Gabriel Roeder Smith & Company
Consultants & Actuaries

LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

GASB STATEMENTS NOS. 67 AND 68 ACCOUNTING AND FINANCIAL REPORTING FOR PENSIONS

DECEMBER 31, 2015

GRS

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April 20, 2016

The Retirement Board of the
Laborers' and Retirement Board Employees'
Annuity and Benefit Fund of Chicago
321 North Clark Street, Suite 1300
Chicago, IL 60654

Dear Members of the Board:

This report provides accounting and financial reporting information as of December 31, 2015, that is intended to comply with the Governmental Accounting Standards Board ("GASB") Statements Nos. 67 and 68 for the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago ("LABF"). These calculations have been made on a basis that is consistent with our understanding of these Statements.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the LABF benefits (described in Section E) was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statements Nos. 67 and 68. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago ("LABF") only in its entirety and only with the permission of LABF.

This report is based upon information, furnished to us by LABF, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

Our valuation and projections assume the sponsor will make the contributions required by state statute. To the extent the sponsor does not make the statutory required contribution, the results contained in this report could be significantly different.

This report complements the funding actuarial valuation report that was provided to LABF and should be considered in conjunction with that report. Please see the funding actuarial valuation report as of December 31, 2015, for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

The signing actuaries are independent of the plan sponsor.

Alex Rivera and Lance J. Weiss are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

By Alex Rivera
Alex Rivera
FSA, EA, MAAA, FCA

By Lance J. Weiss
Lance J. Weiss
EA, MAAA, FCA

AR/LW:rg

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY
AS OF DECEMBER 31, 2015

	2015
Actuarial Valuation Date	December 31, 2015
Measurement Date of the Net Pension Liability	December 31, 2015
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2015
Membership	
Number of	
- Retirees and Beneficiaries	3,846
- Inactive, Nonretired Members	1,455
- Active Members	2,816
- Total	8,117
Covered Payroll	$ 204,772,903
Net Pension Liability	
Total Pension Liability	$ 3,712,615,936
Plan Fiduciary Net Position	1,238,657,245
Net Pension Liability	$ 2,473,958,691
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	33.36%
Net Pension Liability as a Percentage of Covered Payroll	1208.15%
Development of the Single Discount Rate	
Single Discount Rate Beginning of Year	7.24%
Single Discount Rate End of Year	4.04%
Long-Term Expected Rate of Investment Return	7.50%
Long-Term Municipal Bond Rate Beginning of Year*	3.56%
Long-Term Municipal Bond Rate End of Year*	3.57%
Last year ending December 31 in the 2015 to 2114 projection period for which projected benefit payments are fully funded	2027
Total Pension Expense	$ 812,337,178

Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ -	$ 32,705,139
Changes in assumptions	834,530,498	-
Net difference between projected and actual earnings on pension plan investments	97,395,781	-
Total	$ 931,926,279	$ 32,705,139

**Source: "State & local bonds" rate from Federal Reserve statistical release (H.15) as of December 30, 2015. The statistical release describes this rate as "Bond Buyer Index, general obligation, 20 years to maturity, mixed quality." In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.*

DISCUSSION

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board ("GASB") Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions."

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer’s financial statements to disclose the total pension expense, the pension plan’s liabilities and assets and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan’s funding policy, which includes member and employer contribution requirements;
- The pension plan’s investment policies;
- The pension plan’s fiduciary net position, net pension liability and the pension plan’s fiduciary net position as a percentage of the total pension liability;
- The net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan’s board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability and the net pension liability as a percent of covered-employee payroll; and
- A comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of December 31, 2015, and a measurement date of December 31, 2015.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.50%; the municipal bond rate is 3.57% (based on the weekly rate closest to but not later than the measurement date of the "state & local bonds" rate from Federal Reserve statistical release (H.15)); and the resulting Single Discount Rate is 4.04%.

Effective Date and Transition

GASB Statement Nos. 67 and 68 are effective for fiscal years beginning after June 15, 2013, and June 15, 2014, respectively; earlier application is encouraged by the GASB.

SECTION B

FINANCIAL STATEMENTS

Auditor's Note: This information is intended to assist in preparation of the financial statements of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

PENSION EXPENSE UNDER GASB STATEMENT NO. 68
FISCAL YEAR ENDED DECEMBER 31, 2015

A. Expense		
1. Service Cost Including Pension Plan Administrative Expense	$	38,388,765
2. Interest on the Total Pension Liability		153,811,897
3. Current-Period Benefit Changes		384,032,638
4. Employee Contributions (made negative for addition here)		(16,844,246)
5. Projected Earnings on Plan Investments (made negative for addition here)		(99,426,250)
6. Other Changes in Plan Fiduciary Net Position		-
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		328,025,429
8. Recognition of Outflow (Inflow) of Resources due to Assets		24,348,945
9. Total Pension Expense	**$**	**812,337,178**
B. Reconciliation of Net Pension Liability		
1. Net Pension Liability Beginning of Year	**$**	**774,812,844**
2. Pension Expense		812,337,178
3. Employer Contributions (made negative for addition here)		(12,412,471)
4. Deferred Investment Experience (inflows)/outflows		97,395,781
5. Deferred Liability Experience (inflows)/outflows		(32,705,139)
6. Deferred Assumption Changes (inflows)/outflows		834,530,498
7. Net Pension Liability End of Year	**$**	**2,473,958,691**

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods
Fiscal Year Ended December 31, 2015

A. Change in Outflows and (Inflows) of Resources during Current Plan Year

Experience (Gain)/Loss	Balance at Beginning of Year	Amortization Factor	Amortization	Balance at End of Year
1. Differences between expected and actual non-investment experience	$ (46,084,758)	3.4444	$ (13,379,619)	$ (32,705,139)
2. Assumption Changes	1,175,935,546	3.4444	341,405,048	834,530,498
3. Difference between expected and actual investment earnings	121,744,726	5.0000	24,348,945	97,395,781
4. Total	$ 1,251,595,514		$ 352,374,374	$ 899,221,140

B. Outflows and Inflows of Resources by Source to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows (Inflows) of Resources
1. Differences between expected and actual non-investment experience	$ -	$ 13,379,619	$ (13,379,619)
2. Assumption Changes	341,405,048	-	341,405,048
3. Difference between expected and actual investment earnings	24,348,945	-	24,348,945
4. Total	$ 365,753,993	$ 13,379,619	$ 352,374,374

C. Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows (Inflows) of Resources
1. Differences between expected and actual non-investment experience	$ -	$ 32,705,139	$ (32,705,139)
2. Assumption Changes	834,530,498	-	834,530,498
3. Difference between expected and actual investment earnings	97,395,781	-	97,395,781
4. Total	$ 931,926,279	$ 32,705,139	$ 899,221,140

D. Deferred Outflows and Deferred Inflows of Resources by Year to be recognized in Future Pension Expenses

Year Ending December 31	Net Deferred Outflows of Resources	Net Deferred Inflows of Resources
2016	$ 365,753,993	$ 13,379,619
2017	365,753,993	13,379,619
2018	176,069,347	5,945,901
2019	24,348,946	-
2020	-	-
Thereafter	-	-
Total	$ 931,926,279	$ 32,705,139

STATEMENT OF FIDUCIARY NET POSITION
YEARS ENDED DECEMBER 31, 2015, AND 2014

	2015	2014
Assets		
Receivables		
Employer	$ 14,624,677	$ 14,689,166
Plan member	764,166	651,659
Due from broker - net	-	5,366,415
Interest and dividends	1,508,496	1,843,650
Other receivables	74,843	2,651
Total receivables	16,972,182	22,553,541
Investments - at fair value		
Cash and short-term investments	42,960,083	49,892,805
Equities	663,261,420	739,791,534
Fixed income	222,185,829	250,010,117
Private equity	33,411,063	42,071,147
Real estate	45,786,624	45,735,296
Hedge funds	106,767,167	102,078,308
Global asset allocation funds	117,221,466	140,740,336
Subtotal	1,231,593,652	1,370,319,543
Forward currency contracts	66,179	786,734
Securities lending cash collateral	69,646,634	65,235,365
Total investments - fair value	1,301,306,465	1,436,341,642
Property and equipment	178,186	416,509
Total assets	1,318,456,833	1,459,311,692
Deferred outflows		
Accumulated decrease in fair value of hedging derivatives	-	-
Liabilities and net position		
Liabilities		
Due to brokers - net	4,685,095	-
Forward currency contracts	-	-
Refunds, professional fees payable and other liabilities	3,008,449	3,047,520
OPEB liability	2,393,231	2,149,183
Securities lending cash collateral	69,646,634	65,235,365
Total liabilities	79,733,409	70,432,068
Deferred inflows		
Accumulated increase in fair value of hedging derivatives	66,179	786,734
Net Position - Restricted for Pension Benefits	$ 1,238,657,245	$ 1,388,092,890

Statement of Changes in Fiduciary Net Position
Years Ended December 31, 2015, and 2014

