



Ross Haber Associates, Inc.

Demographic Study

prepared for

The Glen Ridge Public Schools

October, 2008

Executive Summary

The Glen Ridge Board of Education has requested that Ross Haber Associates, Inc. perform a demographic study to provide a five-year enrollment projection.

Glen Ridge Borough comprises 1.3 square miles. It is in Essex County New Jersey and is bounded by Bloomfield, Montclair, Orange, and East Orange. The School District is composed of four schools. The middle school and high school are housed in the same location but are operated as two separate programs.

The total population of Glen Ridge as of 2000 was 7,271.¹ The overall population declined to 6,908 as of 2006.² However while the overall population decreased through 2006 the enrollment in the schools has increased.

1. During the 2002-03 school year there was a total of 1,755 children attending the Glen Ridge Public Schools.³ This increased to 1,925 as of September, 2008. This is an increase of 170 students or approximately 10%.⁴
2. The enrollment is projected to increase at a moderate rate from the current 1,925 to 1,966 in 2013-14. This is an increase of 41 students or approximately 2%.
3. The enrollment in the lower elementary schools showed a slight decrease from 567 in 2002-03 to 553 as of September, 2008. This is a decrease of 14 students or less than 2%.
4. The enrollment in the lower elementary schools is projected to decrease slightly from 553 in the current year to 533 during the 2013-14 school year. This is a decrease of 20 students or approximately 1.7%.
5. The upper elementary school population grew from 517 students in 2002-03 to 572 as of September, 2008. This is an increase of 55 students or approximately 10%.
6. The upper elementary enrollment is expected to increase moderately from the current 572 to 581 in 2013-14. This is an increase of less than 1%.
7. The intermediate/high school enrollment increased from 663 students in 2002-03 to 783 as of September 2008. This is an increase of 120

¹ US Census 2000.

² US Census update 2006

³ This does not include out of district students

⁴ The executive summary data reflects a five-year enrollment history using birth to kindergarten ratios to project kindergarten enrollment.

students or approximately 15%.

8. The intermediate/high school enrollment is expected to increase from the current 783 to 837 in 2013-14. This is an increase of 54 students or approximately 7%.
8. The largest period of growth in the District took place between the 2005-06 and 2007-08 where 95 new students entered the system. From 2002-03 to 2005-06 63 students entered the Glen Ridge Schools.

Methodology

This study uses the Cohort Survival Method to project enrollment.⁵ Cohort survival projects enrollments for grades kindergarten through 12 by calculating a growth/decline ratio for students as they move from grade to grade. The method calculates this growth ratio for each grade and then averages that for a period of five years. That ratio is then applied to the current enrollment to project future enrollments. For example, if there were 100 students in grade 1 during the 2002-03 school year and when these students became second graders the enrollment increased to 110, the growth ratio would be 1.1.

This ratio then calculated for five years and averaged. If at the end of five years the average growth from grade 1 to grade 2 is 1.1 and the current enrollment in grade 1 is 120, then the projection for grade 2 would be 132 (120 X 1.1).

In order to project kindergarten there are two methods. The most accepted method is using the birth to kindergarten averaging method. This method looks at birth to kindergarten ratios. For example, if there were 100 children born in 1997 and there were 110 children in kindergarten in 2002 the birth to kindergarten ratio would be 1.1.

In most cases birth to kindergarten is a reliable method. However, there are some instances where, due to the nature of the population, this does not work. In those cases a second method is employed, using a kindergarten moving average. What this does is that it projects kindergarten by averaging for each year in the projection the preceding five-years.

Both methodologies are tested. If there is a significant difference in the results then the reasons for the difference are analyzed and the appropriate method applied. In Glen Ridge there was no significant difference between the two methods and the standard birth to kindergarten method of projecting kindergarten was applied.

