

**REPORT ON THE ACTUARIAL VALUATION
OF THE REGISTERS OF DEEDS' SUPPLEMENTAL
PENSION FUND
PREPARED AS OF DECEMBER 31, 2010**

October 5, 2011

Mr. Steve Toole
Director
State of North Carolina
Department of State Treasurer
Retirement Systems Division
325 North Salisbury Street
Raleigh, NC 27603-1385

Dear Mr. Toole:

We submit herewith our Report on the Actuarial Valuation of the Registers of Deeds' Supplemental Pension Fund, prepared as of December 31, 2010. The report has been prepared in accordance with North Carolina General Statute 161-50.

The valuation has been prepared in accordance with the parameters of Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. As provided in Section 161-50.2 of the General Statutes (as amended by Session Law 2007-245), contributions to support the Fund are equal to 1.50% of the monthly receipts collected pursuant to Article 1 of Chapter 161 of the General Statutes. The total annual required contribution (ARC) under GASB for the 2012-2013 fiscal year is \$0. However, since this Plan is a cost-sharing multiple employer plan, the amounts collected in accordance with the Statutes are suitable for use in the financial statements of the employers as the ARC under GASB 27.

The plan sponsor selected the assumptions used for the results in this report. We believe that these assumptions are reasonable and comply with the requirements of GASB Nos. 25 and 27. We prepared this report in accordance with the requirements of these standards.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



Michael A. Ribble, FSA, EA, MAAA
Director, Consulting Actuary



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Principal, Consulting Actuary

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**REPORT ON THE ACTUARIAL VALUATION OF THE
REGISTERS OF DEEDS' SUPPLEMENTAL
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PREPARED AS OF DECEMBER 31, 2010**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of December 31, 2010, presents the results of an overall actuarial valuation of the system. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below.

**TABLE I
SUMMARY OF PRINCIPAL RESULTS**

VALUATION DATE	12/31/2010	12/31/2009
Active members included in valuation		
Number	100	100
Reported compensation	\$ 5,926,120	\$ 6,092,173
Valuation compensation	\$ 6,171,165	\$ 6,259,228
Terminated vested participants		
Number	1	0
Annual Allowances	\$ 18,000	\$ 0
Beneficiaries		
Number	83	84
Annual allowances	\$ 1,469,916	\$ 1,486,314
Assets:		
Market related actuarial value	\$ 40,529,252	\$ 38,913,032
Market value	40,862,418	38,043,269
Unfunded accrued liability	\$ (18,425,562)	\$ (17,073,438)
Fiscal Year Ending	June 30, 2013	June 30, 2012
Annual required employer contribution:		
Normal cost	\$ 648,789	\$ 636,670
Accrued liability	(648,789)	(636,670)
Total	\$ 0	\$ 0
Liquidation period	N/A*	N/A*

- * If the annual required employer contribution (ARC) is based on 30 year amortization of the unfunded accrued liability, the ARC is less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total employer ARC equals \$0.

2. Tables summarizing the membership of the system as of the valuation date are shown in Section II.
3. An allocation of investments by category is shown in Section III.
4. Comments on the valuation results are provided in Section IV.
5. Comments on the experience and actuarial gains during the valuation year are provided in Section V.
6. Accounting information to be disclosed in the financial statements of the System and the employer is provided in Section VI.
7. Schedule A of this report presents a summary of the results of the valuation, including present and prospective assets and liabilities of the Fund as of December 31, 2010.
8. Schedule B of this report presents the development of the actuarial value of assets.
9. Schedule C of this report outlines the full set of actuarial assumptions and methods employed.
10. Schedule D gives a summary of the benefit and contribution provisions of the system.
11. Schedule E provides detailed tabulations of the membership of the system as of the valuation date.

SECTION II - MEMBERSHIP DATA

Data regarding the membership of the system for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of December 31, 2010 upon which the valuation was based.

