

**ACTUARIAL VALUATION OF
TOWN OF DAVIE FIREFIGHTERS'
PENSION PLAN
AS OF OCTOBER 1, 2015**

February 2016

Determination of Contribution for the
Plan Year ending September 30, 2016
Contribution to be
Paid in Fiscal Year October 1, 2015
through September 30, 2016

**DuLaney and Company, Inc.
Actuarial Services**

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February 10, 2016

Board of Trustees
Town of Davie Firefighters' Pension Plan
c/o Ms. Susy Pita
21629 Stirling Pass
Leesburg, FL 34748

Subject: October 1, 2015 Actuarial Valuation of Pension Plan

Dear Board Members:

We are pleased to present our October 1, 2015 Actuarial Valuation for the Town of Davie Firefighters' Pension Plan. The purpose of this report is to indicate the appropriate contribution levels and to satisfy State requirements. The report is prepared for and at the request of the Board of Trustees.

This report consists of this commentary, detail Tables I through XVII and State Required Exhibit - Table XVIII. The Tables contain basic Retirement Plan cost figures plus significant detail on the benefits, liabilities and experience of your Plan.

Costs for Fiscal Year Beginning October 1, 2015

This Actuarial Valuation develops the required minimum Retirement Plan payment for the fiscal year beginning October 1, 2015 and ending September 30, 2016 under the Florida Protection of Public Employee Retirement Benefits Act and Chapter 175. The minimum payment consists of payment of annual normal cost plus amortization of the unfunded actuarial accrued liability over various periods, and interest, as prescribed by law. We anticipate that the member contributions will be **\$981,532** (9.0% of covered payroll).

The required funding amount for the plan/fiscal year ending September 30, 2016, to be met by the Town and State contributions under Chapter 175, is **\$4,740,376** or **43.5%** of the covered payroll. Please note that Chapter 175 states that employer contributions must be made at least quarterly, and these quarterly amounts must be at least **\$1,015,102**.

The anticipated State (Chapter 175) contribution is **\$679,968** (the Adjusted Annual Base Chapter 175 Contribution Amount). The resulting Town required contribution is **\$4,060,408**, which is 37.2% of the covered payroll. If the actual Chapter 175 contribution amount is less than the anticipated \$679,968, the difference must be made up by additional Town contributions.

The Town contributed its entire contribution for the 10/1/14 - 9/30/15 plan year in a single payment of \$4,258,100 on 10/22/14, rather than making contributions throughout the plan year. From the 10/1/14 valuation report, the Town's Minimum Funding Requirement (MFR) was \$4,395,704, but the MFR as of 10/22/14 was only \$4,216,386. Thus the Town generated a prepaid contribution of \$41,714 (\$4,258,100 - \$4,216,386).

Changes in Plan Provisions, Actuarial Methods or Assumptions Recognized in this Valuation

There were no changes in plan provisions from the October 1, 2014 Valuation. The pertinent plan provisions are outlined in Table XI.

There were no changes in actuarial assumptions and methods from those utilized in the last actuarial valuation. Table XII contains an outline of the assumptions and methods used.

Comparison of Costs With Previous Valuation Year of 2014/2015

Table II of the report provides information of a comparative nature. Column I shows the results of the October 1, 2014 Actuarial Valuation while Column II shows the results as of October 1, 2015. A comparison of the two columns shows the effect of plan experience during the year. Covered payroll decreased by approximately 9.8% while the number of active participants decreased from 137 to 119. The unfunded liability decreased from \$23,703,620 to \$22,661,836. The actuarial gain experienced during the plan year was \$1,293,823, 50% of which or \$646,911 was credited to the COLA Reserve.

The Town minimum funding requirement decreased as a dollar amount from \$4,395,704 to \$4,060,408, and increased from 36.3% to 37.2% of covered payroll, assuming a Chapter 175 contribution amount of at least \$679,968 for 2015 (paid in 2016).

Plan Experience

Table VIII of the report indicates that the plan experienced an actuarial gain of \$646,911. This means that actual overall experience was more favorable than anticipated. Three (3) substantial components of plan experience are shown in Table XVI.

Table XVI shows that on average, the pay for each active member (who was in the plan for the last two (2) full plan years) increased by about 5.1%. The assumption was that pay would increase by 5.75%. Pay increases were therefore a source of actuarial gain.

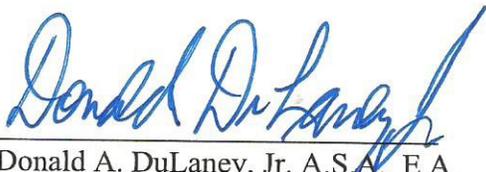
Table XVI also indicates that employee turnover was 29% of expected turnover, a source of actuarial loss. The actuarial value return on assets was 9.7% during the most recent plan year, while the assumed investment return was 7.7%. Investment return was therefore another source of actuarial gain. The three (3) and five (5) year market value returns were 7.3% and 7.6%, respectively.

Participant Census and Financial Data

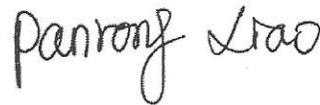
Participant census data was provided by the Town. Supplemental information was also received on retirees and terminations from the plan custodian and the plan administrator. The data was reviewed for consistency and is believed to be reliable.

Information on Plan assets was received from the Plan's auditors. We did not audit this information, however, we believe it to be reliable.

DuLaney and Company



Donald A. DuLaney, Jr. A.S.A., E.A.
Senior Consulting Actuary



Panrong Xiao, M.A.A.A., E.A.
Enrolled Actuary

DAD/PX
Attachments

Table I

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Summary of Retirement Plan Costs as of October 1, 2015**

	<u>Cost Data</u>	<u>% of Payroll</u>
A.	<u>Participant Data Summary</u>	
1.	Active employees	119
2.	Terminated vested	0
3.	Receiving benefits	71
4.	DROP participants	14
5.	Annual payroll of active employees	\$ 10,905,908
		100.0%
B.	<u>Total Normal Costs</u>	
1.	Age retirement benefits	\$ 2,721,919
2.	Termination benefits	369,192
3.	Death benefits	64,083
4.	Disability benefits	84,327
5.	Estimated expenses	144,044
6.	Total annual normal costs	\$ 3,383,565
		25.0%
		3.4%
		0.6%
		0.8%
		1.3%
		31.0%
C.	<u>Total Actuarial Accrued Liability</u>	
1.	Age retirement benefits active employees	\$ 41,181,827
2.	Termination benefits active employees	2,292,322
3.	Death benefits active employees	371,587
4.	Disability benefits active employees	431,642
5.	Retired or terminated vested participants	25,666,141
6.	DROP participants benefits	14,860,351
7.	Terminated vested participants entitled to future benefits	0
8.	Deceased participants whose beneficiaries are receiving benefits	2,622,001
9.	Disabled participants receiving benefits	3,296,454
10.	Total actuarial accrued liability	\$ 90,722,325
		377.6%
		21.0%
		3.4%
		4.0%
		235.3%
		136.3%
		0.0%
		24.0%
		30.2%
		831.9%
D.	<u>Actuarial Value of Assets (Table VI)</u>	\$ 68,060,489
		624.1%
E.	<u>Unfunded Actuarial Accrued Liability (C. – D.)</u>	\$ 22,661,836
		207.8%

Table I
(continued two)

	<u>Cost Data</u>	<u>% of Payroll</u>
F. <u>Minimum Funding Requirements</u>		
1. Total normal cost	\$ 3,385,565	31.0%
2. Amortization of unfunded actuarial accrued liability	2,073,202	19.0%
3. Interest adjustment	<u>265,141</u>	<u>2.4%</u>
4. Total payment	\$ 5,721,908	52.5%
G. <u>Contribution Sources</u>		
1. a) Town	\$ 4,060,408	37.2%
b) State	<u>679,968</u>	<u>6.2%</u>
c) Total Town and State	\$ 4,740,376	43.5%
2. Employees	\$ 981,532	9.0%
H. <u>Actuarial Present Value of Vested Accrued Benefits</u>		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 31,584,596	289.5%
2. DROP participants	14,860,351	136.3%
3. Terminated vested participants entitled to future benefits	0	0.0%
4. Active participants entitled to future benefits	<u>26,626,189</u>	<u>244.1%</u>
5. Total actuarial present value of vested accrued benefits	\$ 73,071,136	670.0%
I. <u>Market Value of Assets (Table V)</u>	\$ 67,570,160	619.6%
J. <u>Unfunded Actuarial Present Value of Vested Accrued Benefits (H. - I., not less than \$0)</u>	\$ 5,500,976	50.4%
K. <u>Vested Benefit Security Ratio (I. ÷ H.)</u>	92.5%	N/A

Table II

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Comparison of Cost Data of October 1, 2014 and October 1, 2015 Actuarial Valuations**

