DEFINED BENEFIT PENSION PLAN FOR EMPLOYEES OF THE ORANGE COUNTY LIBRARY DISTRICT

A DEFINED BENEFIT ACTUARIAL VALUATION

AS OF JANUARY 1, 2018

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February 5, 2018

CONFIDENTIAL

Mr. Robert Tessier
Orange County Library System
101 East Central Blvd.
Orlando, Fl 32801

Re: Defined Benefit Pension Plan for Employees of the Orange County Library District

Dear Bob:

We are pleased to present our Actuarial Valuation Report for the Plan Year beginning January 1, 2018.

A summary of the principal results of the valuation is provided for your convenience on pages 1 through 3. Details supporting the cost calculations, as well as other information designed to assist you and your accountant in preparing your reports, are also included.

The actuarially determined contribution for the 2018 plan year is $498,028 and was developed as follows:

Normal Cost (end of year) *plus*	$	498,028
Amortization Payment (end of year)	$	0
Total Contribution Requirement	$	498,028

We recommend making a contribution at least equal to this actuarially determined amount since (the closed group of) participants continue to accrue benefits under the plan.

We would be happy to answer any questions you may have regarding this report.

Sincerely,

Frederica S. Daniels, FCA, EA, MAAA
Vice President and Managing Actuary

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Section I
Valuation Summaries

PRINCIPAL RESULTS OF THE VALUATION

Below is a summary of the principal results of this year's valuation compared with the previous valuation. Amounts for each valuation period reflect the actuarial cost method, assumptions and plan benefits in effect at that time.

CONTRIBUTION LEVELS	As of January 1, 2017	As of January 1, 2018
Actuarially Determined Contribution (E.O.Y.)	$ 788,794	$ 498,028
Normal Cost	$ 521,686	$ 466,537
Covered Payroll	$ 4,775,367	$ 4,314,180
Normal Cost as a percentage of Covered Payroll	10.92%	10.81%
SUPPORTING INFORMATION		
Actuarial Value of Assets	$ 43,373,580	$ 48,652,294
Present Value of Accumulated Benefits	$ 38,198,599	$ 40,054,794
Funding Ratio - Actuarial Value of Plan Assets as Percentage of Present Value of Accumulated Benefits	113.5%	121.5%
Number of lives in the Valuation	292	289
Valuation Interest Rate	6.75%	6.75%
Measurement Date	1/1/2017	1/1/2018

VALUATION AS OF 1/1/2018

EXECUTIVE SUMMARY

Purpose and Scope

The principal purposes of this actuarial valuation report are:

1. To present our calculation of the actuarially determined contribution for the plan year beginning January 1, 2018,
2. To review plan experience during the plan year ending December 31, 2017 and the funded status of the plan as of January 1, 2018, and
3. To provide information required by the reporting and disclosure requirements of the State of Florida and the Internal Revenue Code.

The valuation is based upon employee data and financial information provided by the plan sponsor. This data was not audited or otherwise verified by us other than for tests of reasonable consistency with prior year data.

Plan Experience

During the plan year ended December 31, 2017, the number of active participants decreased from 88 to 80. As of the valuation date, there are also 62 deferred vested employees, 14 remaining employees who transferred to the Money Purchase Plan on January 1, 2007, and 133 retirees.

The Plan experienced a net actuarial gain of approximately $4,392,000 during 2017. The actuarial value of plan assets increased from $43,373,580 to $48,652,294. The investment return was approximately 15.04%. The investment return assumption used in 2017 was 6.75%, so the investment return on plan assets created an actuarial experience gain of about $3,439,000.

In addition, there was a net liability gain of approximately $953,000. This gain is mainly due to higher turnover than expected and salary increases lower than the assumed rate (3.7% vs. 4.5%).

Plan Provisions

There were no plan changes reflected in this year's valuation report.

Actuarial Methods and Assumptions

All actuarial methods and assumptions used in the January 1, 2018 valuation report are the same as those used in the January 1, 2017 report. The discount rate used to value liabilities remains at 6.75%. The assumed salary increases for active employees remains at 4.5%. The Mortality Improvement Scale remains at Scale BB, to match the mortality used in each of the last 2 Florida Retirement Systems actuarial valuations. Please see the Summary of Actuarial Assumptions and Methods section of this report for more details about the assumptions used in this valuation.

