUCTION (Complete if Amortization Contribution Reduction was elected pursuant to Section 607(H.1) of Act 205.)			
1. REDUCTION OF AMORTIZATION CONTRIBUTION (Maximum is 25% of Item 5.)	\$		(13)
2. RE-CALCULATED MMO for year ended on valuation date (Item 12 - Item 13)	\$		(14)

¹ If the amount entered differs from the amount reported in the actuarial valuation report identified in Item 1 above due to the scheduled termination of one or more amortization bases established pursuant to Chapter 2 of Act 205, attach an exhibit reconciling the difference.

² Funding adjustment is applicable where assets exceed actuarial accrued liability and is equal to 10% of the amount of the excess.

SCHEDULE B - Financial Data as of JANUARY 1, **2013** CITY OF PITTSBURGH ALLEGHENY
 Page 4 of 5 (Valuation Date) (Municipality) (County)

Section IV - Presentation of the Determination of the Minimum Municipal Obligation (MMO) for the Plan Year Beginning in 2011.

INSTRUCTIONS: Enter data reflecting the minimum municipal obligation developed in the fall of 2010 for the plan year beginning in 2011.
 [Section 302(C) of Act 205 of 1984.]

		Item No.
A. IDENTIFICATION OF THE ACTUARIAL VALUATION REPORT (AVR)		
used to determine funding requirement. (Enter valuation date - 2009 or earlier year.)	01 / 01 / 2009 Mo. Da. Yr.	(1)
B. DEVELOPMENT OF MINIMUM MUNICIPAL OBLIGATION under Section 302(c) of Act 205 of 1984. (If the asset value exceeded the present value of future benefits in the actuarial valuation report identified in Part A, check the box, skip Item 2 through Item 10, and complete Item 11 and Item 12, if applicable.) <input type="checkbox"/>		
1. TOTAL ANNUAL PAYROLL projected for year ended on valuation date	\$ 49,828,501	(2)
2. TOTAL NORMAL COST, expressed as a percentage of total annual payroll, derived from actuarial valuation report identified in Item 1	12.080 %	(3)
3. TOTAL PROJECTED NORMAL COST for year ended on valuation date (Item 2 x Item 3)	\$ 6,019,283	(4)
4. TOTAL AMORTIZATION REQUIREMENT for year ended on valuation date ¹	\$ 16,021,969	(5)
5. TOTAL ADMINISTRATIVE EXPENSES projected for year ended on valuation date	\$ 1,195,884	(6)
6. TOTAL FINANCIAL REQUIREMENTS (Item 4 + Item 5 + Item 6)	\$ 23,237,136	(7)
7. MEMBER CONTRIBUTIONS projected for year ended on valuation date	\$ 3,495,387	(8)
8. FUNDING ADJUSTMENT determined pursuant to Section 302(c)(2) of Act 205 of 1984 for year ended on valuation date ²	\$ 0	(9)
9. MINIMUM MUNICIPAL OBLIGATION (MMO) for year ended on valuation date (Item 7 - Item 8 - Item 9)	\$ 19,741,749	(10)
10. DELINQUENT MMO PLUS INTEREST from plan year beginning in 2010	\$ 0	(11)
11. TOTAL MMO for year ended on valuation date (Item 10 + Item 11)	\$ 19,741,749	(12)
C. AMORTIZATION CONTRIBUTION REDUCTION (Complete if Amortization Contribution Reduction was elected pursuant to Section 607(H.1) of Act 205.)		
1. REDUCTION OF AMORTIZATION CONTRIBUTION (Maximum is 25% of Item 5.)	\$ 4,005,492	(13)
2. RE-CALCULATED MMO for year ended on valuation date (Item 12 - Item 13)	\$ 15,736,257	(14)

¹ If the amount entered differs from the amount reported in the actuarial valuation report identified in Item 1 above due to the scheduled termination of one or more amortization bases established pursuant to Chapter 2 of Act 205, attach an exhibit reconciling the difference.

² Funding adjustment is applicable where assets exceed actuarial accrued liability and is equal to 10% of the amount of the excess.

Section V - Documentation of Compliance with Act 205 Funding Standard Requirements

INSTRUCTIONS: 1. Complete the information below if a funding deficiency has been partially or fully rectified and provide the following:

- a. Documentation showing the development of the pension plan's municipal funding requirements (Minimum Municipal Obligation (MMO)) pursuant to Section 302 and, if applicable, Section 607(H.1) of Act 205 for the years reported.
- b. Signature in Section VI below by the approved actuary and the municipality's chief administrative officer certifying, subject to the penalties of 18 Pa. C. S. §4904 relating to unsworn falsification to authorities, that the accompanying documentation is accurate and that the funding requirements prescribed by Section 302, and if applicable Section 607(H.1), of Act 205 are satisfied.

2. Documentation showing the actual municipal contributions to the pension plan for the years reported, including copies of specific supporting documents such as the development of the MMO, bank statements, evidence of deposit, and cancelled checks should be maintained by the municipality for audit and other purposes.

	2012	2013	Item No.
A) Prior Year's Deficiency ¹ for each year indicated	\$	\$	(1)
B) Interest Rate	%	%	(2)
C) Monthly Interest Rate (B ÷ 12)	%	%	(3)
D) Amount Due on Payment Date (A x (1 + C) ^{Time in months})	\$	\$	(4)
E) Minimum Municipal Obligation	\$	\$	(5)
F) Total Minimum Municipal Obligation (D + E)	\$	\$	(6)
G) Amount Deposited ²	\$	\$	(7)
H) Funding Deficiency	\$	\$	(8)

¹ Development of the MMOs must include the reported funding deficiency with interest.

² Must equal amount deposited as shown on supporting documentation maintained by the municipality.

Section VI - Certification of Compliance with Act 205 Funding Standard Requirements

(Signature of Actuary)

(Date)

(Signature of Chief Administrative Officer)

(Date)

(Name of Actuary)

(Name of Chief Administrative Officer)

(Actuarial Firm)

SCHEDULE C - Actuarial Data as of JANUARY 1, **2013** CITY OF PITTSBURGH ALLEGHENY
 Page 1 of 4 (Valuation Date) (Municipality) (County)

INSTRUCTIONS: Complete all items using the entry age normal actuarial cost method. Enter zero, if applicable, and round to the nearest dollar. Refer to attachments or exhibits **only** to explain or support data entered on the schedule.

Section I - Presentation of Actuarial Present Value of Future Benefits as of the Valuation Date

Item No.

A. Actuarial Present Values for Active Members

(Enter values for ancillary benefits only if valued using EAN.)

1. Retirement Benefits	\$ 165,868,799	(1)
2. Disability Benefits	\$ 49,125,243	(2)
3. Survivor Benefits	\$ 0	(3)
4. Liability for the Refund of Member Contributions	\$ 889,595	(4)
5. Vested Withdrawal Benefits	\$ 476,069	(5)
6. Other (Specify) <u>PRE & POST-RET. DEATH BENEFITS</u>	\$ 2,800,677	(6)
Subtotal for Active Members	\$ 219,160,383	(7)

B. Actuarial Present Values for Non-Active Members and Benefit Recipients

1. Deferred Vested Benefits	\$ 520,141	(8)
2. Retirement Benefits	\$ 182,241,070	(9)
3. Disability Benefits	\$ 58,674,208	(10)
4. Survivor Benefits	\$ 20,631,963	(11)
5. Total Monies Accumulated in DROP Participant Accounts	\$ 0	(12)
6. Other (Specify) _____	\$ 0	(13)
Subtotal for Non-Active Members and Benefit Recipients	\$ 262,067,382	(14)

C. Total Actuarial Present Value of Future Benefits (Without adjustments)	\$ 481,227,765	(15)
D. Total Adjustments for Ancillary Benefits Valued through Approximation Techniques ¹	\$ 0	(16)
E. Total Actuarial Present Value of Future Benefits (Item 15 + Item 16)	\$ 481,227,765	(17)

¹ A signed statement and accompanying documentation, as specified in Section 203.5 of the Act 205 regulations, must be attached if adjustments are made.

SCHEDULE C - Actuarial Data as of JANUARY 1, 2013 CITY OF PITTSBURGH ALLEGHENY
Page 2 of 4 (Valuation Date) (Municipality) (County)

Section II - Unfunded Actuarial Accrued Liability and Amortization Contributions as of Valuation Date

Part A - Initial Unfunded Actuarial Accrued Liability.

Amount of Initial Liability	Date Established	Target Date	Original Amortization Period	Remaining Balance	Level Dollar Amortization Contribution ¹
\$ 73,627,561	1998	2037	40	\$ 107,661,060	\$ 4,333,255 (1)

Part B - Changes in Unfunded Actuarial Accrued Liability since the last actuarial valuation report prepared and submitted under Act 205.²

Source	Amount of Liability	Date Established	Target Date	Amortization Period	Amortization Contribution
Benefit Plan Modification	N/A	N/A	N/A	N/A	N/A
Actuarial Assumption Modification	41,016,905	2013	2027	15	4,322,504
Actuarial Losses (-) or Gains (-)	-723,617 ³	2013	2032	20	-66,029
Post-Retirement Adjustments	N/A	N/A	N/A	N/A	N/A
Total	\$ 40,293,288	XXXXXX	XXXXXX	XXXXXX	\$ 4,256,475 (2)

Part C - Aggregation of Changes in Unfunded Actuarial Accrued Liability since initially established in 1985.

Description	Remaining Balance of Aggregated Liability	Date of Aggregation	Aggregated Target Date	Aggregated Amortization Period	Aggregated Amortization Contribution
Aggregation of all prior changes (exclude changes in Section B)	\$ 23,318,707	2011	2026	14	\$ 2,634,696 (3)
Aggregation of all changes (include changes in Section B)	\$ 63,611,995	Current Valuation Date	2027	15	\$ 6,891,171 (4)

¹ Level percentage of future payroll amortization contribution should be entered where the municipality has previously implemented that amortization approach pursuant to Section 607 of Act 205.

² Attach exhibit specifying the individual factors contributing to each change in unfunded actuarial accrued liability summarized in Part B.

³ Attach exhibit of the actuarial valuation report showing development of expected unfunded actuarial accrued liability.

SCHEDULE C - Actuarial Data as of JANUARY 1, 2013 CITY OF PITTSBURGH ALLEGHENY
Page 3 of 4 (Valuation Date) (Municipality) (County)

Section III - Presentation of Actuarial Assumptions and Methods

A. Actuarial Assumptions

SEE ATTACHED

1. Interest Rate -
2. Salary Projection -
3. Disability Rates -
4. Termination Rates -
5. Mortality -
6. Retirement Age -
7. Asset Smoothing -
8. Other (Specify) -
9. Other (Specify) -

B. Actuarial Cost Method (Specify)

SCHEDULE C - Actuarial Data as of JANUARY 1, 2013 CITY OF PITTSBURGH ALLEGHENY
 Page 4 of 4 (Valuation Date) (Municipality) (County)

Section IV - Presentation of Benefit Plan Provisions

A. Eligibility Requirements

SEE ATTACHED

Normal Retirement _____

Early Retirement _____

Vesting _____

B. Retirement Benefit (Describe fully including Social Security offsets, service increments, etc. and include period over which final average salary is determined if benefit salary related.)

C. Survivor Benefit (Describe fully including indication of whether benefit is automatic or provided at the election of individual members.)

D. Disability Benefit (Describe fully including offset provisions, service requirements, extent of disability, etc.)

Service Related

Non-Service Related

E. Post Retirement Adjustments (Describe fully including frequency of adjustment, basis for adjustment, minimum/maximum adjustments, etc.)

F. DROP Benefit (Specify and describe.)

G. Other Benefit (Specify and describe.)

H. Member Contributions

Amount or Rate _____

Interest Rate Credited to Member Contributions _____%

SCHEDULE D - Exhibits for**CITY OF PITTSBURGH****ALLEGHENY**

Page 1 of 1

(Municipality)

(County)

INSTRUCTIONS: Review all items below. Exhibits are to be placed immediately after this review and do not need to be on their own separate pages.

Section I - Actuary's Review of Required Exhibits and Data

- A. The exhibit of **administrative expenses** specified in footnote 1 on page 5 is attached and labeled as Exhibit I, if applicable.

Actuary's Initials

- B. The **active member data** specified in footnote 1 on page 9 has been submitted, if required.