TABLE II

**THE NUMBER AND REPORTED COMPENSATION OF ACTIVE MEMBERS
INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2010**

GROUP	NUMBER	AVERAGE AGE	AVERAGE SERVICE	REPORTED COMPENSATION
Males	19	54.0	9.7	\$ 1,264,991
Females	<u>81</u>	<u>55.7</u>	<u>21.2</u>	<u>4,661,129</u>
Total	100	55.4	19.0	\$ 5,926,120

TABLE III

**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF
BENEFICIARIES INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2010**

GROUP	NUMBER	AVERAGE AGE	ANNUAL RETIREMENT ALLOWANCES
Males	15	70.6	\$ 259,650
Females	<u>68</u>	<u>70.3</u>	<u>1,210,266</u>
Total	83	70.3	\$ 1,469,916

SECTION III – ASSET ALLOCATION

The following table shows an allocation of investments by category for the Register of Deeds' Supplemental Pension Fund as of December 31, 2010.

TABLE IV

**ALLOCATION OF INVESTMENTS BY CATEGORY
FOR THE REGISTER OF DEEDS' SUPPLEMENTAL
PENSION FUND AS OF DECEMBER 31, 2010**

Cash and Receivables	0.3%
Fixed Income (LTIF)	99.7
Public Equity	0.0
Other*	<u>0.0</u>
Total	100.0%

* Real Estate, Alternatives, Inflation and Credit.

SECTION IV – COMMENTS ON VALUATION

- Schedule A of this report presents a summary of the results of the valuation, including present and prospective assets and liabilities of the Fund as of December 31, 2010.
- The results of the valuation show that the Fund has total prospective liabilities of \$26,016,696 of which \$14,514,963 is for the prospective benefits payable on account of present beneficiaries and \$11,501,733 is for the prospective benefits payable on account of present active members. Against these liabilities, the

Fund has present assets of \$40,529,252 leaving a balance of \$(14,512,556) as the present value of contributions to be made in the future.

3. The employer's contributions consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions totaling \$648,789 are required to provide the benefits of the Fund for the average new member and include the amount required for administrative expenses.
4. Prospective employer normal contributions have a present value of \$3,913,006. When this amount is subtracted from \$(14,512,556) which is the present value of total contributions, the result is an unfunded actuarial accrued liability of \$(18,425,562).

SECTION V - COMMENTS ON EXPERIENCE AND GAINS

The following table shows a detailed reconciliation of the change in unfunded accrued liability since the prior valuation.

TABLE V

RECONCILIATION OF CHANGE IN UNFUNDED ACCRUED LIABILITY SINCE THE PRIOR VALUATION (IN MILLIONS)

Unfunded accrued liability as of 12/31/09	\$ (17.1)
Normal cost during 2010	0.6
Reduction due to actual contributions during 2010	(0.8)
Interest on unfunded accrued liability, normal cost and contributions	(1.0)
Asset (gain)/loss	(0.1)
Accrued liability (gain)/loss	<u>0.0</u>
Unfunded accrued liability as of 12/31/10	\$ (18.4)

SECTION VI - ACCOUNTING INFORMATION

1. Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF DECEMBER 31, 2010**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	83
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	1
Active participants	<u>100</u>
Total	184

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
12/31/2005	\$28,242,174	\$11,787,725	\$(16,454,449)	239.6%	\$5,366,955	(306.6)%
12/31/2006	32,371,059	17,375,253	(14,995,806)	186.3	5,558,147	(269.8)
12/31/2007	35,452,796	17,829,797	(17,622,999)	198.8	5,868,775	(300.3)
12/31/2008	37,212,564	18,365,203	(18,847,361)	202.6	6,023,750	(312.9)
12/31/2009	38,913,032	21,839,594	(17,073,438)	178.2	6,092,173	(280.3)
12/31/2010	40,529,252	22,103,690	(18,425,562)	183.4	5,926,120	(310.9)

3. The annual required contribution (ARC) of the employer, determined in accordance with the parameters of GASB 25/27, is shown below. If the accrued liability contribution is based on amortization of the unfunded actuarial accrued liability of \$(18,425,562) over a 30-year period, the total employer ARC would be less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total ARC equals \$0.