VALUATION AS OF 1/1/2018

EXECUTIVE SUMMARY
(Continued)

Plan Contributions

The actuarially determined contribution for the plan year commencing on January 1, 2018 and ending on December 31, 2018 is $498,028.

Funded Status

Plan assets, as a percentage of the present value of accrued benefits, increased from 113.5% to 121.5%.

Certification of Report

This report has been prepared in accordance with generally accepted actuarial standards and procedures and conforms to the Guidelines for Professional Conduct of the American Academy of Actuaries. It is based on the employee data submitted by the plan sponsor and the retirement plan provisions outlined herein.

I, Frederica S. Daniels, FCA, EA, am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. There exists no relationship with the Plan or the Sponsor that would impair the objectivity of my work.

USI CONSULTING GROUP

Frederica S. Daniels, FCA, EA, MAAA
Vice President and Managing Actuary/CT

Diane Padernacht
Associate VP & Actuarial Manager

Anthony Citerella
Senior Actuarial Analyst

VALUATION AS OF 1/1/2018

STATEMENT BY ENROLLED ACTUARY

This Actuarial Valuation report and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes and Chapter 60T-1 of F.A.C. There is no benefit provision or related expense to be provided by the retirement plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the Valuation. All known events or trends that may require a material increase in Plan costs or required contribution rates have been taken into account in the Valuation.

Frederica S. Daniels

Printed Name

Signature

2/5/2018

Date

17-07137

Enrollment Number

FLORIDA REQUIREMENTS

Florida requires that the funding of pension plans take into account:

1. Subsidized early retirement benefits.

2. Benefits continuing to accrue subsequent to expected retirement.

3. A current mortality table assumption with life expectancies and mortality improvement scales used in either of the two most recently published valuation reports for the FRS pension plan. However, the collar and risk class factors must be representative of the current plan's population.

Early retirement produces an actuarial gain for this plan. Benefits are reduced 5% per year for each year that early retirement precedes normal retirement.

The Late Retirement Benefit is the accrued benefit at the Late Retirement Date. The benefit forgone for the year that retirement is delayed is more valuable than the additional accrual.

Overtime pay in excess of 300 hours per plan year can not be included in the definition of yearly compensation used for determining average compensation under the plan's benefit formula. Compensation must also exclude payments for accrued unused sick or annual leave. This rule is effective for non-collectively bargained service earned on/after 7/1/2011 or for service earned under collectively bargained agreements entered into on/after 7/1/2011.

FINANCIAL STATEMENT AS OF 1/1/2018

ASSETS	1/1/2017	1/1/2018
Cash and Money Market Funds	154,641	175,137
Fixed Income	13,218,231	13,272,509
Equities	29,488,292	34,186,834
Alternative Investments (Real Estate)	2,704,321	2,837,830
Total Investments	45,565,485	50,472,310
Accrued Income	53,124	49,767
Other Assets *	671	2,177,871
Total Assets	45,619,280	52,699,948
LIABILITIES AND NET ASSETS		
Accounts Payable	49,127	24,470
Other Liabilities *	2,196,573	4,023,184
Total Liabilities	2,245,700	4,047,654

* Represents broker activity for investment trades pending as of the valuation date.

Net Assets	43,373,580	48,652,294

STATEMENT OF RECEIPTS AND DISBURSEMENTS		
Net Assets at Beginning of Year		43,373,580
Contributions Received or Receivable		
Employer	788,794	
Employee	0	
Total Contributions		788,794
Fixed Income Interest		240,143
Stock Dividends		0
Other Dividends		516,199
Realized Appreciation		9,229,840
Unrealized Appreciation		(3,549,330)
Total Income		7,225,646
Distribution of Benefits		
Monthly Benefit Payments	1,841,798	
Total Distributions		1,841,798
Administrative Expenses		16,775
Investment Related Expenses		88,359
Total Expenses		1,946,932
Net Income/(loss)		5,278,714
Actuarial Value of Assets at Year End		48,652,294
Gross Investment Return:		**15.04%**

VALUATION RESULTS AS OF 1/1/2018

1. PRESENT VALUE OF FUTURE BENEFITS

The value of all projected retirement, death and vested termination benefits projected to be paid to current plan participants, discounted to the valuation date with interest, mortality and withdrawal rates.