In addition to enrollment history and birth data the other variable affecting enrollment is housing. There are two questions concerning the impact of housing on enrollment, new housing (how much new housing is projected for the District) and housing turnover (the impact of current housing being sold to new residents). In Glen Ridge there has

⁵ This is the methodology used and accepted by the New Jersey Department of Education

been little new housing built since 2000. The change in enrollment is, for the most part, based upon housing turnover. The impact of housing turnover is reflected in the cohort projections. Cohort projections show the immediate impact to children entering or leaving the system.

One other factor which may impact enrollment in Glen Ridge is the current state of the housing and financial markets. It is difficult at this point to fully understand how the current economic situation will affect the enrollment in the Glen Ridge Schools. For the purpose of this study we will assume that the cohort method will be basis for the projection.

Housing in Glen Ridge

As of the 2000 US Census there were 2,490 total housing units in Glen Ridge. Table 1 shows the breakdown of these housing units.

Table 1: Housing Units in Glen Ridge

Type of Housing	Number of Units
Single Family Detached	2,101
Single Family Attached	18
Two Family	98
2-4 Units	70
20 or More Units	203
Total	2,490

Municipalities are required to report to the Census Bureau the number of permits issued for new residential construction on a monthly basis. A review of these reports indicates that since 2000 only 3 permits have been issued for new housing construction (this is only for new housing and does not include re-builds and/or renovations). These permits were issued for single family homes. Therefore Table 1 is modified to show 2,104 single family homes and a total of 2,493 homes in Glen Ridge as of this writing.

While there are no new homes being built in Glen Ridge there are current, according the Multiple Listing Services, a total of 66 homes on the market. Of these, 55 are for sale at market value with an average price of \$ 459,000. and 11 are in foreclosure with an average selling price of \$ 340,000.

In terms of student yield per household (how to project the impact of housing on enrollment the calculation is done by dividing the total number of students attending the public schools by the total number of housing units in the District. Single and two family homes yield more students, typically, than apartments of condominiums.

The average yield per household in Glen Ridge (except for apartments and/or condominiums) is .83 students per household. This means that if all the homes sold (66) the District could reasonably expect approximately 55 additional students to enter the system.

Data

The following were the data sources for this study:

1. Enrollment History – The Glen Ridge School District
2. Housing Information—US Department of the Census—American Housing Survey.
3. Building Permits—US Department of the Census
4. Live-birth data—New Jersey Department of Health—birth data is based upon the zip code of the mother at the time the child is born.
5. Housing availability in Glen Ridge—Multiple Listing Service

Enrollment Projections

Table 2: Five-Year Enrollment Projection Based Upon a Five-Year Enrollment History

Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PS	Prim	PK-2 Tot	3-6	Int	3-6 Tot
02-03	110	137	140	146	129	129	136	123	127	111	124	99	96	106	138	0	6	567	517	8	525
03-04	118	155	131	145	143	124	131	140	124	126	104	121	92	97	110	13	7	561	538	6	544
04-05	114	147	153	131	143	139	121	129	143	122	115	101	123	93	92	10	7	540	532	6	538
05-06	96	128	144	156	135	146	140	122	128	141	120	110	104	123	98	11	4	541	543	5	546
06-07	114	141	123	139	150	139	144	138	123	124	129	125	111	106	111	7	6	527	571	5	576
07-08	118	149	145	125	150	151	141	155	144	121	118	127	124	111	96	8	6	529	597	4	601
08-09	109	132	152	147	128	147	150	143	150	140	122	119	128	124	107	6	9	553	568	4	572

Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PS	Prim	PK-2 Tot	3-6	Int	3-6 Tot
09-10	104	141	131	152	149	128	146	152	144	147	134	121	120	129	101	10	6	542	576	5	581
10-11	109	141	140	132	155	150	128	148	153	141	140	133	122	121	101	10	6	529	581	5	584
11-12	108	138	140	140	134	155	149	129	149	150	134	139	134	123	101	10	6	535	568	5	573
12-13	107	140	137	140	143	134	155	151	130	146	143	133	141	135	101	10	6	534	582	5	587
13-14	108	139	139	137	143	143	134	157	152	128	139	142	135	141	101	10	6	533	576	5	581

Table 2 is a five-year enrollment projection based upon a five year history of enrollment. Kindergarten is projected based on the current kindergarten ratio. The births occur five years prior to the entering kindergarten grade. The children entering kindergarten in 2002-03 were born in 1997. The sub-total column reflects the number of students actually in the Glen Ridge School District. The children in the district children are added to that sub-total.