DHS (with REGS)

Actuary's Initials

- C. The exhibit of the minimum municipal obligation **amortization requirements** specified in footnote 1 on page 12 and in footnote 1 on page 13 is attached and labeled as Exhibit II, if applicable.

Actuary's Initials

- D. The exhibit relating to the **changes in the unfunded actuarial accrued liability** specified in footnote 2 on page 16 is attached and labeled as Exhibit III, if applicable.

DHS (in AVR)

Actuary's Initials

- E. The exhibit showing the development of the **expected unfunded actuarial accrued liability** specified in footnote 3 on page 16 is attached and labeled as Exhibit IV, if applicable.

DHS (in AVR)

Actuary's Initials

Attachment to Schedule C, Section III

Actuarial Basis of Valuation

Actuarial Assumptions: January 1, 2013

Economic

Interest Rate	7.50% increase per year
Salary Projection	5.75% increase per year
	Merit Increase 2.75 percent increase per year
	Inflation 3.0 percent increase per year

Employee Characteristics

Mortality Pittsburgh	RP-2000 Mortality Tables, with adjustments to reflect Pension Plan mortality experience as confirmed by experience studies. The adjusted rates are based on the following:
Active Participants	RP-2000 Employee Mortality Rates projected with scale AA.
Retired/Term Vested Participants	RP-2000 Healthy Annuitant Mortality Rates adjusted by blue collar ratios, set forward one year and projected from 2005 with scale AA.
Disability Retirees	Same as Retired, but with ages set forward four years.
Surviving Beneficiaries	RP-2000 Healthy Annuitant Rates adjusted by ratios of female beneficiary experience to overall female RP-2000 Healthy Annuitant Mortality Rates (Appendix D of <i>RP-2000 Mortality Tables Report</i>), set forward one year, and projected from 2005 with scale AA

Sample Base Rates (Rounded):

Age	Active Male Participant	Male Regular Retiree	Male Disabled Retiree	Male Beneficiary
45	0.15%	0.19%	0.52%	0.20%
55	0.30%	0.77%	0.97%	0.86%
65	0.76%	1.82%	2.44%	1.91%
75	N/A	4.77%	6.41%	4.51%
85	N/A	12.64%	16.64%	12.81%

Age	Active Female Participant	Female Regular Retiree	Female Disabled Retiree	Female Beneficiary
45	0.11%	0.15%	0.22%	0.15%
55	0.25%	0.32%	0.55%	0.55%
65	0.58%	1.25%	1.68%	1.47%
75	N/A	3.38%	4.44%	3.31%
85	N/A	9.23%	12.48%	9.01%

Attachment to Schedule C, Section III - Continued

Withdrawal

Sample rates:

Age	Rate
20	0.82%
25	0.79%
30	0.76%
35	0.70%
40	0.53%
45	0.27%
50	0.06%
55	0.00%

Disablement

Sample rates:

Age	Male	Female
30	0.14%	0.17%
40	0.33%	0.64%
50	1.00%	1.26%
60	2.97%	2.27%

Retirement Age

Percentage of employees eligible for retirement who retire at each age:

Age	Percentage
50	8
51	3
52	3
53	3
54	3
55	3
56	3
57	3
58	9
59	9
60	9
61	9
62	18
63	18
64	18
65	100

Attachment to Schedule C, Section III - Continued

Duty Related Mortality	20% of deaths in active service are assumed to be duty related.
Duty Related Disability	50% of disabilities occurring during employment are assumed to occur in the line of duty.
Percentage Married	80% of male participants and 65% of female participants.
Spouse Age	Female spouses are assumed to be two years younger than male spouses.

Actuarial Value of Assets

Description of Method	The Actuarial Value of Assets is determined by a Tabular Smoothing Method which takes the Actuarial Value of Assets from the prior valuation report and brings it forward using a specified interest rate. The Actuarial Value of assets in the prior report, contributions by year and annual disbursements are each credited with interest at a rate of one percent less than the prior valuation's interest rate assumption. The resulting value is further subject to a minimum of 80% and a maximum of 120% of the market value of assets.
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Attachment to Schedule C, Section IV

Summary of Plan Provisions

Plan Year

- ▼ Twelve-month period beginning January 1 and ending December 31

Plan Established

- ▼ May 25, 1933

Principal Definitions

Employee

- ▼ Any uniformed employee of the City of Pittsburgh Bureau of Fire

Retirement Benefit Commencement Date

- ▼ Assumed to be the first day of the month coincident with or next following eligibility for and election to retire

Service Increment

- ▼ Additional monthly benefit of \$20 for each completed year of service in excess of 20 years, excluding years of service after age 65

For members hired on or after January 1, 2005: Additional monthly benefit of \$10 for each completed year of service in excess of 20 years, excluding years of service after age 65 (Payable only after age 50)

Service

- ▼ Completed years of service calculated from date of hire through date of retirement or severance, plus periods of service purchased
- ▼ Monthly pension benefit payable for life

Normal Form of Payment

Participation Requirements

Entry Date

- ▼ Date of hire

Compensation

- ▼ Total wages excluding sick buyback and Dependent Partner Benefit pay.
For members hired on or after January 1, 2005: total wages excluding longevity, sick buyback and Dependent Partner Benefit pay.

Average Compensation

- ▼ Compensation averaged over the 36-month period prior to retirement or severance

Normal Retirement

Eligibility

Members hired before January 1, 1976

Monthly Benefit

- ▼ Later of age 50 or completion of 20 years of service
- ▼ Completion of 20 years of service
- ▼ Equal to 50% of average compensation plus service increment, if any

Late Retirement

Eligibility

Amount of Benefit

- ▼ Employment beyond normal retirement
- ▼ Normal retirement benefit based upon average compensation as calculated at actual retirement

Attachment to Schedule C, Section IV - Continued

Disability

Eligibility

- ▼ Permanent disablement in line of duty *or*
- ▼ Permanent disablement (not in line of duty) after completing 10 years of service

Benefit Amount

- ▼ 50% of earnings in year prior to disablement

Benefit Commencement Date

- ▼ First day of calendar month following determination of disablement *and*
- ▼ Continuing for the duration of disability prior to normal retirement date and life thereafter

Vesting

- ▼ If member completed 20 years of service, may collect normal retirement benefit based on average compensation at termination (providing terminated member continues contributions at rate in effect at termination)
- ▼ Benefit deferred to age 50

Death Benefits

Accidental Death

- ▼ Benefit plus return of member's accumulated contributions
- ▼ Benefit plus workers' compensation or other payments is equal to 50% of member's wages at death
- ▼ Payable for 500 weeks or until surviving spouse dies or remarries
- ▼ If no surviving spouse or unmarried children, dependent parents receive payments

- Children Benefits

(No surviving spouse/ or discontinued payment to surviving spouse)

- ▼ Unmarried child under age 18 receives payments equal to 25% of payments to spouse
- ▼ Total payments to one family may not exceed 50% of member's wages at time of death
- ▼ \$60 minimum monthly payment if only one child
- ▼ If maximum amount payable, divide equally among entitled children
- ▼ Payments terminate when child reaches age 18, dies, marries
- ▼ Payments may continue indefinitely to incompetent child

Death Prior to Retirement

Active service/ not accidental

- ▼ If so elected, spouse paid benefit equal to 50% of pension member would have received if retired on date of death
- ▼ No election, accumulated contributions without interest paid to beneficiary or estate

Attachment to Schedule C, Section IV - Continued

Death After Retirement

- ▼ If so elected, spouse paid benefit equal to 50% of pension member was receiving
- ▼ No surviving spouse, benefit may be paid to surviving children or dependent parents

Lump Sum Benefit

- ▼ Lump sum of \$1,200 to beneficiary of any deceased member

Employee Contributions

- ▼ 6.5 percent of compensation plus \$1 per month
- ▼ \$1 per month ceases at age 65
- ▼ If surviving spouse benefit elected, add 1/2 percent of compensation

Exhibit I

Actuarial Data as of JANUARY, 2013. For: FIREMEN'S of CITY OF PITTSBURGH in ALLEGHENY
 Page 1 of 6 (Valuation Date) (Pension Plan) (Municipality) (County)

GENERAL INSTRUCTIONS: This exhibit is to be completed only if the municipality is reporting the issuance of bonds (or notes, if applicable) to fund unfunded actuarial accrued liabilities under section 404 of Act 205 of 1984. The bond issue proceeds contributed to the pension plan are amortization contributions allocated under section 202(b)(4) of Act 205. The data requested in this exhibit is modified to reflect the funded status of the pension plan that would exist had the bond issue proceeds not been contributed to the pension plan. Print or type the data requested, rounded to the nearest dollar, in the space provided. Enter zero or negative values, if applicable. Do not leave blanks or refer to exhibits.

NOTE: Earnings on bond issue proceeds contributed to the pension fund are to be calculated proportionately, based on the ratio of borrowed assets to total assets at market value as of the valuation date occurring on or immediately following the date on which the borrowed assets were contributed.

A. Summary of Modified Actuarial Data

- | | | | |
|---|----|-------------|-------|
| 1. ACTUARIAL ACCRUED LIABILITY as of valuation date..... | \$ | 395,323,604 | (E1) |
| (Enter amount reported in item 42 on page 4 of the reporting form.) | | | |
| 2. TOTAL FUND ASSETS | | | |
| a. Market Value of Assets ¹ | \$ | 113,400,134 | (E2) |
| b. Actuarial Value of Assets reported in Item 2a above | \$ | 120,803,586 | (E3) |
| 3. UNFUNDED ACTUARIAL ACCRUED LIABILITY as of valuation date (+ or -).... | \$ | 274,520,018 | (E4) |
| (Item 1 minus Item 2b) | | | |
| 4. AMORTIZATION CONTRIBUTIONS | | | |
| a. For amortization of initial unfunded actuarial accrued liability established 1/1/85. ² | | | |
| 1) Amortization period remaining (years) | | 25 | (E5) |
| 2) Amortization contribution calculated as a level dollar amount for the plan year beginning on valuation date. | \$ | 8,869,108 | (E6) |
| 3) Amortization contribution calculated as a level percentage of payroll for the plan year beginning on valuation date ³ | \$ | N/A | (E7) |
| b. For amortization of all increases or decreases in unfunded actuarial accrued liability occurring after 1/1/85 or the initial UAL's establishment. ² | | | |
| 1) Aggregated amortization period (years) | | 14 | (E8) |
| 2) Aggregated amortization contribution calculated as a level dollar amount for the plan year beginning on valuation date. | \$ | 6,196,795 | (E9) |
| c. Modified Total Amortization Requirement ⁴ | \$ | N/A | (E10) |
| d. Total Amortization Requirement (Item E6 + E9 or Item E7 + E9 or Item E10, whichever is applicable) | \$ | 15,065,903 | (E11) |

¹ The value must equal the Total Fund Assets that would have existed had the bond issue proceeds not been contributed to the pension fund, as developed in Schedule II of this exhibit.

² Initial unfunded actuarial accrued liability may be established later than 1/1/85 if coincidental with the establishment of the pension plan or with the initiation of a new amortization schedule authorized by Act 82 of 1998.

³ Enter N/A unless municipality has been certified to use level percentage of payroll amortization pursuant to Section 607 of Act 205.

⁴ If the municipality has formally elected to apply the limit on the amortization contribution under section 202(b)(4), enter the modified total amortization requirement calculated as the amount required to amortize the unfunded actuarial accrued liability over ten years. Otherwise, enter N/A.

Exhibit I

Actuarial Data as of JANUARY, 2013. For: FIREMEN'S of CITY OF PITTSBURGH in ALLEGHENY
 Page 2 of 6 (Valuation Date) (Pension Plan) (Municipality) (County)

INSTRUCTIONS: A modified aggregated amortization period must be developed for each contribution to the pension fund comprised of bond issue proceeds. The modified aggregated amortization period will not change once it is calculated and reported in this exhibit. The modified aggregated amortization period is not used for funding purposes.