	Column I		Column II	
	October 1, 2014		October 1, 2015	
	Cost Data	% of Annual Pay	Cost Data	% of Annual Pay
A. Participants				
1. Active employees	137	N/A	119	N/A
2. Terminated vested	0	N/A	0	N/A
3. Receiving benefits	63	N/A	71	N/A
4. DROP participants	7	N/A	14	N/A
5. Annual payroll of active employees	\$ 12,095,009	100.0%	\$ 10,905,908	100.0%
B. Total Normal Costs	\$ 3,728,288	30.8%	\$ 3,383,565	31.0%
C. Actuarial Value of Assets	\$ 61,055,765	504.8%	\$ 68,060,489	624.1%
D. Actuarial Accrued Liability	\$ 84,759,385	700.8%	\$ 90,722,325	831.9%
E. Unfunded Actuarial Accrued Liability	\$ 23,703,620	196.0%	\$ 22,661,836	207.8%
F. Town Minimum Funding Requirement	\$ 4,395,704	36.3%	\$ 4,060,408	37.2%
G. Actuarial Gain / (Loss)	\$ 661,092	5.5%	\$ 646,912	5.9%
H. Actuarial Present Value of Vested Accrued Benefits	\$ 66,925,079	553.3%	\$ 73,071,136	670.0%
I. Unfunded Actuarial Present Value of Vested Accrued Benefits	\$ 1,196,855	9.9%	\$ 5,500,976	50.4%
J. Vested Benefit Security Ratio	98.2%	N/A	92.5%	N/A

Table III

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Characteristics of Participants in
Actuarial Valuation as of October 1, 2015**A. Characteristic of Active Participants

1.	Active participants as of beginning of prior year		137
2.	New entrants during prior year		0
3.	Exits during prior year		(18)
4.	Active participants as of beginning of year		119
5.	Active participants fully vested		69
6.	Active participants partially vested		50
7.	Active participants non-vested		0
8.	Annual payroll of active participants	\$	10,905,908
9.	Average pay	\$	91,646
10.	Average attained age		39.30 years
11.	Percent female		13.45%

B. Characteristics of Inactive Participants

1.	Inactives as of beginning of prior year		70
2.	Newly inactive during prior year		16
3.	Exits during prior year		(1)
4.	Inactives as of beginning of year		85
5.	Age retirees		57
6.	Annual benefit for age retirees	\$	2,340,475
7.	DROP participants		14
8.	Annual benefit for DROP participants	\$	1,255,602
9.	Beneficiaries receiving benefits		6
10.	Annual benefits for beneficiaries	\$	237,081
11.	Disabled participants receiving benefits		8
12.	Annual benefits for disabled participants	\$	337,279
13.	Terminated vested due deferred benefits		0
14.	Annual benefits for terminated vested participants		0

Table IV

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Statement of Assets as of October 1, 2015¹**

<u>Assets</u>	<u>Market Value</u>
A. <u>General Investments</u>	
1. Cash and short-term investments	\$ 896,255
2. Bonds	6,064,708
3. U.S. government securities	10,800,829
4. Common stocks	42,893,018
5. Real estate fund	11,017,750
6. International equity	<u>5,670,524</u>
	\$ 77,343,084
B. <u>Receivables</u>	
1. Accrued interest and dividends receivable	\$ 82,980
2. Prepaid benefits	0
3. Town contributions	0
4. State contributions	947,357
5. Employee contributions	34,095
6. Securities sold	<u>0</u>
	\$ 1,064,432
C. <u>Liabilities</u>	
1. Accounts payable	\$ 41,258
2. DROP accounts payable	1,846,151
3. COLA funding reserve	4,506,181
4. Share plan accounts	1,583,555
5. Securities purchased	14,634
6. Prepaid Town contributions	<u>2,845,577</u>
	\$ 10,837,356
D. <u>Total Fund</u> (A. + B. - C.)	<u>\$ 67,570,160</u>

¹ As reported by Plan's Auditors.

Table IV (cont)

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Statement of Assets as of October 1, 2015¹**Reconciliation of DROP Accounts Balance

A.	DROP accounts balance as of October 1, 2014	\$	2,088,612
B.	Benefit payments into DROP accounts during year		413,946
C.	Disbursements from DROP accounts during year		(677,028)
D.	Expenses deducted from DROP accounts		(1,200)
E.	Investment gains/(losses) during year*		<u>21,821</u>
F.	DROP accounts balance as of September 30, 2015	\$	1,846,151

* Based on actual Fund performance

¹ As reported by Plan's Auditors.

Table V

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Reconciliation of Plan Assets**¹

A.	<u>Market Value of Assets as of October 1, 2014</u>		\$	65,728,224
B.	<u>Receipts During Period</u>			
	1. Contributions			
	a. Town	\$	4,216,386	
	b. Employee		1,060,367	
	c. State		<u>984,329</u>	
	d. Total		\$	6,261,082
	2. Investment income			
	a. Interest, dividends and Miscellaneous income	\$	2,230,392	
	b. Investment expenses		<u>330,326</u>	
	c. Net		\$	1,900,066
	3. Net gains (losses)			
	a. Realized gains (losses)	\$		
	b. Unrealized gains (losses)		<u>(1,096,257)</u>	
	c. Total gains (losses)			(1,096,257)
	4. Total receipts during period (1.d. + 2.c. + 3.c.)		\$	7,064,891
C.	<u>Disbursements During Period</u>			
	1. Pension payments		\$	4,773,988
	2. DROP payments			413,946
	3. Contribution refunds			33,536
	4. Administrative expenses			144,044
	5. Increase / (decrease) in COLA reserve			(201,799)
	6. Increase / (decrease) in Share plan accounts			<u>59,240</u>
	7. Total disbursements during period		\$	5,222,955
D.	<u>Market Value of Assets as of October 1, 2015 (A. + B.4. - C.7.)</u>		\$	67,570,160

¹ As reported by Plan's Auditors.

Table VI

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Development of Actuarial Value of Assets**

	<u>10/1/2014 – 9/30/2015</u>	<u>10/1/2013 – 9/30/2014</u>	<u>10/1/2012 – 9/30/2013</u>	<u>10/1/2011 – 9/30/2012</u>
A. Preliminary actuarial value from prior year	\$ 61,055,765	\$ 53,642,951	\$ 47,266,964	\$ 41,303,568
B. Market value at end of year (Prior to COLA funding reserve allocation)	68,217,071	66,389,317	58,615,333	50,287,164
C. Market value at beginning of year	65,728,224	58,615,333	50,287,164	40,032,439
D. Non-investment net cash flow	1,685,038	2,284,001	2,317,888	2,041,964
E. Investment return				
1. Total market value return (B.-C.-D.)	\$ 803,809	\$ 5,489,983	\$ 6,010,281	\$ 8,212,761
2. Expected market value return ((C. + .5 x D.) x assumed return rate)	5,125,947	4,720,829	4,064,243	3,243,220
3. Investment gain / (loss) for phased-in recognition (E.1.-E.2)	(4,322,138)	769,154	1,946,038	4,969,541
F. Phased-in recognition of investment return				
1. Current year: 25% of E.3.	\$ (1,080,534)	\$ 192,289	\$ 486,510	\$ 1,242,385
2. First prior year	192,289	486,510	1,242,385	(852,108)
3. Second prior year	486,510	1,242,385	(852,108)	289,061
4. Third prior year	<u>1,242,385</u>	<u>(852,108)</u>	<u>289,061</u>	<u>(332,226)</u>
5. Total phased-in recognition of investment return	\$ 840,650	\$ 1,069,076	\$ 1,165,848	\$ 347,112
G. Actuarial value end of year				
1. Preliminary actuarial value end of year: A.+D.+E.2.+F.5.	\$ 68,707,400	\$ 61,716,858	\$ 54,814,943	\$ 46,935,864
2. Upper corridor limit: 120% of B.	81,860,485	79,667,180	70,338,400	60,344,597
3. Lower corridor limit: 80% of B.	54,573,657	53,111,454	46,892,266	40,229,731
4. Actuarial value end of year: G.1., not more than G.2., nor Less than G.3.	68,707,400	61,716,858	54,814,943	46,935,864
H. Difference between market value and actuarial value	\$ (490,329)	\$ 4,672,459	\$ 3,800,390	\$ 3,351,300
I. Actuarial value rate of return	9.7%	10.6%	10.9%	8.5%
J. Market value rate of return	1.0%	10.7%	10.5%	17.0%
K. Transfer from Cumulative Chapter 175 Reserve	\$ -	\$ -	\$ -	\$ 331,100
L. Allocation to COLA Funding Reserve	\$ 646,911	\$ 661,093	\$ 1,171,992	\$ 0
L. Net Actuarial Value of Assets (G.4+K-L.)	\$ 68,060,489	\$ 61,055,765	\$ 53,642,951	\$ 47,266,964

Table VII**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN****History of Chapter 175 Contribution Usage**

Under the provisions of Florida Statutes Chapter 175, as amended by Chapter 99-1, increments in Chapter 175 contributions over the amount for 1997 must first be used to fund the cost of meeting minimum benefit requirements. After the minimum requirements are met, any additional Chapter 175 contributions received must be used to provide extra benefits. The following is an accounting of the contributions received and the amounts used for compliance since the 1997 plan year.