Table 3: Five-Year Enrollment Projection Based Upon a Three-Year Enrollment History

Year	3yr Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PS	Prim	PK-2 Tot	3-6	Int	3-6 Tot
02-03	110	137	140	146	129	129	136	123	127	111	124	99	96	106	138	0	6	567	517	8	5
03-04	118	155	131	145	143	124	131	140	124	126	104	121	92	97	110	13	7	561	538	6	5
04-05	114	147	153	131	143	139	121	129	143	122	115	101	123	93	92	10	7	540	532	6	5
05-06	96	128	144	156	135	146	140	122	128	141	120	110	104	123	98	11	4	541	543	5	5
06-07	114	141	123	139	150	139	144	138	123	124	129	125	111	106	111	7	6	527	571	5	5
07-08	118	149	145	125	150	151	141	155	144	121	118	127	124	111	96	8	6	529	597	4	6
08-09	109	132	152	147	128	147	150	143	150	140	122	119	128	124	107	6	9	553	568	4	5
Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PS	Prim	PK-2 Tot	3-6	Int	3-6 Tot
09-10	104	139	132	152	150	129	147	154	144	146	134	123	119	129	101	10	6	541	579	5	5
10-11	109	138	140	132	155	151	128	150	155	140	140	136	124	120	101	10	6	527	585	5	5
11-12	108	140	138	140	135	156	151	132	151	151	134	142	136	125	101	10	6	535	573	5	5
12-13	107	140	140	138	143	136	156	155	133	148	145	136	142	137	101	10	6	535	589	5	5
13-14	108	138	140	140	141	143	136	160	156	129	141	146	136	143	101	10	6	535	580	5	5

Table 3 is a five-year enrollment projection based upon a three-year enrollment history. All other factors are five and three year history. This table is provided because there was a surge in the growth of the District during 2008-09.

Table 4: Comparison of Projections

2009-10						2010-11					
Level	Five-year	Three-Year	Diff	% Diff	Average	Level	Five-year	Three-Year	Diff	% Diff	Average
PK-2	542	541	-1	-0.18%	541.5	PK-2	529	527	-2	-0.38%	528
3-6	581	584	3	0.52%	582.5	3-6	586	590	4	0.68%	588
7-12	795	796	1	0.13%	795.5	7-12	810	815	5	0.62%	812.5
Total	1918	1921		0.16%	1919.5	Total	1925	1932		0.36%	1928.5

2011-12						2012-13					
Level	Five-year	Three-Year	Diff	% Diff	Average	Level	Five-year	Three-Year	Diff	% Diff	Average
PK-2	535	535	0	0.00%	535	PK-2	534	535	1	0.19%	534.5
3-6	573	594	21	3.66%	583.5	3-6	587	594	7	1.19%	590.5
7-12	830	840	10	1.20%	835	7-12	828	840	12	1.45%	834
Total	1938	1969		1.60%	1953.5	Total	1949	1969		1.03%	1959

2013-14					
Level	Five-year	Three-Year	Diff	% Diff	Average
PK-2	533	535	2	0.38%	534
3-6	576	585	9	1.56%	580.5
7-12	837	852	15	1.79%	844.5
Total	1946	1972		1.34%	1959

Table 4 presents a comparison between projecting on a five-year basis and projecting on a three year basis. Because the growth in the District was the greatest during the past three years, most likely based upon mortgage availability and the impact of “empty nesters” it was important to see the impact of the past three years compared to the past five.

Because of the uncertainty of the current housing market and the current availability of homes in Glen Ridge it appears that using the average between the two projections will provide greater accuracy in these projections.

While the cohort survival method includes the impact of housing turnover it is difficult to project, especially under the current economic climate, when the available housing will actually take occur.

