

**Orange County School District
School Membership 2004-2005 School Year (November 15, 2004)**

	11/14/03 Actual 2003-04	Projected 2004-05	11/15/04 Actual 2004-05	Change between actual Nov 2003- Nov 2004
Elementary	2945		3016	+ 71
Model			Projection is	
T		3063	H47	
OCP		3007	L9	
10C		2981	L35	
5C		2974	L42	
3C		2980	L36	
AVG		3001	L15	
			11/15/2004	
Middle	1671		1593	- 78
Model			Projection is	
T		1738	H145	
OCP		1690	H97	
10C		1566	L27	
5C		1570	L23	
3C		1572	L21	
AVG		1627	H34	
			11/15/2004	
High	1887		2057	+ 170
Model			Projection is	
T		1962	L95	
OCP		1956	L101	
10C		2048	L9	
5C		2056	L1	
3C		2101	H44	
AVG		2025	L32	
			11/15/2004	
Totals				
Elementary	2945		3016	
Middle	1671		1593	
High	1887		2057	
	6503		6666	+ 163
Model			Projection is	
T		6763	H97	
OCP		6653	L13	
10C		6595	L71	
5C		6600	L66	
3C		6653	L13	
AVG		6653	L13	

H means High

L means low

* includes hospital school

**Orange County School District
School Membership 2004-2005 School Year (November 15, 2004)**

Statistical Findings

<i>PROJECTION TYPE ABBREVIATIONS</i>	
TISCHLER (T)	10-YEAR COHORT (10C)
ORANGE COUNTY PLANNING (OCP)	5-YEAR COHORT (5C)
	3-YEAR COHORT (3C)

Elementary School Level

- Projections were mixed (high and low) and between a loss of 42 and a gain of 47 students over the actual November 15, 2004 membership. The average projection was 15 students lower than actual membership.
- The membership actually increased by 71 members between November 14, 2003 and November 15, 2004.

Middle School Level

- Two projections [Tischler and Orange County Planning (OCP)] were high and three were low (10C, 5C, 3C). The average projection was 34 students higher than actual membership.
- The membership actually decreased by 78 members between November 14, 2003 and November 15, 2004.

High School Level

- Four projections were low (between 1 and 101) and one (3C) was high. The average projection was 32 students low.
- The membership actually increased by 170 members between November 14, 2003 and November 15, 2004.

TOTAL

- The total of all school level projections were low and between 13 (OCP and 3C representing the lowest) and 71 (10C, representing the highest) students. The Tischler (T) projection was high at a gain of 97 students. The average projected was a 13 student decrease.
- The membership increased in total by 163 students, which is the sum of +71 at Elementary, -78 at Middle and +170 at High.
- NC Department of Public Instruction (NCDPI) projected 6,632, which is low (i.e. undercount) but within 34 students of the November 15, 2004 membership.

**Chapel Hill/Carrboro School District
School Membership 2004-2005 School Year (November 15, 2004)**

	11/14/03 Actual 2003-04	Projected 2004-05	11/15/04 Actual 2004-05	Change between actual Nov 2003- Nov 2004
Elementary	4692		4695	+3
Model			Projection is	
T		5064	H369	
OCP		4905	H210	
10C		4876	H181	
5C		4899	H204	
3C		4808	H113	
AVG		4910	H215	
			11/15/2004	
Middle	2612		2560	-52
Model			Projection is	
T		2819	H259	
OCP		2770	H210	
10C		2598	H38	
5C		2602	H42	
3C		2585	H25	
AVG		2675	H115	
			11/15/2004	
High	3330		3422	+92
Model			Projection is	
T		3594	H172	
OCP		3274	L148	
10C		3515	H93	
5C		3541	H119	
3C		3562	H140	
AVG		3497	H75	
			11/15/2004	
Totals			11/15/2004	
Elementary	4692		4695	
Middle	2612		2560	
High	3330		3422	
	10634		10677	+43
Model			Projection is	
T		11477	H800	
OCP		10949	H272	
10C		10989	H312	
5C		11042	H365	
3C		10955	H278	
AVG		11082	H405	

H means High
L means low
* excludes hospital school

**Chapel Hill/Carrboro School District
School Membership 2004-2005 School Year (November 15, 2004)**

Statistical Findings

<i>PROJECTION TYPE ABBREVIATIONS</i>	
TISCHLER (T)	10-YEAR COHORT (10C)
ORANGE COUNTY PLANNING (OCP)	5-YEAR COHORT (5C)
	3-YEAR COHORT (3C)

Elementary School Level

- All projections were high and between 113 and 369 students over the actual November 15, 2004 enrollment.
- The membership actually increased by 3 members between November 14, 2003 and November 15, 2004.

Middle School Level

- All projections were high and between 25 and 259 students over the actual November 15, 2004 enrollment.
- The membership actually decreased by 52 members between November 14, 2003 and November 15, 2004.

High School Level

- Four projections were high and between 93 and 172 and one (OCP) was low. The average projection was 75 students high.
- The total membership actually increased by 92 members between November 14, 2003 and November 15, 2004.

TOTAL

- The total of all school level projections were high and between 272 (OCP representing the lowest) and 800 (T representing the highest) students. The average projected was a 405 student increase.
- The membership increased in total by 43 students, which is the sum of +3 at Elementary, -52 at Middle, and +92 at High.
- NC Department of Public Instruction (NCDPI) projected 10,933 (an increase of 299), which is high (i.e. overcount) but within 256 students of the actual November 15, 2004 membership.

C. Student Projections

1. **Responsible Entity for Suggesting Change** – The updating of this section will be conducted by the Planning Directors, School Representatives, Technical Advisory Committee (SAPFOTAC) and referred to the BOCC for annual report certifications.

Projections will be distributed to SAPFO partners for review and comments to the BOCC prior to certification.

2. **Definition** – The result of the average of the five student projection models represented by 10 year numerical membership projections by school level (Elementary, Middle, and High) for each school district (Chapel Hill/Carrboro School District and Orange County School District) .

3. **Standard for:**

Chapel Hill Carrboro School District	Orange County School District
The 5 model average discussed in Section II.B (Student Projection Methodology) See Attachment II.C.6	The 5 model average discussed in Section II.B (Student Projection Methodology) See Attachment II.C.5

4. **Analysis of Existing Conditions**

The membership figures and percentage growth on the attachments show continued growth in both systems. Variability by school level and between the School Districts is also noted. Year-by-year percent growth is shown on the attached table as well as the projected LOS. The projections models were updated using current (November 15) memberships. Ten years of student membership were projected thereafter.

Please note that the information contained in this report relates to existing school certified capacities and is not related to new legislation from DPI (Department of Public Instruction) affecting elementary schools. Any capacity changes related to DPI legislation will require reconvening of a School Facilities Task Force type of group that can act as a Joint Action Committee.

Section II

Chapel Hill Carrboro School District

Elementary

The previous year (2003) projection for November 2004 at this level was overestimated by 215 students. The actual growth was +3. Over the previous three years, this level was steadily increasing from 30 to 77 to 141 students a year, which created a historical base of accelerating growth. This was captured by the various mathematical models last year to produce the need for Elementary School #10 to come 'on line' in 2006-2007. However, the relatively short term (3 year) record was statistically misleading in its limited context and was made more realistic by a low enrollment current year of only +3. The new four year historical average of 62.75 students versus an accelerating 87.67 average, now portends the needs for Elementary School #10 in 2009-10.