A.	1997 Chapter 175 contributions received (Base Amount including Supplemental)	\$ 255,616
	2000/2001 adoption of minimum Chapter 175 benefits	13,649
	<ul style="list-style-type: none"> - Added definition of early retirement date and early retirement benefit amount - Changed the normal form of payment for an unmarried participant to a ten year certain and life annuity - Implemented a minimum pre-retirement benefit for a participant with at least 10 years of Credited Service to be the participant's accrued benefit payable at normal or early retirement age. - Added the joint and 75% survivor annuity optional form of payment. 	
	2004/2005 adoption of minimum Chapter 175 benefits	61,602
	<ul style="list-style-type: none"> - Added attainment of age 55 with 10 years of Credited Service as a normal retirement age - Provided for a service-incurred disability, the minimum benefit after applicable offsets to be the greater of 42% of Final Monthly Compensation or accrued benefit at date of disability - Provided for a non service-incurred disability, the minimum benefit after applicable offsets to be the greater of 25% of Final Monthly Compensation or accrued benefit at date of disability 	
	2006/2007 adoption of additional improvements	313,814
	<ul style="list-style-type: none"> - Changed Earnable Compensation to total remuneration, exclusive of overtime - Changed the retirement benefit multiplier to be 3.0% per year for years 1 - 10 of service, 4.0% per year for years 11 – 15 of service, and 5.0% per year for years 16 – 20 of service for members actively employed, including active DROP participants on June 21, 2007. For years 21 – 30 of service, the multiplier would be 2.0% per year, with a total maximum benefit accrual cap of 95%. - Increased member contribution rate from 7.0% to 8.4%. - Changed the maximum period of DROP participation from six (6) to five (5) years for all members entering into the DROP after June 21, 2007 (no cost impact). - Provided a one-time supplemental lump sum benefit to all retirees who were not eligible for the pension benefit enhancement stated above, to be funded entirely by available accumulated excess Supplemental Chapter 175 contributions 	
	Through Collective Bargaining, effective 2012/2013	
	Total Annual Chapter 175 Contributions are set at	\$ 679,968
B.	Benefit improvements needed to meet Ch. 175 minimum benefits	None

Table VII
(continued two)

C. History of Chapter 175 contribution usage

Regular Contributions

During Plan Year	<u>Adjusted Base Amount</u>			<u>Actual Amount Received</u>		
	Ch. 175 Contribution	Cost for New Benefits	Total Ch. 175 Contribution Used	Ch. 175 Contribution	Excess of Actual over Base Amount	Cumulative Excess of Actual over Base Amount w/ Interest*
1998/1999	\$ 240,903	\$ 0	\$ 240,903	\$ 253,679	\$ 12,776	\$ 12,776
1999/2000	\$ 240,903	\$ 0	\$ 240,903	\$ 281,739	\$ 40,836	\$ 53,612
2000/2001	\$ 240,903	\$ 13,649	\$ 254,552	\$ 287,707	\$ 33,155	\$ 86,767
2001/2002	\$ 254,552	\$ 0	\$ 254,552	\$ 361,512	\$ 106,960	\$ 193,727
2002/2003	\$ 254,552	\$ 0	\$ 254,552	\$ 407,692	\$ 153,140	\$ 363,334
2003/2004	\$ 254,552	\$ 0	\$ 254,552	\$ 464,556	\$ 210,004	\$ 604,221
2004/2005	\$ 254,552	\$ 61,602	\$ 316,154	\$ 532,238	\$ 216,084	\$ 871,664
2005/2006	\$ 316,154	\$ 0	\$ 316,154	\$ 596,983	\$ 280,829	\$1,226,584
2006/2007	\$ 316,154	\$313,814	\$ 629,968	\$ 629,968	\$ 0	\$ 0†
2007/2008	\$ 629,968	\$ 0	\$ 629,968	\$ 640,763	\$ 10,795	\$ 10,795
2008/2009	\$ 629,968	\$ 0	\$ 629,968	\$ 732,089	\$ 102,121	\$ 113,834
2009/2010	\$ 629,968	\$ 0	\$ 629,968	\$ 776,851	\$ 146,883	\$ 270,108
2010/2011	\$ 629,968	\$ 0	\$ 629,968	\$ 831,030	\$ 201,062	\$ 492,509
2011/2012	\$ 629,968	\$ 0	\$ 629,968	\$ 864,056	\$ 234,088	\$ 434,405††
2012/2013	\$ 679,968	\$ 0	\$ 679,968	\$ 906,640	\$ 226,672	\$ 695,395

Supplemental Contributions

During Plan Year	<u>Adjusted Supplemental Base Amount</u>			<u>Actual Supplemental Amount Received</u>		
	Ch. 175 Contribution	Cost for New Benefits	Total Ch. 175 Contribution Used	Ch. 175 Contribution	Excess of Actual over Base Amount	Cumulative Excess of Actual over Base Amount w/ Interest*
1998/1999	\$ 14,713	\$ 0	\$ 14,713	\$ 9,136	\$ 0	\$ 0
1999/2000	\$ 14,713	\$ 0	\$ 14,713	\$ 0	\$ 0	\$ 0
2000/2001	\$ 14,713	\$ 0	\$ 14,713	\$ 0	\$ 0	\$ 0
2001/2002	\$ 14,713	\$ 0	\$ 14,713	\$ 0	\$ 0	\$ 0
2002/2003	\$ 14,713	\$ 0	\$ 14,713	\$ 40,746	\$ 26,033	\$ 26,033
2003/2004	\$ 14,713	\$ 0	\$ 14,713	\$ 68,257	\$ 53,544	\$ 81,790
2004/2005	\$ 14,713	\$ 0	\$ 14,713	\$ 43,950	\$ 29,237	\$ 117,979
2005/2006	\$ 14,713	\$ 0	\$ 14,713	\$ 52,526	\$ 37,813	\$ 165,820
2006/2007	\$ 14,713	\$ 0	\$ 14,713	\$ 167,270	\$ 152,557	\$ 62,608†
2007/2008	\$ 14,713	\$ 0	\$ 14,713	\$ 203,029	\$ 188,316	\$ 256,246
2008/2009	\$ 14,713	\$ 0	\$ 14,713	\$ 57,139	\$ 42,426	\$ 320,453
2009/2010	\$ 14,713	\$ 0	\$ 14,713	\$ 0	\$ 0	\$ 346,890
2010/2011	\$ 0	\$ 0	\$ 14,713	\$ 0	\$ 0	\$ 374,294
2011/2012	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 403,863
2012/2013	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 435,768

* Interest accumulation begins with the 2002/2003 plan year, and applies to the cumulative excess of actual over base amount from prior plan year. The interest rate was 8.5% per year through the end of the 2008/2009 plan year, 8.25% for the 2009/2010 plan year and 7.90% per year thereafter.

† A one-time use of \$1,644,658 in Regular Contributions and \$269,864 in Supplemental Contributions was also utilized for the 2006/2007 benefit improvements.

†† A one-time use of \$331,100 of Chapter 175 contributions was utilized for the 2011/2012 required Town contributions.

Table VIII**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN****Actuarial Gains (Losses) for Plan Year Ended September 30, 2015****A. Derivation of Actuarial Gain (Loss)**

1. City and State normal cost previous valuation	\$	2,639,737
2. Unfunded actuarial accrued liability previous valuation		23,703,620
3. City and State contributions previous year (limited by 99-1)		4,896,354
4. Interest on:		
(a) City normal costs	\$	203,260
(b) Unfunded actuarial accrued liability		1,825,179
(c) City and State contributions		<u>166,694</u>
(d) Net total: (a) + (b) - (c)	\$	1,861,745
5. Increase (decrease) in unfunded actuarial accrued liability from plan amendment		0
6. Increase (decrease) in unfunded actuarial accrued liability from assumptions changes		0
7. Expected unfunded actuarial accrued liability current year: 1. + 2. - 3. + 4. + 5. + 6.		23,308,748
8. Actual unfunded actuarial accrued liability current year		22,661,836
9. Actuarial gain (loss): 7. - 8.	\$	646,912*

B. Approximate Portion of Gain (Loss) Due to Investments

1. Actuarial value of assets previous year	\$	61,055,765
2. Contributions during year (limited by 99-1)		5,956,721
3. Disbursements during year (expenses & benefits)		5,365,514
4. Expected appreciation for period		<u>4,696,694</u>
5. Expected actuarial value of assets current year 1. + 2. - 3. + 4.		66,343,666
6. Actual actuarial value of assets current year		68,060,489
7. Approximate gain (loss): 6. - 5.		1,716,823

C. Approximation Portion of Gain (Loss) Due to Liabilities: \$ (1,069,911)

* Actual actuarial gain was \$1,293,823, and 50% of which or \$646,911 was credited to the COLA Reserve. A like amount of \$646,912 is established as a credit base. The \$22,661,836 figure in A.8. above reflects an adjustment for this amount.

