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April 24, 2012

Mr. Anthony Ferrucci  
 Warwick School Department  
 34 Warwick Lake Avenue  
 Warwick, RI 02889

**Re: Warwick School Committee Employee Retirement Plan**

Dear Tony:

We have compared the plan's experience for the past five years to the plan's actuarial assumptions and have summarized our results and recommendations in this letter.

Before discussing the results, we should emphasize the following. The measured plan experience from an analysis over the past several years gives an indication of whether changes in assumptions are justified. The recommended changes in assumptions generally do not bridge the full gap between current assumptions and measured experience. Instead, the changes move in the direction of the actual experience, reducing but not eliminating the gap. This is because the data may not include a large enough sample size that is statistically significant for our analysis. Also, the period studied may not be 100% indicative of future plan experience. Our recommendations are for changes in five actuarial assumptions: salary scale, assumed retirement age, turnover table, disability and lump sum distributions.

**Interest Rate**

The average return over the 5-year period ending 6/30/2011 is 4.37%. The returns were negative during the two years after 2007. More recently, the market is showing signs of recovery and the assets returned over 14% for the year ending 6/30/2011.

The current investment policy strategically allocates equities to be at 55%. The target and actual allocation of the investments as of 12/31/2011 is as follows :

<u>Asset Category</u>	<u>Strategic Allocation</u>	<u>Allowable Range</u>	<u>As of 12/31/2011</u>
Domestic Large Cap Equities	30%	25%-35%	33.05%
Domestic Small-Mid Cap Equities	15%	10%-20%	13.90%
International Equities	10%	5%-15%	9.10%
Fixed Income	45%	35%-55%	43.95%
Total	100%	100.0%	100.0%

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Based on the current investment policy and the market trend, we recommend to remain at the 7.00% interest assumption.

The history of gross returns on the market value of assets over the past five years is quite erratic and is summarized below:

<u>Period</u>	<u>Estimated Gross Return on Market Value</u>
7/1/2010 – 6/30/2011	14.32%
7/1/2009 – 6/30/2010	8.72%
7/1/2008 – 6/30/2009	-11.42%
7/1/2007 – 6/30/2008	-0.08%
7/1/2006 – 6/30/2007	12.57%

### Salary Scale

The current salary scale assumption is 3.25% per year. The annual salary increases for active participants, as a group from one year to another, have been less than 3.25% every year over the past five years. The average of the rate of increases over the five-year period was 0.58%. On its face value, this rate of increase is well below the 3.25% assumption.

When we analyzed the rate of salary increases by individual employee, the average salary increase of an individual employee with five years of salary history is about 0.72%. Our sample consists of 371 employees with 5 or more years of salary history who are currently active employed.

Based on experience, we recommend a decrease in the salary scale assumption from 3.25% to 2.50% to reflect the most recent salary trend.

The following table summarizes of the average salary increases of Warwick School Committee Employee Retirement Plan for the past five years

<u>Period</u>	<u>Average Salary Increase</u>
7/1/2010 – 6/30/2011	-3.73%
7/1/2009 – 6/30/2010	3.02%
7/1/2008 – 6/30/2009	0.51%
7/1/2007 – 6/30/2008	0.78%
7/1/2006 – 6/30/2007	2.19%

**Assumed Retirement Age**

The current retirement age assumption is 62 for all active and terminated vested participants. We have reviewed the actual ages at which participants have retired over the past five years. Among the thirty one participants retiring over our observation period, all retired from active status. The average retiring age from the active status is 65.7 years old.

We are unable to perform a statistically meaningful analysis for this category, as the sample size is too small. However, if we consider these thirty one retirees as representative for the whole group, we would conclude that the expected retirement age is 65.7.

Based on the distribution of our sample group of retirees, a graded retirement age assumption with an overall weighted-average retirement age of 65.9 is recommended. The recommended retirement rates are intended to match more closely with the experience of retirement from active employment.

Recommended retirement rates are as follows:

<u>Age</u>	<u>Probability</u>
61 and under	0%
62-65	15%
66-69	20%
70 and over	100%

**Mortality**

The RP2000 table adjusted for mortality improvements using Scale AA is current with contemporary mortality experience. Based on the information over the five-year period available to us, there were 50 deaths. We were expecting 41.38 deaths during the same period, which is lower than the actual experience. According to this sample result, our mortality assumption is conservative. Once again, our sample size is not large enough to perform a statistically meaningful analysis but it did show that our mortality expectation is lower than actual experience. We recommend no changes to the mortality in the current study. A recommendation to a lesser mortality improvement will be considered in the next experience study if this trend persist.