Middle

The previous year (2003) projection for November 2004 for this level was overestimated by 115 students. The actual membership decreased by 52. Over the previous three years, the growth was decreasing precipitously from 214 to 68 to 4, so the -52 was consistent with the straight-line trend. However, certain models did reflect the prior year's growth at the elementary school level as they progress into the middle school cohorts. Accordingly, the previously noted elementary growth matriculated into continued growth at the middle school level. Now, with the November 2004 negative middle school enrollment and the +3 at the elementary school level, future projections are more conservative with an average of 53 new students projected each year for the next ten years. This projection pushes the need for Middle School #5 to the later year of 2013-14.

High School

The previous year (2003) projection for November 2004 for this level was overestimated by 75 students. The actual membership increased by +92, but was not as high as the +167 predicted. Over the previous three years, growth was appreciable at a relatively constant 148, 199 and 168 membership increase, so the predicted 167 was credible. Actual real estate market conditions can suppress historical and mathematical trends, which is likely the case in all three school levels

Section II

within the school system. Even though 4-year historic growth at this high school level is recognizable, future projections are more moderate because of the slowing of growth at the elementary and middle school levels. Therefore, an average annual increase of approximately 77 students is predicted in the next ten years. After High School #3 opens in 2007-08, no further capacity needs are noted in the 10-year projection horizon.

Orange County School District

Elementary

The previous year (2003) projection for November 2004 at this level was underestimated by 15 students. The actual growth was +71. Over the previous three years, this level has experienced erratic enrollment which changed from -185 to +8 to +44 students a year. This created a historical base of negative growth which was captured by the various mathematical models last year to produce realistic and moderate projections that were less than a classroom capacity low. In the Orange County school system, historic growth is more closely related to development than in the Chapel Hill-Carrboro School District, which has a sizeable number of new families in older, regentrified housing stock. Therefore, development activity should be monitored off-line as a harbinger to student growth on a more equal level to historically based mathematical models.

Middle

The previous year (2003) projection for November 2004 for this level was overestimated by 34 students. The actual membership decreased by 78. Over the previous three years, the growth was increasing from 23 to 104 to 40, so the -78 was inconsistent with the straight-line trend. However, certain models did reflect the negative growth (-185) at the elementary school level in 2001-2002 as they progress into the middle school cohorts. Accordingly, the previously noted elementary growth (positive and negative) matriculated into slow continued growth at the middle school level. Now, with the November 2004 negative middle school enrollment and the moderate growth at the elementary school level, future projections are conservative with an average of 13 new students projected each year for the next ten years. Although growth is slow,

Section II

the existing school level remains over adopted Level-of-Service capacities while awaiting the opening of Orange County Middle School #3 in 2006-07.

High School

The previous year (2003) projections for November 2004 for this level underestimated by 32 students. The actual membership increased by +170. Over the previous three years, growth was moderate at a relatively constant 81, 75 and 59 membership increase, so the predicted 138 was credible. Even though 4-year historic growth at the high school level is moderate and recognizable, future projections are more moderate because of the slowing of growth at the elementary and middle school levels. Therefore, an average annual increase of approximately 25 students is predicted in the next ten years

5. *Recommendation –*

Use statistics as noted in 3 above

OCS Student Projections

Compiled by : Orange County Budget Office
01/28/03

Attachment II.C.1
(2002)

3rd month
November 15, 2002

2nd month

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	3,078	2,893	2,901	2,951	3,000	3,060	3,100	3,150	3,198	3,249	3,299	3,349	3,398	3,446
Teacher ¹⁾				2,966	3,035	3,105	3,178	3,254	3,331	3,411	3,493	3,577	3,664	3,753
OC Planning				2,916	2,946	2,930	2,992	3,040	3,070	3,101	3,132	3,163	3,195	3,227
10 Year Growth				2,889	2,868	2,870	2,921	2,965	2,995	3,026	3,056	3,086	3,117	3,148
5 Year Growth				2,800	2,892	2,854	2,892	2,925	2,955	2,984	3,014	3,044	3,074	3,105
3 Year Growth				2,922	2,954	2,963	3,017	3,067	3,110	3,154	3,199	3,244	3,289	3,336
Average				3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820
Capacity - 100% Level of Service				4,011	4,118	4,116	4,118	4,118	4,118	4,118	4,118	4,118	4,118	4,118
105% Level of Service				80.6%	78.7%	78.9%	76.5%	75.4%	75.8%	77.0%	78.2%	79.3%	80.5%	81.6%
Actual - % Level of Service				76.5%	75.4%	75.8%	77.0%	78.2%	79.3%	80.5%	81.6%	82.8%	83.9%	85.1%
Average - % Level of Service														

Additional 100 seats available at Hillsborough elementary

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	1,504	1,527	1,631	1,658	1,687	1,715	1,743	1,771	1,799	1,827	1,855	1,883	1,911	1,939
Teacher ¹⁾				1,533	1,570	1,709	1,749	1,791	1,834	1,877	1,923	1,969	2,017	2,066
OC Planning				1,641	1,560	1,541	1,510	1,508	1,477	1,526	1,558	1,574	1,569	1,605
10 Year Growth				1,617	1,514	1,463	1,418	1,394	1,355	1,389	1,419	1,433	1,447	1,462
5 Year Growth				1,638	1,555	1,520	1,488	1,469	1,514	1,438	1,473	1,488	1,492	1,502
3 Year Growth				1,638	1,597	1,590	1,581	1,567	1,566	1,611	1,643	1,666	1,680	1,715
Average				1,466	1,466	1,466	1,466	1,466	1,466	1,466	1,466	1,466	1,466	1,466
Capacity - 100% Level of Service				1,569	1,569	1,569	1,569	1,569	1,569	1,569	1,569	1,569	1,569	1,569
107% Level of Service				102.6%	104.2%	111.3%	111.7%	108.4%	108.4%	73.0%	73.0%	73.3%	73.7%	74.4%
Actual - % Level of Service				111.7%	108.4%	108.4%	73.0%	73.0%	73.3%	73.7%	74.4%	75.8%	76.9%	78.0%
Average - % Level of Service														

Based on January 2003 revised timetable submitted by OCS, middle school #3 opens in fall 2006 with 700 additional seats

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	1,872	1,783	1,826	1,859	1,881	1,922	1,953	1,985	2,016	2,047	2,078	2,110	2,141	2,173
Teacher ¹⁾				1,906	1,950	1,995	2,042	2,091	2,140	2,192	2,244	2,299	2,354	2,411
OC Planning				1,852	1,916	1,914	1,897	1,896	1,896	1,805	1,792	1,819	1,808	1,851
10 Year Growth				1,843	1,893	1,903	1,847	1,908	1,773	1,662	1,628	1,635	1,616	1,648
5 Year Growth				1,892	1,982	2,025	1,993	1,977	1,950	1,855	1,830	1,825	1,790	1,817
3 Year Growth				1,868	1,926	1,958	1,950	1,952	1,957	1,912	1,915	1,838	1,942	1,980
Average				2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518
Capacity - 100% Level of Service				2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770
110% Level of Service				110.1%	115.5%	122.6%	74.2%	76.5%	77.7%	77.4%	77.5%	77.7%	75.9%	76.0%
Actual - % Level of Service				74.2%	76.5%	77.7%	77.4%	77.5%	77.7%	75.9%	76.0%	76.9%	77.1%	78.6%
Average - % Level of Service														

Cedar ridge high opens with 1,000 seats in fall 2002

indicates first year that district surpasses Schools APFO recommended Level of Service

¹⁾ It is important to note that this reflects the November 15, 2002 date of membership as outlined in by the Schools Adequate Public Facilities Ordinance. It does not include CHCCS students attending the Hospital School.
²⁾ The Teacher Model provides for the "Linear Method" of projections for both CHCCS and OCS. Original projections used in prior years projection models included the "Linear Extrapolation Method" for CHCCS.
³⁾ Annual growth rate calculated using actual membership for years 2000-01 through 2002-03 and average membership for years 2003-04 through 2013-14.