Table IX

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Amortization of Unfunded Liability**

<u>Date</u>	<u>Total Unfunded Liability</u>	<u>Amortization Payment</u>
10/1/2015	\$ 22,661,836	\$ 2,073,202
10/1/2016	\$ 22,173,959	\$ 2,073,202
10/1/2017	\$ 21,648,515	\$ 2,073,202
10/1/2018	\$ 2,1082,612	\$ 2,073,202
10/1/2045	\$ -	\$ -

Table X**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN****Accounting Disclosure Exhibit**

I. <u>Number of Plan Participants</u>	10/1/2014	10/1/2015
1. Retirees, disabled and beneficiaries receiving benefits	63	71
2. Terminated plan participants entitled to but not yet receiving benefits	0	0
3. DROP participants	7	14
4. Active plan participants	137	119
5. Total	207	204
II. <u>Accumulated Plan Benefits as of October 1, 2015</u>		
A. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested plan benefits		
a. Participants currently receiving benefits	\$ 27,933,315	\$ 31,584,596
b. DROP participants	7,782,783	14,860,351
c. Others	31,208,981	26,626,189
d. Total	\$ 66,925,079	\$ 73,071,136
2. Actuarial present value of accumulated non-vested plan benefits	1,314,985	903,008
3. Total actuarial present value of accumulated plan benefits	\$ 68,240,064	\$ 73,974,144
B. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated plan benefits as of October 1, 2014		\$ 68,240,064
2. Increase (decrease) during year attributable to:		
a. Plan amendment		0
b. Actuarial assumptions and method changes		0
c. Benefits paid and contribution refunds		(4,807,524)
d. DROP benefits credited		(413,946)
e. Other, including benefits accumulated and increase for interest due to decrease in the discount period		10,955,550
f. Net increase		\$ 5,734,080
3. Actuarial present value of accumulated plan benefits as of October 1, 2015		\$ 73,974,144

Table X
(continued two)

C. Significant Matters Affecting Calculations

1. Assumed rate of return used in determining actuarial present values	7.70%
2. Plan amendments	None
3. Change in actuarial assumptions	None

Table X
(continued three)

III. Schedule of Funding Progress (As required by GASB #25)

(1) Valuation Date	(2) Actuarial Value of Assets (AVA)	(3) Actuarial Accrued Liability (AAL) -	(4) Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	(5) Funded Ratio (2) / (3)	(6) Annual Covered Payroll	(7) UAAL as % of Payroll (4) / (6)
October 1, 1991	\$ 4,511	\$ 5,505	\$ 994	81.9%	\$ 2,252	44.1%
October 1, 1992	\$ 5,623	\$ 6,598	\$ 975	85.2%	\$ 2,221	43.9%
October 1, 1993	\$ 7,382	\$ 8,292	\$ 910	89.0%	\$ 2,350	38.7%
October 1, 1994	\$ 7,395	\$ 8,428	\$ 1,033	87.7%	\$ 2,636	39.2%
October 1, 1995	\$ 9,070	\$ 10,067	\$ 997	90.1%	\$ 2,773	36.0%
October 1, 1996	\$ 10,550	\$ 11,604	\$ 1,054	90.9%	\$ 2,902	36.3%
October 1, 1997	\$ 13,046	\$ 14,189	\$ 1,143	91.9%	\$ 3,185	35.9%
October 1, 1998	\$ 14,689	\$ 15,821	\$ 1,132	92.8%	\$ 3,021	37.5%
October 1, 1999	\$ 15,918	\$ 16,923	\$ 1,005	94.1%	\$ 3,346	30.0%
October 1, 2000	\$ 17,360	\$ 18,156	\$ 796	95.6%	\$ 3,691	21.6%
October 1, 2001	\$ 17,884	\$ 18,637	\$ 753	96.0%	\$ 4,020	18.7%
October 1, 2002	\$ 17,165	\$ 17,989	\$ 824	95.4%	\$ 3,868	21.3%
October 1, 2003	\$ 16,955	\$ 17,750	\$ 795	95.5%	\$ 5,013	15.9%
October 1, 2004	\$ 17,543	\$ 21,040	\$ 3,497	83.4%	\$ 5,352	65.3%
(all figures above are based on Frozen Initial Liability – all figures below are based on Entry Age Normal Actuarial Accrued Liability)						
October 1, 2004	\$ 17,543	\$ 27,641	\$ 10,098	63.5%	\$ 5,352	188.7%
October 1, 2005	\$ 19,291	\$ 29,931	\$ 10,640	64.5%	\$ 6,755	157.5%
October 1, 2006	\$ 22,249	\$ 32,814	\$ 10,565	67.8%	\$ 7,360	143.5%
October 1, 2007	\$ 27,352	\$ 41,212	\$ 13,860	66.4%	\$ 9,233	150.1%
October 1, 2008	\$ 30,965	\$ 47,768	\$ 16,803	64.8%	\$ 10,131	165.9%
October 1, 2009	\$ 34,572	\$ 53,207	\$ 18,635	65.0%	\$ 10,646	175.0%
October 1, 2010	\$ 38,144	\$ 61,404	\$ 23,260	62.1%	\$ 10,555	220.4%
October 1, 2011	\$ 41,304	\$ 65,969	\$ 24,665	62.6%	\$ 10,709	230.3%
October 1, 2012	\$ 47,267	\$ 71,939	\$ 24,672	65.7%	\$ 11,259	219.1%
October 1, 2013	\$ 53,643	\$ 76,682	\$ 23,039	70.0%	\$ 11,510	200.2%
October 1, 2014	\$ 61,056	\$ 84,759	\$ 23,703	72.0%	\$ 12,095	196.0%
October 1, 2015	\$ 68,060	\$ 90,722	\$ 22,662	75.0%	\$ 10,906	207.8%

Note: Dollar amounts in thousands

Table X
(continued four)

IV. GASB No. 27 Disclosures

Period	(a) Annual Required Contribution (ARC)	(b) Actual Employer Contributions	(c) Interest on NPO Balance	(d) Amortization Factor	(e) Adjustment to ARC (h) / (d)	(f) Annual Pension Cost (APC) (a) + (c) – (e)	(g) Change in NPO (f) – (b)	(h) NPO = Prior NPO + (g)
10/01/2000 – 09/30/2001								\$ (127,963)
10/01/2001 – 09/30/2002	\$ 1,191,415	\$1,191,415	\$ (10,877)	11.6603	\$ (10,974)	\$ 1,912,512	\$ 97	\$ (127,866)
10/01/2002 – 09/30/2003	\$ 1,432,712	\$1,466,241	\$ (10,869)	11.6603	\$ (10,966)	\$ 1,432,809	\$ (33,432)	\$ (161,298)
10/01/2003 – 09/30/2004	\$ 1,804,460	\$1,813,022	\$ (13,710)	11.6603	\$ (13,833)	\$ 1,804,583	\$ (8,439)	\$ (169,737)
10/01/2004 – 09/30/2005	\$ 2,319,345	\$2,319,345	\$ (14,428)	11.6603	\$ (14,557)	\$ 2,319,474	\$ 129	\$ (169,608)
10/01/2005 – 09/30/2006	\$ 2,795,543	\$2,795,543	\$ (14,417)	11.6603	\$ (14,546)	\$ 2,795,672	\$ 129	\$ (169,479)
10/01/2006 – 09/30/2007	\$ 2,872,187	\$2,872,187	\$ (14,406)	11.6603	\$ (14,535)	\$ 2,872,316	\$ 129	\$ (169,350)
10/01/2007 – 09/30/2008	\$ 3,620,621	\$3,620,621	\$ (14,395)	11.6603	\$ (14,524)	\$ 3,620,750	\$ 129	\$ (169,221)
10/01/2008 – 09/30/2009	\$ 4,114,229	\$4,114,229	\$ (14,384)	11.6603	\$ (14,513)	\$ 4,114,358	\$ 129	\$ (169,092)
10/01/2009 – 09/30/2010	\$ 4,187,213	\$4,187,213	\$ (13,950)	11.9046	\$ (14,204)	\$ 4,187,467	\$ 254	\$ (168,838)
10/01/2010 – 09/30/2011	\$ 4,818,899	\$4,818,899	\$ (13,338)	12.2627	\$ (13,768)	\$ 4,819,329	\$ 430	\$ (168,408)
10/01/2011 – 09/30/2012	\$ 4,661,312	\$4,661,312*	\$ (13,304)	12.2627	\$ (13,733)	\$ 4,661,741	\$ 429	\$ (167,979)
10/01/2012 – 09/30/2013	\$ 5,014,304	\$5,014,304	\$ (13,270)	12.2627	\$ (13,698)	\$ 5,014,462	\$ 158	\$ (167,821)
10/01/2013 – 09/30/2014	\$ 4,716,038	\$4,716,038**	\$ (13,258)	12.2627	\$ (13,685)	\$ 4,716,465	\$ 427	\$ (167,394)
10/01/2014 – 09/30/2015	\$ 4,896,354	\$4,896,354***	\$ (12,889)	12.3885	\$ (13,512)	\$ 4,896,977	\$ 623	\$ (166,771)