	Lives	Total
Active	80	23,860,448
Terminated / Inactive	76	2,562,836
Retired	133	23,124,949
Total	289	49,548,233

2. VALUATION ASSETS	48,652,294
3. ACTUARIAL ACCRUED LIABILITY	45,760,711
4. ACTUAL UNFUNDED ACTUARIAL ACCRUED LIABILITY	(2,891,583)
5. UNFUNDED ACTUARIAL ACCRUED LIABILITY (FOR ADC)	0

6. EXPECTED UNFUNDED ACCRUED LIABILITY

(a) Prior Unfunded Accrued Liability	1,647,719
(b) Prior Normal Cost	521,686
(c) Interest on (a) + (b)	146,435
(d) Employer Contributions	788,794
(e) Interest on Employer Contributions	26,187
(f) Increase/(Decrease) due to Change in Assumptions/Cost Method	0
(g) Total Expected Unfunded Accrued Liability: (a) + (b) + (c) - (e) - (e) + (f)	1,500,859

7. ACTUARIAL GAIN/(LOSS)	4,392,442
8. NORMAL COST	466,537

CONTRIBUTION REQUIREMENTS FOR PLAN YEAR ENDING 12/31/2018

ACTUARIALLY DETERMINED CONTRIBUTION (ADC)

(1) Normal Cost		466,537
(2) Outstanding Charge Base	0	
(3) Amortization of Outstanding Charge Base (see below)		0
(4) Interest Charge		31,491
(5) Total Charges		498,028

AMORTIZATION SCHEDULE FOR ADC

Description	Year Est.	Initial Amount	Outstanding Balance	Amortization Payment	Years Remaining
Unfunded Accrued Liability	2018	0	0	0	10

GAIN/LOSS ANALYSIS

I. LIABILITY GAIN/(LOSS)

(1) EAN Accrued Liability as of 1/1/2017	45,021,299
(2) EAN Normal Cost for 2017	521,686
(3) Benefit Payments during 2017	(1,841,798)
(4) Net Interest	3,013,006
(5) Expected EAN AL as of 1/1/2018 (1 + 2 + 3 + 4)	46,714,193
(6) Actual EAN Accrued Liability as of 1/1/2018	45,760,711
(7) Liability Gain/(Loss) (5 - 6)	953,482

II. ASSET GAIN/(LOSS)

(1) Actuarial Value of Assets as of 1/1/2017	43,373,580
(2) Employer Contributions during 2017	788,794
(3) Benefit Payments during 2017	(1,841,798)
(4) Net Interest	2,892,758
(5) Expected Actuarial Value of Assets as of 1/1/2018 (1 + 2 + 3 + 4)	45,213,334
(6) Actual Actuarial Value of Assets as of 1/1/2018	48,652,294
(7) Asset Gain/(Loss) (6 - 5)	3,438,960

III. NET ACTUARIAL GAIN/(LOSS) (I.7 + II.7)	4,392,442

PARTICIPANT DATA AS OF 1/1/2018

Active employees under retirement age	
Number	74
Total annual compensation	4,314,180
Average accrued benefit	1,951.81
Average projected benefit	4,080.80
Average attained age	53.86
Average prior service	21.40
Other active and inactive employees	
Number	20
Average accrued benefit	681.42
Average attained age	51.51
Terminated deferred vested, deceased and disabled employees	
Number	62
Average accrued benefit	533.10
Average attained age	48.75
Retired employees, beneficiaries and contingent annuitants	
Number	133
Average monthly benefit	1,222.58
Average attained age	70.34

RECONCILIATION OF PARTICIPANT STATUS

	Active	Inactive	Transfer to MP Plan	Deferred Vested	Retired	Total
Prior Valuation	88	0	14	62	128	292
Terminated - not vested	0	0	0	0	0	0
Terminated - vested	(2)	0		2	0	0
Retired	(6)	0	0	(2)	8	0
Cashed Out	0	0	0	0	0	0
Annuity Purchase	0	0	0	0	0	0
New Entrants/Adjustments	0	0	0	0	0	0
Deaths	0	0	0	0	(3)	(3)
Current Valuation	80	0	14	62	133	289