**Termination of Employment**

For this analysis we reviewed the withdrawal rates for plan participants over the past five plan years. The withdrawal rate for participants over this period has been 2.71% per year while the expected withdrawal rate under the current assumption over this period has been approximately 1.36%.



The attached Exhibit I displays the expected and actual withdrawal rates for the entire sample group over the past five years in five-year age groups. As you can see, the expected withdrawal rates are significantly lower than the actual experience over the past five years. We recommend modifying the withdrawal rates in accordance with the attached Exhibit II.

The recommended withdrawal table increases the probability of turnover and partially closes the gap between the expected and actual turnover in our sample.

### **Disability**

For this analysis, we reviewed the disability rates for the plan participants over the past five plan years. During the five year period, there was 1 separation from employment as a result of disability. The expected number to separate employment as a result of disability was 11.92.

Our analysis suggests that the disability assumption is higher than actual experience. We recommend that we lower the disability assumption to 10% of the current disability rates.

### **Annuity Purchases**

For this analysis we reviewed all participants who have had an annuity purchased over the past five plan years. Over the period of our examination, the plan purchased 53 annuities for participants. The total number of vested participants terminated in our examination period is 82. This means 64.6% of the terminated vested participants have annuities purchased. Another 24 participants have received their benefits in a lump sum settlement in the years subsequent to termination. Overall, almost all of the vested terminations benefits are settled subsequent to termination.

Our analysis suggests that the younger participants are more inclined to receive a lump sum settlement at termination. Trending for participants near retirement age are annuities purchased. The plan's overall benefit settlement percentage is 94% for the past five years. We are anticipating that these trends will continue and recommend a 100% Lump Sum/Annuity Purchase settlement assumption.

### **Conclusions**

The following are our recommendations at this time:

- ◆ Salary Scale: 2.50%
- ◆ Assumed Retirement Age: Rate Table
- ◆ Termination Rates: Modify Turnover Rates illustrated in Exhibit II
- ◆ Disability Rates: Assume 10% of Current Assumption
- ◆ Annuity Purchase Assumption: 100%

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To examine the financial impact of these changes, we have recalculated the 7/1/2011 valuation results demonstrating the funding level impact of these changes. The results are summarized in Exhibit III.

As we can see from Exhibit III, the funding charges and the required contributions will decrease as the result of the assumption change. This is because our recommended assumption set is generally closer to contemporary experiences than the current assumption set.

If you have any questions or would like to discuss this further, please feel free to call.

Sincerely,

USI CONSULTING GROUP

A handwritten signature in blue ink that reads "Bill Beck". The signature is written in a cursive, flowing style.

Bill Beck, EA, MAAA  
Assistant Vice President and Actuary

c: Cheryl Bongivengo, Warwick Public Schools  
Michael Welz, USI Consulting Group

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**Warwick School Committee Employee Retirement Plan  
Experience Study - Average Withdrawal Rates 2006 - 2011**

<u>Age</u>	<u>Total in Group</u>	<u>Actual Terms</u>	<u>Expected Terms</u>	<u>Actual Rates</u>	<u>Average of Individ Exp Rates</u>	<u>Ratio Actual over Expected</u>
Less than 25	0	0	0	0.0000%	0.0000%	0.000
25 - 29	27	1	1.68	3.7037%	6.2393%	0.594
30 - 34	89	2	4.27	2.2472%	4.7947%	0.469
35 - 39	141	4	5.63	2.8369%	3.9895%	0.711
40 - 44	214	7	6.06	3.2710%	2.8312%	1.155
45 - 49	426	10	7.16	2.3474%	1.6819%	1.396
50 - 54	527	10	2.66	1.8975%	0.5054%	3.755
55 - 59	419	10	0	2.3866%	0.0000%	0.000
60 - 64	164	11	0	6.7073%	0.0000%	0.000
65 and Older	15	0	0	0.0000%	0.0000%	0.000
Total	2022	55	27.46	2.7201%	1.3583%	2.003