B. Development of Modified Aggregated Amortization Period

	Contribution Comprised of Bond Issue Proceeds ¹	Date of Contribution	Modified Aggregated Amortization Contribution Target Date ² (MO/DA/YR)	Modified Aggregated Amortization Period Initially Established ² (Years)	Modified Aggregated Amortization Period Remaining (Years)
1.	\$ 77,069,961	03/10/1998	03/10/2037	40	25
2.	\$				
3.	\$				
4.	\$				
5.	\$				
6.	\$				
7.	\$				
8.	\$				
9.	\$				
10.	\$				

¹ Contributions to the pension plan shall consist of original bond issue proceeds used to fund unfunded actuarial accrued liability and shall not include refinancing of an amount previously borrowed.

² Determined under section 404 of Act 205 using the unfunded accrued liability and total amortization requirement shown in Part A of this exhibit and the plan's assumed rate of investment earnings. In the event that the period calculated is indeterminate or is in excess of 30 years, the amortization period initially established shall not exceed 30 years.

Commission Use Only

Int	4522,674
Prin	2,398,560
Total \$	6,921,234

Exhibit I

Actuarial Data as of JANUARY, 2013. For: FIREMEN'S of CITY OF PITTSBURGH in ALLEGHENY
 Page 3 of 6 (Valuation Date) (Pension Plan) (Municipality) (County)

INSTRUCTIONS: Provide unfunded actuarial accrued liability and amortization contributions as of valuation date developed under section 404 of Act 205. Bond issue proceeds used to fund unfunded actuarial accrued liabilities are not reflected in the data provided. Submission of the exhibits prepared in compliance with section 202(b)(3) of Act 205 may be required.

Part C - Modified Unfunded Actuarial Accrued Liability and Amortization Contributions

Initial Unfunded Actuarial Accrued Liability					
Amount of Initial Liability	Date Established	Target Date	Original Amortization Period	Remaining Balance	Level Dollar Amortization Contribution ¹
\$ 150,697,522	1998	2037	40	\$ 220,355,728	\$ 8,869,108 (E11)

Changes in Unfunded Actuarial Accrued Liability Since the Last Actuarial Valuation Report Prepared and Submitted Under Act 205.					
Source	Amount of Liability	Date Established	Target Date	Amortization Period	Amortization Contribution
Benefit Plan Modification	N/A	N/A	N/A	N/A	N/A
Actuarial Assumption Modification	41,016,905	2013	2027	15	4,322,504
Actuarial Losses (+) or Gains (-)	4,834,910	2013	2032	20	441,179
Post-Retirement Adjustments	N/A	N/A	N/A	N/A	N/A
Total	\$ 45,851,815	XXXXXX	XXXXXX	XXXXXX	\$ 4,763,683 (E12)

Aggregation of Changes in Unfunded Actuarial Accrued Liability Since Initially Established in 1985					
Description	Remaining Balance of Aggregated Liability	Date of Aggregation	Aggregated Target Date	Agg. Amortization Period	Aggregated Amortization Contribution
Aggregation of all prior changes (exclude changes in Section B)	\$ 8,312,475	2011	2020	8	1,433,112 (E13)
Aggregation of all changes (include changes in Section B)	\$ 54,164,290 ²	Current Valuation Date	2026	14	\$ 6,196,795 (E14)

¹ Level percentage of future payroll amortization contribution should be entered where the municipality has previously implemented that amortization approach pursuant to Section 607 of Act 205.

² The sum of this item (aggregated balance of all changes in UAL) and the remaining balance of the initial liability must equal the amount in Exhibit I, Part A, Item E4.

Exhibit I

Actuarial Data as of JANUARY, 2013. For: FIREMEN'S of CITY OF PITTSBURGH in ALLEGHENY
 Page 4 of 6 (Valuation Date) (Pension Plan) (Municipality) (County)

INSTRUCTIONS: A separate Part D for debt service requirements is required for each instance where bond issue proceeds are contributed to the pension plan. If more than one Part D is required, please submit color coded copies or request additional originals from the Commission's office.

NOTES: 1) If the bond issue proceeds contributed to an individual pension plan were less than 100% of the total bond issue proceeds contributed, the total debt service requirements must be proportionately allocated among the individual pension plans based on the ratio of the bond issue proceeds contributed to each individual pension plan to the total bond issue proceeds contributed.

2) Debt service requirements determined and reported on this exhibit are not modified if refinancing occurs.

D. Identification and Allocation of Total Debt Service Requirements for Debt Issued to Finance Pension Plan Contributions

Date of Original Borrowing	Total Principal Amount Borrowed and Contributed to Pension Plans	Amount of Total Principal Contributed to this Pension Plan	Percentage of Total Debt Service Allocated to this Pension Plan	Date of Refinancing
03/10/98	\$ 255,865,000.00	\$ 77,782,960.48	30.1 %	N/A
	(A)	(B)	(B÷A)	

Plan Year	Required Principal Payment	Required Interest Payment	Premium or Discount Amortized	Principal Balance at Valuation Date
1. 1997	\$ -	\$ -	\$ -	\$ -
2. 1998	-	2,531,176.79	-	77,782,960.48
3. 1999	304,000.00	5,053,765.57	-	77,782,960.48
4. 2000	304,000.00	5,036,665.57	-	77,478,960.48
5. 2001	304,000.00	5,019,473.37	-	77,174,960.48
6. 2002	304,000.00	5,001,963.97	-	76,870,960.48
7. 2003	304,000.00	4,984,316.77	-	76,566,960.48
8. 2004	304,000.00	4,966,487.17	-	76,262,960.48
9. 2005	761,520.00	4,934,627.98	-	75,958,960.48
10. 2006	705,280.00	4,890,447.65	-	75,197,440.48
11. 2007	747,740.00	4,846,303.81	-	74,492,160.48
12. 2008	779,760.00	4,799,614.54	-	73,744,320.48
13. 2009	842,080.01	4,746,261.58	-	72,964,560.48
14. 2010	915,040.01	4,688,193.78	-	72,122,480.47
15. 2011	981,920.01	4,628,913.78	-	71,207,440.46
16. 2012	2,398,560.01	4,522,674.15	-	70,225,520.45
17. 2013	3,339,440.01	4,341,092.29	-	67,826,960.44
18. 2014	3,553,760.02	4,119,567.87	-	64,487,520.42
19. 2015	3,865,360.02	3,878,446.47	-	60,933,760.04
20. 2016	4,122,240.03	3,618,849.46	-	57,060,400.38

(Continue on additional pages, if necessary.)

(CONTINUED FROM PAGE 4 OF 6)

	Plan Year	Required Principal Payment	Required Interest Payment	Premium or Discount Amortized	Principal Balance at Valuation Date
1	2017	\$ 5,546,480.03	\$ 3,304,616.06	\$ -	\$ 52,946,160.35
2	2018	4,023,440.02	2,993,593.66	-	47,399,680.32
3	2019	6,089,120.04	2,661,890.89	-	43,376,240.30
4	2020	6,505,600.04	2,246,265.13	-	37,287,120.26
5	2021	6,949,440.04	1,802,248.81	-	30,781,520.22
6	2022	7,425,200.06	1,327,885.67	-	23,832,080.18
7	2023	7,932,880.06	821,069.03	-	16,406,880.12
8	2024	8,474,000.06	279,641.99		8,474,000.06
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(Continue on additional pages, if necessary.)

Exhibit I

Actuarial Data as of JANUARY, 2013. For: FIREMEN'S of CITY OF PITTSBURGH in ALLEGHENY
Page 5 of 6 (Valuation Date) (Pension Plan) (Municipality) (County)

Schedule I

STATEMENT OF RECEIPTS AND DISBURSEMENTS INCLUDING BOND ISSUE ASSETS FOR THE PERIOD ENDING JANUARY 1, 2013

TOTAL FUND ASSETS AT JANUARY 1, 2011 ¹ \$ 188,721,694

RECEIPTS:

Employer Contributions. \$ 17,800,307

Employee Contributions. \$ 7,267,146

State Aid. \$ 15,310,542

Supplemental State Assistance. \$ 0

Investment Income. \$ 3,602,233

Net Change in Market Value..... \$ 22,742,177

Other Receipts (Identify)..... \$ 2,580,204

TOTAL RECEIPTS..... \$ 69,302,609

DISBURSEMENTS:

Monthly Benefit Payments. \$ 56,149,509

Refund of Employee Contributions..... \$ 223,468

Administrative Expenses..... \$ 1,267,892

Other Disbursements (Identify)..... \$ 677,200

TOTAL DISBURSEMENTS..... \$ 58,318,069

TOTAL FUND ASSETS AT JANUARY 1, 2013 ² \$ 199,706,235

¹ All filers should prepare this schedule for a two-year period. Value must equal Total Fund Assets at Market Value reported in Section V of the January 1, 2011, actuarial valuation reporting form if bonds were issued on or after that date. If bonds were issued prior to that date, the assets reported should be from Exhibit I of the January 1, 2011, actuarial valuation reporting form.

² Value must equal Total Fund Assets at market value reported in Section V of the current Act 205 actuarial valuation reporting form.

Exhibit I

Actuarial Data as of JANUARY, 2013. For: FIREMEN'S of CITY OF PITTSBURGH in ALLEGHENY
Page 6 of 6 (Valuation Date) (Pension Plan) (Municipality) (County)

Schedule II

STATEMENT OF RECEIPTS AND DISBURSEMENTS EXCLUDING BOND ISSUE ASSETS FOR THE PERIOD ENDING JANUARY 1, 2013

TOTAL FUND ASSETS AT JANUARY 1, 2011¹ \$ 112,008,009

RECEIPTS:

Employer Contributions² \$ 19,273,568

Employee Contributions..... \$ 7,267,146

State Aid..... \$ 15,310,542

Supplemental State Assistance..... \$ 0

Investment Income³ \$ 9,821,430

Net Change in Market Value⁴ \$ 5,307,953

Other Receipts (Identify)..... \$ 2,580,204

TOTAL RECEIPTS..... \$ 59,560,843

DISBURSEMENTS:

Monthly Benefit Payments..... \$ 56,149,509

Refund of Employee Contributions..... \$ 223,468

Administrative Expenses⁵..... \$ 1,118,541

Other Disbursements (Identify)..... \$ 677,200

TOTAL DISBURSEMENTS..... \$ 58,168,718

TOTAL FUND ASSETS AT JANUARY 1, 2013⁶ \$ 113,400,134

¹ All filers should prepare this schedule for a two-year period. Value must equal Total Fund Assets at Market Value reported in Section V of the January 1, 2011, actuarial valuation reporting form if bonds were issued on or after that date. If bonds were issued prior to that date, the assets reported should be from Exhibit I of the January 1, 2011, actuarial valuation reporting form.

² This amount includes hypothetical amortization contributions that would have been made had bond issue proceeds not been deposited.

³ This amount does not include earnings on bond issue proceeds, but does include assumed interest earnings on hypothetical amortization contributions.

⁴ This amount represents the proportionate change in market value attributable to assets excluding bond issue proceeds.

⁵ Investment expenses attributable to bond issue proceeds should be excluded from this amount.

⁶ Value must equal Total Fund Assets at market value reported in Exhibit I, Page 1, Item E2.



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ACTUARIAL VALUATION REPORT

for the

City of Pittsburgh

Firemen's Relief and Pension Fund

as of

January 1, 2013

Report Date: March 28, 2014

Table of Contents

	<u>Page</u>
Section One: Commentary and Actuarial Disclosures	1
Section Two: Certification	7
Section Three: Valuation Highlights.....	8
Section Four: Summary of Plan Provisions	9
Section Five: Development of Contribution Requirements	
Table 1: Normal Cost and Actuarial Accrued Liability.....	12
Table 2: Actuarial (Gain) Loss Determination	13
Table 3: Amortization of Unfunded Actuarial Accrued Liability.....	14
Table 4: Required Municipal Contributions (MMO)	15
Section Six: Accounting Information	
Accumulated Plan Benefits	16
GAS #27 Information	17
Section Seven: Actuarial Basis for Valuation	
Actuarial Assumptions	18
Actuarial Cost Method.....	21
Section Eight: Demographic Summaries	22
Section Nine: Plan Assets	
Combined Municipal Pension Trust Fund Calendar Year 2011.....	29
Undivided Participation Calculation Calendar Year 2011	30
Combined Municipal Pension Trust Fund Calendar Year 2012.....	31
Undivided Participation Calculation Calendar Year 2012	32
Calculation of Actuarial Value of Assets.....	33
Section Ten: Supplementary Exhibits for Plans Funded with Pension Bond Proceeds	
Table 5: Unfunded Actuarial Accrued Liability Excluding Assets	
Arising from Pension Bond Proceeds	34
Table 6: Actuarial (Gain) Loss Determination Excluding Assets	
Arising from Pension Bond Proceeds	35
Table 7: Amortization of Unfunded Actuarial Accrued Liability	
Excluding Assets Arising from Pension Bond Proceeds.....	36
Debt Service Schedule by Plan Year, Pension Bond Issue of March 10, 1998.....	37
Section Eleven: Glossary.....	38

Section One: Commentary and Actuarial Disclosures

At the request of the City of Pittsburgh, we have completed an actuarial valuation report for the City of Pittsburgh Firemen's Relief and Pension Fund as of January 1, 2013. This actuarial valuation is based upon participant data as of January 1, 2013 and asset information as of December 31, 2012 as provided by the City.