**2012/2013 FISCAL YEAR
ANNUAL REQUIRED EMPLOYER CONTRIBUTION RATES (ARC)
BASED ON THE VALUATION AS OF DECEMBER 31, 2010**

ANNUAL REQUIRED CONTRIBUTION (ARC)	AMOUNT
Normal Cost	\$ 648,789
Accrued Liability	<u>(648,789)</u>
Total	\$ 0

Since the Registers of Deeds' Supplemental Pension Fund is a cost-sharing multiple employer plan, the amounts collected in accordance with the Statutes are suitable for use in the financial statements of the employers as the annual required contribution (ARC) even though they may differ in total from the amounts shown above.

4. Additional information as of December 31, 2010 follows.

Valuation date	12/31/10
Actuarial cost method	Entry age
Amortization method	Level dollar closed
Remaining amortization period	N/A*
Asset valuation method	20% of market value plus 80% of expected actuarial value (not greater than 120% of market value and not less than 80% of market value)
Actuarial assumptions:	
Investment rate of return**	5.75%
Projected salary increases***	4.25% – 7.75%
** Includes inflation of	3.00%
*** Includes inflation and productivity of	3.50%
Cost-of-living adjustments	N/A

* If the annual required employer contribution (ARC) is based on 30 year amortization of the unfunded accrued liability, the ARC is less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total employer ARC equals \$0.

SCHEDULE A**RESULTS OF THE VALUATION AS OF DECEMBER 31, 2010**

1.	Actuarial liabilities	
	Present value of prospective benefits payable in respect of:	
	a. Present beneficiaries and terminated vested members	14,514,963
	b. Present active members	<u>11,501,733</u>
	c. Total actuarial liabilities	26,016,696
2.	Assets of the System	<u>40,529,252</u>
3.	Present value of future contributions (1)(c) – (2)	(14,512,556)
4.	Present value of future normal contributions by employers	<u>3,913,006</u>
5.	Present value of unfunded accrued liability contributions by employers (3) – (4)	(18,425,562)

SCHEDULE B**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
FOR THE YEAR ENDING DECEMBER 31, 2010**

1.	Actuarial Value of Assets as of December 31, 2009	\$	38,913,032
2.	2010 Net Cash Flow		
	a. Contributions		772,757
	b. Disbursements		1,457,637
	c. Net Cash Flow: (a) - (b)		(684,880)
3.	Expected Investment Return: [(1) x .0575] + [(2)c x .02875]		2,217,809
4.	Expected Actuarial Value of Assets as of December 31, 2010: (1) + (2)c + (3)		40,445,961
5.	Market Value of Assets as of December 31, 2010		40,862,418
6.	Excess of Market Value over Expected Actuarial Value of Assets: (5) - (4)		416,457
7.	20% Adjustment towards Market Value: (6) x .20		83,291
8.	Preliminary Actuarial Value of Assets as of December 31, 2010: (4) + (7)		40,529,252
9.	Final Actuarial Value of Assets as of December 31, 2010: [(8) not less than 80% of (5) and not greater than 120% of (5)]		40,529,252
10.	Rate of investment return on actuarial value		5.97%
11.	Rate of investment return on market value		9.29%

SCHEDULE C**STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

Assumptions are based on the experience investigation for LGERS prepared as of December 31, 2009 and adopted by the Board of Trustees on October 21, 2010.

INTEREST RATE: 5.75% per annum, compounded annually.

INFLATION: Both general and wage inflation are assumed to be 3.00% per annum.

PRODUCTIVITY INCREASE: 0.50% per annum.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

ANNUAL RATES OF WITHDRAWAL		
<u>Service</u>	<u>Male</u>	<u>Female</u>
0	.3000	.3000
1	.1725	.2000
2	.1450	.1600
3	.1200	.1300
4	.1000	.1250

<u>Age</u>	ANNUAL RATES OF					
	<u>Withdrawal and Vesting*</u>		<u>Base Mortality**</u>		<u>Disability</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0600	.0800	.0004	.0002	.0004	.0005
30	.0600	.0700	.0006	.0003	.0010	.0009
35	.0600	.0700	.0009	.0005	.0025	.0015
40	.0400	.0500	.0012	.0007	.0045	.0030
45	.0400	.0400	.0017	.0011	.0055	.0040
50	.0400	.0400	.0024	.0017	.0080	.0048
55	.0400	.0400	.0036	.0025	.0100	.0065
60	.0400	.0400	.0059	.0039	.0100	.0085
65			.0086	.0058		
69			.0109	.0073		

* These rates apply only after five years of membership in the system.