SUMMARY OF PLAN PROVISIONS

Effective Date	7/1/1952
Plan Year Beginning	1/1/2018
Eligibility	
Requirements	Minimum age: 0; Minimum months of service: 12
Entry Dates	Date of meeting the requirements for employees hired on or before 12/31/2006. No participants will be allowed to enter the Plan after 1/1/2008.
Year of Service	All days worked as a full time employee. Measured as elapsed time from Date of Participation.
Year of Vesting Service	All days worked as a full time employee. Measured as elapsed time from date of hire as a full time employee.
Normal Retirement Date	Day participant turns 65 or, if later, completion of 4 Years of Vesting Service in the Plan.
Normal Retirement Benefit	
Benefit Formula	2% of average monthly compensation times Years of Service up to 30 years.
Average Monthly Compensation	Monthly average of compensation for the 5 years of highest compensation of the last 10 years. Maximum annual compensation: $275,000.
Maximum Annual Benefit	$220,000 as adjusted per IRC Sec. 415 for retirement age other than Social Security Retirement Age and annuity form.
Normal Form of Benefit	Life Annuity with modified cash refund.
Accrued Benefit	Normal Retirement Benefit based on earnings and Years of Service to date.
Cost of Living	2% per year following year of retirement (prorated for partial year in initial year of retirement).
Early Retirement Benefit	Minimum Age: 55 Minimum Service: 9 Years of Service Benefit Amount: Accrued Benefit, reduced by 0.417% for each month by which early retirement precedes normal retirement.
Pre-Retirement Death Benefit	Return of employee contributions with interest.
Vested Termination Benefit	Upon termination after 4 Years of Vesting Service, 100% of the Accrued Benefit, deferred to Normal Retirement Date.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

In order to determine the size of the liabilities and costs for a given level of benefits, an actuary must make certain assumptions as to future experience among the covered group of employees and as to the rate of investment return. In particular, assumptions are made regarding rates of employment termination, disability and mortality, in order to determine the likelihood of each employee reaching retirement age. In addition, since benefits are based in part on salary, it is also necessary to project the amount of each employee's salary at the time he or she retires. Investment earnings are a source of income to the pension plan fund and the actuary makes an assumption as to the rate to be earned each year in the future.

As a result of these assumptions applied to the covered group of participants, a total liability for future retirement benefits is determined. This total liability is then apportioned for payment to future years by use of an actuarial cost method. There are many different cost methods in use, some resulting in increasing annual contributions, some causing decreasing annual contributions, and others which result in level contributions. The level contribution method is the most common. Below is a summary of the actuarial methods and assumptions used in this valuation.

The plan's funding policy enables the plan sponsor to meet contribution requirements. Future measurements may differ significantly from the information contained within this report. These measurements will be based on the market value of assets, which varies based on the underlying portfolio experience, as well as plan sponsor contributions, benefit payments and expenses paid from plan assets. Liability calculations will be produced in accordance with current census data, as well as the interest rates and mortality tables in effect at that time. There has been no analysis of potential future impacts associated with this report. Please refer to the plan's Funding Policy for a more detailed disclosure of how the policy enables the plan sponsor to meet contribution requirements.

LIABILITY COST METHOD

Entry Age Normal Cost Method (EAN). Under this method, the annual cost is equal to the normal cost, plus a payment to amortize the unfunded accrued liability over a fixed (open) period of 10 years.

The normal cost is the sum of individual normal costs, determined as a level percentage of compensation which would have been necessary to fund the employee's projected retirement, death and withdrawal benefits, from entry age (the age at which the employee would have entered the plan had it been in effect on his employment date), to his retirement age. Thus, the dollar normal cost is expected to increase with the salary projection assumption.

The actuarial accrued liability is the accumulation, based on the actuarial assumptions, of all assumed prior normal costs. Thus, it represents the amount of reserves, which would be held by the plan, had it always been in effect for the present group of participants and had plan experience followed that predicted by the actuarial assumptions. The unfunded accrued liability is the excess, if any, of the accrued liability over the plan assets.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

Actuarial gains and losses arising from differences between plan experience and that predicted by the actuarial assumptions, as measured by the difference between actual and expected unfunded accrued liabilities, will be recognized over 10 years as part of the unfunded accrued liability amortization payment.