Annual Pension Cost and Net Pension Asset:

Fiscal Year Ended	09/30/2011	09/30/2012	09/30/2013	09/30/2014	09/30/2015
Annual Required Contribution (ARC)	\$ 4,818,899	\$ 4,661,312	\$ 5,014,034	\$ 4,716,038	\$ 4,896,354
Interest on Net Pension Asset	(13,338)	(13,304)	(13,270)	(13,258)	(12,889)
Adjustment to Annual Required Contribution	13,768	13,733	13,698	13,685	13,512
Annual Pension Cost (APC)	\$ 4,819,329	\$ 4,661,741	\$ 5,014,462	\$ 4,716,465	\$ 4,896,977
Employer Contributions Made	(4,818,899)	(4,661,312)*	(5,014,304)	(4,716,038)	(4,896,354)
(Increase) decrease in Net Pension (Asset)	\$ 430	\$ 429	\$ 158	\$ 427	\$ 623
Net Pension (Asset), beginning of year	(168,838)	(168,408)	(167,979)	(167,821)	(167,394)
Net Pension (Asset), end of year	\$ (168,408)	\$ (167,979)	\$ (167,821)	\$ (167,394)	\$ (166,771)

* It includes a credit of \$331,100 transferred from accumulated Ch. 175 reserve on 9/30/2013.

** Because the Town made the entire contribution for 2013/2014 in one payment on 10/21/13, the Town's funding requirement was \$ 4,036,070, not \$ 4,212,036 as shown in prior year's report.

*** Because the Town made the entire contribution for 2014/2015 in one payment on 10/22/14, the Town's funding requirement was \$ 4,216,386, not \$ 4,395,704 as shown in prior year's report.

Table X
(continued five)

V. Schedule of Employer Contributions (As required by GASB #25)

Plan Year	Annual Required Contribution ¹	Percentage Contributed
(1)	(2)	(3)
1995	634,643	106%
1996	660,471	106%
1997	643,347	106%
1998	722,563	101%
1999	664,667	125%
2000	894,888	132%
2001	895,617	114%
2002	1,191,415	100%
2003	1,432,712	100%
2004	1,804,460	100%
2005	2,319,345	100%
2006	2,795,543	100%
2007	2,872,187	100%
2008	3,620,621	100%
2009	4,114,229	100%
2010	4,187,213	100%
2011	4,818,899	100%
2012	4,661,312†	100%
2013	5,014,304	100%
2014	4,892,004*	100%
2015	5,075,672**	100%

† It includes a credit of \$331,100 transferred from accumulated Ch. 175 reserve on 9/30/2013.

* Because the Town made the entire, contribution for 2013/2014 in one payment on 10/21/13, the Town's funding requirement was \$ 4,036,070, not \$ 4,212,036 as shown in prior year's report.

** Because the Town made the entire, contribution for 2014/2015 in one payment on 10/22/14, the Town's funding requirement was \$ 4,216,386, not \$ 4,395,704 as shown in prior year's report.

VI. Notes to Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	October 1, 2015
Actuarial cost method	Entry Age Normal
Amortization method	Layered amortization
Remaining amortization period	30 years
Asset valuation method	See Table XII, Item 8.
Actuarial assumptions:	
Investment rate of return*	7.70%
Projected salary increases*	5.75%
Cost-of-living adjustments	None

* Includes inflation at 3.00%

Table X
(continued six)

Accounting Disclosure Exhibit

VII. Revenues by Source and Expenses by Type

<u>Plan Year</u>	<u>Revenues by Source</u>				<u>Total</u>
	<u>Employee Contributions</u>	<u>Employer Contributions</u>	<u>State Contributions</u>	<u>Investment Income</u>	
2015	\$ 1,060,367	\$ 4,216,386	\$ 984,329	\$ 1,134,135	\$ 7,395,217
2014	\$ 1,122,208	\$ 4,036,070	\$ 966,799	\$ 7,007,650	\$ 13,132,727
2013	\$ 986,543	\$ 4,334,336	\$ 906,640	\$ 6,274,906	\$ 12,502,425
2012	\$ 919,840	\$ 4,031,344†	\$ 864,056	\$ 8,558,468	\$ 14,373,708
2011	\$ 967,179	\$ 4,188,931	\$ 831,030	\$ 3,197	\$ 5,990,337
2010	\$ 932,369	\$ 3,557,245	\$ 776,851	\$ 3,855,720	\$ 9,122,185
2009	\$ 933,460	\$ 3,469,548	\$ 789,227	\$ 1,139,974	\$ 6,332,209
2008	\$ 819,174	\$ 2,975,940	\$ 843,792	\$ (4,245,901)	\$ 393,005
2007	\$ 907,241	\$ 2,541,320	\$ 797,238	\$ 3,708,867	\$ 7,954,666
2006	\$ 567,961	\$ 2,464,676	\$ 649,509	\$ 1,209,486	\$ 4,891,632

<u>Plan Year</u>	<u>Expenses by Type</u>			<u>Total</u>
	<u>Benefits & DROP Payments</u>	<u>Expenses</u>	<u>Refunds</u>	
2015	\$ 5,187,934	\$ 474,370	\$ 33,536	\$ 5,695,840
2014	\$ 3,841,629	\$ 472,313	\$ 3,425	\$ 4,317,367
2013	\$ 3,397,735	\$ 403,362	\$ 0	\$ 3,801,097
2012	\$ 3,048,342	\$ 503,046	\$ 0	\$ 3,551,388
2011	\$ 2,882,981	\$ 496,413	\$ 6,661	\$ 3,386,055
2010	\$ 2,341,333	\$ 448,886	\$ 18,990	\$ 2,809,209
2009	\$ 1,742,116	\$ 368,421	\$ 20,188	\$ 2,130,725
2008	\$ 1,776,034	\$ 475,631	\$ 108,202	\$ 2,359,867
2007	\$ 1,722,219	\$ 374,058	\$ 36,096	\$ 2,132,373
2006	\$ 1,582,113	\$ 330,305	\$ 49,745	\$ 1,962,163

Contributions were made in accordance with actuarially determined contribution requirements.

† It includes a credit of \$331,100 transferred from accumulated Ch. 175 reserve on 9/30/2012.

Table XI**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN****Outline of Principal Provisions of the Plan**1. Effective Date

December 19, 1973, revised and amended as of October 1, 1982 as Resolution R-82-107. The Plan was last amended with the adoption of ordinances 2005-23, 2005-24, 2008-21, 2008-24 and 2009-26. The provisions of the 2011 – 2016 Collective Bargaining Agreement between the Town and the Firefighters Union that became effective as of October 1, 2011 were also reflected.

2. Eligibility Requirements

- a. Participants in previous retirement plan as of 10/1/1982 are automatically and immediately included.
- b. Participation (with satisfactory physical) upon date of hire or attainment of age 18, if later.

3. Credited Service

Uninterrupted service in years and completed months from date of hire to date of retirement or termination. A member may buy back up to four (4) years of total prior military and firefighter service with any state, municipal or federal agency. The member must pay the fund the actuarial equivalent cost of the buy back.

4. Earnable Compensation

Earnable Compensation shall mean a member's total remuneration, exclusive of overtime pay.

Effective October 1, 2011, Earnable Compensation shall exclude payments for accrued vacation and sick leave, or PTO, in excess of the number of such hours the member has accrued as of September 30, 2011.

5. Final Monthly Compensation (FMC)

The monthly Earnable Compensation of a member over the three (3) years which produce the highest average.

6. Employee Contributions

8.4% of a member's Earnable Compensation to the plan, starting upon eligibility date and continuing until the member's date of retirement, disability, termination or death, whichever comes first. The employee contribution percentage changed to 9.0% effective on October 1, 2014.

TABLE XI
(continued two)

7. Monthly Accrued Benefit

The monthly accrued benefit is equal to 3.0% times FMC for each of the first 10 years of Credited Service earned, plus 4.0% times FMC for each of the next 5 years of Credited Service earned, plus 5.0% times FMC for each of the next 5 years of Credited Service earned, plus 2.0% times FMC for each of the 10 years of Credited Service earned thereafter. The total maximum monthly accrued benefit is 95% of FMC.