	2015	2014
Additions		
Contributions		
Employer [1]	$ 12,412,471	$ 12,160,815
Plan Member	16,844,246	16,359,082
Total Contributions	29,256,717	28,519,897
Investment Income		
Net appreciation in fair value of investments	(34,248,125)	40,042,434
Interest	5,397,240	5,618,937
Dividends	10,780,752	12,380,534
Private equity income - net	537,004	281,305
Real estate operating income - net	1,912,543	632,251
Hedge funds income - net	564,835	1,877,621
Global Net Investment Income	2,285,626	2,402,938
	(12,770,125)	63,236,020
Less investment expenses	(9,980,397)	(10,304,870)
Investment income - net	(22,750,522)	52,931,150
Securities lending		
Income	231,702	138,031
Lender (borrower) rebates	276,587	405,816
Management fees	(76,243)	(81,480)
Securities lending income - net	432,046	462,367
Total additions	6,938,241	81,913,414
Deductions		
Benefits [1]	150,013,189	145,586,268
Refunds	2,516,351	2,071,694
Administrative and OPEB expenses	3,844,346	3,835,170
Total deductions	156,373,886	151,493,132
Net increase	(149,435,645)	(69,579,718)
Net Position Restricted for Pension Benefits		
Beginning of year	1,388,092,890	1,457,672,608
End of year	$ 1,238,657,245	$ 1,388,092,890

[1] *Excludes amount paid for health insurance supplement.*

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor’s Note: This information is intended to assist in preparation of the financial statements of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

Schedule of Changes in Net Pension Liability and Related Ratios Current Period

Fiscal Year Ended December 31, 2015

A. Total Pension Liability		
1. Service Cost Including Pension Plan Administrative Expense	$	38,388,765
2. Interest on the Total Pension Liability		153,811,897
3. Changes of benefit terms		384,032,638
4. Difference between expected and actual experience of the Total Pension Liability		(46,084,758)
5. Changes of assumptions		1,175,935,546
6. Benefit payments, including refunds of employee contributions		(152,529,540)
7. Pension Plan Administrative Expenses		(3,844,346)
8. Net change in total pension liability		1,549,710,202
9. Total pension liability – beginning		2,162,905,734
10. Total pension liability – ending	**$**	**3,712,615,936**
B. Plan Fiduciary Net Position		
1. Contributions – employer		12,412,471
2. Contributions – employee		16,844,246
3. Net investment income		(22,318,476)
4. Benefit payments, including refunds of employee contributions		(152,529,540)
5. Pension Plan Administrative Expense		(3,844,346)
6. Other		-
7. Net change in plan fiduciary net position		(149,435,645)
8. Plan fiduciary net position – beginning		1,388,092,890
9. Plan fiduciary net position – ending	**$**	**1,238,657,245**
C. Net Pension Liability	**$**	**2,473,958,691**
D. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		**33.36%**
E. Covered-Employee Payroll	**$**	**204,772,903**
F. Net Pension Liability as a Percentage of Covered Employee Payroll		**1208.15%**

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Fiscal year ending December 31,	2015	2014
Total Pension Liability		
Service Cost Including Pension Plan Administrative Expense	$ 38,388,765	$ 38,523,054
Interest on the Total Pension Liability	153,811,897	174,071,491
Benefit Changes	384,032,638	(324,166,854)
Difference between Expected and Actual Experience	(46,084,758)	-
Assumption Changes	1,175,935,546	28,201,429
Benefit Payments	(150,013,189)	(145,586,268)
Refunds	(2,516,351)	(2,071,694)
Pension Plan Administrative Expense	(3,844,346)	(3,835,170)
Net Change in Total Pension Liability	1,549,710,202	(234,864,012)
Total Pension Liability - Beginning	2,162,905,734	2,397,769,745
Total Pension Liability - Ending (a)	$ 3,712,615,936	$2,162,905,734
Plan Fiduciary Net Position		
Employer Contributions	12,412,471	12,160,815
Employee Contributions	16,844,246	16,359,082
Pension Plan Net Investment Income	(22,318,476)	53,393,517
Benefit Payments	(150,013,189)	(145,586,268)
Refunds	(2,516,351)	(2,071,694)
Pension Plan Administrative Expense	(3,844,346)	(3,835,170)
Other	-	-
Net Change in Plan Fiduciary Net Position	(149,435,645)	(69,579,718)
Plan Fiduciary Net Position - Beginning	1,388,092,890	1,457,672,608
Plan Fiduciary Net Position - Ending (b)	$ 1,238,657,245	$1,388,092,890
Net Pension Liability - Ending (a) - (b)	2,473,958,691	774,812,844
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	33.36%	64.18%
Covered Employee Payroll	$ 204,772,903	$ 202,673,014
Net Pension Liability as a Percentage of Covered Employee Payroll	1208.15%	382.30%

10 fiscal years will be built prospectively.

Please see the following page for additional notes relating to the Schedule of Changes in Net Pension Liability and Related Ratios.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

ADDITIONAL NOTES TO THE SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS MULITIYEAR

Beginning of year total pension liability for fiscal year 2015 used a Single Discount Rate of 7.24% and the benefit provisions and funding policy in effect as of the December 31, 2014, funding valuation. The Single Discount Rate of 7.24% was based on a long-term expected rate of return on pension plan investments of 7.50% used in the December 31, 2014, funding valuation for the years 2015 through 2063 and a long-term municipal bond rate as of December 31, 2014, of 3.56% for subsequent years.

Due primarily to the repeal of Public Act 98-0641, the end of year total pension liability for fiscal year 2015 uses a Single Discount Rate of 4.04% and the benefit provisions and funding policy in effect as of the December 31, 2015, funding valuation. The Single Discount Rate of 4.04% was based on a long-term expected rate of return on pension plan investments of 7.50% used in the December 31, 2015, funding valuation for the years 2016 through 2027and a long-term municipal bond rate as of December 30, 2015, of 3.57% for subsequent years.

The increase in the total pension liability for fiscal year 2015 due to benefit changes is a result of the change in provisions to those in effect prior to Public Act 98-0641, due to the court's ruling Public Act 98-0641 unconstitutional and void in its entirety. This change was measured at the end of the year using a Single Discount Rate of 7.24%.

The increase in the total pension liability for fiscal year 2015 due to assumption changes and methods includes both the impact of reverting back to the funding policy in place prior to Public Act 98-0641, and the change in the long-term municipal bond rate from 3.56% as of December 31, 2014, to 3.57% as of December 30, 2015. Changes in assumptions, methods, plan provisions and statutory funding policy led to the change in the Single Discount Rate from 7.24% to 4.04% based on the long-term expected rate of return on pension plan investments of 7.50% used in the December 31, 2015, funding valuation and the long-term municipal bond rate of 3.56% as of December 31, 2014, and 3.57% as of December 30, 2015, respectively. This change was measured at the end of the year using the benefit provisions in effect as of the December 31, 2015, funding valuation.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE NET PENSION LIABILITY MULTIYEAR

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll*	Net Pension Liability as a % of Covered Payroll
2014	$2,162,905,734	$1,388,092,890	$ 774,812,844	64.18%	$ 202,673,014	382.30%
2015	3,712,615,936	1,238,657,245	2,473,958,691	33.36%	204,772,903	1208.15%

** Covered payroll is the amount in force as of the valuation date and likely differs from actual payroll paid during the fiscal year.*

10 fiscal years will be built prospectively.

SCHEDULE OF CONTRIBUTIONS MULTIYEAR
LAST 10 FISCAL YEARS

FY Ending December 31,	Actuarial Determined Contribution*	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll**	Actual Contribution as a % of Covered Payroll	Statutory Contribution***	Statutory Contribution Deficiency/(Excess)
2006	$ 21,142,739	$ 106,270	21,036,469	$ 193,176,272	0.06%	$ 17,193,400	17,087,130
2007	21,725,805	13,256,147	8,469,658	192,847,482	6.87%	13,256,165	18
2008	17,652,023	15,232,804	2,419,219	216,744,211	7.03%	15,543,376	310,572
2009	33,517,429	14,626,771	18,890,658	208,626,493	7.01%	14,982,660	355,889
2010	46,664,704	15,351,944	31,312,760	199,863,410	7.68%	15,652,734	300,790
2011	57,258,593	12,778,697	44,479,896	195,238,332	6.55%	13,055,795	277,098
2012	77,566,394	11,852,905	65,713,489	198,789,741	5.96%	12,336,770	483,865
2013	106,199,410	11,583,051	94,616,359	200,351,820	5.78%	12,098,712	515,661
2014	106,018,725	12,160,815	93,857,910	202,673,014	6.00%	12,714,800	553,985
2015	79,850,835	12,412,471	67,438,364	204,772,903	6.06%	12,857,827	445,356

* *The LABF Statutory Funding Policy does not conform to Actuarial Standards of Practice; therefore, the Actuarial Determined Contribution is equal to the normal cost plus an amount to amortize the unfunded liability using level dollar payments and a 30-year open amortization period.*

** *Covered payroll is the amount in force as of the valuation date and likely differs from actual payroll paid during the fiscal year.*