As the _____'s (Town or School District) designated member of the Orange County Planning and School Technical Advisory Committee (OCPTAC) I certify that the Student Membership Projections and Student Generation Rates identified in the chart above are the ones that the OCPSTAC has discussed and agreed upon to be the official projections that will be used to complete Orange County's 2003-13 Capital Investment Plan (CIP) for the Chapel Hill-Carrboro City Schools and the Orange County Schools. _____ (Date)

CHCCS Student Projections

Compiled by: Orange County Budget Office
01/29/03

November 15, 2002 membership

3rd month

2nd month

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	4,444	4,474	4,861	4,714	4,877	5,040	5,203	5,366	5,529	5,692	5,855	6,018	6,181	6,344
Teacher ¹⁾				4,760	4,913	5,070	5,221	5,387	5,547	5,708	5,868	6,028	6,188	6,348
OC Planning				4,725	4,890	5,018	5,143	5,309	5,362	5,415	5,468	5,524	5,579	5,635
10 Year Growth				4,799	5,034	5,229	5,413	5,621	5,877	6,134	6,391	6,648	6,905	7,162
5 Year Growth				4,736	4,913	5,060	5,193	5,362	5,416	5,470	5,525	5,580	5,636	5,692
3 Year Growth				4,745	4,828	5,083	5,235	5,405	5,498	5,585	5,673	5,761	5,844	5,928
Average				4,821	4,921	4,921	5,021	5,021	5,121	5,121	5,221	5,221	5,321	5,321
Capacity - 100% Level of Service	4,302	4,302	4,302	4,821	4,821	4,821	5,341	5,341	5,341	5,341	5,341	5,341	5,341	5,341
105% Level of Service	4,817	4,817	4,817	5,167	5,167	5,167	5,797	5,797	5,797	5,797	5,797	5,797	5,797	5,797
Actual - % Level of Service	103.3%	104.0%	106.8%	96.4%	100.1%	103.5%	94.8%	97.9%	99.6%	101.2%	102.8%	104.4%	105.9%	107.4%
Average - % Level of Service				96.4%	100.1%	103.5%	94.8%	97.9%	99.6%	101.2%	102.8%	104.4%	105.9%	107.4%

Elementary #9 opens in fall 2003 with additional 619 seats

Elementary #10 opens in fall 2006 with 600 additional seats

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	2,326	2,640	2,608	2,701	2,795	2,868	2,962	3,075	3,188	3,262	3,356	3,448	3,542	3,635
Teacher ¹⁾				2,705	2,774	2,839	2,899	2,955	3,007	3,078	3,152	3,225	3,298	3,372
OC Planning				2,673	2,656	2,714	2,813	2,863	2,985	3,102	3,203	3,295	3,328	3,362
10 Year Growth				2,676	2,674	2,767	2,884	2,991	3,184	3,382	3,581	3,627	3,664	3,700
5 Year Growth				2,683	2,683	2,719	2,825	2,988	3,033	3,158	3,324	3,357	3,381	3,425
Average				2,687	2,712	2,785	2,863	2,954	3,077	3,197	3,337	3,390	3,445	3,499
Capacity - 100% Level of Service	2,106	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840
107% Level of Service	2,266	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039
Actual - % Level of Service	110.3%	94.4%	91.6%	94.6%	96.6%	98.0%	101.6%	104.0%	106.4%	112.6%	117.5%	119.4%	121.3%	123.2%
Average - % Level of Service				94.6%	96.6%	98.0%	101.6%	104.0%	106.4%	112.6%	117.5%	119.4%	121.3%	123.2%

High

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	2,815	2,963	3,162	3,276	3,388	3,602	3,615	3,728	3,841	3,955	4,068	4,181	4,294	4,407
Teacher ¹⁾				3,195	3,279	3,357	3,431	3,499	3,562	3,621	3,679	3,736	3,820	3,903
OC Planning				3,250	3,458	3,593	3,651	3,733	3,786	3,872	3,940	4,139	4,296	4,421
10 Year Growth				3,245	3,451	3,605	3,687	3,784	3,847	3,978	4,112	4,212	4,347	4,454
5 Year Growth				3,286	3,540	3,703	3,779	3,873	3,919	4,019	4,105	4,228	4,302	4,351
3 Year Growth				3,250	3,425	3,552	3,629	3,719	3,790	3,889	3,981	4,159	4,310	4,447
Average				3,035	3,035	3,035	4,035	4,035	4,035	4,035	4,035	4,035	4,035	4,035
Capacity - 100% Level of Service	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035
110% Level of Service	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359
Actual - % Level of Service	92.8%	97.6%	104.2%	107.1%	112.9%	117.0%	89.9%	92.2%	93.9%	96.4%	98.7%	103.1%	108.8%	110.2%
Average - % Level of Service				107.1%	112.9%	117.0%	89.9%	92.2%	93.9%	96.4%	98.7%	103.1%	108.8%	110.2%

Based on January 2003 revised timetable submitted by chccs, high school #3 opens in fall 2006 with 1,000 additional seats

Indicates first year that district surpasses Schools APFO recommended Level of Service

¹⁾ It is important to note that this reflects the November 16, 2002 date of membership as outlined by the Schools Adequate Public Facilities Ordinance. It does not include CHCCS students attending the Hospital School.

²⁾ The Teacher Model provides for the "Linear Method" of projections for both CHCCS and OCS. Original projections used in prior years projection models included the "Linear Extrapolation Method" for CHCCS.

³⁾ Annual growth rate calculated using actual membership for years 2000-01 through 2002-03 and average membership for years 2003-04 through 2013-14.

As the _____ is (Town or School District) designated member of the Orange County Planning and School Technical Advisory Committee (OCPSTAC), _____ certify that the Student Membership Projections and Student Generation Rates identified in the chart above are the ones that the OCPSTAC has discussed and agreed upon to be the official projections that will be used to complete Orange County's 2003-13 Capital Investment Plan (CIP) for the Chapel Hill-Carrboro City Schools and the Orange County

OCS Student Projections (No reduction in class size for grades K thru 2) ⁽¹⁾

draft

Elementary	2009-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	3,078	2,863	2,961	2,945										
Teacher ⁽²⁾														
OC Planning														
10 Year Growth														
5 Year Growth														
3 Year Growth														
Annual Change - Increase (Decrease) in Actual & Projected Membership		(186)	0	44	66	18	64	52	89	44	48	51	51	82
Capacity - 100% Level of Service	3,570	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820
Number of Students, Actual and Projected, Over (Under) 100% LOB	(742)	(927)	(927)	(927)	(927)	(927)	(927)	(927)	(927)	(927)	(927)	(927)	(927)	(927)
105% Level of Service	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911	4,911
Number of Students, Actual and Projected, Over (Under) 105% LOB	(923)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)	(1,118)
Actual - % Level of Service	86.6%	75.7%	76.9%	78.1%										
Average - % Level of Service		4.03%	2.13%	3.13%	76.0%	76.0%	76.4%	76.3%	81.2%	82.4%	83.6%	84.0%	86.2%	87.8%