8. Normal Retirement

A member's Normal Retirement Date is the first day of the month which falls on, or next follows, the earlier of the date on which a member attains 20 years of Credited Service, or the date on which a member attains age 55 and completes 10 years of Credited Service.

The amount of normal retirement income is the Monthly Accrued Benefit earned by a member at his or her Normal Retirement Date.

9. Early Retirement

Early Retirement Date is the first day of the month coincident with or next following a member's completion of 10 years of Credited Service.

The amount of early retirement income is the Monthly Accrued Benefit earned by a member at his or her Early Retirement Date, reduced by 3.0% per year for commencement prior to Normal Retirement Date.

10. Benefits on Termination of Service

In the event of termination of service prior to Normal Retirement Date, for reasons other than death or disability, a monthly benefit will be payable, equal to Monthly Accrued Benefit earned by a member at his or her termination date, multiplied by the percentage from the following schedule:

<u>Years of Credited Service</u>	<u>Vested Percentage</u>
0	0%
1	10%
2	20%
3	30%
4	40%
5	50%
6	60%
7	70%
8	80%
9	90%
10	100%

TABLE XI
(continued three)

11. Disability Retirement

- a. Disability: Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter (and completion of at least 10 years of Credited Service for non-service incurred disability).
- b. Disability Benefit:
- 1) Service Incurred: 66-2/3% of salary in effect on date of disability. Benefit not less than the greater of 42% of FMC or Monthly Accrued Benefit at date of disability after any applicable offsets described below.
 - 2) Non-Service Incurred: 2.0% of FMC multiplied by years of Credited Service but not more than 50% of FMC in effect on date of disability. Benefit not less than the greater of 25% of FMC or Monthly Accrued Benefit at date of disability after any applicable offsets described below.

NOTE: Service and Non-Service incurred disability benefits are offset by Workers' Compensation entitlements resulting from disability, to the extent that the sum of the benefits under the Plan and Workers' Compensation exceed 100% of the employee's FMC.

12. Pre-Retirement Death Benefit:

The minimum death benefit for a participant with at least 10 years of Credited Service shall equal the participant's Monthly Accrued Benefit payable at Normal or Early Retirement Age.

- a. Service Incurred: To spouse, 50% of FMC until death. To children, 5.0% of FMC until the attainment of age 18 (age 22 if full-time student). Total monthly benefit limited to 60% of FMC for spouse and children, or 35% of FMC for children only.

The minimum death benefit for a participant with at least 10 years of Credited Service shall equal the participant's Monthly Accrued Benefit payable at Normal or Early Retirement Age.

- b. Non-Service Incurred:

- 1) Less than five (5) years of Credited Service, the designated beneficiary would receive a lump sum of \$2,500 or return of employee contributions with 6.0% interest, whichever is greater.
- 2) Five (5) or more years of Credited Service, the designated beneficiary would receive a lump sum of \$2,500 plus, if married, the spouse would receive a monthly benefit equal to 50% of the Monthly Accrued Benefit as of participant's date of death, but not less than 20% of FMC. To children of the deceased member, same benefits as are payable by service incurred death. Combined monthly benefit cannot exceed 50% of FMC for spouse and children, or 35% of FMC for children only.

The minimum death benefit for a participant with at least 10 years of Credited Service shall equal the participant's Monthly Accrued Benefit payable at Normal or Early Retirement Date.

TABLE XI
(continued four)

13. Normal Form of Normal Retirement Income

If married, monthly benefit for life with full benefit continuing to spouse for one (1) year and 60% of benefit payable to spouse thereafter.

For an unmarried participant, normal form of retirement income is a monthly benefit with 120 guaranteed payments.

14. Optional Forms of Retirement Income

The following optional forms of retirement income may be elected by a member at any time prior to actual retirement. This election revokes any prior election.

a. Joint and Survivor Annuity Options

A retirement annuity of different monthly amount, payable to the member during the joint lifetime of the member and a joint pensioner designated by the member, and following the death of the member, 50%, 66-2/3%, 75% or 100% depending on the member's election, of such different monthly amount payable to the survivor for the lifetime of the survivor. This option shall be null and void if the designated beneficiary dies before the member's retirement.

b. 10 Year Certain and Life Option

An annuity payable to the member for 10 years certain and life thereafter.

15. Cost of Living Adjustment (COLA) Reserve

A Cost of Living Adjustment (COLA) Reserve Fund had been established since the October 1, 1982 through September 30, 1983 plan year (details in Table XVII).

For plan years beginning with the 1993/94 plan year, COLA benefits were to be awarded if the plan experienced an actuarial gain for the prior plan year. Fifty percent (50%) of the actuarial gain, if any, is credited to the COLA Reserve Fund. The COLA benefit, if awarded, is paid in the form of a 13th monthly pension payment to each retiree or beneficiary. The payment, since the 2000 plan year, is equal to 5.0% of the annual retirement benefit multiplied by the number of years that the participant has been retired up to a maximum of 10 years, resulting in a maximum benefit equal to 50% of the participant's annual pension payment. If the plan did not experience an actuarial gain, but there was positive market value return on assets for the prior plan year, a 13th monthly pension payment would be payable to each retiree or beneficiary, with the amount not to exceed the regular monthly pension payment commencing 2004.

TABLE XI
(continued five)

16. Deferred Retirement Option Plan (DROP)

The DROP is available only if the employee makes an irrevocable election to participate after the completion of 20 years of Credited Service. The DROP has a five (5) year maximum participation period.

The earliest date of eligibility for entry into the DROP will begin on the first day of a member's twenty-first (21st) year of employment. The maximum DROP participation period shall decline by one month, for every month that a member delays entry into the DROP following the first day of a member's twenty-sixth (26th) year of employment. Total years of Credited Service plus DROP participation cannot exceed 30 years.

The employee has the option of having his or her funds be managed in the same manner as others in the general fund, or have the Self Directed investment option, currently managed by The Hartford.

If the employee dies or becomes disabled during the DROP period, the member will have presumed to have retired on a normal retirement on the day prior to disability or death.

17. Share Plan

Effective September 30, 2013, a Share Plan was established with the total Ch. 175 Reserve funds of \$1,131,163. Excess Chapter 175 contributions are allocated to the accounts of active members each September 30.

18. Changes from Previous Valuation

None.

Table XII**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN****Actuarial Assumptions and Actuarial Cost Methods**1. Mortality:

For healthy participants, the 1983 Group Annuity Mortality Table was used with separate rates for males and females.

For disabled participants, the 1985 Pension Disability Table was used with separate rates for males and females.

No provisions for future mortality improvements are built into these tables.

50% of all pre-retirement deaths are assumed to be duty related.

2. Interest to be Earned by Fund:

7.70% compounded annually, net of investment expenses. This rate is lower than what would otherwise be assumed, in order to reflect the fact that 50% of actuarial gains are credited to the COLA Reserve, but losses do not reduce the Reserve.

3. Allowances for Expenses or Contingencies:

Actual administrative expenses paid during previous year.

4. Employee Withdrawal Rates:

Withdrawal rates were used in accordance with tables per the following illustrative example:

<u>Age</u>	<u>Withdrawal Rates Per 100 Employees</u>	
	<u>Male</u>	<u>Female</u>
20	5.3	5.3
25	5.0	5.0
30	4.4	4.4
35	3.3	3.3
40	2.3	2.3
45	1.4	1.4
50	0.7	0.7
55	0.3	0.3
60	0.2	0.2
65 & over	0.0	0.0

Table XII
(continued two)

5. Disability Rates:

The 1985 Disability Study - Class 1 with separate male and female rates were used. 80% of disabilities assumed to be service incurred, 20% assumed to be non-service incurred.

6. Salary Increase Factors:

Current salaries were assumed to increase at a rate of 5.75% per year until retirement.

7. Rates of Retirement:

The following are the retirement rates assumed for the participants eligible for retirement:

<u>Participants with 20 or more years of Credited Service</u>		<u>Participants who attained age 55 with 10 or more years of Credited Service</u>
<u>Years of Credited Service Completed</u>	<u>Percentage Retiring</u>	
20	50%	100 % retiring upon eligibility
21	25%	
22	25%	
23	25%	
24	25%	
25 or more	100%	

8. Asset Valuation Method:

The actuarial value of assets is determined by phasing in the deviations between actual and expected return on assets at the rate of 25% per year. The resulting actuarial value of assets would then be adjusted, if necessary, to be within the corridor of 80% (lower end) to 120% (upper end) of market value of assets.

This method contains a systematic bias in that if the fund earned the assumed rate of return of 7.7% on a market value basis for four (4) consecutive years, the actuarial value of assets would not converge to the market value of assets.