**Warwick School Committee Employee Retirement Plan  
Experience Study - Proposed Withdrawal Rates**

<u>Age</u>	<u>Current Rates</u>		<u>Proposed Rates</u>	
	<u>Male Rate</u>	<u>Female Rate</u>	<u>Male Rate</u>	<u>Female Rate</u>
15	6.00%	10.44%	6.00%	10.44%
16	6.00%	10.44%	6.00%	10.44%
17	6.00%	10.44%	6.00%	10.44%
18	6.00%	10.44%	6.00%	10.44%
19	6.00%	10.44%	6.00%	10.44%
20	5.94%	10.44%	5.94%	10.44%
21	5.69%	10.04%	5.69%	10.04%
22	5.44%	9.69%	5.44%	9.69%
23	5.19%	9.34%	5.19%	9.34%
24	4.94%	8.99%	4.94%	8.99%
25	4.74%	8.64%	4.74%	8.64%
26	4.54%	8.29%	4.54%	8.29%
27	4.24%	7.94%	4.24%	7.94%
28	4.04%	7.59%	4.04%	7.59%
29	3.79%	7.29%	3.79%	7.29%
30	3.54%	6.99%	3.54%	6.99%
31	3.33%	6.68%	3.33%	6.68%
32	3.13%	6.43%	3.13%	6.43%
33	2.92%	6.12%	2.92%	6.12%
34	2.77%	5.82%	2.77%	5.82%
35	2.66%	5.56%	2.66%	5.56%
36	2.44%	5.29%	2.44%	5.29%
37	2.27%	4.97%	2.27%	4.97%
38	2.10%	4.65%	2.10%	4.65%
39	1.99%	4.39%	1.99%	4.39%
40	1.87%	4.12%	1.87%	4.12%
41	1.75%	3.85%	1.75%	3.85%
42	1.58%	3.58%	1.58%	3.58%
43	1.40%	3.30%	1.40%	3.30%
44	1.27%	3.02%	1.27%	3.02%
45	1.09%	2.74%	1.09%	2.74%
46	0.92%	2.46%	1.09%	2.74%
47	0.74%	2.19%	1.09%	2.74%
48	0.54%	1.89%	1.09%	2.74%
49	0.40%	1.60%	1.09%	2.74%
50	0.26%	1.31%	1.09%	2.74%
51	0.16%	1.02%	1.09%	2.74%
52	0.12%	0.67%	1.09%	2.74%
53	0.00%	0.30%	1.09%	2.74%
54	0.00%	0.00%	1.09%	2.74%
55	0.00%	0.00%	1.09%	2.74%
56	0.00%	0.00%	1.09%	2.74%
57	0.00%	0.00%	1.09%	2.74%
58	0.00%	0.00%	1.09%	2.74%
59	0.00%	0.00%	1.09%	2.74%
60	0.00%	0.00%	1.09%	2.74%
61	0.00%	0.00%	1.09%	2.74%



**Warwick School Committee Employee Retirement Plan  
Experience Study - Impact of Assumption Changes to 2011 Valuation**

**VALUATION RESULTS AS OF 7/1/2011**

**A. Present Value of Future Benefits**

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

	<u>Current Valuation</u>	<u>Proposed Assumption Changes</u>
Active .....	46,907,012	47,659,994
Terminated/Inactive/Disabled .....	500,684	500,684
Retired .....	4,281,797	4,281,797
Total .....	51,689,493	52,442,475

**B. Accrued Liability**

The portion of the present value of future benefits attributable to prior service.

Active .....	36,724,951	36,287,414
Terminated/Inactive/Disabled .....	500,684	500,684
Retired .....	4,281,797	4,281,797
Total .....	41,507,432	41,069,895

**C. Valuation Assets** ..... 35,062,863 35,062,863

**D. Unfunded Accrued Liability [(B) - (C)]** ..... 6,444,569 6,007,032

**E. Normal Cost**

1. Total Normal Cost .....	1,339,264	1,348,744
2. Expected Employee Contributions .....	715,058	758,025
3. Normal Cost Expense Load .....	210,377	210,377
4. Employer Normal Cost [(1) - (2) + (3)] .....	834,583	801,096

**CONTRIBUTION CALCULATION FOR PLAN YEAR ENDING 6/30/2012**

**MINIMUM SUGGESTED CONTRIBUTION**

(1) Normal Cost.....	834,583	801,096
(2) 30 Year Amortization of Unfunded Liability .....	485,369	452,416
(3) Interest Adjustment .....	92,397	87,746
<b>(4) Minimum Suggested Contribution .....</b>	<b>1,412,349</b>	<b>1,341,258</b>

**ALTERNATE CONTRIBUTION**

(1) Normal Cost.....	834,583	801,096
(2) 10 Year Amortization of Unfunded Liability .....	857,534	799,314
(3) Interest Adjustment .....	118,448	112,029
<b>(4) Alternate Contribution (1) + (2) + (3) .....</b>	<b>1,810,565</b>	<b>1,712,439</b>