Finally, it is also worth noting that the increases in enrollment have historically occurred at the upper elementary and intermediate/high school levels. This is consistent with similar communities with similar housings costs. Because the housing costs are higher

more economically established individuals tend to buy homes and these individuals tend to have older children.

Lower Elementary School Projections

Table 5: Forest Avenue Projection

Forest Av								
Year	Births	K	1	2	Sub	PK	Primary	Total
02-03	110	69	71	80	220	50	6	276
03-04	118	77	62	73	212	46	7	265
04-05	114	71	77	64	212	34	7	253
05-06	96	59	59	80	210	40	4	254
06-07	114	70	70	67	194	47	6	247
07-08	118	69	69	60	203	41	6	250
08-09	109	68	69	72	209	44	9	262
Projected								
09-10	104	64	68	70	202	44	9	255
10-11	109	67	64	69	200	44	9	253
11-12	108	66	67	64	198	44	9	251
12-13	107	65	66	68	199	44	9	252
13-14	108	66	66	67	199	44	9	252

Table 6: Linden Avenue Projection

Linden Av								
Year	Births	K	1	2	Sub	PK	PS/TR	Total
02-03	110	68	69	66	203	88	0	291
03-04	118	78	69	72	219	64	13	296
04-05	114	76	76	67	219	58	10	287
05-06	96	69	69	76	218	58	11	287
06-07	114	71	71	72	209	64	7	280
07-08	118	80	80	65	216	55	8	279
08-09	109	64	83	75	222	63	6	291
Projected								
09-10	104	68	63	83	214	63	6	283
10-11	109	71	67	63	202	63	6	271
11-12	108	71	70	67	208	63	6	277
12-13	107	70	70	70	210	63	6	279
13-14	108	71	69	70	209	63	6	278

Tables 5 and 6 show the projections for the two lower elementary schools.⁶

⁶ There is a small deviation between the totals of the two elementary projections and the District-wide projections. This is due to the difference in the sample size. The difference is insignificant.

The tables show that both schools will have a small decline in enrollment during the next five years. Both these tables are based upon a five-year history and a kindergarten projection based upon birth to kindergarten ratios.

There was no significant difference in the projections between a three-year history and the five-year history used to project the lower elementary schools.

Table 7: Upper Elementary School Projection

Year	3	4	5	6	Int'l	Total
02-03	129	129	136	123	8	525
03-04	143	124	131	140	6	544
04-05	143	139	121	129	6	538
05-06	135	146	140	122	5	548
06-07	150	139	144	138	5	576
07-08	150	151	141	155	4	601
08-09	128	147	150	143	4	572
Projected						
09-10	149	128	146	152	5	580
10-11	155	150	128	148	5	586
11-12	134	155	149	129	5	572
12-13	143	134	155	151	5	588
13-14	143	143	134	157	5	582

Table 8: High School Projection

Year	7	8	9	10	11	12	Total
02-03	127	111	124	99	96	106	663
03-04	124	126	104	121	92	97	664
04-05	143	122	115	101	123	93	697
05-06	128	121	120	110	104	123	706
06-07	123	124	129	125	111	106	718
07-08	144	121	118	127	124	111	745
08-09	150	140	122	119	128	124	783
Projected							
09-10	144	147	134	121	120	129	795
10-11	153	141	133	122	121	101	771
11-12	149	150	134	139	134	123	829
12-13	130	146	143	133	141	135	828
13-14	152	128	139	142	135	141	837

Both the Upper Elementary School and the High School show moderate increases in enrollment for the projected five years.

Conclusion

The Glen Ridge School District has experienced growth during the past five years with the greatest growth in enrollment during the past three years. It appears the increase in enrollment has been fueled by housing turnover in the District. While there are currently (September, 2008) approximately 66 homes available in Glen Ridge it is difficult to project when and how many of these will be sold. Because there was some variance in the historical enrollment of the District it is suggested that the District consider the range of projections as indicated in Table 4 using the average between the projections based upon three-year and five-year history.