OCS Student Projections (No reduction in class size for grades K thru 2) ⁽¹⁾

Middle	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	1,554	1,527	1,631	1,631										
Teacher ⁽²⁾														
OC Planning														
10 Year Growth														
5 Year Growth														
3 Year Growth														
Annual Change - Increase (Decrease) in Actual & Projected Membership		23	104	0	18	18	18	23	46	34	34	38	34	41
Capacity - 100% Level of Service	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468	1,468
Number of Students, Actual and Projected, Over (Under) 100% LOB	38	61	163	799	161	177	(876)	(810)	(833)	(487)	(453)	(415)	(381)	(366)
107% Level of Service	1,608	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609
Number of Students, Actual and Projected, Over (Under) 107% LOB	(82)	(42)	82	192	59	74	(848)	(662)	(684)	(335)	(461)	(421)	(384)	(378)
Actual - % Level of Service	102.6%	104.2%	111.5%	114.3%	111.5%	112.9%	110.9%	110.9%	110.9%	111.5%	111.5%	110.9%	110.9%	111.5%
Average - % Level of Service														

OCS Student Projections (No reduction in class size for grades K thru 2) ⁽¹⁾

High	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	1,672	1,753	1,828	1,997										
Teacher ⁽²⁾														
OC Planning														
10 Year Growth														
5 Year Growth														
3 Year Growth														
Annual Change - Increase (Decrease) in Actual & Projected Membership		81	74	89	138	38	3	37	107	110	14	17	31	40
Capacity - 100% Level of Service	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518	1,518
Number of Students, Actual and Projected, Over (Under) 100% LOB	154	235	(690)	(521)	(483)	(455)	(450)	(440)	(436)	(471)	(443)	(440)	(428)	(409)
105% Level of Service	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670
Number of Students, Actual and Projected, Over (Under) 105% LOB	2	63	(642)	(682)	(745)	(794)	(791)	(790)	(888)	(723)	(704)	(652)	(681)	(630)
Actual - % Level of Service	110.1%	115.5%	112.6%	114.6%	114.6%	114.6%	114.6%	114.6%	114.6%	114.6%	114.6%	114.6%	114.6%	114.6%
Average - % Level of Service														

⁽¹⁾ This document is a draft and is subject to change. It is not intended to be used for final planning purposes. It is intended to provide a general overview of the projected student population for the 2003-2014 school year. The actual student population for each year will be determined by the actual enrollment figures for each year. The actual student population for each year will be determined by the actual enrollment figures for each year. The actual student population for each year will be determined by the actual enrollment figures for each year.

CHCCS Student Projections (No reduction in class size for grades K thru 2) ⁽¹⁾

Draft

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	4,444	4,474	4,651	4,662										
Teacher ²⁾														
OC Planning	5,084	5,240	5,435	5,421	5,435	5,421	5,435	5,421	5,435	5,421	5,435	5,421	5,435	5,421
10 Year Growth	4,916	5,084	5,240	5,240	5,240	5,240	5,240	5,240	5,240	5,240	5,240	5,240	5,240	5,240
3 Year Growth	4,662	4,818	4,974	4,974	4,974	4,974	4,974	4,974	4,974	4,974	4,974	4,974	4,974	4,974
Annual Change - Increase (Decrease) in Actual & Projected Membership	30	141	172	172	172	172	172	172	172	172	172	172	172	172
Capacity - 100% Level of Service	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507	6,507
Number of Students, Actual and Projected, Over (Under) 100% LOS	142	172	248	248	248	248	248	248	248	248	248	248	248	248
Capacity - 100% Level of Service (LOS)	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817	4,817
Number of Students, Actual and Projected, Over (Under) 100% LOS	121	143	34	34	34	34	34	34	34	34	34	34	34	34
Actual - % Level of Service	103.1%	104.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%
Average - % Level of Service	103.6%	104.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%	106.0%

CHCCS Student Projections (No reduction in class size for grades K thru 2) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	2,336	2,540	2,608	2,612										
Teacher ²⁾														
OC Planning	2,710	2,855	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,951
10 Year Growth	2,580	2,610	2,620	2,620	2,620	2,620	2,620	2,620	2,620	2,620	2,620	2,620	2,620	2,620
3 Year Growth	2,435	2,474	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498
Annual Change - Increase (Decrease) in Actual & Projected Membership	104	169	142	142	142	142	142	142	142	142	142	142	142	142
Capacity - 100% Level of Service	3,108	3,040	3,040	3,040	3,040	3,040	3,040	3,040	3,040	3,040	3,040	3,040	3,040	3,040
Number of Students, Actual and Projected, Over (Under) 100% LOS	218	180	132	132	132	132	132	132	132	132	132	132	132	132
Capacity - 100% Level of Service (LOS)	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318
Number of Students, Actual and Projected, Over (Under) 100% LOS	70	69	41	41	41	41	41	41	41	41	41	41	41	41
Actual - % Level of Service	110.1%	109.4%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%
Average - % Level of Service	110.2%	109.4%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%	111.9%

CHCCS Student Projections (No reduction in class size for grades K thru 2) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Actual	3,016	2,963	3,102	3,330										
Teacher ²⁾														
OC Planning	3,564	3,726	3,857	3,857	3,857	3,857	3,857	3,857	3,857	3,857	3,857	3,857	3,857	3,857
10 Year Growth	3,274	3,352	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426
3 Year Growth	3,151	3,147	3,147	3,147	3,147	3,147	3,147	3,147	3,147	3,147	3,147	3,147	3,147	3,147
Annual Change - Increase (Decrease) in Actual & Projected Membership	148	189	145	145	145	145	145	145	145	145	145	145	145	145
Capacity - 100% Level of Service	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035	3,035
Number of Students, Actual and Projected, Over (Under) 100% LOS	171	172	137	137	137	137	137	137	137	137	137	137	137	137
Capacity - 100% Level of Service (LOS)	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339	3,339
Number of Students, Actual and Projected, Over (Under) 100% LOS	324	320	177	177	177	177	177	177	177	177	177	177	177	177
Actual - % Level of Service	102.0%	97.6%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%
Average - % Level of Service	102.0%	97.6%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%	104.2%

⁽¹⁾ It is important to note that this reflects the November 14, 2003, date of membership as outlined in the Revised Adequate Public Facilities Ordinance. It should be noted that CHCCS is currently projecting a 10% increase in membership for the year 2003-04. The Teacher Market Analysis for the "Linear Method" of projections for the year 2003-04 is 3,330. The actual enrollment for the year 2003-04 is 3,330. The actual enrollment for the year 2003-04 is 3,330. The actual enrollment for the year 2003-04 is 3,330.

OCS Student Projections (No reduction in class size for grades K thru 3) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Enrollment	1,078	2,562	2,921	2,845	3,016										
Teacher ²⁾															
OC Planning															
10 Year Growth															
5 Year Growth															
3 Year Growth															
Average															
Annual Enrollment (Increases/Decreases) in Actual & Projected Membership		(186)	8	44	71										
Capacity - 100% Level of Service	3,020	3,020	3,020	3,020	3,020										
Number of Students, Actual and Projected, Over (Under) 100% LOS	(942)	(927)	(918)	(816)	(3,020)										
105% Level of Service	4,011	4,011	4,011	4,011	4,011										
Number of Students, Actual and Projected, Over (Under) 105% LOS	(923)	(1,119)	(1,119)	(1,096)	(4,011)										
Actual % Level of Service	89.6%	76.7%	75.9%	77.3%	79.9%										
Average % Level of Service															
Annual Enrollment Growth Rate (3)		-8.91%	0.26%	1.87%	2.41%										
of new full-time seats in kindergarten/elementary															