Table XII
(continued three)

9. Actuarial Cost Method:

Normal Retirement, Termination, Disability and Pre-Retirement Death Benefits: Entry-Age-Actuarial Cost Method

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his date of hire to his retirement age to fund his estimated benefits, assuming the plan had always been in effect. The normal cost for the plan is the sum of the individual normal costs for all active participants. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the plan is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the actuarial value of assets of the plan.

The amortization bases would be funded by the excess of actual contributions over prior year's normal cost, adjusted with interest. For each existing base, the funding is done proportionally, determined based on the individual base's required amortization payment as a percentage of the overall total required total amortization payment for the prior year. New bases are then added to the total outstanding unfunded actuarial accrued liability as new layers.

10. Marriage Assumptions:

100% of active participants were assumed married, with husbands three (3) years older than wives.

11. Changes from Most Recent Actuarial Valuation

None.

Table XIII

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Distribution of Active Participants by Age and Service Groups**
as of October 1, 2015Years of Credited Service

<u>Age</u>	<u>0 - 4</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 & Over</u>	<u>Total</u>
Under 25	1	.	.	.	.	.	.	1
25 - 29	12	1	.	.	.	.	.	13
30 - 34	7	11	6	.	.	.	.	24
35 - 39	2	10	12	2	.	.	.	26
40 - 44	2	6	9	8	.	.	.	25
45 - 49	.	1	9	6	.	.	.	16
50 - 54	.	1	7	4	.	.	.	12
55 - 59	.	.	.	1	1	.	.	2
60 - 64	.	.	.	.	.	.	.	0
65 & Over	.	.	.	.	.	.	.	0
TOTAL	<u>24</u>	<u>30</u>	<u>43</u>	<u>21</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>119</u>

10/01/201410/01/2015

Average Attained Age

39.79 years

39.30 years

Average Service

10.30 years

10.56 years

Average Pay

\$88,285

\$91,646

Percent Female

12.4%

13.4%

Table XIV

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Reconciliation of Participant Data**A. Active Participants

1. Active participants previous year	137
2. Retired during year	(8)
3. Entered DROP during year	(9)
4. Died during year	0
5. Disabled during year	0
6. Terminated vested during year	0
7. Terminated non-vested during period	(1)
8. Retiree rehired	0
9. New active participants	0
10. Active participants current year	<u>119</u>

B. Participants Receiving Benefits

1. Participants receiving benefits previous year	63
2. New retired participants	8
3. New terminated vested receiving benefits	0
4. New disabled receiving benefits	0
5. New beneficiaries receiving benefits	0
6. DROP participants exited and retired	2
7. Died or ceased payment during year	<u>(2)</u>
8. Retired or terminated vested receiving benefits current year	71

C. Terminated Participants Entitled to Future Benefits

1. Terminated entitled to future benefits previous year	0
2. Died during year	0
3. Commenced receiving benefits during year	0
4. New terminated participants	<u>0</u>
5. Terminated participants entitled to future benefits current year	0

D. DROP Participants

1. DROP participants previous year	7
2. New entrants during year	9
3. Died during year	0
4. Exited and retired during year	<u>(2)</u>
5. DROP participants current year	14

TABLE XV

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN

Statistics for Participants Entitled to Deferred Vested Benefits
and Participants Receiving PaymentsA. Entitled to Deferred Benefits

<u>Current Age Group</u>	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 40	0	\$ 0	\$ 0
40 - 44	0	0	0
45 - 49	0	0	0
50 - 54	0	0	0
55 - 59	0	0	0
60 - 64	0	0	0
65 & over	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	0	\$ 0	\$ 0

B. Receiving Benefits (includes DROP participants)

<u>Current Age Group</u>	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 40	4	\$ 69,631	\$ 17,408
40 - 44	2	35,711	17,856
45 - 49	7	493,542	70,506
50 - 54	23	1,470,127	63,919
55 - 59	18	930,768	51,709
60 - 64	9	430,442	47,827
65 & over	<u>22</u>	<u>740,216</u>	<u>33,927</u>
TOTAL	85	\$ 4,170,437	\$ 49,064

Table XVI

TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**Recent Investment, Salary Increase, and Turnover Experience**A. Investment Return

Comparison of actual to assumed investment return for the last five years:

Year Ended	Rate of Return		
	Market Value	Actuarial Value	Assumed
09/30/2015	1.0%	9.7%	7.70%
09/30/2014	10.7%	10.6%	7.90%
09/30/2013	10.5%	10.9%	7.90%
09/30/2012	17.0%	8.5%	7.90%
09/30/2011	-0.1%	1.2%	7.90%
Last 3 Yrs.	7.3%	10.4%	7.83%
Last 5 Yrs.	7.6%	8.1%	7.86%

B. Recent Salary Increase and Turnover Experience

Year Ended	Salary Increase		Ratio of Actual Turnover to Expected
	Actual	Assumed	
09/30/2015	5.1%	5.75%	0.29
09/30/2014	4.9%	6.00%	0.00
09/30/2013	1.1%	6.00%	0.00
09/30/2012	0.4%	6.00%	0.00
09/30/2011	6.2%	6.25%	0.32
Last 3 Yrs.	3.7%	5.92%	0.09
Last 5 Yrs.	3.5%	6.00%	0.11

TABLE XVII**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN****Cost of Living Adjustment (COLA) Reserve****A. Methodology**

Operationally, funds were credited to the Excess Interest Earnings Reserve (COLA Reserve) for plan years from 10/1/1982 through 9/30/1993 if and only if the fund's **book value** rate of return exceeded a benchmark equal to the actuarial funding assumption for the given plan year.

This benchmark was 9.0% for plan years 1982/83 through 1984/85, 7.5% for plan years 1985/86 through 1989/1990 and 8.5% for plan years 1990/91 through 1992/93.

For plan years 1982/83 through 1989/90, the entire amount of such investment gain was added to the COLA Reserve; for plan years 1990/91 through 1992/93, one-half of such investment gain was added to the COLA Reserve, pursuant to a 1990 amendment. Beginning with the 1993/94 plan year, fifty percent (50%) of the actuarial gain experience each plan year, if any, is credited to the COLA Reserve. Actuarial gain was measured from all sources, not simply investments, in determining the amount, if any, to be credited to the COLA Reserve.

TABLE XVII
(continued two)

B. History of the COLA Reserve

Plan Year	Beginning Balance	Investment Credit		Gain/(Loss) Credited	COLA Payment	09/30 Ending Balance
		Rate	Amount			
1982/83	\$ 0		\$ 0	\$ 1,508	\$ 0	\$ 1,508
1983/84	1,508	3.1%	47	0	0	1,555
1984/85	1,555	6.3%	98	0	0	1,653
1985/86	1,653	17.3%	286	102,786	0	104,725
1986/87	104,725	11.0%	11,520	53,675	0	169,920
1987/88	169,920	4.4%	7,477	0	0	177,397
1988/89	177,397	6.3%	11,176	0	0	188,573
1989/90	188,573	5.9%	11,126	0	1,593	198,106
1990/91	198,106	8.6%	16,883	2,388	2,017	215,360
1991/92	215,360	19.4%	41,422	245,454	2,520	499,716
1992/93	499,716	8.3%	41,204	0	4,407	536,513
1993/94	536,513	2.2%	11,803	0	0	548,316
1994/95	548,316	21.5%	117,888	500,970	0	1,167,174
1995/96	1,167,174	11.5%	132,855	146,856	16,098	1,430,787
1996/97	1,430,787	25.7%	363,915	779,666	20,289	2,554,079
1997/98	2,554,079	6.2%	157,256	0	23,765	2,687,570
1998/99	2,687,570	12.9%	346,697	156,046	0	3,190,313
1999/00	3,190,313	6.1%	194,030	0	58,258	3,326,085
2000/01	3,326,085	(8.8%)	(292,695)	0	0	3,033,390
2001/02	3,033,390	(9.6%)	(291,205)	0	0	2,742,185
2002/03	2,742,185	10.1%	276,961	0	0	3,019,146
2003/04	3,019,146	5.4%	163,034	0	101,500	3,076,007
2004/05	3,076,007	5.6%	172,256	0	117,137	3,131,126
2005/06	3,131,126	4.5%	140,901	0	131,752	3,140,275
2006/07	3,140,275	12.3%	386,254	0	132,987	3,393,542
2007/08	3,393,542	(12.3%)	(417,406)	0	0	2,976,136
2008/09	2,976,136	2.1%	62,499	0	60,218	2,978,417
2009/10	2,978,417	9.6%	285,928	0	207,920	3,056,425
2010/11	3,056,425	(0.1%)	(3,056)	0	0	3,053,369
2011/12	3,053,369	17.0%	519,073	0	254,043	3,318,399
2012/13	3,318,399	10.5%	348,432	1,171,992	268,168	4,570,655
2013/14	4,570,655	10.7%	489,060	661,093	1,012,828	4,707,980
2014/15	4,707,980	1.0%	47,080	646,911	895,790	4,506,181

Since 2000, the amount of a retiree's COLA check, if awarded as a result of an actuarial gain, is 5.0% of his annual retirement benefit multiplied by the number of years he has been retired – maximum 50% of his annual retirement benefit. However, if no actuarial gain was experienced, but there has been a positive market value return on assets for the plan year, a 13th check not exceeding the regular monthly pension payment would be payable to the pensioners commencing 2004.