****Excludes amounts paid for health insurance supplement beginning in 2006.*

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date:	December 31, 2015
Notes	Statutory contribution rates are calculated as of December 31, which is 12 months prior to the end of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates as of the Valuation Date:

Actuarial Cost Method	Entry Age Normal
Amortization Method	The statutory contributions are based on a multiple of member contributions from the second prior year. The statutory contribution multiple is 1.00
Remaining Amortization Period	Not Applicable. An amortization payment is not directly calculated. The amortization payment is the difference between the total statutory contribution and the employer normal cost contribution.
Asset Valuation Method	5 year smoothed market
Inflation	3.00 percent
Salary Increases	Salary increase rates based on age-related productivity and merit rates plus inflation.
Postretirement Benefit Increases	Post retirement benefit increases are equal to 3.00 percent, compounded annually, for Tier 1 members. Post retirement increases for Tier 2 members are equal to the lesser of 3.00 percent or one-half the annual unadjusted percentage increase (but no less than zero) in the consumer price index-u for the 12 months ending with the September preceding the date of the increase, simple.
Investment Rate of Return	7.50 percent as of the December 31, 2015, valuation.
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the December 31, 2012, valuation pursuant to an experience study of the period January 1, 2004, through December 31, 2011.
Mortality	RP2000 Combined Healthy mortality table, sex distinct, set forward one year for males and setback two years for females. No adjustment is made for post-disabled mortality.

Other Information:

Notes	Benefit changes based on the provisions in effect prior to Public Act 98-0641 were recognized in the Total Pension Liability as of December 31, 2015.

Methods and Assumptions Used for Accounting Purposes as of the Valuation Date:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Market
Discount Rate	7.24 percent as of the December 31, 2014, valuation.
	4.04 percent as of the December 31, 2015, valuation.

SCHEDULE OF INVESTMENT RETURNS MULTIYEAR

FY Ending December 31,	Annual Return[1]
2014	3.20 %
2015	(1.50)%

[1] *Annual money-weighted rate of return, net of investment expenses.*

The annual money-weighted rates of return, net of investment expenses for fiscal years ending December 31, 2014, and December 31, 2015, were provided by the Fund.

10 fiscal years will be built prospectively.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note: This information is intended to assist in preparation of the financial statements of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Single Discount Rate

A Single Discount Rate of 4.04% was used to measure the total pension liability. This Single Discount Rate was based on an expected rate of return on pension plan investments of 7.50% and a municipal bond rate of 3.57%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the statutory contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments only through the year 2027. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2027, and the municipal bond rate was applied to all benefit payments after that date.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 4.04%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

SENSITIVITY OF NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

1% Decrease 3.04%	Current Single Discount Rate Assumption 4.04%	1% Increase 5.04%
$ 3,017,415,600	$ 2,473,958,691	$ 2,028,466,970

SUMMARY OF POPULATION STATISTICS

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	3,846
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	1,455
Active Plan Members	2,816
Total Plan Members	8,117

Additional information about the member data used is included in the December 31, 2015, actuarial valuation report.

SECTION E

SUMMARY OF BENEFITS

PLAN DESCRIPTION (AS OF DECEMBER 31, 2015)

Any employee of the City of Chicago or the Board of Education employed under the provisions of the municipal personnel ordinance as labor service or any person employed by a retirement board of any annuity and benefit fund in the city is covered by the Laborers’ and Retirement Board Employees’ Annuity and Benefit Fund of Chicago (Laborers’ Plan) which is a defined benefit single employer pension plan with a money purchase minimum. Although this is a single employer plan, the defined benefits, as well as the employer and employee contribution levels, are mandated in Illinois Compiled Statutes (Chapter 40, Pensions, Article 5/11) and may be amended only by the Illinois legislature. The City of Chicago accounts for the plan as a pension trust fund. The City of Chicago payroll for employees covered by the Laborers’ Plan for the year ended December 31, 2015, was $204,772,903. At December 31, 2015, the Laborers’ Plan membership consisted of:

Retiree, surviving spouse, reversionary annuitant and child annuitants currently receiving benefits	3,846
Terminated inactive employees entitled to benefits or a refund of contributions but not yet receiving them	1,455
Current employees (includes 239 disabilities)	2,816

The Laborers’ Fund provides retirement benefits as well as death and disability benefits. Employees age 55 or more with at least 10 years of service are entitled to receive a money purchase annuity with partial city contributions if under age 60 with less than 20 years of service. Employees age 55 or more with at least 20 years of service or age 50 or more with at least 30 years of service are entitled to receive a minimum formula annuity of 2.4 percent per year of service times the final average salary (highest average annual salary for any 4 consecutive years within the last 10 years of service immediately preceding the date of retirement). If the employee retires prior to age 60, the annuity shall be reduced by ¼ of 1.00 percent for each month the employee is under age 60, unless the employee is 50 or over with at least 30 years of service or 55 or over with at least 25 years of service. The original annuity is limited to 80 percent of the highest average annual salary. Beginning January 1, 1999, there is a 10-year deferred vested benefit payable at age 60. Employees who retire at age 60 or over with at least 10 years of service are entitled to a minimum of $850 per month.

The monthly annuity is increased by 3.00 percent in January of the year of the first payment date following the later of age 60 or the first anniversary of retirement, and by 3.00 percent annually thereafter; except that for an employee retiring prior to age 60 the first increase will occur no later than January of the year of the first payment date following the later of (1) the third anniversary of retirement or (2) the attainment of age 53.

Participants that first became members on or after January 1, 2011, are subject to different retirement eligibility conditions and benefit provisions as described on the following pages.

PLAN DESCRIPTION (CONT'D)

Covered employees are required to contribute 8.50 percent of their salary to the Laborers' Plan. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with 3.00 percent interest.

The City of Chicago is required by state statutes to contribute the remaining amounts necessary to finance the requirements of the Fund. It is required to levy a tax at a rate not more than an amount equal to the total amount of contributions by the employees to the Fund made in the calendar year two years prior to the year for which the annual applicable tax is levied, multiplied by 1.00 annually. The total amount of contributions by the employees for purposes of establishing the tax levy amount shall not include contributions for service credit purchases under the Early Retirement Incentive provided for in Section 11-133.3 of the Illinois Pension Code.

Participants that first became members on or after January 1, 2011, are subject to a cap on pensionable salary upon which contributions are made as described on the following pages.

DEFINITIONS

These terms are defined in Article 1A of the Illinois Pension Code *Regulation of Public Pensions.*

"Accrued liability" means the actuarial present value of future benefit payments and appropriate administrative expenses under a plan, reduced by the actuarial present value of all future normal costs (including any participant contributions) with respect to the participant included in the actuarial valuation of the plan.

"Actuarial present value" means the single amount, as of a given valuation date, that results from applying actuarial assumptions to an amount or series of amounts payable or receivable at various times.

"Actuarial value of assets" means the value assigned by the actuary to the assets of a plan for the purposes of an actuarial valuation.

"Beneficiary" means a person eligible for or receiving benefits from the pension fund.

"Credited projected benefit" means that portion of a participant's projected benefit based on an allocation taking into account service to date determined in accordance with the terms of the plan based on anticipated future compensation.

"Current value" means the fair market value when available; otherwise, the fair value as determined in good faith by a trustee, assuming an orderly liquidation at the time of the determination.

"Normal cost" means that part of the actuarial present value of all future benefit payments and appropriate administrative expenses assigned to the current year under the actuarial valuation method used by the plan (excluding any amortization of the unfunded accrued liability).

"Participant" means a participating member or deferred pensioner or annuitant of the pension fund, or a beneficiary thereof.

"Pension Fund" or "Fund" means the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago established under Article 11 of the Illinois Pension Code.

"Plan year" means the calendar year for which the records of a given plan are kept.

"Projected benefits" means benefit amounts which are expected to be paid at various future times under a particular set of actuarial assumptions, taking into account, as applicable, the effect of advancement in age and past and anticipated future compensation and service credits.

"Supplemental annual cost" means that a portion of the unfunded accrued liability is assigned to the current year under one of the following bases:

1. The level annual amount required to amortize the unfunded accrued liability over a period not exceeding 30 years (40 years for pension unfunded accrued liability prior to 2007); and
2. The amount required for the current year to amortize the unfunded accrued liability over a period not exceeding 30 years as a level percentage of payroll (40 years for pension unfunded accrued liability prior to 2007).

"Total annual cost" means the sum of the normal cost plus the supplemental annual cost.

"Unfunded accrued liability" means the excess of the accrued liability over the actuarial value of the assets of a plan.

"Vested pension benefit" means an interest obtained by a participant or beneficiary in that part of an immediate or deferred benefit under a plan which arises from the participant's service and is not conditional upon the participant's continued service for an employer any of whose employees are covered under the plan, and which has been forfeited under the terms of the plan.

PARTICIPANTS

Any person employed by the City or the Board of Education in a position classified as labor service of the employer, any person employed by the Board, and any person employed by the Retirement Board of any other Annuity and Benefit Fund which is in operation for the employer.