This report has been completed in accordance with generally accepted actuarial principles and practices, and reflects our current understanding of applicable laws and regulatory requirements. This valuation was prepared to satisfy the funding and disclosure requirements of Act 205 of 1984. It also contains the cost components that may be used to compute the Plan's Minimum Municipal Obligation (MMO) in accordance with that law. This valuation should be used for no other purpose than those outlined herein.

One of the cost components of the Minimum Municipal Obligation is an amortization payment calculated according to specified rules of Act 205. The minimum amortization under Act 205 reflects the utilization of provisions of Act 82 of 1998 for which the City qualified. Under those provisions, the Unfunded Actuarial Accrued Liability as of January 1, 1998 is being amortized over 40 years calculated pursuant to special procedures described beginning on page 5. Bases for subsequent years are established according to the normal procedures of Act 205 of 1984 and amortized over various periods according to the source of the change in unfunded liability such as experience gains or losses, benefit changes, and assumption changes. These periods are not limited by average future service because the City qualifies for Distress Level II according to the requirements under Act 205 of 1984.

Because the Act 82 amortization methodology does not result in an actuarially appropriate funding level, this report also presents an actuarially recommended amortization payment based on a 30-year "fresh start" amortization payment commencing as of January 1, 2011 and additional amortization bases added thereafter according to the normal procedures of Act 205 of 1984.

The City's pension plan assets are aggregated into a single trust. An annual calculation is made to determine each Plan's portion of the assets. The receipts and disbursements for each Plan are added to the Plan's allocated value from the prior year. Then, the year's investment income is allocated proportionately to each Plan in accordance with procedures set forth in Act 205. As of December 31, 2012 the calculated market value of assets in the Firemen's Relief and Pension Fund is \$199,706,235. Section Nine contains exhibits illustrating the calculation of this amount. Section Nine also shows the development of the actuarial value of assets, which is determined by using the Tabular Reserve Method first adopted as of January 1, 2009.

The City Controller obtained third-party advice from which he determined that the dedicated stream of revenue created by Ordinances 42 and 44 of 2010 can be recognized as a pension plan asset for purposes of the required actuarial report under Act 205 and the Board of Trustees of the Comprehensive Municipal Pension Trust Fund has unanimously directed us to combine the assets listed in the CAFR with the value of the revenue stream as determined by an independent accounting firm, Gleason & Associates. The value so provided is consistent with Paragraph 3.5 (Assets that are Difficult to Value) of ASOP 44, Selection and Use of Asset Valuation Methods for Pension Valuations. The Public Employee Retirement Commission (PERC) has accepted the Revised Actuarial Valuation Report as of January 1, 2011 which included the present value of the revenue stream as a pension plan asset for Act 205 actuarial valuation purposes. The inclusion of the present value of this stream of dedicated future parking meter revenues does not imply that it necessarily qualifies as a pension plan asset under GAS 25 or for any other purpose.

2013 Results

Certain highlights of this actuarial valuation compared with the prior valuation are shown in Section Three. The use of pension bond proceeds to reduce the Unfunded Actuarial Accrued Liability has split the funding of the pension plan into actuarial costs and debt service. The actuarial costs consist of normal cost, administrative expense contributions and amortization payments to eliminate the remainder of the Unfunded Actuarial Accrued Liability. The actuarial information used to develop contribution requirements according to the rules of Act 205 is shown in Section Five. Debt service payments repay the money borrowed and subsequently deposited into the plan. Information concerning the annual debt service is contained in Section Ten. The demographics of the Plan population are summarized in Section Eight.

The actuarial cost components as of January 1, 2013 compared to the prior year are as follows:

	Current Year 2013	Prior Year 2011
<i>Normal Cost</i> as a Percentage of Total W-2 Payroll	14.256%	11.849%
<i>Expenses</i> as a Percentage of Total W-2 Payroll	1.200%	1.600%
<i>Minimum Amortization</i> Payment	\$11,224,426	\$7,971,360

The change in actuarial costs from valuation to valuation can be affected by changes in Plan provisions, assumption changes, and experience changes. Pension bonds were issued in March 1998. The debt service payment for 2013 is approximately \$7.68 million.

Assumption Changes

Multiple assumption changes have been made for this actuarial valuation. The most significant is the change in the interest rate assumption, which the City decided to lower from 8.0% to 7.5% per year. We believe this to be a reasonable and more conservative assumption.

Act 205 requires that the City have an experience study prepared every four years. The purpose of this experience study is to compare the plan's actual experience with the valuation assumptions. This comparison can indicate that actuarial assumptions should be changed. Based on the January 1, 2013 experience study, the mortality assumptions have been changed for this valuation.

The mortality assumptions are all based on the RP-2000 Mortality Tables with various adjustments. The changes in the mortality assumptions are summarized in the following chart:

	Prior	Current
Active Participants	Employee Rates	Employee Rates projected with Scale AA
Retired Participants	Healthy Annuitant rates adjusted by blue collar ratios and set forward two years	Healthy Annuitant rates adjusted by blue collar ratios, set forward one year and projected from 2005 with Scale AA
Disabled Participants	Same as Retired, but with five year set forward	Same as Retired, but with four year set forward
Surviving Beneficiary	Healthy Annuitant rates adjusted by blue collar ratios, set forward two years and adjusted by ratio of female beneficiary experience to overall female mortality	Healthy Annuitant rates set forward one year, adjusted by ratio of female beneficiary experience to overall female mortality and projected from 2005 with Scale AA

The interest rate and mortality assumption changes increased the actuarial accrued liability (AAL) by \$41,016,905. This amount will be amortized over 15 years.

Benefit Changes

There were no benefit changes during the period from January 1, 2011 through January 1, 2013. The benefits provided are summarized in Section Four of this report.

Experience Changes

Plan experience during the year affects the Plan cost for the following year. Both the normal cost and the amortization payment can change.

Normal cost is the portion of the total cost allocated to the current year by the actuarial cost method. Unless Plan provisions or assumptions change, normal cost usually remains fairly stable,

changing only moderately from year to year. The changes that do occur relate to changes in the age and service distribution of the participant group.

Generally, experience changes affect the current year's actuarial gain or loss to a greater degree than they affect normal cost. Since foresight can never be perfect, actuarial assumptions will not perfectly match the experience that actually develops from year to year. The determination and amortization of actuarial gains and losses provide the mechanism for correcting these gains and losses and maintaining the Plan's funding on a sound basis.

The actuarial gain or loss computed in the current valuation reflects differences since the prior valuation between actual experience and the experience anticipated by the actuarial assumptions. For bases established in 2009 and later, Act 205 requires the amortization of actuarial gains or losses over a 20-year period. An actuarial gain will reduce the total amortization payment and an actuarial loss will increase the payment.

For 2013, a new actuarial gain base of \$723,617 has been established. This relatively small net actuarial gain is the net effect of larger sources of gain and loss (although none of the sources were overly large). The primary source of gain was due to contributions to the plan in excess of the minimum amounts required based on the January 1, 2011 actuarial valuation report (based on the Act 82 amortization). The contribution gain was partially offset by losses from return on the actuarial value of assets (AVA) that was less than the assumed rate (under the tabular smoothing method interest is credited on the AVA each year at a rate that is one percent less than the assumed interest rate of the plan).

Funded Ratios

Another measure of comparison between valuations is the plan's funded ratio, the actuarial value of assets divided by the actuarial accrued liability. This ratio is currently 56.7 percent (refer to Table 1). As of January 1, 2011, the corresponding ratio was 61.9 percent so the current valuation shows a decrease of 5.2 percent. This decrease was primarily due to the change to more conservative assumptions (which should help the plan's funded status in the long run). The funded ratio based on the market value of assets is 50.5%.

Accounting Information

This valuation also includes certain actuarial information required for accounting purposes. Section Six contains a summary of the actuarial present values of accumulated Plan benefits and a summary of certain information required by GAS#27.

Actuarially Recommended Amortization Payment

Act 82 of 1998 has a significant impact on the minimum funding requirements. We believe that the procedure for determining amortization amounts in accordance with Act 82 no longer produces an actuarially appropriate funding level. The adoption of a funding policy based on the alternative Actuarially Recommended Amortization Payment in this report is highly recommended.

Act 82 allowed the City to change the minimum funding amortization schedule for its Unfunded Actuarial Accrued Liability because pension bond proceeds were deposited by the City into the pension plan during 1998 that changed the ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability by more than 25 percent. Act 82 allowed the City to amortize the January 1, 1998 Unfunded Actuarial Accrued Liability, reduced by pension bond proceeds deposited during 1998, over a 40-year period using a special procedure that was mechanically complex but lowered the amortization payment from what it otherwise would have been. The annual amortization payment was calculated in several steps. An amortization payment was calculated that would eliminate the Unfunded Actuarial Accrued Liability net of 1998 bond proceeds over a 40-year period using a statutory interest rate of 8.75 percent. Next, the future value of these payments at the end of the 40-year period was calculated using 8.75 percent interest. Finally, an amortization payment was calculated using 10 percent interest that would have the same future value at the end of the 40-year period as the previous calculation. The 10 percent amortization amount became the amortization payment starting in 1998.

There are several drawbacks to this approach in the long-term. Under the Act 82 amortization schedule, the outstanding balance of Unfunded Actuarial Accrued Liability for the affected 1998 base actually grows for several years, extending the funding of obligations beyond normal payment periods. For example, the Unfunded Actuarial Accrued Liability for this special base has increased from \$73,627,561 as of January 1, 1998 to \$107,661,060 as of January 1, 2013 and doesn't start to decline until during the year 2024. Therefore, this amortization method does not maintain normal generational funding objectives.

Act 82 requires that valuations include a comparative interest rate tabulation. This annual tabulation compares the balance of the accumulated Act 82 amortization payments using the actual earnings of the fund during the year with the balance assuming a 10 percent rate of return. If the fund earns more than 10 percent during the year, there will be an actuarial gain. If the fund earns less than 10 percent, there will be an actuarial loss on the comparative interest rate balance. When this legislation was enacted in 1998, investment conditions were different, and an average 10 percent rate of return on a significant block of assets no longer seems reasonable. This balance grows over time and the losses from this source will tend

to grow significantly. In fact, because benefits are being paid out as contributions are coming in, the comparative interest rate balance, which isn't adjusted for benefit payments, eventually will become larger than the total market value of assets. This will likely lead to significant experience losses, an increasing pattern of amortization payments and a funding ratio which will still be well below 100% at the end of the 40-year period due to remaining balances on these losses.

By contrast, funding the plan on the basis of the actuarially recommended amortization payment is expected to result in a more level amortization schedule, that will result in higher contributions now but ultimately lower contributions, and will likely lead to a funding ratio much closer to 100% by the fixed target year.

Section Two: Certification

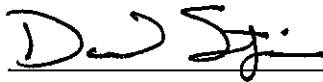
In the actuary's opinion, the actuarial assumptions used in the valuation are reasonably related to the experience of the Plan and to reasonable expectations. They represent the actuary's best estimate of anticipated experience under the Plan. To the best of our knowledge, the report is complete and accurate, based on the data outlined herein and the disclosures in Section One.

We will be happy to answer any questions concerning this report and provide further information as needed.

MOCKENHAUPT BENEFITS GROUP

I, David H. Stimpson, 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.