OCS Student Projections (No reduction in class size for grades K thru 3) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Enrollment	1,154	1,527	1,633	1,671	1,663										
Teacher ²⁾															
OC Planning															
10 Year Growth															
5 Year Growth															
3 Year Growth															
Average															
Annual Enrollment (Increases/Decreases) in Actual & Projected Membership		33	109	40	(23)										
Capacity - 100% Level of Service	1,466	1,466	1,466	1,466	1,466										
Number of Students, Actual and Projected, Over (Under) 100% LOS	312	61	166	205	(1,466)										
107% Level of Service	1,549	1,549	1,549	1,549	1,549										
Number of Students, Actual and Projected, Over (Under) 107% LOS	(95)	(42)	82	102	(1,549)										
Actual % Level of Service	92.6%	94.2%	111.3%	114.0%	109.7%										
Average % Level of Service															
Annual Enrollment Growth Rate (3)		1.53%	8.31%	2.43%	-4.87%										
of new full-time seats in kindergarten/middle															

OCS Student Projections (No reduction in class size for grades K thru 3) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Enrollment	1,622	1,753	1,628	1,697	1,652										
Teacher ²⁾															
OC Planning															
10 Year Growth															
5 Year Growth															
3 Year Growth															
Average															
Annual Enrollment (Increases/Decreases) in Actual & Projected Membership		11	126	69	(126)										
Capacity - 100% Level of Service	1,618	1,618	1,618	1,618	1,618										
Number of Students, Actual and Projected, Over (Under) 100% LOS	154	235	(90)	(93)	(1,618)										
110% Level of Service	1,770	1,870	1,770	1,770	1,770										
Number of Students, Actual and Projected, Over (Under) 110% LOS	2	83	(92)	(93)	(1,770)										
Actual % Level of Service	109.2%	115.6%	109.4%	109.4%	107.7%										
Average % Level of Service															
Annual Enrollment Growth Rate (3)		0.68%	7.93%	3.97%	-4.81%										
of new full-time seats in kindergarten															

¹⁾ Includes 400 year two students in previous school year who are not included in this year's enrollment. ²⁾ Includes 400 year two students in previous school year who are not included in this year's enrollment. ³⁾ Includes 400 year two students in previous school year who are not included in this year's enrollment.

CHCCS Student Projections (No reduction in class size for grades K thru 3) (3)



School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Actual	4,444	4,474	4,551	4,602	4,695										
Teacher ⁽¹⁾	30	77	141	3	3										
OC Planning	4,393	4,392	4,397	4,391	4,371										
10 Year Growth	142	172	249	(279)	(238)										
3 Year Growth	4,517	4,517	4,517	5,167	5,167										
3 Year Growth	(173)	(43)	34	(475)	(472)										
Average - % Level of Service	103.3%	104.0%	106.6%	96.3%	95.4%										
Annual Student Growth Rate (%)				0.68%	1.72%	3.10%	0.06%	0.06%	0.68%	1.84%	2.89%	1.77%	1.31%	1.49%	1.63%

⁽¹⁾ Elementary PT opens in fall 2001 with additional 6/3 seats.

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Actual	2,426	2,540	2,868	2,612	2,560										
Teacher ⁽²⁾															
OC Planning	2,114	2,340	2,840	2,840	2,840										
10 Year Growth	211	(302)	(234)	(226)	(280)										
3 Year Growth	2,796	3,039	3,039	3,039	3,039										
3 Year Growth	(70)	(499)	(431)	(427)	(479)										
Average - % Level of Service	110.3%	99.4%	91.0%	92.0%	90.1%										
Annual Student Growth Rate (%)				9.30%	2.66%	-0.10%	-1.90%	0.30%	3.06%	1.48%	2.81%	2.64%	3.49%	0.90%	1.44%

⁽²⁾ Middle PT opens in fall 2001 with additional 6/3 seats.

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Actual	2,615	2,863	3,167	3,330	3,422										
Teacher ⁽²⁾															
OC Planning	3,035	3,035	3,035	3,035	3,035										
10 Year Growth	(290)	(72)	127	295	387										
3 Year Growth	3,339	3,339	3,339	3,339	3,339										
3 Year Growth	(824)	(270)	(177)	(9)	83										
Average - % Level of Service	97.6%	97.6%	104.2%	109.1%	112.8%										
Annual Student Growth Rate (%)				3.28%	3.74%	3.81%	3.74%	1.49%	1.49%	2.81%	2.64%	3.49%	0.90%	1.44%	2.00%

⁽²⁾ High School PT opens in fall 2001 with additional 6/3 seats.

(1) 100% reported to include the 6/3 seats for November 15, 2004 date of membership as outlined in by the St. Joseph's Adequate Public Facilities Ordinance. It does not include 116.3 of additional seats in the Hospital School. (2) 100% reported to include the 6/3 seats for November 15, 2004 date of membership as outlined in by the St. Joseph's Adequate Public Facilities Ordinance. It does not include 116.3 of additional seats in the Hospital School. (3) Annual growth rate calculated over the "1 near Method" of projections for both 10, 3 and 3 years. Capital projects that are included in the 10 near Method projection include the 2010 construction Method for CHCCS. (4) Annual growth rate calculated over the 3 year period 2003-04 through 2005-06. (5) Annual growth rate calculated over the 10 year period 2000-01 through 2010-11.

D. Student Growth Rate

1. **Responsible Entity for Suggesting Change** – The updating of this section will be conducted by the Planning Directors, School Representatives, Technical Advisory Committee (SAPFOTAC) each year and referred to the BOCC for annual report certification.

Projections will be distributed to SAPFO partners for review and comments to the BOCC prior to certification.

2. **Definition** – The annual percentage growth rate calculated from the projections resulting from the average of the five models represented by 10 year numerical membership projections by school level for each school district. This does not represent the year-by-year growth rate that may be positive or negative but rather the average of the annual growth rates over ten (10) years.

3. **Standard for:**

Chapel Hill Carrboro School District

See Attachment II.D.3

Standard for:

Orange County School District

See Attachment II.D.3

4. **Analysis of Existing Conditions**

The membership figures and percentage growth on the attachments show continued growth at each school level within the system.

Average Annual Growth Rate over ten years:

Year Projection Made:	2004	2005
Elementary -	2.34%	1.79%
Middle -	2.63%	1.91%
High -	2.81%	2.04%

Analysis of Existing Conditions

The membership figures and percentage growth on the attachments show continued growth at each school level within the system.

Average Annual Growth Rate over ten years:

Year Projection Made:	2004	2005
Elementary -	1.54%	1.68%
Middle -	0.79%	1.50%
High -	1.28%	1.21%

5. **Recommendation**

Use statistics as noted

Recommendation

Use statistics as noted

Orange County Student Projections 2002-2003

Elementary

Average	2,901	2,922	2,954	2,962	3,017	3,067	3,110	3,154	3,199	3,244	3,290
% Increase		0.72%	1.10%	0.27%	1.86%	1.66%	1.40%	1.41%	1.43%	1.41%	1.42%

Middle

Average	1,631	1,638	1,597	1,590	1,581	1,587	1,596	1,611	1,643	1,668	1,690
% Increase		0.43%	-2.50%	-0.44%	-0.57%	0.38%	0.57%	0.94%	1.99%	1.40%	1.44%

High School

Average	1,828	1,868	1,926	1,958	1,950	1,952	1,957	1,912	1,915	1,938	1,942
% Increase		2.19%	3.10%	1.66%	-0.41%	0.10%	0.26%	-2.30%	0.16%	1.20%	0.21%

Chapel Hill/Carrboro Student Projections

Elementary

Average	4,551	4,745	4,925	5,083	5,235	5,405	5,498	5,585	5,673	5,761	5,844
% Increase		4.26%	3.79%	3.21%	2.99%	3.25%	1.72%	1.58%	1.58%	1.55%	1.44%

Middle

Average	2,608	2,687	2,712	2,783	2,883	2,954	3,077	3,197	3,337	3,390	3,445
% Increase		3.03%	0.93%	2.62%	3.59%	2.46%	4.16%	3.90%	4.38%	1.59%	1.62%