SERVICE

For minimum annuity, one half-year credit is given for one complete month of service and a full year credit is given for one complete month of service plus service in at least five other months. For money purchase annuity, 700 hours of service in any calendar year constitutes one year of service credit. For Ordinary Disability credit, the exact number of days, months and years is used.

RETIREMENT ANNUITY

Money Purchase Formula

Maximum is 60 percent of highest salary. Applies in cases where an employee is age 55 or older and has a minimum of 10 years of service. If employee is age 55 to 60 with service less than 20 years, the annuity is based on all employee deductions plus 1/10th of the City contributions for each year over 10. In the case of withdrawal before age 55 and application after age 55, the annuity is based on employee deductions plus 1/10th of the City contributions for each year over 10, with interest to date of application or age 55, whichever is later. The age factor for age 55 is used.

The annuity is based on all employee deductions and City contributions in cases where the employee is (a) age 55 to 60 with 20 or more years of service; (b) age 60 or older; or (c) resigning at the time of disability credit expiration.

Minimum Annuity Formula

Maximum is 80 percent of final average salary.

An employee age 60 or older with at least 10 years of service, or an employee age 55 or older, with at least 20 years of service, or an employee age 50 or older with at least 30 years of service, is entitled to an annuity equal to 2.40 percent, for each year of service of the final average salary during the four highest consecutive years within the last 10 years of service prior to retirement. If the employee withdraws from service before age 60 with less than 20 years of service, he can begin to receive an annuity no earlier than age 60. For an employee who is eligible to begin receiving an annuity before age 60, the annuity is discounted 0.25 percent for each month the employee is younger than age 60, unless he has at least 30 years of service and is age 50 or over, or has at least 25 years of service and is age 55 or over.

The employee will receive a minimum annuity of $850 per month if the employee withdraws from service at age 60 or older with at least 10 years of service.

Participants that first became members on or after January 1, 2011, are first eligible for an unreduced annuity benefit upon attainment of age 65 with 10 years of service. Members are first eligible to begin receiving a reduced annuity benefit upon attainment of age 60 with 10 years of service. The annuity is discounted 0.50 percent for each full month the employee is younger than age 65. Final average salary is calculated using salary from the eight highest consecutive years within the last 10 years of service prior to retirement. Pensionable salary is limited to $106,800 in 2011, increased by the lesser of 3 percent and one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12-month period ending with the September preceding the November 1, which is the date that the new amount will be calculated and made available to the pension funds.

Reversionary Annuity

An employee may elect to reduce his or her annuity by an amount less than or equal to $400 to provide a reversionary annuity for a spouse, parent, child, brother or sister, to begin upon the employee's death. The election must be made before retirement and have been in effect one year prior to death. The one-year requirement is waived if the beneficiary is the employee's spouse. The death of the employee before retirement voids this election. The reversionary annuity cannot exceed 100 percent of the employee's reduced annuity. If the employee resigns after June 30, 1983, the 3.00 percent automatic annual increase in the annuity will be computed on the original, not the reduced, annuity; if the beneficiary dies before the employee annuitant, the full annuity is restored for annuities granted after June 30, 1983. The amount of the monthly reversionary annuity is determined by multiplying the amount of the monthly reduction in the employee's annuity by a factor based on the age of the employee and the difference between the ages of the employee and the reversionary annuitant at the starting date of the employee's annuity.

Automatic Increase in Annuity

An employee annuitant is entitled to receive an increase of 3.00 percent of the currently payable annuity (compound). This increase begins in January of the year of the first payment date following the earlier of:

1.) The later of the third anniversary of retirement and age 53, and
2.) The later of the first anniversary of retirement and age 60.

Increases apply only to life annuities.

An employee annuitant that first became a member on or after January 1, 2011, that is eligible to receive an increase in annuity benefit, shall receive an annual increase equal to the lesser of 3 percent and one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12-month period ending with the September preceding the increase. The increase is based on the amount of the originally granted benefit (simple). This increase begins on January 1 of the year of the first payment date following the later of:

1.) Attainment of age 67, and
2.) The first anniversary of the annuity start date.

SPOUSE ANNUITY

The surviving spouse annuity is the greater of the annuity under the money purchase formula or the minimum annuity formula. Surviving spouses who remarry on or after September 4, 2000, will not have their annuities terminated.

Money Purchase Formula

When an employee retires, the spouse's annuity is fixed, based on employee deductions and City contributions made for spouses' annuity purposes and a joint life age factor. (If the employee is a female, these are deductions accumulated since October 1974.)

If the employee dies in service, the spouse's annuity is based on all sums accumulated to their credit.

For 3.00 percent annuities fixed on or after August 1, 1983, the “Combined Annuity Mortality Table” shall continue to be used; however, surviving spouse’s single life annuities and reversionary annuities shall be computed using the best factor (the factor producing the highest annuity), without regard to gender.

Spouses’ Minimum Annuity Formula

If the employee retires or dies in service and is at least age 55 with 20 or more years of service, or is at least age 50 with 30 or more years of service, the spouse’s annuity is equal to half the amount of annuity the employee was entitled to receive at the time of retirement or death in service. This annuity must then be discounted 0.25 percent for each month the spouse is under age 55 (or age 50 if the employee had at least 25 years of service) at the time the employee retires or dies in service.

If the employee dies while receiving a retirement annuity, the spouse is eligible for an annuity of one-half of the employee’s annuity at death. This annuity is discounted for his/her age under 55 at the time of the employee’s death, unless the employee had at least 25 years of service and withdrew from service on or after June 27, 1997, in which case the spouse annuity would be discounted for spouse age under 50 at the time of the employee’s death.

If the employee dies in service on or after January 1, 2002, with at least 10 years of service, the spouse is entitled to an annuity of half of the minimum formula annuity earned and accrued to the credit of the employee at the date of death. For the purposes of this benefit, the minimum formula annuity earned and accrued to the credit of the employee is equal to 2.40 percent for each year of service of the highest average annual salary for any four consecutive years within the last 10 years of service immediately preceding the date of death, up to a maximum of 80 percent of the highest average annual salary. This annuity is not reduced due to the age of the employee or spouse. The spouse is eligible for this annuity only if the marriage was in effect for 10 full years or more.

The spouse will receive a minimum annuity of $800 per month if the employee retires with at least 10 years of service or dies in service with at least five years of service.

For participants that first became members on or after January 1, 2011, the annuity payable to the surviving spouse is equal to 66 2/3 percent of the participant’s earned retirement annuity at the date of death without a reduction due to age.

Automatic Increase in Annuity

The widow or survivor of a participant that first became a member on or after January 1, 2011, shall receive an annual increase equal to the lesser of 3 percent and one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12-month period ending with the September preceding the date of the increase. The increase is based on the amount of the originally granted survivor’s benefit (simple). This annual increase begins on January 1 following the commencement of the widow’s or survivor’s annuity if the deceased member died while receiving an annuity benefit and on January 1 following the first anniversary of the commencement of the annuity otherwise.

Child's Annuity

A child's annuity is provided for unmarried children of a deceased employee who are under the age of 18, if the child was conceived or born before the withdrawal from service. The annuity is $220 per month while the spouse of the deceased employee is alive and $250 per month if the spouse is deceased.

Family Maximum

Non-Duty Death: 60 percent of final monthly salary.
Duty Death: 70 percent of final monthly salary.

DISABILITIES

Duty Disability Benefits

Any employee who becomes disabled as the result of an injury incurred in the performance of any act of duty shall have a right to receive a duty disability benefit in the amount of 75 percent of salary at date of injury, plus $10 a month for each unmarried child (the issue of the employee) less than age 18. Child's duty disability benefit is limited to 15 percent of the employee's salary as of the date of injury. Duty disability benefits begin one day after the later of the last day worked or the last day paid.

If the disability has resulted from any mental disorder, physical defect or disease which existed at the time such injury was sustained, the duty disability benefit shall be 50 percent of salary at date of injury. Disablement because of heart attacks, strokes or any disablement due to heart disease shall not be considered the result of an accident suffered in the performance of duty; however, the employee will receive service credit and the City will contribute salary deductions for annuity purposes if the employee is receiving Workers' Compensation.

A duty disability benefit is payable to age 65 if the disability benefits begin before age 60. For an employee who begins disability on or after age 60, disability will continue for five years. A duty disability benefit which continues for more than five years and which starts before the employee's age 60, will be increased by 10 percent on January 1st of the sixth year. The City contributes salary deductions for annuity purposes for the duty disability benefit. Such amounts contributed by the City after December 31, 1983, while the employee is receiving duty disability benefits, are not refundable to the employee and will be used for annuity purposes only.

Ordinary Disability Benefit

This benefit is granted for disability incurred other than in performance of an act of duty and is 50 percent of salary as of the last day worked. The first payment shall be made one month after the disablement occurs. Disability is payable until age 65 and limited to a maximum of 25 percent of the employee's total service or five years, whichever occurs first.

For ordinary disability benefits paid on or after January 1, 2001, the Fund credits amounts equal to the amounts ordinarily contributed by an employee for annuity purposes for any period during which the employee receives ordinary disability. These amounts are used for annuity purposes but are not credited for refund purposes.