Prepared and Certified by:



David H. Stimpson, E.A., F.C.A., M.A.A.A.
Vice President of Actuarial Services

Section Three: Valuation Highlights

Participant Count	01/01/13	01/01/11	Change
Total Active	584	611	(27)
Vested	148	180	(32)
Not Vested	436	431	5
Total In Payment Status	1,111	1,124	(13)
Retirement Benefits	555	557	(2)
Disability Benefits	230	233	(3)
Survivor Benefits	326	334	(8)
Deferred	1	0	1
Total	1,696	1,735	(39)

Average Monthly Benefit

<i>In Payment Status</i>			
Retirement Benefits	\$ 2,900	\$ 2,795	\$ 105
Disability Benefits	\$ 2,274	\$ 2,198	\$ 76
Survivor Benefits	\$ 726	\$ 675	\$ 51
Deferred	\$ 3,551	\$ 0	\$ 3,551

Active Participant Averages

Hire Age	29.8	29.7	0.1
Attained Age	46.1	45.1	1.0
Normal Retirement Age	56.5	53.5	3.0
Assumed Future Service	16.0	17.0	(1.0)
Monthly Compensation	\$7,353	\$6,621	\$732

Financial Data

Market Value of Assets	\$199,706,235	\$188,721,694	\$10,984,541
Accumulated Employee Contributions	\$36,944,365	\$34,008,260	\$2,936,105

Cost Components

Normal Cost as a percentage of total payroll	14.256%	11.849%	2.407%
Expenses as a percentage of total payroll	1.200%	1.600%	-0.400%
Total	15.456%	13.449%	2.007%
Amortization Payment	\$11,224,426	\$7,971,360	\$3,253,066

Section Four: Summary of Plan Provisions

<i>Plan Year</i>	▼ Twelve-month period beginning January 1 and ending December 31
<i>Plan Established</i>	▼ May 25, 1933
Principal Definitions	
<i>Employee</i>	▼ Any uniformed employee of the City of Pittsburgh Bureau of Fire
<i>Retirement Benefit Commencement Date</i>	▼ Assumed to be the first day of the month coincident with or next following eligibility for and election to retire
<i>Service Increment</i>	▼ Additional monthly benefit of \$20 for each completed year of service in excess of 20 years, excluding years of service after age 65 For members hired on or after January 1, 2005: Additional monthly benefit of \$10 for each completed year of service in excess of 20 years, excluding years of service after age 65 (Payable only after age 50)
<i>Service</i>	▼ Completed years of service calculated from date of hire through date of retirement or severance, plus periods of service purchased
<i>Normal Form of Payment</i>	▼ Monthly pension benefit payable for life
Participation Requirements	
<i>Entry Date</i>	▼ Date of hire
Compensation	
	▼ Total wages excluding sick buyback and Dependent Partner Benefit pay. For members hired on or after January 1, 2005: total wages excluding longevity, sick buyback and Dependent Partner Benefit pay.
<i>Average Compensation</i>	▼ Compensation averaged over the 36-month period prior to retirement or severance
Normal Retirement	
<i>Eligibility</i>	▼ Later of age 50 or completion of 20 years of service
<i>Members hired before January 1, 1976</i>	▼ Completion of 20 years of service
<i>Monthly Benefit</i>	▼ Equal to 50% of average compensation plus service increment, if any
Late Retirement	
<i>Eligibility</i>	▼ Employment beyond normal retirement
<i>Amount of Benefit</i>	▼ Normal retirement benefit based upon average compensation as calculated at actual retirement

Disability

Eligibility

- ▼ Permanent disablement in line of duty *or*
- ▼ Permanent disablement (not in line of duty) after completing 10 years of service

Benefit Amount

- ▼ 50% of earnings in year prior to disablement

Benefit Commencement Date

- ▼ First day of calendar month following determination of disablement *and*
- ▼ Continuing for the duration of disability prior to normal retirement date and life thereafter

Vesting

- ▼ If member completed 20 years of service, may collect normal retirement benefit based on average compensation at termination (providing terminated member continues contributions at rate in effect at termination)
- ▼ Benefit deferred to age 50

Death Benefits

Accidental Death

- ▼ Benefit plus return of member's accumulated contributions
- ▼ Benefit plus workers' compensation or other payments is equal to 50% of member's wages at death
- ▼ Payable for 500 weeks or until surviving spouse dies or remarries
- ▼ If no surviving spouse or unmarried children, dependent parents receive payments

- Children Benefits

(No surviving spouse/ or discontinued payment to surviving spouse)

- ▼ Unmarried child under age 18 receives payments equal to 25% of payments to spouse
- ▼ Total payments to one family may not exceed 50% of member's wages at time of death
- ▼ \$60 minimum monthly payment if only one child
- ▼ If maximum amount payable, divide equally among entitled children
- ▼ Payments terminate when child reaches age 18, dies, marries
- ▼ Payments may continue indefinitely to incompetent child

Death Prior to Retirement

Active service/ not accidental

- ▼ If so elected, spouse paid benefit equal to 50% of pension member would have received if retired on date of death
- ▼ No election, accumulated contributions without interest paid to beneficiary or estate

Death After Retirement

- ▼ If so elected, spouse paid benefit equal to 50% of pension member was receiving
- ▼ No surviving spouse, benefit may be paid to surviving children or dependent parents

Lump Sum Benefit

- ▼ Lump sum of \$1,200 to beneficiary of any deceased member

Employee Contributions

- ▼ 6.5 percent of compensation plus \$1 per month
- ▼ \$1 per month ceases at age 65
- ▼ If surviving spouse benefit elected, add 1/2 percent of compensation

Section Five: Development of Contribution Requirements

Table 1: Normal Cost and Actuarial Accrued Liability

Normal Cost

Retirement Benefits	\$4,995,540
Disability Benefits	2,180,244
Preretirement Death Benefits	168,336
Postretirement Death Benefits	2,591
Refunds to Withdrawals	94,704
Medicare Premium Benefits	0
Vested Benefits	25,078
Total	\$7,466,493

Actuarial Accrued Liability

Actuarial Present Value of Benefits at Attained Age

	<u>Deferred</u>	<u>In Payment</u>	<u>Active</u>	<u>All</u>
Retirement Benefits	\$520,141	\$182,241,070	\$165,868,799	\$348,630,010
Disability Benefits	0	58,674,208	49,125,243	107,799,451
Survivor Benefits	0	20,631,963	0	20,631,963
Preretirement Death Benefits	0	0	2,724,118	2,724,118
Postretirement Death Benefits	0	0	76,559	76,559
Refunds to Withdrawals	0	0	889,595	889,595
Medicare Premium Benefits	0	0	0	0
Vested Benefits	0	0	476,069	476,069
Total	\$520,141	\$261,547,241	\$219,160,383	\$481,227,765

Actuarial Present Value of Future Normal Costs

Retirement Benefits	\$57,662,239
Disability Benefits	24,960,084
Preretirement Death Benefits	1,827,605
Postretirement Death Benefits	24,093
Refunds to Withdrawals	1,089,582
Medicare Premium Benefits	0
Vested Benefits	340,558
Total	\$85,904,161
	<u>(\$85,904,161)</u>

Actuarial Accrued Liability	\$395,323,604
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Unfunded Actuarial Accrued Liability

Actuarial Accrued Liability	\$395,323,604
Actuarial Value of Assets	(224,050,549)
Unfunded Actuarial Accrued Liability	\$171,273,055

Funded Ratio	56.7%
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Table 2: Actuarial (Gain) Loss Determination**Reconciliation of Funded Status**

Unfunded Actuarial Accrued Liability as of January 1, 2011			\$129,198,421
--	--	--	---------------

	2011	2012	
Normal Cost/Administrative Expenses Assumed	\$6,659,206	\$6,995,540	13,654,746
Interest Charged at Valuation Rate			23,166,352
Contributions Made			
- Municipality	\$8,440,820	\$9,359,487	
- State Aid Allocated	9,106,716	6,203,826	
- Employees	<u>3,562,550</u>	<u>3,704,596</u>	\$(40,377,995)
Interest Credited at Valuation Rate			(3,451,395)
Special Adjustment Because of Higher Act 82 Interest Rate			<u>(5,371,976)</u>
Expected Unfunded Actuarial Accrued Liability Before Adjustments			\$116,818,152
Experience from Investment Return			
- Comparative Interest Rate Amortization Tab. (Gain) Loss		\$7,658,975	
- Other Investment Return (Gain) Loss		<u>(86,532)</u>	7,572,443
Experience (Gain) Loss from all Other Sources			5,865,555
Increase (Decrease) in Unfunded Actuarial Accrued Liability			
- Benefit Modifications for Actives		\$ 0	
- Benefit Modifications for Retirees		0	
- Change in Actuarial Assumptions		<u>41,016,905</u>	<u>41,016,905</u>
Actual Unfunded Actuarial Accrued Liability			<u>\$171,273,055</u>

Loss (Gain) to be Amortized

Experience (Gain) Loss from January 1, 2011		\$13,437,998
Actuarially Required Contributions and Bond Proceeds with Interest	\$29,667,775	
Actual Contributions with Interest	<u>(43,829,390)</u>	
Contribution (Gain) Loss		<u>(14,161,615)</u>
Loss (Gain) to be Amortized		\$(723,617)

Comparative Interest Rate Amortization Tabulation

<i>Balance Calculated Using Actual Investment Return</i>	2011	2012	
Act 82 Amortization Balance at January 1	\$116,889,487	\$124,614,554	
Act 82 Amortization Payment	<u>4,333,255</u>	<u>4,333,255</u>	
Comparative Interest Rate Balance at January 1	\$ 121,222,742	\$ 128,947,809	
Actual Investment Return on Balance	<u>3,391,812</u>	<u>14,839,314</u>	
Actual Act 82 Amort. Balance at December 31	\$ 124,614,554	\$143,787,123	\$143,787,123

<i>Balance Calculated Using 10 Percent Investment Return</i>	2011	2012	
Comparative Interest Rate Balance at January 1	121,222,742	\$ 137,678,271	
Interest at 10 Percent	<u>12,122,274</u>	<u>13,767,827</u>	
Comparative Act 82 Amort. Bal. at December 31	\$ 133,345,016	\$ 151,446,098	\$ 151,446,098

<i>Comparative Interest Rate Amortization Tabulation (Gain) Loss</i>		\$ 7,658,975
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Table 3: Amortization of Unfunded Actuarial Accrued Liability

Source	Original Amount	Year Est.	Target Year	Remaining Balance	Remaining Payments	Annual Amount
Initial	\$73,627,561	1998	2037	\$107,661,060	25	\$4,333,255
Assumption Change	(2,712,163)	1998	2017	(1,133,222)	5	(260,551)
Experience Gain	(7,309,856)	1999	2013	(813,637)	1	(813,637)
Experience Gain	(10,034,869)	2000	2014	(2,143,134)	2	(1,110,298)
Experience Loss	14,852,702	2001	2015	4,567,584	3	1,633,868
Experience Loss	1,151,699	2002	2016	453,603	4	125,982
Investment Loss	18,857,549	2002	2032	16,009,880	20	1,460,878
Assumption Change	(17,287,129)	2003	2022	(11,955,709)	10	(1,620,259)
Ben. Mod. - Actives	957,341	2003	2022	662,095	10	89,728
Experience Gain	(1,201,890)	2003	2017	(568,714)	5	(130,759)
Investment Loss	27,829,106	2003	2032	24,459,717	20	2,231,914
Assumption Change	847,777	2005	2024	655,689	12	78,852
Experience Gain	(10,559,362)	2005	2019	(6,482,115)	7	(1,138,442)
Experience Loss	50,924,405	2007	2021	37,330,670	9	5,443,928
Assumption Change	(7,157,970)	2009	2028	(6,453,136)	16	(656,666)
Experience Loss	55,699,104	2009	2028	50,214,497	16	5,109,788
Experience Gain	(85,365,441)	2011	2030	(81,485,361)	18	(7,809,630)
Agg. Changes through Last Valuation	N/A	N/A	2026	\$23,318,707	14	\$2,634,696
Assumption Change	\$41,016,905	2013	2027	\$41,016,905	15	\$4,322,504
Ben. Mod. – Actives	N/A					
Ben. Mod. – Retired	N/A					
Experience Gain	(723,617)	2013	2032	(723,617)	20	(66,029)
Agg. Changes-2013	N/A	N/A	2027	\$40,293,288	15	4,256,475
Aggregate Changes	N/A	N/A	2027	\$63,611,995	15	\$6,891,171
Aggregate	N/A	N/A		\$171,273,055		\$11,224,426

Details of the Calculation of Act 82 Payment

Act 82 Unfunded Actuarial Accrued Liability	\$ 73,627,561
40-Year Amortization Payment	\$ 6,138,285
Future Value at end of 40-Year period	\$ 2,109,653,057
Payment to provide the same future value with 10% annual earnings	\$ 4,333,255

Table 4: Municipal Contributions

Required Municipal Contributions (Reflecting Act 82 of 1998)

The Financial Requirement of the Plan is based on the Normal Cost Percentage and other components shown below. The Normal Cost Percentage is applied to the payroll of the members for the applicable fiscal year.