High School

Average	3,162	3,250	3,425	3,552	3,629	3,719	3,790	3,889	3,981	4,159	4,310
% Increase		2.78%	5.38%	3.71%	2.17%	2.48%	1.91%	2.61%	2.37%	4.47%	3.63%

Source: Orange County Budget 5 Model Compilation from PSTAC members to determine average based on November 15, 2002 membership numbers
- Orange County Planning and Inspections Department Extractor of Annual Growth Rate from Averages- January, 2003

Orange County Student Projections 2003-2004

Elementary

Average	2,945	3,001	3,011	3,074	3,126	3,185	3,231	3,278	3,328	3,380	3,432
% Increase		1.90%	0.32%	2.11%	1.66%	1.90%	1.44%	1.44%	1.55%	1.54%	1.54%

Middle

Average	1,671	1,627	1,643	1,638	1,656	1,633	1,679	1,713	1,751	1,775	1,800
% Increase		-2.62%	0.95%	-0.29%	1.11%	-1.36%	2.80%	2.00%	2.22%	1.38%	1.40%

High School

Average	1,887	2,025	2,062	2,068	2,070	2,062	2,047	2,061	2,076	2,089	2,138
% Increase		7.29%	1.86%	0.30%	0.08%	0.57%	-1.66%	0.68%	0.82%	0.52%	2.36%

Chapel Hill/Carrboro Student Projections

Elementary

Average	4,692	4,910	5,070	5,210	5,368	5,465	5,556	5,648	5,739	5,826	5,913
% Increase		4.65%	3.25%	2.75%	2.99%	1.86%	1.67%	1.64%	1.63%	1.51%	1.49%

Middle

Average	2,612	2,675	2,713	2,810	2,883	3,000	3,100	3,219	3,277	3,332	3,387
% Increase		2.40%	1.44%	3.57%	2.60%	4.06%	3.33%	3.84%	1.79%	1.67%	1.65%

High School

Average	3,330	3,497	3,631	3,673	3,737	3,790	3,873	3,967	4,123	4,269	4,390
% Increase		5.02%	3.81%	1.16%	1.78%	1.41%	2.17%	2.44%	3.94%	3.53%	2.83%

Source: Orange County Budget 5 Model Compilation from PSTAC members to determine average based on November 15, 2002 membership numbers
- Orange County Planning and Inspections Department Extraction of Annual Growth Rate from Averages - January, 2003

Orange County Student Projections

Elementary

Membership	3,016	3,043	3,119	3,201	3,283	3,328	3,375	3,422	3,471	3,516	3,562
Average % Increase		0.90%	2.51%	2.62%	1.94%	1.97%	1.42%	1.40%	1.41%	1.31%	1.31%

Middle

Membership	1,593	1,614	1,611	1,678	1,609	1,647	1,710	1,751	1,793	1,820	1,848
Average % Increase		1.29%	-0.19%	4.20%	-4.14%	2.37%	3.83%	2.37%	2.43%	1.51%	1.51%

High School

Membership	2,057	2,122	2,136	2,135	2,160	2,137	2,134	2,174	2,183	2,250	2,318
Average % Increase		3.16%	0.64%	-0.03%	1.17%	-1.06%	-0.14%	1.85%	0.41%	3.11%	2.99%

Chapel Hill/Carrboro Student Projections

Elementary

Membership	4,695	4,819	4,913	5,040	5,129	5,196	5,274	5,356	5,440	5,521	5,605
Average % Increase		2.65%	1.94%	2.59%	1.77%	1.31%	1.49%	1.57%	1.55%	1.49%	1.53%

Middle

Membership	2,560	2,568	2,646	2,677	2,757	2,827	2,925	2,976	3,007	3,051	3,091
Average % Increase		0.30%	3.06%	1.16%	2.98%	2.54%	3.48%	1.8%	0.98%	1.44%	1.33%

High School

Membership	3,422	3,530	3,580	3,651	3,671	3,732	3,784	3,874	3,997	4,076	4,185
Average % Increase		3.16%	1.42%	1.98%	0.54%	1.67%	1.41%	2.37%	3.16%	1.97%	2.69%

Source: Orange County Budget 5 Model Compilation from PSTAC members to determine average based on November 15, 2004 membership numbers and historical data
 - Orange County Planning and Inspections Department Extraction of Annual Growth Rate from Averages - January, 2005

E. Student / Housing Generation Rate

1. **Responsible Entity for Suggesting Change** – The updating of this section will be conducted by Planning Directors, School Representatives, Technical Advisory Committee (SAPFOTAC) and referred to the BOCC for certification.

Projections will be distributed to SAPFO partners for review and comments to the BOCC prior to certification.

2. **Definition** – A projected number of students that are generated from two different types of housing, “single-family” and “other”. Single-family also includes double-wide or greater manufactured and modular homes. “Other” includes multifamily and single-wide mobile homes. The standards were created during the Tischler and Associates School Impact Fee Report of February 2001.

3. **Standard for:**

Chapel Hill Carrboro School District	Orange County School District
See Attachment II.E.1	See Attachment II.E.1

4. **Analysis of Existing Conditions**

The staff committee (SAPFOTAC) is developing a program to independently calculate student generation rates using GIS and School reporting systems. This program will take a few years to develop.

Also, note that students are generated from new housing as well as from existing housing where new families have moved in. The CAPS system estimates new development impacts and associated student generation but it is important to understand that student increases are a composite of both of these factors. This effect can be dramatic and can vary greatly between areas and districts where either new housing is dominant or new families move into a large inventory of existing housing stock.

Section II

5. ***Recommendation – No change***

Use Tischler Generation Rates (2001) until alternate rates are developed and endorsed.

Tischler Student Generation Rates

Orange County Schools				
	Elementary	Middle	High	All Grades
Single-Family	0.150	0.075	0.084	0.309
Other	0.084	0.033	0.030	0.147
All Housing Types	0.140	0.068	0.076	0.284

Chapel Hill-Carrboro Schools				
	Elementary	Middle	High	All Grades
Single-Family	0.168	0.095	0.123	0.386
Other	0.094	0.042	0.043	0.179
All Housing Types	0.134	0.070	0.086	0.290

Source: 2001 Student Generation Rate and School Impact Fee Report by Tischler & Associates

Table 1. Student Generation Rates by Housing Type and School District

III. FLOWCHART OF SCHOOLS ADEQUATE PUBLIC FACILITIES ORDINANCE PROCESS

Abstract: The Schools Adequate Public Facilities Ordinance process has two distinct components:

A. Capital Investment Plan (CIP) (Process 1)

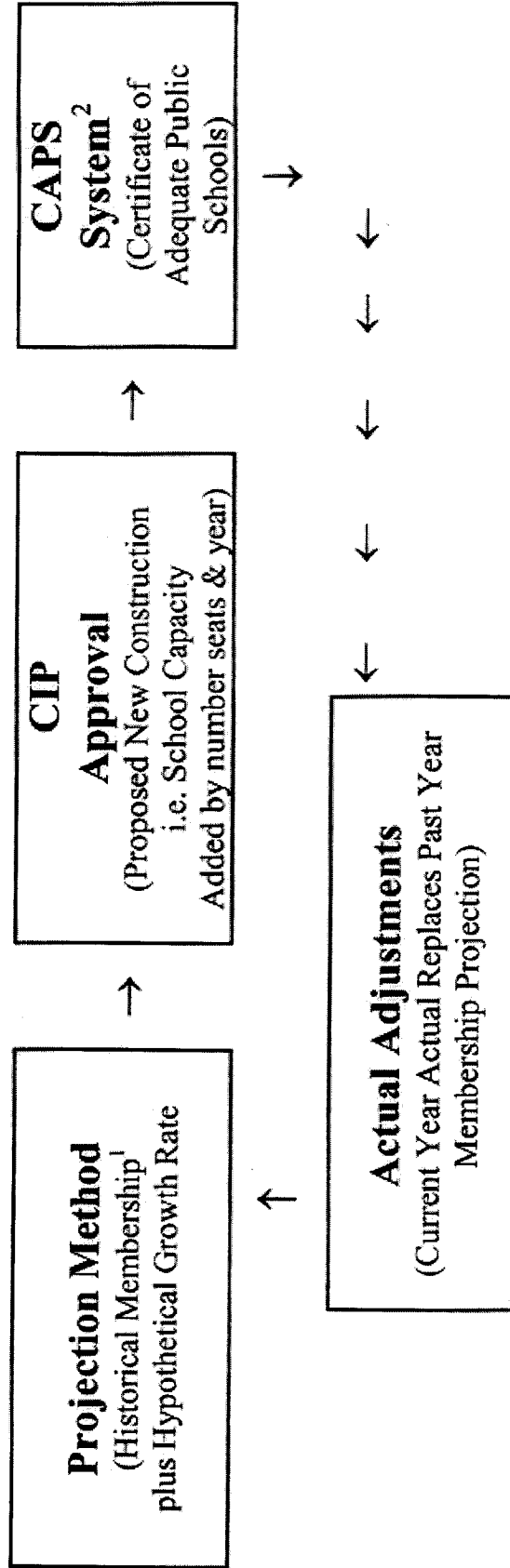
Timeframe: In November of each year, Student Membership and Building Capacity is transmitted from the school districts to the Orange County Board of Commissioners for consideration and approval and used in the following years CIP (e.g. November 15, 2004 membership numbers used to develop a CIP to be considered for adoption in June, 2005).

Process Framework

1. SAPFOTAC projects future student membership from historical data, current membership and hypothetical growth rates from established methodologies.
2. School Districts and BOCC compare projections to existing capacity and proposed Capital Investment Plan.
3. SAPFOTAC forwards data and projections to all Schools APFO partners.
4. School Districts develop Capital Investment Plan Needs Assessment during this process
5. The Capital Investment Plan work sessions and Public Hearings are conducted by the BOCC in the spring of each year.
6. The adoption of CIP that sets forth monies and timeframe for school construction (future capacity) by BOCC.

School Adequate Public Facilities Ordinance

Process 1 - Capital Investment Planning (CIP)



¹Historical Membership is a product of students generated from: (1) pre-existing/approved undeveloped lots where new housing is built, (2) existing housing stock with new families/children, and (3) newly approved housing development (in the future this component will be known as CAPS approved development)

²The only part of the CAPS System (i.e., computer spreadsheet subdivision tracking) that receives data from the Process 1 CIP includes the actual membership (November 15 of preceding CIP year) and new school capacity amount (seats) in a specific year pursuant to the CIP.

**B. Schools Adequate Public Facilities Ordinance
Certificate of Adequate Public Schools (CAPS)
Update (Process 2)**

Timeframe: The CAPS system is updated approximately November 15 of each year when the school districts report actual membership and 'pre-certified' capacity, whether it is CIP associated or prior 'joint action' agreement. 'Joint action' determinations of changes in capacity due to State rules or other non-construction related items are anticipated to be done prior to the November 15 capacity and membership reporting date. This update may reflect the Board of County Commissioners action on the earlier year Capital Investment Plan (CIP) as it affects capacity and addition of new actual fall membership. The Schools Adequate Public Facilities Ordinance Certificate of Adequate Public Schools (CAPS) stays in effect until the following year – (e.g.: November 15, 2004 to November 14, 2005).

New development is originally logged for a certain year. As the CAPS system is updated, each CAPS projection year is 'absorbed' by the actual estimate of a given year. Later year CAPS projections of the same development remain in the future year CAPS system accordingly. For example, if a 50-lot subdivision is issued a CAPS, 15 lots may be assigned to "Year 1," 10 lots to "Year 2," 10 lots to "Year 3," 10 lots to "Year 4," and 5 lots to "Year 5." When "Year 1" is updated, the students generated from the 15 lots are absorbed by the actual estimate. The students generated in "Years 2, 3, 4, and 5" are held in the CAPS system and added to the appropriate year when the CAPS system is updated.

Please note that the two processes (CIP and CAPS) are on separate but parallel tracks. However, the CIP does create a crossover of capacity information between the two processes. For example, the Schools APFO system for both school districts that will be established / initiated / certified each year in November and is based on prior year created and / or planned CIP capacity and current school year membership. The SAPFOTAC report including new current year membership and projections are to be used for upcoming CIP development as noted in Process 1.

Section III

CIP Process 1 (for CIP 2005 – 2015)

November 2004 – June 2005 (using 2004 SAPFOTAC Report)

Schools APFO CAPS Process 2 (for Schools APFO System 2004 – 2005)

November 2004 - November 2005

School Adequate Public Facilities Ordinance

Process 2 - Certificate of Adequate Public Schools (CAPS) Allocation

2005 CAPS system is effective November 15, 2004 through November 14, 2005.

The system is updated with new membership, CIP capacity changes, and any other BOCC/School District joint action approved capacity prior to November 15, 2004. This information is received within 5 days of November 15 and posted within the next 15 days. This CAPS system recalibration is retroactive to November 15, 2004.

CAPS Allocation System

1. Certified Capacity
2. LOS Capacity
3. Actual Membership
4. Year Start Available Capacity
5. Ongoing Current Available Capacity (includes available capacity decreases from approved CAPS development by year)
6. CAPS approved development
 - a. Total units
 - b. Single Family¹
 - c. Other Housing¹

CAPS System

$$AC^2 = SC^2 - (ADM^2 + ND1^2 + ND2^2 + \dots)$$

AC ≥ 0 - Issue CAPS

AC < 0 - Defer CAPS to later date

¹ Student Generation Rates from CAPS housing type create future membership estimate. Please note that this CAPS membership future estimate is different than the projection based on historical data and projection models used in the CIP process 1. This estimate only captures new development impact, which is the component that the SAPFO can regulate.

² AC - Available Capacity - Starts at Annual Update Capacity and reduces as CAPS approved development is entered into the system.

SC - Certified School Level Capacity

ADM - Average Daily Membership

ND - New Development; ND1 means first approved CAPS approved development

IV. ADDITIONAL ATTACHMENTS

The following attachments are additional information relevant to the SAPFOTAC report.

Attachment IV.1 is the BOCC Agenda Abstract (sans listed Attachments) for the December 14, 2004 BOCC meeting at which the November 15, 2004 actual membership and capacity numbers for both school districts were approved. Other issues related to the SAPFO were also discussed at the meeting, as addressed in the various portions of the attached abstract.

Attachment IV.2 is the student projection chart for Orange County Schools (OCS) if the student/teacher class size ratio for grades K-3 is changed to 21:1 in accordance with State Department of Public Instruction mandates. Although the change in class size in grades K through 3 decreases available capacity, it does not raise Level of Service percentages above the adopted thresholds in the 10-year planning timeframe in OCS. The programmatic change reduces capacity at the Elementary level in OCS by approximately 280 seats.

Attachment IV.3 is the student projection chart for Chapel Hill-Carrboro City Schools (CHCCS) if the student/teacher class size ratio for grades K-3 is changed to 21:1 in accordance with State Department of Public Instruction mandates. The change in class size in grades K through 3 would necessitate an additional Elementary School in year 2006-7 instead of in year 2009-10 in the Chapel Hill-Carrboro City Schools District. The programmatic change reduces capacity at the Elementary level in CHCCS by approximately 260 seats.