GROUP HEALTH HOSPITAL AND SURGICAL INSURANCE PREMIUMS

The pension fund shall provide payments in the amount of $95 per month for non-Medicare eligible city annuitants (defined in section 160.1 of Article 11 of the Illinois Pension Code as persons receiving an age and service annuity, a widow's annuity, a child's annuity, or a minimum annuity as a direct result of previous employment by the City of Chicago) and $65 per month for Medicare eligible city annuitants beginning July 1, 2008, and until such time as the city no longer provides a health care plan for such annuitants or December 31, 2016, whichever comes first.

The city health care plans referred to above and the pension fund’s payments to the city for such plans are not and shall not be construed to be pension or retirement benefits for the purposes of Section 5 of Article XIII of the Illinois Constitution of 1970.

Should the Board of Education continue to sponsor a retiree health plan, the pension fund is authorized to provide payments to the Board of Education, on behalf of each eligible annuitant who chooses to participate in the Board of Education retiree health benefit plan, in the amount of $95 per month for non-Medicare eligible participants and $65 per month for Medicare eligible participants beginning July 1, 2008, and until such time as the city no longer provides a health care plan for such annuitants or December 31, 2016, whichever comes first.

The Board of Education health benefit plan referred to above and the pension fund’s payments to the Board of Education for such plan are not and shall not be construed to be pension or retirement benefits for the purposes of Section 5 of Article XIII of the Illinois Constitution of 1970.

REFUNDS

To Employees

An employee who resigns before age 55, or before age 60 with less than 10 years of service, is entitled to all salary deductions for retirement annuity and spouse annuity accumulated with interest to date of resignation, plus the 0.50 percent deducted for annuity increase purposes without interest.

If the annuity of an employee is less than $800 a month, the employee may elect to receive a refund, as above, in lieu of an annuity.

Spouse’s annuity deductions are payable to the employee if not married when he retires.

For participants that first became members on or after January 1, 2011, an employee who resigns before age 62 without regard to length of service or with less than 10 years of service regardless of age is entitled to all salary deductions for retirement annuity and spouse annuity accumulated with interest to date of resignation, plus the 0.50 percent deducted for annuity increase purposes without interest.

To Spouses

The spouse may choose a refund in lieu of annuity if the annuity would be less than $800 per month.

Remaining Amounts

Amounts contributed by the employee excluding 0.50 percent deductions for annuity increases, and which have not yet been paid out as annuity, are refundable to his estate with interest to his retirement or death if the employee died in service.

DEDUCTIONS AND CONTRIBUTIONS

Members are required to contribute 8.50 percent of their salary to the pension fund.

For participants that first became members on or after January 1, 2011, pensionable salary, upon which member contributions are made, is limited to $106,800 in 2011, increased by the lesser of 3 percent and one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12-month period ending with the September preceding the November 1, which is the date that the new amount will be calculated and made available to the pension funds.

The City shall annually levy a tax which, when added to the amounts deducted from the salaries of the employees, or otherwise contributed by them, will be sufficient for the requirements of the Fund. The tax will produce an amount that does not exceed the amount of contributions by the employees to the Fund made in the calendar year two years prior to the year for which the annual applicable tax is levied, multiplied by 1.00 for the year 1999 and each year thereafter. The total amount of contributions by the employees shall not include contributions for service credit purchases under Section 11-133.3 for purposes of establishing the tax levy amount.

When the balance of the prior service reserve equals its liabilities (including in addition to all other liabilities, the present value of all annuities, present or prospective, according to the applicable mortality tables and rates of interest), the City shall cease to contribute the amounts to provide prior service annuities and other annuities and benefits. All liabilities attributable to the cost of the Early Retirement Incentive created by Public Act 93-0654 are to be excluded from the determination of a required City contribution.

TAX SHELTER OF EMPLOYEE SALARY DEDUCTIONS

Beginning January 1, 1982, the City employee salary deductions were designated for income tax purposes to be made by the employer. The W-2 salary is therefore reduced by the amount of contributions. For pension purposes the salary remains unchanged. Income tax will be paid when a refund or annuity is granted. For the purposes of benefits, refunds or financing, these contributions are treated as employee contributions.

Beginning September 1, 1981, the Board of Education paid contributions in the amount of 7.00 percent of the employee’s salary. The 1985 amendments contained a provision whereby the amount of pick-up, if any, is included in the pensionable salary for contributions and benefits. Such provision was retroactive to September 1, 1981. Beginning May 28, 2000, the remainder of contributions due for Board of Education employee salary deductions was designated for income tax purposes to be made by the employer and treated in the same manner as City employee salary deductions.

SALARY AND COLA DEVELOPMENT FOR MEMBERS HIRED ON OR AFTER JANUARY 1, 2011

Calendar Year	CPI-U	1/2 CPI-U	COLA	Maximum Annual Pensionable Earnings
2011				$106,800.00
2012	3.90%	1.95%	1.95%	$108,882.60
2013	2.00%	1.00%	1.00%	$109,971.43
2014	1.20%	0.60%	0.60%	$110,631.26
2015	1.70%	0.85%	0.85%	$111,571.63
2016	0.00%	0.00%	0.00%	$111,571.63

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

ACTUARIAL COST METHOD

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The principal Actuarial Cost Method used in this valuation is the Entry Age Normal Actuarial Cost Method. Under this Method, a Normal Cost is developed by spreading the actuarial value of benefits expected to be received by each active participant over the total working lifetime of that participant, from date of hire to termination, as a level percentage of pay.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued Liability ("UAAL") develops. The UAAL is generally amortized over a defined period of time (e.g., 30 years). The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

Estimated annual administrative expenses are added to the normal cost.

CURRENT ACTUARIAL ASSUMPTIONS
(Adopted as of December 31, 2012, unless otherwise stated)

Demographic Assumptions

Post Retirement Mortality: RP2000 Combined Healthy mortality table, sex distinct, set forward one year for males and setback 2 years for females. No adjustment is made for post-disabled mortality. The mortality table used is a static table and provides an estimated margin of 18 percent for future mortality improvements.

Pre-Retirement Mortality: 80 percent of post-retirement mortality.

Mortality assumptions first adopted for the December 31, 2011, valuation.

Disability: Disability cost valued as a term cost of 2.50 percent of payroll.

RATE OF RETIREMENT:

Tier 1 Age-and-Service-Based Rates of Retirement

Years of Service

Attained Age	10	11-14	15-19	20-24	25-29	30-32	33-34	35-39	40+
50-54	-	-	-	-	-	24 %	40 %	35 %	100 %
55-59	-	-	-	16 %	24 %	24	40	35	100
60-64	16 %	10 %	10 %	16	24	24	40	35	100
65-69	16	16	24	24	24	24	40	35	100
70-79	24	24	24	24	24	24	40	40	100
80+	100	100	100	100	100	100	100	100	100

Tier 2 Age-and-Service-Based Rates of Retirement

Years of Service

Attained Age	10-39	40+
62-66	24 %	100 %
67-69	40	100
70-79	40	100
80+	100	100

RATE OF TERMINATION:

Service[1]	Rate
0	8.00%
1	7.00%
2-3	5.00%
4-9	4.00%
10-15	3.00%
16-19	2.00%
20-29	1.50%
30+	1.00%

[1]Based on service at beginning of valuation year.

Economic Assumptions

Investment Return Rate and Discount Rate: 7.50 percent per annum (net of investment expense) for pensions and 4.50 percent per annum for OPEB. The 7.50 percent assumption contains a 3.00 percent inflation assumption and a 4.50 percent real rate of return assumption for pension. OPEB discount rate adopted 2005.

Future Salary Increases: The assumed base rate of individual salary increase is 3.75 percent per year, plus a service-based increase in the first 15 years.

Completed Years of Service[1]	Additional Increase	Total Increase
1	6.25 %	10.00 %
2	4.75	8.50
3	3.75	7.50
4	3.25	7.00
5	2.25	6.00
6	1.25	5.00
7 – 15	0.25	4.00
16 – 30+	0.00	3.75

[1]Based on projected service at end of valuation year.

Asset Value: For funding purposes, the actuarial value of assets is smoothed by using a five-year phase-in of each year’s unexpected investment gains and losses. For purposes of determining the total pension liability, the actuarial value of assets is equal to market value.

Expenses: Administrative expenses included in the first year normal cost are based on the previous years’ administrative expenses increased by 3.0 percent and discounted to the beginning of the year. Future administrative expenses are assumed to increase at the assumed inflation assumption of 3.0 percent.

Projection Assumptions

Population: The active population is assumed to remain stable at the December 31, 2015, level.

New Entrant Profile: New entrants in the projection are assumed to have the following characteristics:

	Before Pay Cap	After Pay Cap
Average Age:	34.35	34.35
Average Salary:	$ 58,519	$ 58,495
Minimum Salary:	$ 12,660	$ 12,660
Maximum Salary:	$129,568	$111,572

New entrant characteristics are based upon current members that have been hired in the last ten years. Approximately 75 percent of new entrants are assumed to be male.