Normal Cost (Table 1)	\$ 7,466,493
Total Annual Payroll	\$ 52,375,212
Percentages for Budget	
• Normal Cost (Normal Cost divided by Total Annual Payroll)	14.256%
• Administrative Expense (as a % of Payroll)	1.200%
• Gross Normal Cost	15.456%
Net Amortization Payment (Table 3)	\$ 11,224,426
Funding Adjustment	\$ 0

Amortization Payment for Actuarially Recommended Contribution

See Section One for further explanation of the basis of this recommendation.

Source	Original Amount	Year Est.	Target Year	Remaining Balance	Remaining Payments	Annual Amount
Initial	\$129,198,421	2011	2040	\$126,826,201	28	\$10,193,901
Experience Loss	3,429,949	2013	2032	3,429,949	20	312,978
Assumption Change	41,016,905	2013	2027	41,016,905	15	4,322,504
Aggregate			2035	\$171,273,055	23	\$14,829,383

Section Six: Accounting Information

Accumulated Plan Benefits		<u>01/01/13</u>	<u>01/01/11</u>
Assets at Market Value		<u>\$ 199,706,235</u>	<u>\$188,721,694</u>
Actuarial Present Value of Vested Benefits			
Retired	\$261,547,241		
Deferred	520,141		
Employee Contributions	4,980,607		
Active	<u>55,661,286</u>		
Total		<u>\$322,709,275</u>	<u>\$282,703,072</u>
Unfunded Actuarial Present Value of Vested Benefits		<u>\$123,003,040</u>	<u>\$93,981,378</u>
Actuarial Present Value of Accrued Benefits			
Retired	\$261,547,241		
Deferred	520,141		
Employee Contributions	501,043		
Active	<u>101,142,573</u>		
Total		<u>\$363,710,998</u>	<u>\$314,403,082</u>
Unfunded Actuarial Present Value of Accrued Benefits		<u>\$164,004,763</u>	<u>\$125,681,388</u>

GAS #27 Information

Summary of Annual Pension Cost and Net Pension Obligation (NPO) for Prior Years

	2011	2012
Annual Required Contribution (ARC)	\$ 21,466,123	\$ 13,927,553
Interest on NPO	(979,263)	(632,154)
Adjustment to the ARC	<u>1,399,532</u>	<u>1,000,416</u>
Annual pension cost	21,886,392	14,295,815
Contributions made	<u>17,547,536</u>	<u>15,563,313</u>
Change in NPO	4,338,856	(1,267,498)
NPO, Beginning of Year (1/1)	<u>(12,240,786)</u>	<u>(7,901,930)</u>
NPO, End of Year (12/31)	\$ (7,901,930)	\$ (9,169,428)

Annual Pension Cost for the Year Beginning 1/1/2013

Annual Required Contribution (ARC)	\$ 14,158,929
Interest on NPO	(733,554)
Adjustment to the ARC	<u>1,167,021</u>
Annual Pension Cost	\$ 14,592,396

Other Information from the 1/1/2013 Actuarial Valuation for GAS #25 and GAS #27

Actuarial Cost Method	Entry Age
Asset Valuation Method	Tabular Smoothing
	Level Dollar
Amortization Method	Closed
Aggregate Remaining Amortization Period (Years)	30
Actuarial Assumptions	
Investment Rate of Return	7.50%
Projected Salary Increases	5.75%
Underlying Inflation Rate	3.00%

Section Seven: Actuarial Basis of Valuation

Actuarial Assumptions: January 1, 2013

Economic

Interest Rate	7.50% increase per year
Salary Projection	5.75% increase per year
	Merit Increase 2.75 percent increase per year
	Inflation 3.0 percent increase per year

Employee Characteristics

Mortality	RP-2000 Mortality Tables, with adjustments to reflect Pittsburgh Pension Plan mortality experience as confirmed by experience studies. The adjusted rates are based on the following:
<i>Active Participants</i>	RP-2000 Employee Mortality Rates projected with scale AA.
<i>Retired/Term Vested Participants</i>	RP-2000 Healthy Annuitant Mortality Rates adjusted by blue collar ratios, set forward one year and projected from 2005 with scale AA.
<i>Disability Retirees</i>	Same as Retired, but with ages set forward four years.
<i>Surviving Beneficiaries</i>	RP-2000 Healthy Annuitant Rates adjusted by ratios of female beneficiary experience to overall female RP-2000 Healthy Annuitant Mortality Rates (Appendix D of <i>RP-2000 Mortality Tables Report</i>), set forward one year, and projected from 2005 with scale AA

Sample Base Rates (Rounded):

Age	Active Male Participant	Male Regular Retiree	Male Disabled Retiree	Male Beneficiary
45	0.15%	0.19%	0.52%	0.20%
55	0.30%	0.77%	0.97%	0.86%
65	0.76%	1.82%	2.44%	1.91%
75	N/A	4.77%	6.41%	4.51%
85	N/A	12.64%	16.64%	12.81%

Age	Active Female Participant	Female Regular Retiree	Female Disabled Retiree	Female Beneficiary
45	0.11%	0.15%	0.22%	0.15%
55	0.25%	0.32%	0.55%	0.55%
65	0.58%	1.25%	1.68%	1.47%
75	N/A	3.38%	4.44%	3.31%
85	N/A	9.23%	12.48%	9.01%

Withdrawal

Sample rates:

Age	Rate
20	0.82%
25	0.79%
30	0.76%
35	0.70%
40	0.53%
45	0.27%
50	0.06%
55	0.00%

Disablement

Sample rates:

Age	Male	Female
30	0.14%	0.17%
40	0.33%	0.64%
50	1.00%	1.26%
60	2.97%	2.27%

Retirement Age

Percentage of employees eligible for retirement who retire at each age:

Age	Percentage
50	8
51	3
52	3
53	3
54	3
55	3
56	3
57	3
58	9
59	9
60	9
61	9
62	18
63	18
64	18
65	100

Duty Related Mortality	20% of deaths in active service are assumed to be duty related.
Duty Related Disability	50% of disabilities occurring during employment are assumed to occur in the line of duty.
Percentage Married	80% of male participants and 65% of female participants.
Spouse Age	Female spouses are assumed to be two years younger than male spouses.

Actuarial Basis of Valuation: Actuarial Cost Method

The actuarial costs of this Plan are determined under the Entry Age Normal Actuarial Cost Method as described in Act 205 of 1984. The total contribution (the financial requirements of the Pension Plan) is made up of three components: normal cost, administrative expense and amortization payment or funding adjustment.

Normal Cost

For each active participant covered by the Plan, normal cost is calculated to be the annual contribution necessary to completely fund the participant's pension by the participant's retirement age. Contributions are assumed to begin with the year of employment and to be a constant percentage of the participant's annual pay.

For the Plan, normal cost is expressed as a percentage of the total annual payroll of the participants used in budgeting of required contributions.

Administrative Expense

Estimated annual expense to be incurred by the fund for the contribution year for which the financial requirements are determined.

Actuarial Accrued Liability

Total actuarial present value of all future benefits less the actuarial present value of the future normal costs. The total unfunded actuarial accrued liability as of the valuation date is the actuarial accrued liability less the total value of all assets owned by the Plan.

Amortization Payment

Sum of the annual level amortization contribution requirements specified by the Act for the applicable portions of the unfunded actuarial accrued liability. The Plan's unfunded actuarial accrued liability was re-established in 1998. In the subsequent years, experience gains and losses, changes in benefit provisions, and changes in valuation assumptions would result in increases or decreases to the unfunded actuarial accrued liability. If the unfunded actuarial accrued liability is negative, the amortization payment is zero and a funding adjustment is created.

Section Eight: Demographic Summaries

Distribution of Active Members by Age and Service

Years of Service											
Age	Number of People in Category										
	1	2	3	4-5	6-10	11-15	16-20	21-25	26-30	30+	Total by Age
< 20	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	6	18	0	0	0	0	0	24
30-34	0	0	0	13	47	2	0	0	0	0	62
35-39	0	0	0	5	43	20	1	0	0	0	69
40-44	0	0	0	4	28	29	32	0	0	0	93
45-49	0	1	0	0	9	32	51	3	5	0	101
50-54	0	0	0	3	13	24	28	6	25	15	114
55-59	0	0	0	0	3	5	14	8	27	32	89
60-64	0	0	0	0	0	2	2	2	7	18	31
65+	0	0	0	0	0	0	1	0	0	0	1
Total	0	1	0	31	161	114	129	19	64	65	584

Age Distribution of Deferred Vested Participants

Persons Entitled to Deferred Benefits			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	0.00	0.00
30-34	0	0.00	0.00
35-39	0	0.00	0.00
40-44	0	0.00	0.00
45-49	0	0.00	0.00
50-54	1	\$42,610.80	\$42,610.80
55-59	0	0.00	0.00
60-64	0	0.00	0.00
65-69	0	0.00	0.00
70-74	0	0.00	0.00
75-79	0	0.00	0.00
80-84	0	0.00	0.00
85+	0	0.00	0.00
Total	1	\$ 42,610.80	\$ 42,610.80

Age Distribution of Retired Participants

Regular Retirements			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	0.00	0.00
30-34	0	0.00	0.00
35-39	0	0.00	0.00
40-44	0	0.00	0.00
45-49	0	0.00	0.00
50-54	7	\$ 318,766.44	\$ 45,538.06
55-59	61	2,486,459.04	40,761.62
60-64	147	5,920,494.36	40,275.47
65-69	114	4,525,965.48	39,701.45
70-74	69	2,286,026.40	33,130.82
75-79	56	1,671,070.32	29,840.54
80-84	52	1,200,380.64	23,084.24
85+	49	905,493.72	18,479.46
Total	555	\$19,314,656.40	\$ 34,801.18

Age Distribution of Retired Participants

Disability Retirements			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	0.00	0.00
30-34	0	0.00	0.00
35-39	0	0.00	0.00
40-44	6	\$196,319.28	\$32,719.88
45-49	7	227,795.04	32,542.15
50-54	8	256,037.28	32,004.66
55-59	28	1,013,334.00	36,190.50
60-64	55	1,644,776.52	29,905.03
65-69	45	1,324,387.56	29,430.83
70-74	19	495,640.20	26,086.33
75-79	21	424,193.52	20,199.69
80-84	21	382,700.52	18,223.83
85+	20	311,478.96	15,573.95
Total	230	\$ 6,276,662.88	\$ 27,289.84

Age Distribution of Retired Participants

Survivors			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	\$ 0.00	\$ 0.00
30-34	1	5,734.92	5,734.92
35-39	0	0.00	0.00
40-44	0	0.00	0.00
45-49	0	0.00	0.00
50-54	2	32,091.36	16,045.68
55-59	17	272,267.04	16,015.71
60-64	17	211,548.12	12,444.01
65-69	21	246,183.00	11,723.00
70-74	38	413,858.04	10,891.00
75-79	50	451,910.40	9,038.21
80-84	75	564,620.52	7,528.27
85+	105	642,230.40	6,116.48
Total	326	\$ 2,840,443.80	\$ 8,713.02

Age Distribution of Retired Participants

All Persons Receiving Benefits			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	\$ 0.00	\$ 0.00
30-34	1	5,734.92	5,734.92
35-39	0	0.00	0.00
40-44	6	196,319.28	32,719.88
45-49	7	227,795.04	32,542.15
50-54	17	606,895.08	35,699.71
55-59	106	3,772,060.08	35,585.47
60-64	219	7,776,819.00	35,510.59
65-69	180	6,096,536.04	33,869.64
70-74	126	3,195,524.64	25,361.31
75-79	127	2,547,174.24	20,056.49
80-84	148	2,147,701.68	14,511.50
85+	174	1,859,203.08	10,685.08
Total	1,111	\$ 28,431,763.08	\$ 25,591.15

Demographic Data as of January 1, 2013

Changes in Plan Participation for Active Members

Active Members	Number
As of January 1, 2011	611
New Entrants	25
Transfer From Another Plan	<u>0</u>
Total	636
Separation from Active Service	
Separation with a Deferred Benefit	(1)
Separation without a Deferred Benefit	(8)
Disability	(9)
Death	(1)
Retirement with a Service Retirement Benefit	<u>(33)</u>
Total Separations	(52)
Data Adjustments	<u>0</u>
Active Members as of January 1, 2013	584

Changes in Plan Participants for Inactive Members and Survivors

	Deferred Vested	Regular Retirements	Disability Retirement	Survivors		Total
				Child	Other	
As of January 1, 2011	0	557	233	2	332	1,124
New Benefit Recipients	1	33	9	0	30	73
Death	0	(35)	(12)	0	(37)	(84)
Other Cessation of Benefits	0	0	0	(1)	0	(1)
Net Data Adjustments	0	0	0	0	0	0
As of January 1, 2013	1	555	230	1	325	1,112

Section Nine: Plan Assets

Combined Municipal Pension Trust Fund Calendar Year 2011

Source of Asset Information

The assets of the Aggregated Trust for the City's pension plans are summarized in the following tables based on the information provided by the City and by Maher Duessel. As directed by the Trustees of the City of Pittsburgh Comprehensive Municipal Pension Trust Fund, the values represent a combination of the assets listed in the City's 2011 Comprehensive Annual Financial Report (CAFR) and the present value calculated by Gleason and Associates of the dedicated stream of revenues created by City Ordinances 42 & 44 of 2010. Assets are shown at market value.