** Base mortality rates as of December 31, 2003.

RETIREMENTS: Representative values of the assumed rates of retirement from active service are as follows:

MALES

Age	Service						
	5	10	15	20	25	30	35
50				0.0500	0.0700	0.3000	0.3000
55				0.0400	0.1000	0.2500	0.1750
60	0.0800	0.0800	0.0800	0.0800	0.2750	0.4000	0.2500
65	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
70	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

FEMALES

Age	Service						
	5	10	15	20	25	30	35
50				0.0700	0.0500	0.2500	0.2500
55				0.0500	0.1000	0.3250	0.1750
60	0.0900	0.0900	0.0900	0.0900	0.3000	0.4000	0.2750
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

SALARY INCREASES: Representative values of the assumed annual rates of future salary increase are as follows:

<u>Service</u>	<u>Annual Rate of Salary Increase</u>
0	7.75%
5	6.50
10	5.45
15	5.20
20	5.00
25	5.00
30	5.00
35	5.00
40	4.50
45	4.25
50	4.25

DEATHS AFTER RETIREMENT: Representative values of the assumed post-retirement mortality rates as of December 31, 2003 prior to any mortality improvements are as follows:

Annual Rate of Death after Retirement

Age	Healthy Retirees		Beneficiaries of Deceased Members		Disabled Retirees	
	Male	Female	Male	Female	Male	Female
55	.0064	.0035	.0061	.0044	.0277	.0176
60	.0099	.0062	.0090	.0077	.0342	.0229
65	.0165	.0104	.0149	.0125	.0407	.0296
70	.0273	.0167	.0246	.0207	.0483	.0401
75	.0469	.0281	.0422	.0341	.0596	.0558
80	.0805	.0459	.0720	.0563	.0775	.0771

MORTALITY IMPROVEMENTS: Representative values of the assumed mortality improvement rates (applied to pre-retirement mortality rate for active members and post-retirement mortality rates for healthy retirees and beneficiaries of deceased members) after retirements are as follows:

Age	Male Projection Scale	Female Projection Scale
25	0.010	0.014
30	0.005	0.010
35	0.005	0.011
40	0.008	0.015
45	0.013	0.016
50	0.018	0.017
55	0.019	0.008
60	0.016	0.005
65	0.014	0.005
70	0.015	0.005
75	0.014	0.008
80	0.010	0.007

DEATHS AFTER RETIREMENT (NON-DISABLED): According to the RP-2000 Mortality tables for retirees. These tables are set forward two years for male employees and unadjusted for female employees. These tables are also set forward one year for male beneficiaries of deceased members and set forward two years for female beneficiaries of deceased members. The base retiree RP-2000 tables have no rates prior to age 50. The active employee rates of RP-2000 are used for ages less than 50 prior to any adjustments for setbacks.

DEATH AFTER DISABILITY: According to the RP-2000 Mortality tables for disabled annuitants set back six years for males and set forward one year for females.

DEATHS PRIOR TO RETIREMENT: According to the RP-2000 Mortality tables for active employees. These tables are set forward two years for male employees and unadjusted for female employees. The base RP-2000 tables for active employees have no rates after age 70. A blend of active rates and retired rates are used from ages 70 to 80 prior to any set back and adjustments.

MORTALITY PROJECTION (NON-DISABLED): All mortality rates are projected from December 31, 2003 using Scale AA.

TIMING OF ASSUMPTIONS: All withdrawals, deaths, disabilities, retirements and salary increases are assumed to occur July 1 of each year.

ADMINISTRATIVE EXPENSES: Assumed to be 0.15% of the market value of assets at the beginning of each calendar year.

REPORTED COMPENSATION: Calendar year compensation as furnished by the system's office.

VALUATION COMPENSATION: Reported compensation adjusted to reflect the assumed rate of pay as of the valuation date.

VALUATION METHOD: Entry age normal cost method.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets is not allowed to be greater than 120% of the market value of assets or less than 80% of the market value of assets.

SCHEDULE D**SUMMARY OF MAIN BENEFIT PROVISIONS**

The Registers of Deeds' Supplemental Pension Fund was established October 1, 1987 for all county registers of deeds who are retired from the Local Governmental Employees' Retirement System or an equivalent locally sponsored plan.