Individual member new entrant uncapped pay at hire date is assumed to increase by 3.75 percent over the individual member new entrant pay during the prior period.

New entrant pay is calculated explicitly each year for each individual new entrant and is tested against the pensionable pay cap in the applicable year.

Individual new entrant pay once hired is assumed to increase in accordance with the salary increase assumptions used in the actuarial valuation until the pensionable pay cap is reached. Thereafter, pay increases at the same rate as the pay cap.

P.A. 96-0889 and P.A. 96-1490 Assumptions: Capped (pensionable pay) was $111,571.63 for fiscal years 2015 and 2016 and increases at ½ CPI thereafter.

Employee and employer contributions and benefits are based on capped pay.

The annual increase in the Consumer Price Index-U is assumed to be 3.0 percent for all years.

Disability Payments in Lieu are assumed to reduce the applicable members’ contributions used in the determination of the City’s contribution by 7.6 percent.

Other Assumptions

Marital Status:	It is assumed that 85 percent of active members have an eligible spouse. The male spouse is assumed to be four years older than the female spouse. No assumption is made about other dependents.
Disability:	Liability for disability benefits is recognized as a one-year term cost of 2.50 percent of pay added to the normal cost.
Reciprocal Service:	No assumption for reciprocal service.
Benefit Service:	Exact fractional years of service are used to determine the amount of benefit payable.
Decrement Timing:	All decrements are assumed to occur mid-year.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Turnover decrements do not operate after member reaches retirement eligibility for a minimum annuity formula benefit.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Pay Increase Timing:	Middle of (fiscal) year.
Group Health Insurance:	Due to P.A. 98-0043 effective June 28, 2013, it is assumed for valuation purposes that the health insurance supplement in effect prior to June 30, 2013, will end on December 31, 2016 for all employee annuitants (and their future surviving spouses). The amount of the Fund paid health insurance from July 1, 2008, until December 31, 2016, is $95.00 per month for each annuitant (employees and surviving spouses) not qualified to receive Medicare benefits, and $65.00 if qualified. It is assumed that all annuitants age 65 and older will be eligible for Medicare and all annuitants less than age 65 will not be eligible for Medicare. Future surviving spouses of retirees, age 65 and older, are assumed to be eligible for Medicare, as well as surviving spouse annuitants that are currently receiving a health insurance supplement. It is assumed that 75 percent of future retirees will elect to receive the health insurance supplement at retirement, first adopted for the valuation as of December 31, 2011.
Loss in Tax Levy:	4.00 percent loss on tax levy is assumed.

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

CALCULATION OF THE SINGLE DISCOUNT RATE

GASB Statement Nos. 67 and 68 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate ("SDR") is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.50%; the municipal bond rate is 3.57%; and the resulting Single Discount Rate is 4.04%.

The sponsor finances benefits using a funding policy defined in state statute. Sponsor contributions are determined as 1.00 times the employee contribution level in the second prior fiscal year. The statutory contribution does not explicitly separate projected employer contributions between current plan members and future plan members.

For purposes of developing the Single Discount Rate, we have projected actuarial liabilities on an Entry Age Normal basis, and compared against projected market value of assets. We have assumed the actuarial liability for future member will be fully financed, to the extent that assets are available, any remaining asset will be assigned to current plan members. Based on this assignment of assets and employer contributions, plan assets assigned to current members are projected to be depleted by 2027.

The tables in this section provide background for the development of the Single Discount Rate.

The following tables show the assignment of assets and employer contributions and the projection of assets for current members as of the valuation date. Our projections assume the sponsor will make the required statutory contributions. The projections are based on the statutory funding projections performed during the December 31, 2015, actuarial valuation.

Total administrative expenses are assumed to increase at the assumed rate of inflation, or 3.00%. Total administrative expenses are allocated between current and future hires by total payroll.