ATTRIBUTION PARAMETERS

Attribution parameters determine how growth in the benefit formula is allocated to years of service. For this plan, the attribution parameters use accrual rate prorations by component. This method attributes the benefit separately for each component of the benefit formula, based on the credited service. If there are no accrual definitions in the benefit formula, then the entire projected benefit is assigned to past service (and considered fully accrued as of the valuation date). This results in "natural" or "direct differencing" attribution.

ASSET VALUATION METHOD

The asset valuation method measures the current market value of assets, as reported by the Trustee, plus any accrued contributions.

ACTUARIAL ASSUMPTIONS

Pre-Retirement and Post-Retirement Mortality – RP-2000 Combined Healthy Participant Mortality Tables, by gender, with generational projection by scale BB. The projection scale matches the mortality improvement scale chosen for the FRS plan over the last two years.

Investment Return – 6.75% per annum. This return reflects the anticipated gross long-term rate of return on plan assets based on the plan’s current and expected future asset portfolio, as supported by the plan’s investment advisor. The Plan Administrators have determined that a 6.75% rate of return is reasonable for the current year, each of the next several years, and for the long term thereafter. This rate is reasonable in our opinion.

Retirement Age – The assumed retirement age is the Normal Retirement Age. The average age at commencement among all current retirees is 60 years. The average age at commencement for those individuals who retired in the past 5 years is about 62. In addition, there are currently 6 actives and 0 terminated vesteds who are past age 65 and have yet to commence payments. We do not feel a change is needed at this time. The assumption is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

Withdrawal Rates – The assumption currently incorporates rates from the Hartford Life Turnover Table 1. The actual experience of the Plan has generally been in-line with the assumption.

	Sample Pre-retirement Withdrawal Rates	
Age	Male	Female
20	10.000%	15.000%
25	10.000%	15.000%
30	7.500%	10.000%
35	5.000%	7.500%
40	3.000%	5.000%
45	1.500%	2.500%
50	0.000%	0.000%
55	0.000%	0.000%
60	0.000%	0.000%

The assumption is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

Salary Scale Projections – 4.5% per annum.
The assumption selected is consistent with the plan sponsor's current compensation practice. No significant changes are expected in the near future.

Disability Rates – None

Expense Loading – 3% of liabilities

Payroll Growth Rate – None (for amortization purposes)

Cost of Living Increases – The Plan provides for an annual COLA of 2.0% per annum. The valuation reflects an assumption of 2.0% per annum, as an estimate of the long term COLA increases.

Long-Term Inflation – The assumption of 2.0% follows the current plan provisions.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

Maximum Compensation – Increases in this assumption correspond to the expectation in inflation.

Maximum Benefit – Increases in this assumption correspond to the expectation in inflation.

Marital Assumptions:
A. 80% of population is married
B. 80% of married participants elect the 50% Joint & Survivor annuity payment upon retirement
C. Spouses are assumed to be of the opposite gender of the participant
D. Husbands are assumed to be 3 years older than wives

Plan Provisions Not Valued – None

Additional Disclosure Items:
These assumptions are reflective of the participant data. We will continue to periodically review the population and retirement elections and make any appropriate updates to these assumptions.

Vested benefits are based on the Plan document's vesting schedule based on Years of Vesting Service. Please refer to the Summary of Plan Provisions section of this report for requirements for particular benefits.

Early retirement subsidies are only valued once participants become eligible by meeting the specified requirements. Please refer to the Summary of Plan Provisions section of this report for such requirements.

Death benefits are treated as vested benefits for liability calculation purposes.

VALUATION RESULTS AS OF 1/1/2018

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

This exhibit is intended to satisfy Part VII, Chapter 112 of the Florida Statutes. Please note that some of the information required by Chapter 60T-1 of F.A.C. rules governing actuarial reports is located in the Exhibits that make up this report.