Table XVIII**TOWN OF DAVIE FIREFIGHTERS' PENSION PLAN**State Required Exhibit

	<u>10/1/2014</u>	<u>10/1/2015</u>
A. <u>Participant Data</u>		
1. Active participants	137	119
2. Retired participants and beneficiaries receiving benefits	54	63
3. DROP participants	7	14
4. Disabled participants receiving benefits	9	8
5. Terminated vested participants	0	0
6. Annual payroll of active participants	\$ 12,095,009	\$ 10,905,908
7. Annual benefits payable to those currently receiving benefits	\$ 2,560,629	\$ 2,914,835
8. Annual benefits payable to DROP participants	\$ 654,975	\$ 1,255,602
B. <u>Value of Assets</u>		
1. Actuarial value	\$ 61,055,765	\$ 68,060,489
2. Market value	\$ 65,728,224	\$ 67,570,160
C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 69,653,398	\$ 63,059,488
b. Vesting benefits	5,337,354	5,071,372
c. Death benefits	949,691	844,407
d. Disability benefits	<u>1,187,274</u>	<u>1,154,933</u>
e. Total	\$ 77,127,717	\$ 70,130,200
2. Actuarial present value of future expected benefit payments for terminated vested members	0	0
3. Actuarial present value of future expected benefit payments for those receiving benefits		
a. Service retired	\$ 22,700,401	\$ 25,666,141
b. DROP participants	7,782,783	14,860,351
c. Disability retired	3,456,748	3,296,454
d. Beneficiaries	<u>1,776,166</u>	<u>2,622,001</u>
e. Total	\$ 35,716,098	\$ 46,444,947

Table XVIII
(continued two)

	10/1/2014	10/1/2015
4. Total actuarial present value of future expected benefit payments	\$ 112,843,815	\$ 116,575,147
5. Actuarial accrued liabilities	\$ 84,759,385	\$ 90,722,325
6. Unfunded actuarial accrued liabilities	\$ 23,703,620	\$ 22,661,836
D. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested plan benefits		
a. Participants currently receiving benefits	\$ 27,933,315	\$ 31,584,596
b. DROP participants	7,782,783	14,860,351
c. Other participants	31,208,981	26,626,189
d. Total	\$ 66,925,079	\$ 73,071,136
2. Actuarial present value of accumulated non-vested plan benefits	1,314,985	903,008
3. Total actuarial present value of accumulated plan benefits	\$ 68,240,064	\$ 73,974,144
E. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated plan benefits as of October 1, 2014		\$ 68,240,064
2. Increase (decrease) during year attributable to:		
a. Plan amendment		\$ 0
b. Actuarial assumptions and methods changes		0
c. Benefits paid and contribution refunds		(4,807,524)
d. DROP benefits credited		(413,946)
e. Other, including benefits accumulated and increase for interest due to decrease in the discount period		10,955,550
f. Net increase (decrease)		\$ 5,734,080
3. Actuarial present value of accumulated plan benefits as of October 1, 2015		\$ 73,974,144

Table XVIII
(continued three)

	10/1/2014	10/1/2015
F. <u>Pension Cost</u>		
1. Total normal cost including expenses	\$ 3,728,288	\$ 3,383,565
2. Expected member contribution	1,088,551	981,532
3. Item 2. as percentage of payroll	<u>9.00%</u>	<u>9.00%</u>
4. Net employer normal cost	\$ 2,639,737	\$ 2,402,033
5. Payment required to amortize unfunded liability	<u>2,151,985</u>	<u>2,073,202</u>
6. Estimated total employer required contribution (including interest)	\$ 5,075,672	\$ 4,740,376
7. Item 6. as a percentage of payroll	42.0%	43.5%
8. Estimated State contributions	\$ 679,968	\$ 679,968
9. Item 8. as a percentage of payroll	5.6%	6.2%
10. Estimated net amount payable by Town	\$ 4,395,704	\$ 4,060,408
11. Item 10. as a percentage of payroll	36.3%	37.2%
G. <u>Past Contributions</u>		
1. Total estimated contribution required	\$ 6,164,223	\$ 5,721,908
2. Actual contributions made:		
a. Employees	1,060,367	N/A
b. Town	4,216,386*	N/A
c. State	<u>679,968</u>	<u>N/A</u>
d. Total	\$ 5,956,721	N/A
H. <u>Net Actuarial Gain (Loss)</u>	\$ 1,322,185	\$ 1,293,823
I. <u>Disclosure of Following Items:</u>		
1. Actuarial present value of future salaries - attained age	\$ 95,159,195	\$ 87,360,766
2. Actuarial present value of future employee contributions - attained age	\$ 8,564,328	\$ 7,862,469
3. Actuarial present value of future contributions from other sources	N/A	N/A
- 4. Amount of active members' accumulated contributions	\$ 7,883,446	\$ 7,421,076
5. Actuarial present value of future salaries and future benefits at entry age	Not provided by software	
6. Actuarial present value of future employee contributions at entry age	Not provided by software	

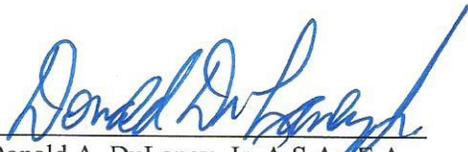
* Because the Town made the entire, contribution for 2014/2015 in one payment on 10/22/14, the Town's funding requirement was \$ 4,216,386, not \$ 4,395,704 as shown in prior year's report.

Table XVIII**(continued four)**

Description and Amount of Original Liability	Remaining Amortization Period	Unamortized Amount as of Valuation Date	Amortization Payment
10/01/1990 Plan Amendment	5 years	454,505	104,861
10/01/1990 Assumption Change	5 years	(369,040)	(85,143)
10/01/1994 Plan Amendment	9 years	87,665	12,868
10/01/1996 Assumption Change	11 years	53,345	6,837
10/01/1997 Assumption Change	12 years	83,098	10,080
10/01/1997 Plan Amendment	12 years	22,858	2,773
10/01/2000 Plan Amendment	15 years	55,838	5,947
10/01/2001 Method Changes	16 years	41,820	4,303
10/01/2003 Plan Amendment	18 years	889	86
10/01/2003 CBA Amendment	18 years	2,177,611	211,274
10/01/2004 Method Change	19 years	5,123,512	484,715
10/01/2004 Chapter 175 Amendment	19 years	136,443	12,908
10/01/2005 Actuarial Loss	20 years	535,038	49,474
10/01/2006 Actuarial Loss	21 years	63,613	5,761
10/01/2007 Actuarial Loss	22 years	1,462,877	130,012
10/01/2007 CBA Amendment	22 years	1,519,668	135,059
10/01/2008 Actuarial Loss	23 years	2,780,327	242,878
10/01/2009 Actuarial Loss	24 years	2,346,303	201,763
10/01/2009 Plan Amendment	24 years	(1,666,449)	(143,301)
10/01/2009 Assumption Change	24 years	1,310,151	112,662
10/01/2010 Actuarial Loss	25 years	2,368,264	200,742
10/01/2010 Assumption Change	25 years	2,271,986	192,581
10/01/2011 Actuarial Loss	26 years	2,764,387	231,250
10/01/2011 Plan Amendment	26 years	(586,776)	(49,086)
10/01/2012 Actuarial Loss	27 years	460,076	38,025
10/01/2013 Actuarial Gain	28 years	(1,142,024)	(93,345)
10/01/2014 Actuarial Gain	29 years	(652,142)	(52,764)
10/01/2014 Assumption Change	19 years	1,604,905	151,834
10/01/2015 Actuarial Gain	30 years	(646,912)	(51,852)
	Total:	<u>\$ 22,661,836</u>	<u>\$ 2,073,202</u>

Table XVIII
(continued five)

This actuarial valuation 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. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise provided for in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



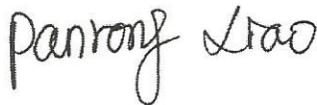
Donald A. DuLaney, Jr. A.S.A., E.A.
Senior Consulting Actuary

2/10/16

Date

14-04191

Enrollment Number



Panrong Xiao, E.A., M.A.A.A.
Enrolled Actuary

2/10/2016

Date

14-07551

Enrollment Number