PROJECTION OF FUNDED STATUS AND ASSIGNMENT OF ASSETS

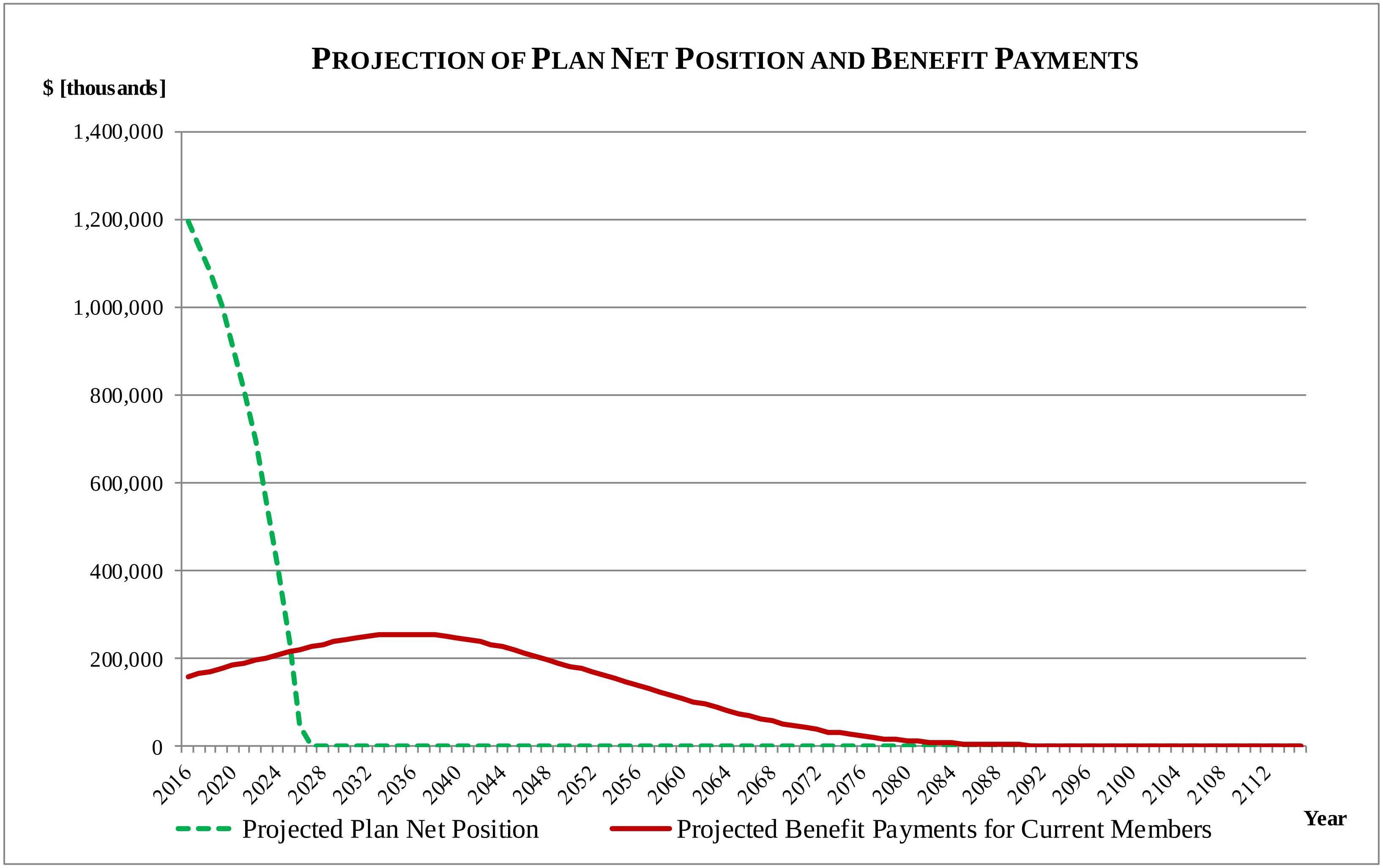
PYE 12/31	Open Group Actuarial Liability	Closed Group Actuarial Liability	Future Member Actuarial Liability	Open Group Assets	Future Member Assigned Assets	Closed Group Assigned Assets	Funded Ratio Current Members	Funded Ratio Future Members
	(a)	(b)	(c)=(a)-(b)	(d)	(e)=min[(c),(d)]	(f)=(d)-(e)	(g)=(f)/(b)	(h)=(e)/(c)
2015	$2,467,746,236	$2,467,746,236	$ -	$ 1,238,657,245	$ -	$ 1,238,657,245	50.19%	0.00%
2016	2,527,143,389	2,527,143,389	-	1,195,600,508	-	1,195,600,508	47.31%	0.00%
2017	2,583,237,144	2,581,937,259	1,299,884	1,144,166,463	1,299,884	1,142,866,578	44.26%	100.00%
2018	2,636,778,503	2,632,942,526	3,835,977	1,082,594,760	3,835,977	1,078,758,783	40.97%	100.00%
2019	2,687,606,183	2,679,851,772	7,754,411	1,011,036,757	7,754,411	1,003,282,346	37.44%	100.00%
2020	2,735,178,636	2,722,013,146	13,165,490	927,610,654	13,165,490	914,445,164	33.59%	100.00%
2021	2,779,504,551	2,759,245,813	20,258,738	831,820,889	20,258,738	811,562,152	29.41%	100.00%
2022	2,820,433,633	2,791,309,057	29,124,576	722,840,162	29,124,576	693,715,586	24.85%	100.00%
2023	2,857,646,821	2,817,785,531	39,861,290	599,641,721	39,861,290	559,780,430	19.87%	100.00%
2024	2,890,583,507	2,837,955,888	52,627,619	460,961,941	52,627,619	408,334,323	14.39%	100.00%
2025	2,918,749,534	2,851,211,169	67,538,366	305,506,237	67,538,366	237,967,872	8.35%	100.00%
2026	2,942,977,890	2,857,807,011	85,170,879	133,245,070	85,170,879	48,074,191	1.68%	100.00%
2027	2,962,257,863	2,856,606,090	105,651,773	-	-	-	0.00%	0.00%
2028	2,976,468,808	2,847,335,582	129,133,226	-	-	-	0.00%	0.00%
2029	2,985,525,256	2,829,778,401	155,746,855	-	-	-	0.00%	0.00%
2030	2,989,354,891	2,803,705,439	185,649,452	-	-	-	0.00%	0.00%
2031	2,988,609,839	2,769,686,748	218,923,091	-	-	-	0.00%	0.00%
2032	2,983,784,986	2,728,129,859	255,655,127	-	-	-	0.00%	0.00%
2033	2,975,412,582	2,679,454,752	295,957,829	-	-	-	0.00%	0.00%
2034	2,964,368,636	2,624,465,036	339,903,600	-	-	-	0.00%	0.00%
2035	2,951,306,122	2,563,809,404	387,496,718	-	-	-	0.00%	0.00%
2036	2,936,814,228	2,498,031,921	438,782,307	-	-	-	0.00%	0.00%
2037	2,921,459,063	2,427,669,149	493,789,914	-	-	-	0.00%	0.00%
2038	2,905,747,951	2,353,189,914	552,558,038	-	-	-	0.00%	0.00%
2039	2,890,179,839	2,275,011,806	615,168,034	-	-	-	0.00%	0.00%
2040	2,875,649,510	2,194,012,269	681,637,241	-	-	-	0.00%	0.00%
2041	2,863,036,354	2,111,051,963	751,984,391	-	-	-	0.00%	0.00%
2042	2,853,001,196	2,026,775,541	826,225,655	-	-	-	0.00%	0.00%
2043	2,846,181,072	1,941,794,578	904,386,494	-	-	-	0.00%	0.00%
2044	2,843,139,572	1,856,667,892	986,471,680	-	-	-	0.00%	0.00%
2045	2,844,206,177	1,771,722,834	1,072,483,343	-	-	-	0.00%	0.00%
2046	2,849,704,497	1,687,312,879	1,162,391,618	-	-	-	0.00%	0.00%
2047	2,859,912,769	1,603,776,326	1,256,136,443	-	-	-	0.00%	0.00%
2048	2,875,015,044	1,521,339,774	1,353,675,270	-	-	-	0.00%	0.00%
2049	2,895,194,508	1,440,291,408	1,454,903,099	-	-	-	0.00%	0.00%
2050	2,920,383,792	1,360,706,003	1,559,677,789	-	-	-	0.00%	0.00%
2051	2,950,025,040	1,282,188,366	1,667,836,674	-	-	-	0.00%	0.00%
2052	2,983,608,699	1,204,394,701	1,779,213,998	-	-	-	0.00%	0.00%
2053	3,020,918,520	1,127,423,551	1,893,494,969	-	-	-	0.00%	0.00%
2054	3,061,798,706	1,051,458,833	2,010,339,873	-	-	-	0.00%	0.00%
2055	3,106,227,934	976,985,566	2,129,242,368	-	-	-	0.00%	0.00%
2056	3,153,711,493	904,806,273	2,248,905,220	-	-	-	0.00%	0.00%
2057	3,203,486,371	835,346,536	2,368,139,836	-	-	-	0.00%	0.00%
2058	3,255,207,536	768,694,847	2,486,512,689	-	-	-	0.00%	0.00%
2059	3,308,636,438	705,110,854	2,603,525,584	-	-	-	0.00%	0.00%
2060	3,363,451,698	644,681,145	2,718,770,554	-	-	-	0.00%	0.00%
2061	3,419,418,511	587,461,881	2,831,956,630	-	-	-	0.00%	0.00%
2062	3,476,347,502	533,493,545	2,942,853,957	-	-	-	0.00%	0.00%
2063	3,534,013,814	482,790,292	3,051,223,522	-	-	-	0.00%	0.00%
2064	3,592,225,137	435,372,942	3,156,852,195	-	-	-	0.00%	0.00%
2071	4,006,439,259	190,239,841	3,816,199,418	-	-	-	0.00%	0.00%
2081	4,628,651,586	40,400,119	4,588,251,467	-	-	-	0.00%	0.00%
2091	5,382,796,918	4,542,768	5,378,254,150	-	-	-	0.00%	0.00%
2101	6,311,391,350	208,578	6,311,182,772	-	-	-	0.00%	0.00%
2111	7,357,891,170	2,242	7,357,888,928	-	-	-	0.00%	0.00%
2114	7,693,041,852	328	7,693,041,524	-	-	-	0.00%	0.00%

CURRENT MEMBER PROJECTION OF ASSETS AND ASSIGNMENT OF EMPLOYER CONTRIBUTIONS

PYE 12/31	Assets (boy)	Member Contributions	Administrative Expenses	Benefit Payments	Assigned Employer/City Contribution	Income on Cash Flow	Income on Assigned Contribution	Total Investment Income
2016	$ 1,238,657,245	$ 17,729,050	$ 3,959,676	$ 159,308,437	$ 14,411,424	$ 87,540,244	$ 530,658	$ 88,070,902
2017	1,195,600,508	16,882,203	3,809,046	164,056,307	13,636,568	84,110,526	502,127	84,612,653
2018	1,142,866,578	16,230,257	3,674,997	170,201,917	13,144,728	79,910,117	484,016	80,394,133
2019	1,078,758,782	15,554,371	3,528,861	176,328,034	13,473,032	74,856,950	496,105	75,353,055
2020	1,003,282,345	14,844,725	3,369,680	182,726,663	12,995,574	68,940,337	478,524	69,418,861
2021	914,445,163	14,081,661	3,195,352	188,857,775	12,594,585	62,030,110	463,759	62,493,869
2022	811,562,151	13,339,989	3,020,099	194,916,608	12,229,893	54,069,929	450,330	54,520,259
2023	693,715,586	12,608,253	2,844,845	201,026,682	11,903,834	44,985,960	438,324	45,424,284
2024	559,780,430	11,807,366	2,656,621	207,281,279	11,570,422	34,687,956	426,047	35,114,003
2025	408,334,322	11,014,860	2,469,399	213,686,128	11,287,227	23,071,371	415,619	23,486,990
2026	237,967,872	10,227,054	2,283,620	219,350,135	11,043,227	10,063,159	406,634	10,469,793
2027	48,074,191	9,411,362	2,094,376	225,590,176	168,428,808	(4,431,706)	6,201,897	1,770,191
2028	-	8,604,908	1,909,044	231,567,894	224,872,029	(8,280,253)	8,280,253	-
2029	-	7,820,308	1,730,896	237,229,575	231,140,163	(8,511,059)	8,511,059	-
2030	-	7,033,137	1,555,334	242,519,361	237,041,558	(8,728,360)	8,728,360	-
2031	-	6,325,719	1,398,537	246,810,990	241,883,807	(8,906,662)	8,906,662	-
2032	-	5,697,201	1,259,849	250,298,257	245,860,905	(9,053,107)	9,053,107	-
2033	-	5,116,092	1,132,350	252,943,007	248,959,266	(9,167,195)	9,167,195	-
2034	-	4,603,086	1,020,065	254,438,067	250,855,046	(9,237,001)	9,237,001	-
2035	-	4,183,505	929,138	255,050,260	251,795,893	(9,271,645)	9,271,645	-
2036	-	3,793,501	847,119	254,796,149	251,849,766	(9,273,629)	9,273,629	-
2037	-	3,452,916	776,420	253,760,936	251,084,440	(9,245,448)	9,245,448	-
2038	-	3,155,140	715,002	252,040,646	249,600,509	(9,190,807)	9,190,807	-
2039	-	2,856,909	653,027	249,622,706	247,418,824	(9,110,473)	9,110,473	-
2040	-	2,618,031	603,649	246,217,890	244,203,508	(8,992,078)	8,992,078	-
2041	-	2,424,090	563,901	241,881,508	240,021,319	(8,838,081)	8,838,081	-
2042	-	2,263,385	531,223	236,856,216	235,124,054	(8,657,754)	8,657,754	-
2043	-	2,119,380	501,997	231,192,024	229,574,642	(8,453,413)	8,453,413	-
2044	-	1,992,557	476,274	224,977,466	223,461,183	(8,228,303)	8,228,303	-
2045	-	1,871,541	451,485	218,454,292	217,034,236	(7,991,649)	7,991,649	-
2046	-	1,746,696	425,378	211,605,851	210,284,533	(7,743,111)	7,743,111	-
2047	-	1,636,612	402,321	204,503,353	203,269,062	(7,484,787)	7,484,787	-
2048	-	1,510,792	374,894	197,232,873	196,096,974	(7,220,696)	7,220,696	-
2049	-	1,386,777	347,352	189,772,218	188,732,793	(6,949,532)	6,949,532	-
2050	-	1,265,208	319,858	182,348,428	181,403,078	(6,679,636)	6,679,636	-
2051	-	1,107,679	282,637	175,375,159	174,550,117	(6,427,296)	6,427,296	-
2052	-	850,768	219,119	168,708,770	168,077,121	(6,188,947)	6,188,947	-
2053	-	617,211	160,466	162,021,414	161,564,669	(5,949,145)	5,949,145	-
2054	-	372,942	97,892	155,217,102	154,942,052	(5,705,287)	5,705,287	-
2055	-	168,769	44,756	148,057,900	147,933,888	(5,447,232)	5,447,232	-
2056	-	70,817	19,007	140,358,760	140,306,950	(5,166,392)	5,166,392	-
2057	-	44,430	12,079	132,487,999	132,455,648	(4,877,291)	4,877,291	-
2058	-	-	-	124,710,578	124,710,578	(4,592,101)	4,592,101	-
2059	-	-	-	116,930,483	116,930,483	(4,305,622)	4,305,622	-
2060	-	-	-	109,288,785	109,288,785	(4,024,239)	4,024,239	-
2061	-	-	-	101,821,086	101,821,086	(3,749,263)	3,749,263	-
2062	-	-	-	94,546,577	94,546,577	(3,481,400)	3,481,400	-
2063	-	-	-	87,493,575	87,493,575	(3,221,694)	3,221,694	-
2064	-	-	-	80,656,676	80,656,676	(2,969,946)	2,969,946	-
2071	-	-	-	41,117,750	41,117,750	(1,514,041)	1,514,041	-
2081	-	-	-	11,117,927	11,117,927	(409,385)	409,385	-
2091	-	-	-	1,697,192	1,697,192	(62,494)	62,494	-
2101	-	-	-	108,601	108,601	(3,999)	3,999	-
2111	-	-	-	1,890	1,890	(70)	70	-
2114	-	-	-	366	366	(13)	13	-