		As of January 1, 2017		As of January 1, 2018
A. PARTICIPANT DATA				
1. Number included				
a. Actives		88		80
b. Inactives		0		0
c. Transfers		14		14
d. Terminated Vested		62		62
e. Retirees		128		133
2. Total annual payroll of active employees included	$	4,775,367	$	4,314,180
3. Balance of employee contributions	$	115,291	$	87,101
4. Balance of employee contributions with interest for actives and inactives	$	415,937	$	324,939
B. ASSETS				
1. Actuarial value	$	43,373,580	$	48,652,294
2. Statement value	$	43,373,580	$	48,652,294
3. Market value	$	43,373,580	$	48,652,294
C. LIABILITIES				
1. Present Value of Accrued Benefits				
a. Accrued to date vested	$	38,198,599	$	40,054,794
b. Accrued to date non-vested	$	0	$	0
c. Total Accrued	$	38,198,599	$	40,054,794
2. Unfunded Accrued Liability	$	0	$	0

VALUATION RESULTS AS OF 1/1/2018

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS (continued)

C. LIABILITIES (continued)		As of January 1, 2017		As of January 1, 2018
3. Present Value of Active Members				
a. Future salaries at present age	$	46,446,314	$	39,804,648
b. Future contributions at present age	$	0	$	0
4. Breakdown of the Present Value of Future Benefits				
a. Active Participants				
i. Retirement benefits	$	25,519,173	$	23,752,699
ii. Termination/Vesting	$	125,195	$	99,635
iii. Death benefits	$	9,500	$	8,114
iv. Disability benefits	$	0	$	0
v. Return of contributions	$	0	$	0
vi. Subtotal	$	25,653,868	$	23,860,448
b. Retired Members	$	21,476,532	$	23,124,949
c. Terminated Vested / Inactive	$	2,429,674	$	2,562,836
d. Total	$	49,560,074	$	49,548,233

VALUATION RESULTS AS OF 1/1/2018

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS (continued)

D. PENSION COST		As of January 1, 2017		As of January 1, 2018
1. Normal Cost	$	521,686	$	466,537
2. Payment Required to Amortize Unfunded Actuarial Liabilities	$	217,231	$	0
3. Net interest on (1) + (2) to the end of the plan year	$	49,877	$	31,491
4. Actuarially Determined Contribution [(1) + (2) + (3)]	$	788,794	$	498,028
5. Contribution as a percent of payroll		16.52%		11.54%

The contribution levels are calculated as payable on the last day of the plan year.

E. PAST CONTRIBUTIONS		2016 Plan Year		2017 Plan Year
1. Actuarially Determined Contribution (assuming end-of-year deposit)	$	872,075	$	788,794
2. Actual Contributions made by Orange County Library District	$	872,075	$	788,794
3. Interest Accumulated on Monthy Contributions from date paid	$	28,952	$	26,187
4. Total Contributions (2) + (3)	$	901,027	$	814,981

VALUATION RESULTS AS OF 1/1/2018

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS (continued)

F. SALARY AND INVESTMENT EXPERIENCE COMPARISONS

1. Comparison of Actual and Assumed Salary Increases

Year Ended	Actual	Assumed
12/31/2017	3.70%	4.50%
12/31/2016	3.57%	4.50%
12/31/2015	3.01%	5.00%
12/31/2014	3.28%	5.00%
12/31/2013	3.89%	5.00%
12/31/2012	0.77%	5.00%
12/31/2011	0.09%	5.00%
12/31/2010	1.08%	5.00%
12/31/2009	2.28%	5.00%
12/31/2008	4.42%	5.00%

2. Comparison of Actual and Assumed Investment Returns

Year Ended	Actual	Assumed
12/31/2017	15.04%	6.75%
12/31/2016	7.49%	6.75%
12/31/2015	-0.63%	7.00%
12/31/2014	6.28%	7.00%
12/31/2013	18.38%	7.00%
12/31/2012	12.01%	7.00%
12/31/2011	-1.16%	7.00%
12/31/2010	13.49%	7.00%
12/31/2009	28.39%	7.00%
12/31/2008	-26.12%	7.00%

G. FOUR YEAR SCHEDULE OF UNAMORTIZED LIABILITIES

Date of Establishment	1/1/2018	1/1/2019	1/1/2020	1/1/2021
1/1/2018	0	0	0	0

All amortization payments are calculated as payable on the first day of the plan year.
The last year of amortization payment for the Unfunded Accrued Liability base will be in 2027.

H. DISCLOSURE

All benefits provided by the Plan have been taken into account in preparing the actuarial valuation. Additionally, participant reconciliation and demographic information are located on page 9 of this report.