Summary of Values for Aggregated Trust

	<u>1/1/11</u>	<u>1/1/12</u>
Invested Portfolio	\$334,927,888	\$325,275,669
Dedicated Funding from Parking Assets	238,572,759	246,267,849
Accrued Interest	540,982	506,858
Accrued Contributions	12,606	0
Due from City of Pittsburgh	0	1,402,380
Accrued Expenses and Other Payables	<u>(2,671,784)</u>	<u>(2,660,726)</u>
Market Value of Assets - Accrual Basis	\$571,382,451	\$570,792,030

Summary of Transactions for the Aggregated Trust

Balance as of January 1, 2011		\$571,382,451
Contributions Toward Pension Liability		
- Policemen's	\$25,581,920	
- Firemen's	23,013,090	
- Municipal	<u>15,527,698</u>	\$ 64,122,708
Miscellaneous and Pass Through Items		4,418,518
Interest and Dividends		5,241,252
Net Appreciation (Decline) in Fair Value Of Investments		9,622,836
Payments to Participants		
- Policemen's	\$ 32,545,291	
- Firemen's	28,200,726	
- Municipal	<u>21,133,734</u>	(81,879,751)
Expenses		<u>(2,115,984)</u>
Balance as of December 31, 2011		\$570,792,030

Undivided Participation Calculation Calendar Year 2011 - Accrual Basis

	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
January 1, 2011 Market Value	\$216,050,208	\$188,721,694	\$ 166,610,549	\$571,382,451
Plan-Specific Contributions	26,885,936	23,384,367	17,372,712	67,643,014
Plan-Specific Distributions	<u>(32,873,373)</u>	<u>(28,393,023)</u>	<u>(21,420,864)</u>	<u>(82,687,260)</u>
Sub-Total	\$210,062,771	\$183,713,038	\$ 162,562,397	\$556,338,205
Sub-Total Percentages	37.76%	33.02%	29.22%	100.00%
Allocated Expenses	(494,080)	(432,058)	(382,336)	(1,308,475)
Allocated Investment Earnings	<u>5,951,844</u>	<u>5,204,711</u>	<u>4,605,745</u>	<u>15,762,300</u>
December 31, 2011 Market Value	\$215,520,534	\$188,485,691	\$166,785,805	\$570,792,030

Contributions and Distributions for 2011 - Accrual Basis

	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
Plan-Specific Contributions				
General Municipal				
Pension System State Aid	\$ 11,402,091	\$ 9,106,716	\$ 6,398,832	\$26,907,639
Member Contributions	3,591,870	3,562,550	3,196,201	10,350,620
City Contributions	10,587,959	8,440,820	5,932,666	24,961,445
Wilkinsburg Fire Transfer	0	1,903,004	0	1,903,004
Pass Through Contributions	1,304,016	361,800	1,772,618	3,438,434
Miscellaneous Income	<u>0</u>	<u>9,477</u>	<u>72,395</u>	<u>81,872</u>
Total Contributions	\$26,885,936	\$23,384,367	\$17,372,712	\$67,643,014

Plan-Specific Distributions

Benefit Payments to Participants	\$32,297,162	\$28,159,257	\$20,562,562	\$81,018,981
Refunds to Participants	248,129	41,469	571,172	860,770
Administrative Expenses	<u>328,082</u>	<u>192,297</u>	<u>287,130</u>	<u>807,509</u>
Total Distributions	\$32,873,373	\$28,393,023	\$21,420,864	\$82,687,260

Combined Municipal Pension Trust Fund Calendar Year 2012

Source of Asset Information

The assets of the Aggregated Trust for the City's pension plans are summarized in the following tables based on the information provided by the City and by Maher Duessel. As directed by the Trustees of the City of Pittsburgh Comprehensive Municipal Pension Trust Fund, the values represent a combination of the assets listed in the City's 2012 Comprehensive Annual Financial Report (CAFR) and the present value calculated by Gleason and Associates of the dedicated stream of revenues created by City Ordinances 42 & 44 of 2010. Assets are shown at market value.

Summary of Values for the Aggregated Trust

	<u>1/1/12</u>	<u>1/1/13</u>
Invested Portfolio	\$ 325,275,669	\$ 355,308,381
Dedicated Funding from Parking Assets	246,267,849	252,251,944
Accrued Interest	506,858	534,057
Accrued Contributions	0	0
Due From City of Pittsburgh	1,402,380	688,949
Accrued Expenses and Other Payables	<u>(2,660,726)</u>	<u>(2,660,148)</u>
Market Value of Assets – Accrual Basis	\$ 570,792,030	\$ 606,123,183

Summary of Transactions for the Aggregated Trust

Balance as of January 1, 2012		\$ 570,792,030
Contributions Toward Pension Liability		
-Policemen's	\$ 19,697,172	
-Firemen's	19,267,909	
-Municipal	<u>14,078,478</u>	\$ 53,043,559
Miscellaneous and Pass Through Items		3,506,306
Interest and Dividends		4,675,117
Net Appreciation (Decline) in Fair Value of Investments		59,319,524
Payments to Participants		
-Policemen's	\$ 32,627,580	
-Firemen's	28,849,451	
-Municipal	<u>21,573,218</u>	(83,050,249)
Expenses		<u>(2,163,104)</u>
Balance as of December 31, 2012		\$ 606,123,183

Undivided Participation Calculation Calendar Year 2012 - Accrual Basis

	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
January 1, 2012 Market Value	\$215,520,534	\$188,485,691	\$166,785,805	\$570,792,030
Plan-Specific Contributions	20,955,098	19,592,765	15,897,202	56,445,065
Plan-Specific Distributions	<u>(32,994,063)</u>	<u>(29,071,505)</u>	<u>(21,868,627)</u>	<u>(83,934,195)</u>
Sub-Total	\$203,481,569	\$179,006,951	\$160,814,380	\$543,302,900
Sub-Total Percentages	37.45%	32.95%	29.60%	100.00%
Allocated Expenses	(479,045)	(421,483)	(378,631)	(1,279,158)
Allocated Investment Earnings	<u>24,005,241</u>	<u>21,120,766</u>	<u>18,973,434</u>	<u>64,099,441</u>
December 31, 2012 Market Value	\$227,007,765	\$ 199,706,235	\$ 179,409,183	\$606,123,183

Contributions and Distributions for 2012 - Accrual Basis

Plan-Specific Contributions	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
General Municipal Pension System State Aid	\$ 6,383,196	\$ 6,203,826	\$ 4,320,825	\$16,907,847
Member Contributions	3,684,218	3,704,596	3,236,377	10,625,191
City Contributions	9,629,757	9,359,487	6,521,276	25,510,521
Pass Through Contributions	1,257,926	315,400	1,798,849	3,372,175
Miscellaneous Income	<u>0</u>	<u>9,456</u>	<u>19,875</u>	<u>29,331</u>
Total Contributions	\$20,955,098	\$19,592,765	\$15,897,202	\$56,445,065

Plan-Specific Distributions

Benefit Payments to Participants	\$32,402,642	\$28,667,452	\$21,055,082	\$ 82,125,176
Refunds to Participants	224,938	181,999	518,136	925,073
Administrative Expenses	<u>366,483</u>	<u>222,054</u>	<u>295,409</u>	<u>883,946</u>
Total Distributions	\$32,994,063	\$29,071,505	\$21,868,627	\$83,934,195

Calculation of Actuarial Value of Assets

Description of Method

The Actuarial Value of Assets is determined by a Tabular Smoothing Method which takes the Actuarial Value of Assets from the prior valuation report and brings it forward using a specified interest rate. The Actuarial Value of Assets in the prior report, contributions by year, and annual disbursements are each credited with interest at a rate of one percent less than the prior valuation interest rate assumption. The resulting value is further subject to a minimum of 80 percent and a maximum of 120 percent of the market value of assets.

Development of the Actuarial Value of Assets

Market Value of Assets at January 1, 2013	\$199,706,235
Actuarial Value of Assets at January 1, 2011	\$209,936,926
Contributions During 2011	23,374,890
Disbursements During 2011	(28,825,081)
Interest Credited During 2011	<u>14,494,478</u>
Tabular Smoothing Value of Assets at January 1, 2012	\$218,981,213
Tabular Smoothing Value of Assets at January 1, 2012	\$218,981,213
Contributions During 2012	19,583,309
Disbursements During 2012	(29,492,988)
Interest Credited During 2012	<u>14,979,014</u>
Tabular Smoothing Value of Assets at January 1, 2013	\$224,050,549
Low Limit: 80% of Market Value	\$159,764,988
High Limit: 120% of Market Value	\$239,647,482
Actuarial Value of Assets at January 1, 2013	\$224,050,549

Section Ten: Supplementary Exhibits for Plans Funded With Pension Bond Proceeds

**Table 5: Unfunded Actuarial Accrued Liability Excluding Assets
Arising from Pension Bond Proceeds**

Assets Excluding Pension Bond Proceeds			
Assets Excluding Bond Proceeds at January 1, 2011			\$ 112,008,009
Receipts	2011	2012	
Employer Contributions	\$9,914,081	\$9,359,487	
Employee Contributions	3,562,550	3,704,596	
State Aid	9,106,716	6,203,826	
Investment Income	5,373,196	4,448,234	
Net Appreciation	(2,363,157)	7,652,177	
Pass Through Contributions, Misc. Income, Wilkinsburg Fire Transfer (2011 only)	<u>2,274,281</u>	<u>324,856</u>	
Total Receipts			59,560,843
Disbursements			
Monthly Benefit Payments	\$27,797,457	\$ 28,352,052	
Refund of Employee Contributions	41,469	181,999	
Administrative Expenses	575,723	542,818	
Pass Through Payments	<u>361,800</u>	<u>315,400</u>	
Total Disbursements.			(58,168,718)
Assets Excluding Bond Proceeds at January 1, 2013			\$ 113,400,134
Development of Actuarial Value of Assets Excluding Bond Proceeds			
Market Value of Assets Excluding Bond Proceeds at January 1, 2013			\$ 113,400,134
Actuarial Value of Assets Excluding Bond Proceeds at January 1, 2011			\$ 118,234,353
Contributions During 2011			24,848,151
Disbursements During 2011			(28,776,449)
Interest Credited During 2011			<u>8,085,301</u>
Tabular Smoothing Value of Assets at January 1, 2012			\$ 122,391,356
Tabular Smoothing Value of Assets at January 1, 2012			\$ 122,391,356
Contributions During 2012			19,583,309
Disbursements During 2012			(29,392,269)
Interest Credited During 2012			<u>8,221,190</u>
Tabular Smoothing Value of Assets at January 1, 2013			\$ 120,803,586
Low Limit 80 Percent of Market Value			\$ 90,720,107
High Limit 120 Percent of Market Value			\$ 136,080,161
Actuarial Value of Assets Excluding Bond Proceeds at January 1, 2013			\$ 120,803,586
Unfunded Actuarial Accrued Liability Excluding Assets from Bond Proceeds			
Actuarial Accrued Liability (Table 1)			\$ 395,323,604
Actuarial Value of Assets Excluding Bond Proceeds at January 1, 2013			<u>(120,803,586)</u>
Adjusted Unfunded Actuarial Accrued Liability			\$ 274,520,018