BENEFITS**Service Retirement Allowance****Conditions for Allowance**

Retirement from the Local Governmental Employees' Retirement System or equivalent locally sponsored plan with 10 or more years of service as a register of deeds.

Amount of Allowance

Benefit payable for the life of the member only, equal to 75% of a registers of deeds equivalent annual salary immediately preceding retirement computed on the latest monthly base rate. Maximum benefit is \$1,500 per month.

Deferred Vested Retirement Allowance**Conditions for Allowance**

Separation from service after completing at least 10 years of service as a register of deeds.

Amount of Allowance

Service Retirement Allowance described above commencing upon retirement with the Local Governmental Retirement System.

CONTRIBUTIONS**Employer Contributions**

1.5% of the monthly receipts collected pursuant to Article 1 of Chapter 161 of the General Statutes.

Employee Contributions

None.

SCHEDULE E

TABLE 1

**THE NUMBER AND AVERAGE REPORTED COMPENSATION OF
ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE
AS OF DECEMBER 31, 2010**

AGE	YEARS OF SERVICE										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	1	0	0	0	0	0	0	0	0	0	0	1
	1,762	0	0	0	0	0	0	0	0	0	0	1,762
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	1	1	0	0	0	0	0	0	0	2
	0	0	65,562	54,393	0	0	0	0	0	0	0	59,977
40 to 44	0	1	3	2	2	3	1	0	0	0	0	12
	0	52,102	76,472	80,192	55,504	55,072	76,239	0	0	0	0	66,197
45 to 49	0	2	2	3	2	1	3	0	0	0	0	13
	0	80,781	74,424	48,215	53,091	87,567	46,234	0	0	0	0	60,577
50 to 54	0	2	2	2	0	2	6	2	0	0	0	16
	0	49,902	39,714	55,924	0	46,229	60,804	69,127	0	0	0	55,414
55 to 59	1	2	3	1	3	4	3	4	0	0	0	21
	2,544	78,066	75,053	68,794	47,487	59,272	55,625	58,424	0	0	0	58,702
60 to 64	1	1	3	2	1	4	2	2	2	2	2	20
	3,082	57,888	55,419	42,620	54,835	50,440	60,903	51,727	73,380	61,440	0	53,198
65 to 69	0	0	0	1	1	1	0	2	2	0	0	7
	0	0	0	113,000	43,649	70,586	0	63,342	70,785	0	0	70,784
70 & up	0	0	1	2	0	2	0	0	1	2	0	8
	0	0	53,306	48,590	0	51,703	0	0	81,041	104,390	0	67,964
Total	3	8	15	14	9	17	15	10	5	4	0	100
	2,463	65,936	64,532	59,678	50,904	56,358	57,896	60,209	73,874	82,915	0	59,261

SCHEDULE E

TABLE 2

**THE DISTRIBUTION OF THE NUMBER AND ANNUAL
RETIREMENT ALLOWANCES OF BENEFICIARIES
BY AGE AS OF DECEMBER 31, 2010**

Age	Men		Women	
	Number	Amount	Number	Amount
51			1	\$ 18,000
52			2	36,000
54			3	54,000
55			1	18,000
56			1	18,000
57	1	\$ 18,000	1	18,000
58	3	54,000	2	36,000
59			1	18,000
60			1	18,000
61	1	18,000	2	36,000
62			2	36,000
63	1	18,000	2	36,000
64	1	18,000	3	54,000
65			5	90,000
66			3	54,000
67			1	18,000
68	1	18,000	1	18,000
69			1	18,000
70	1	18,000	3	52,650
71			4	72,000
72			2	36,000
74			3	54,000
75	1	18,000	2	36,000
76	1	18,000		
77			1	18,000
78			2	36,000
79			1	18,000
80			2	36,000
81			3	54,000
82			2	34,902
84			1	18,000
85			1	18,000
86			4	70,902
87	2	36,000		
88	1	18,000		
89			1	18,000
90	1	7,650		
91			1	18,000
92			1	18,000
95			1	7,812
Total	15	\$ 259,650	68	\$ 1,210,266