DEVELOPMENT OF SINGLE DISCOUNT RATE

PYE 12/31	Benefit Payments	Discount Rate	Discounted Benefit Payment	Single Discount Rate	Discounted Benefit Payment
2016	$ 159,308,437	7.50%	$ 153,650,701	4.04%	$ 156,185,314
2017	164,056,307	7.50%	147,190,654	4.04%	154,595,621
2018	170,201,917	7.50%	142,050,670	4.04%	154,159,943
2019	176,328,034	7.50%	136,896,310	4.04%	153,508,100
2020	182,726,663	7.50%	131,966,541	4.04%	152,902,536
2021	188,857,775	7.50%	126,878,582	4.04%	151,897,446
2022	194,916,608	7.50%	121,813,053	4.04%	150,684,050
2023	201,026,682	7.50%	116,866,550	4.04%	149,373,990
2024	207,281,279	7.50%	112,095,488	4.04%	148,041,745
2025	213,686,128	7.50%	107,496,895	4.04%	146,690,937
2026	219,350,135	7.50%	102,647,655	4.04%	144,733,044
2027	225,590,176	7.50%	98,202,568	4.04%	143,071,394
2028	231,567,894	3.57%	149,366,650	4.04%	141,160,702
2029	237,229,575	3.57%	147,744,102	4.04%	138,997,546
2030	242,519,361	3.57%	145,832,311	4.04%	136,580,140
2031	246,810,990	3.57%	143,297,252	4.04%	133,600,618
2032	250,298,257	3.57%	140,312,776	4.04%	130,228,080
2033	252,943,007	3.57%	136,907,769	4.04%	126,494,699
2034	254,438,067	3.57%	132,969,957	4.04%	122,302,286
2035	255,050,260	3.57%	128,695,462	4.04%	117,836,842
2036	254,796,149	3.57%	124,135,599	4.04%	113,149,078
2037	253,760,936	3.57%	119,369,748	4.04%	108,314,292
2038	252,040,646	3.57%	114,473,805	4.04%	103,403,305
2039	249,622,706	3.57%	109,467,612	4.04%	98,435,275
2040	246,217,890	3.57%	104,252,670	4.04%	93,323,091
2041	241,881,508	3.57%	98,886,333	4.04%	88,120,107
2042	236,856,216	3.57%	93,494,145	4.04%	82,939,224
2043	231,192,024	3.57%	88,112,698	4.04%	77,812,769
2044	224,977,466	3.57%	82,788,630	4.04%	72,781,312
2045	218,454,292	3.57%	77,617,255	4.04%	67,927,288
2046	211,605,851	3.57%	72,592,440	4.04%	63,243,254
2047	204,503,353	3.57%	67,737,659	4.04%	58,747,556
2048	197,232,873	3.57%	63,077,587	4.04%	54,459,231
2049	189,772,218	3.57%	58,599,570	4.04%	50,364,865
2050	182,348,428	3.57%	54,366,308	4.04%	46,515,737
2051	175,375,159	3.57%	50,484,949	4.04%	43,000,034
2052	168,708,770	3.57%	46,891,867	4.04%	39,759,528
2053	162,021,414	3.57%	43,480,878	4.04%	36,701,077
2054	155,217,102	3.57%	40,219,020	4.04%	33,794,716
2055	148,057,900	3.57%	37,041,582	4.04%	30,984,440
2056	140,358,760	3.57%	33,904,979	4.04%	28,232,831
2057	132,487,999	3.57%	30,900,573	4.04%	25,614,995
2058	124,710,578	3.57%	28,084,022	4.04%	23,175,220
2059	116,930,483	3.57%	25,424,345	4.04%	20,885,802
2060	109,288,785	3.57%	22,943,711	4.04%	18,762,981
2061	101,821,086	3.57%	20,639,150	4.04%	16,802,226
2062	94,546,577	3.57%	18,504,013	4.04%	14,996,080
2063	87,493,575	3.57%	16,533,404	4.04%	13,338,621
2064	80,656,676	3.57%	2,417,296	4.04%	11,818,923
2071	41,117,750	3.57%	5,868,724	4.04%	4,566,535
2081	11,117,927	3.57%	1,117,373	4.04%	831,016
2091	1,697,192	3.57%	120,106	4.04%	85,378
2101	108,601	3.57%	5,412	4.04%	3,677
2111	1,890	3.57%	66	4.04%	43
2112	1,131	3.57%	38	4.04%	25
2113	649	3.57%	21	4.04%	14
2114	366	3.57%	12	4.04%	7
Total Present Value			**$ 4,465,326,399**		**$ 4,465,326,399**


PROJECTION OF PLAN NET POSITION AND BENEFIT PAYMENTS
$ [thousands]
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2016
2020
2024
2028
2032
2036
2040
2044
2048
2052
2056
2060
2064
2068
2072
2076
2080
2084
2088
2092
2096
2100
2104
2108
2112
Year
Projected Plan Net Position
Projected Benefit Payments for Current Members

SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Accrued Liability ("AAL")	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
Actuarial Assumptions	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
Actuarial Gain (Loss)	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
Actuarial Present Value ("APV")	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
Actuarial Valuation	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability and related actuarial present value of projected benefit payments for pensions.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution ("ADC") or Annual Required Contribution ("ARC")	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

GLOSSARY OF TERMS

Amortization Method — The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year.

Amortization Payment — The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Cost-of-Living Adjustments — Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan) — A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered-Employee Payroll — The payroll of employees that are provided with pensions through the pension plan.

Deferred Retirement Option Program ("DROP") — A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.

Deferred Inflows and Outflows — The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.

Discount Rate — For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:

1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and
2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

GLOSSARY OF TERMS

Entry Age Actuarial Cost Method ("EAN")	The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
Fiduciary Net Position	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
GASB	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
Long-Term Expected Rate of Return	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
Money-Weighted Rate of Return	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Municipal Bond Rate	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
Net Pension Liability ("NPL")	The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.
Non-Employer Contributing Entities	Non-employer contributing entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.
Normal Cost	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.

GLOSSARY OF TERMS

Other Postemployment Benefits ("OPEB") All postemployment benefits other than retirement income (such as death benefits, life insurance, disability and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.

Real Rate of Return The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.

Service Cost The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

Total Pension Expense The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost
2. Interest on the Total Pension Liability
3. Current-Period Benefit Changes
4. Employee Contributions (made negative for addition here)
5. Projected Earnings on Plan Investments (made negative for addition here)
6. Pension Plan Administrative Expense
7. Other Changes in Plan Fiduciary Net Position
8. Recognition of Outflow (Inflow) of Resources due to Liabilities
9. Recognition of Outflow (Inflow) of Resources due to Assets

Total Pension Liability ("TPL") The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability ("UAAL") The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.