**Table 6: Actuarial (Gain) Loss Determination Excluding Assets
Arising from Pension Bond Proceeds**

Reconciliation of Funded Status

Unfunded Actuarial Accrued Liability as of January 1, 2011			\$220,900,994
	2011	2012	
Normal Cost/Administrative Expenses Assumed	\$ 6,659,206	\$ 6,995,540	13,654,746
Interest Charged at Valuation Rate			38,425,660
Contributions Made			
- Municipality	\$ 9,914,081	\$ 9,359,487	
- State Aid Allocated	9,106,716	6,203,826	
- Employees	<u>3,562,550</u>	<u>3,704,596</u>	\$(41,851,256)
Interest Credited at Valuation Rate			(3,581,120)
Special Adjustment Because of Higher Act 82 Interest Rate			<u>(10,995,115)</u>
Expected Unfunded Actuarial Accrued Liability Before Adjustments			\$216,553,908
Experience from Investment Return			
- Comparative Int. Rate Amortization Tab. (Gain) Loss		\$ 15,676,039	
- Other Investment Return (Gain) Loss		<u>(4,621,827)</u>	11,054,212
Experience (Gain) Loss from all Other Sources			5,894,993
Increase (Decrease) in Unfunded Actuarial Accrued Liability			
- Benefit Modifications for Actives		\$0	
- Benefit Modifications for Retirees		0	
- Change in Actuarial Assumptions		<u>41,016,905</u>	<u>41,016,905</u>
Actual Unfunded Actuarial Accrued Liability			<u>\$274,520,018</u>

Loss (Gain) to be Amortized

Experience (Gain) Loss from January 1, 2011		\$ 16,949,205
Actuarially Required Contributions and Bond Proceeds w/Interest	\$33,318,082	
Actual Contributions with Interest	<u>(45,432,377)</u>	
Contribution (Gain) Loss		<u>(12,114,295)</u>
Loss (Gain) to be Amortized		\$ 4,834,910

Comparative Interest Rate Amortization Tabulation

<i>Balance Calculated Using Actual Investment Return</i>	2011	2012	
Act 82 Amortization Balance at January 1	\$ 239,244,043	\$ 255,055,357	
Act 82 Amortization Payment	<u>8,869,108</u>	<u>8,869,108</u>	
Comparative Interest Rate Balance at January 1	\$ 248,113,151	\$ 263,924,465	
Actual Investment Return on Balance	<u>6,942,206</u>	<u>30,372,427</u>	
Actual Act 82 Amort. Balance at December 31	\$255,055,357	\$294,296,892	\$294,296,892

<i>Balance Calculated Using 10 Percent Investment Return</i>			
Comparative Interest Rate Balance at January 1	\$ 248,113,151	\$ 281,793,574	
Interest at 10 Percent	<u>24,811,315</u>	<u>28,179,357</u>	
Comparative Act 82 Amort. Balance at December 31	\$ 272,924,466	\$ 309,972,931	\$309,972,931

<i>Comparative Interest Rate Amortization Tabulation (Gain) Loss</i>			\$ 15,676,039
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Table 7: Amortization of Unfunded Actuarial Accrued Liability Excluding Assets Arising from Pension Bond Proceeds

Source	Original Amount	Year Est.	Target Year	Remaining Balance	Remaining Payments	Annual Amount
Initial	\$150,697,522	1998	2037	\$220,355,728	25	\$8,869,108
Assumption Change	(2,712,163)	1998	2017	(1,133,222)	5	(260,551)
Experience Gain	(8,740,776)	1999	2013	(972,908)	1	(972,908)
Experience Gain	(5,967,507)	2000	2014	(1,274,473)	2	(660,269)
Experience Loss	5,187,425	2001	2015	1,595,265	3	570,641
Experience Loss	12,280,996	2002	2016	492,107	4	136,676
Investment Loss	9,840,706	2002	2032	8,354,665	20	762,351
Assumption Change	(17,287,129)	2003	2022	(11,955,710)	10	(1,620,259)
Ben. Mod. - Actives	957,341	2003	2022	662,095	10	89,728
Experience Gain	(930,312)	2003	2017	(440,208)	7	(101,213)
Investment Loss	14,203,883	2003	2032	12,484,159	20	1,139,161
Assumption Change	847,777	2005	2024	655,689	12	78,852
Experience Loss	2,347,661	2005	2019	1,441,169	7	253,110
Experience Loss	52,958,493	2007	2021	38,821,779	9	5,661,377
Assumption Change	12,126,548	2009	2028	10,932,464	16	1,112,479
Experience Loss	31,000,351	2009	2028	27,947,793	16	2,843,946
Experience Gain	(83,074,123)	2011	2030	(79,298,189)	18	(7,600,009)
Agg. Changes through Last Valuation	N/A	N/A	2020	\$8,312,475	8	\$1,433,112
Assumption Change	\$41,016,905	2013	2027	\$41,016,905	15	\$4,322,504
Ben. Mod. - Actives	N/A					
Ben. Mod. - Retired	N/A					
Experience Gain	4,834,910	2013	2032	4,834,910	20	441,179
Agg. Changes -2013	N/A	N/A	2028	\$45,851,815	16	\$4,763,683
Aggregate Changes	N/A	N/A	2026	\$54,164,290	14	\$6,196,795
Aggregate	N/A	N/A		\$274,520,018		\$15,065,903

Details of the Calculation of Act 82 Payment

Act 82 Unfunded Actuarial Accrued Liability	\$ 150,697,522
40-Year Amortization Payment	\$ 12,563,560
Future Value at end of 40-Year period	\$ 4,317,941,320
Payment to provide the same future value with 10% annual earnings	\$ 8,869,108

Debt Service Schedule by Plan Year
Pension Bond Issue of March 10, 1998

	Date of Original Borrowing	Total Principal Borrowed	Total Principal to this Plan	Percentage to this Plan	Date of Refinancing
	3/10/98	\$255,865,000.00	\$77,782,960.48	30.1%	N/A
Plan Year	Required Principal Pymt.	Required Interest Pymt.	Annual Debt Service	Premium or Discount Amortized	Principal Balance at Valuation Date
1997					
1998		\$2,531,176.79	\$2,531,176.79		\$77,782,960.48
1999	\$ 304,000.00	5,053,765.57	5,357,765.57		77,782,960.48
2000	304,000.00	5,036,665.57	5,340,665.57		77,478,960.48
2001	304,000.00	5,019,474.37	5,323,474.37		77,174,960.48
2002	304,000.00	5,001,963.97	5,305,963.97		76,870,960.48
2003	304,000.00	4,984,316.77	5,288,316.77		76,566,960.48
2004	304,000.00	4,966,487.17	5,270,487.17		76,262,960.48
2005	761,520.00	4,934,627.98	5,696,147.98		75,958,960.48
2006	705,280.00	4,890,447.65	5,595,727.65		75,197,440.48
2007	747,840.00	4,846,303.81	5,594,143.81		74,492,160.48
2008	779,760.00	4,799,614.54	5,579,374.54		73,744,320.48
2009	842,080.01	4,746,261.58	5,588,341.59		72,964,560.48
2010	915,040.01	4,688,193.78	5,603,233.79		72,122,480.47
2011	981,920.01	4,628,913.78	5,610,833.79		71,207,440.46
2012	2,398,560.01	4,522,674.15	6,921,234.16		70,225,520.45
2013	3,339,440.02	4,341,092.29	7,680,532.31		67,826,960.44
2014	3,553,760.02	4,119,567.87	7,673,327.89		64,487,520.42
2015	3,865,360.02	3,878,446.47	7,743,806.49		60,933,760.40
2016	4,122,240.03	3,618,849.46	7,741,089.49		57,068,400.38
2017	5,546,480.03	3,304,616.06	8,851,096.09		52,946,160.35
2018	4,023,440.02	2,993,593.66	7,017,033.68		47,399,680.32
2019	6,089,120.04	2,661,890.89	8,751,010.93		43,376,240.30
2020	6,505,600.04	2,246,265.13	8,751,865.17		37,287,120.26
2021	6,949,440.04	1,802,248.81	8,751,688.85		30,781,520.22
2022	7,425,200.06	1,327,885.67	8,753,085.73		23,832,080.18
2023	7,932,880.06	821,069.03	8,753,949.09		16,406,880.12
2024	8,474,000.06	279,641.99	8,753,642.05		8,474,000.06

Section Eleven: Glossary

Accrued Benefit

The portion of the participant's retirement benefit that is attributable to service completed before the calculation date. The calculation typically uses actual service as of the calculation date and may involve other factors such as average pay at the determination date and projected service through the retirement eligibility date.

Act 205 of 1984

Municipal Pension Plan Funding Standard and Recovery Act of December 18, 1984, P.L. 1005, No. 205. The Act controls pension funding in Pennsylvania. This Act also provides for reporting of actuarial information and for a recovery program for qualifying municipalities.

Actuarial Accrued Liability

The portion of the actuarial cost assigned to prior years.

Actuarial Assumptions

Factors used by the actuary to forecast future events. These factors include items relating to future economic conditions, the survival of the participants and their beneficiaries, and the length of employment.

Actuarial Cost Method

A means of assigning costs to periods of employment. This method is used to determine a funding level that will provide sufficient assets to pay benefits for each participant upon retirement. Act 205 specifies that the entry age normal cost method, as described in the Act, should be used for this determination.

Actuarial Gain or Loss

The effect on the actuarial accrued liability of differences between events as predicted by the actuarial assumptions and those that actually occurred. This difference can increase or decrease the contribution in future years.

Actuarial Present Value

The lump sum value that is equivalent to an expected series of future payments. This value is determined by using the actuarial assumptions. An actuarial present value, as of the valuation date, represents the amount of funds that would be sufficient to provide the series of payments, if experience precisely matches the actuarial assumptions.

Actuarial Value of Assets

The value of current plan assets which is used by the actuary to evaluate the current funding status and determine future funding requirements. Under Act 205, a corridor limitation requires that this value be between 80 and 120 percent of the fair market value of the assets except for certain temporary periods for which an expanded corridor of between 70 and 130 percent of fair market value applies.

Administrative Expenses

The average of expenses to administer the plan that is paid in the year preceding the most recent valuation and the anticipated expenses for the year following this valuation. The average is converted to a percentage of payroll and used as part of the Minimum Municipal Obligation calculation.

Amortization Payment

The annual payment required to eventually eliminate the unfunded actuarial accrued liability according to the schedule established in Act 205.

Funding Adjustment

Occurs when the actuarial value of assets exceeds the actuarial accrued liability; it is defined by Act 205 as 10 percent of the excess. This adjustment reduces the amount that must be contributed to the pension plan.

General Municipal Pension System State Aid

Annually municipalities receive a portion of the insurance premium tax levied on casualty insurance companies headquartered outside of Pennsylvania. If they have paid firefighters, they also receive a portion of the premium tax on out-of-state fire insurance companies. These taxes are distributed according to formula contained in Act 205.

Minimum Municipal Obligation

The amount that must be contributed to a pension plan by a municipality for a given year. The calculation of this amount uses the normal cost, anticipated administrative expenses, amortization payment or funding adjustment, and anticipated employee contributions to determine a municipality's contribution requirement. General Municipal Pension System State Aid may be used to reduce the contribution.

Normal Cost

The actuarial cost assigned to a given year to pay for the portion of the anticipated benefit derived from service during that year.

Unfunded Actuarial Accrued Liability

The amount by which the actuarial accrued liability exceeds the actuarial value of assets. A valuation will identify the value of changes in the unfunded actuarial accrued liability that result from changes in plan benefits, actuarial assumptions, or actuarial gains and losses.

Vesting

The participant's non-forfeitable right to receive a benefit, provided that the participant survives until benefit eligibility.