**ORANGE COUNTY
BOARD OF COMMISSIONERS**

ACTION AGENDA ITEM ABSTRACT
Meeting Date: December 14, 2004

Action Agenda
Item No. 9-b

SUBJECT: 10-Year Student Membership Projections and Schools Adequate Public
Facilities Ordinance (SAPFO) Implications

DEPARTMENT: Manager/Budget/Planning/
Attorney

PUBLIC HEARING: (Y/N)

No

ATTACHMENT(S):

SAPFO Membership Capacity Calculation
and Change Request Forms
10-Year Student Membership Projection
Tables/Graphs
09/24/04 Manager Memo re: New School
Projects
11/23/04 Attorney Letter on K-3 Class Size
Chart – County's Annual Debt Service
Projections

INFORMATION CONTACT:

Rod Visser, ext 2300
Donna Dean, ext 2151
Craig Benedict, ext 2592
Geof Gledhill, 732-2196

TELEPHONE NUMBERS:

Hillsborough 732-8181
Chapel Hill 968-4501
Durham 688-7331
Mebane 336-227-2031

PURPOSE: To consider approval of November 15, 2004 actual membership and capacity numbers for the Orange County Schools and Chapel Hill-Carrboro City Schools; to receive 10-year student membership projections developed through agreed-upon models; and to consider reallocating a portion of currently programmed debt issuance to address anticipated cost overruns in various critical school and County capital projects.

BACKGROUND: In 2003, the County, the two school systems, and the Towns of Carrboro, Chapel Hill, and Hillsborough entered into mutual agreements that created a system of Schools Adequate Public Facilities ordinances. SAPFO was designed to ensure that new growth within the County's two school districts occurs at a pace that allows Orange County and the school districts to provide adequate school facilities to serve the children who will be living within new residential developments.

SAPFO Machinery

The SAPFO MOUs (Memorandums of Understanding) provide that the Board of County Commissioners shall approve the School Districts' November 15 membership and capacity numbers within fifteen days after receiving the numbers from the School Districts. Both School Districts have submitted their membership and capacity numbers. The actual student membership figures as of November 15 each year are run through five separate student membership projection models by a Technical Advisory Committee (SAPFOTAC) comprised of representatives of the County, Towns, and school systems. The average of the five models becomes the basis for programming the construction of additional school space to

accommodate forecast growth in student membership. The membership numbers reflect an actual student count as defined in the MOU. The capacity that is noted is from last year's SAPFOTAC certification.

The SAPFOTAC analytical work would normally take place in the January-February timeframe, but was accelerated for 2004-05 at the request of the BOCC because the results of the SAPFOTAC analysis of updated student membership projections will have a significant impact on major capital funding decisions that the BOCC will need to make in the very near future. SAPFOTAC is tasked to produce an annual report for the governing boards of each SAPFO partner. The full annual SAPFOTAC report will be completed in early 2005.

Building Capacity

There has been extensive discussion among the governing boards and staff of the County and school systems throughout 2004 regarding the certification of individual school building capacities. The State of North Carolina has taken unilateral action during the past two years to dictate to local school administrative units that the average class size throughout a school district for grades K-3 must be reduced to 1 teacher for every 21 students. As the BOCC has noted, this has in effect created an unfunded mandate for county governments to provide additional school space with no time to plan for the funding and construction of new space.

Following discussion on the subject at a November 2004 work session, the County Attorney examined the requirements for reduced class size and the possible sanctions or other ramifications that might face any school system that is unable to comply with the average class size mandates. The accompanying letter from the Attorney outlines the results of his research.

As provided for in the SAPFO Section 1.b "...building capacity' will be determined... by a joint action of the School Board and the BOCC." Therefore, until there is a 'joint action' agreeing to the impact of new State rules for classroom size in grades K-3, the existing capacity levels are being used for capacity/membership projection comparisons.

Implications of Updated Ten Year Student Membership Projections

SAPFO provides that the County must provide funding and a school system must construct new school space so that the Level of Service (LOS) for elementary school space will not exceed 105% of capacity across an entire school district. The updated ten-year student membership projections prepared by SAPFOTAC and reflected on the accompanying charts indicate that, absent the creation of new seats, the 105% level of service would be exceeded at the elementary level in the Chapel Hill-Carrboro City Schools for academic year 2009-10.

Accordingly, adherence to SAPFO provisions will require that new permanent elementary school space be available for the beginning of that school year. The needed opening date has shifted back three years compared to the 2006-07 opening contemplated in last year's student membership projections. Slowing growth produced only minor enrollment increases at the elementary level in the Chapel Hill-Carrboro Schools during the current school year.

CHCCS Middle School #5 is projected to be needed in 2013-2014. 800 new seats will become available with the anticipated opening of CHCCS High School #3 in August 2007. Based on the updated student membership projections, there is no other additional high school space needed within the ten-year planning period.

The Orange County School student membership projections reflect no requirement at this time for additional school seats during the ten-year planning horizon, beyond the construction of Middle School #3 that is in progress, and slated for opening in August 2006.

Other Observations

- Recently, the Board asked County staff to review estimates by both school systems' architects regarding likely shortfalls in the established budgets for OCS Middle School #3 and CHCCS High School #3. Both school systems have been advised that higher prices for steel, concrete, and fuel, among other factors, make it very likely that construction bids will significantly exceed the project allocations for construction. County staff have been working with the school staffs and architects and plan to bring responses on January 24 to the BOCC-requested analysis about factors affecting the anticipated cost overruns for the two new school projects.
- The Manager has explained during the past several months that the County faces significant constraints, under its own policies, regarding the issuance of debt beyond that already programmed in the County's debt issuance schedule. That fact was reviewed in detail during several Board work sessions this fall. The accompanying chart depicts the County's anticipated annual debt capacity over the next ten years, with very little latitude to assume any non-programmed debt through FY 2007-08. Estimates of potential cost overruns just for the two new school projects have been in the range of \$6 million to \$7 million. The Manager has made it clear that he will not recommend that the County issue additional debt to address additional funding requested by both school systems for the new school projects, beyond that already programmed, until the County regains additional debt issuance flexibility beginning with FY 2008-09.
- In view of that, the Manager transmitted a September 24, 2004 memo to both Superintendents soliciting ideas about how the anticipated cost overruns for the respective new school projects might be addressed through reallocation of resources available to the school systems through their CIPs and other revenue streams.
- To this point, there have been no expressed written alternatives to the Manager's proposal that a portion of the planned issuance of \$12.8 million in debt for CHCCS Elementary School #10 be shifted to address anticipated cost overruns for the two school projects and other County capital projects that are in development.
- In the absence of viable alternatives and with the SAPFO-calculated postponement in the need for the opening of CHCCS Elementary School #10 until the 2009-10 academic year, the Manager recommends that the BOCC indicate its intention now to redirect some portion of debt planned for Elementary #10 to address other, more urgent capital funding needs.
- The adopted 2004-14 Capital Investment Plan (CIP) would be amended to reflect the need for funds to construct CHCCS Elementary #10 with a revised opening date of August 2009.
- The Superintendent reports that the project architects have advised her that construction on OCS Middle School #3 must begin by mid-February 2005 to keep the project on track for an August 2006 opening. Accordingly, the Orange County Board of Education will likely consider awarding the construction bid and approving associated contracts at their scheduled meeting on January 24, 2005.
- BOCC action to reallocate specific amounts of planned debt to provide appropriate revised capital project budgets would be scheduled no sooner than the next BOCC regular meeting on January 24, 2005. That action could take the form of endorsement of specific project budget amounts and/or the adoption of updated capital project ordinances.
- The existing interlocal agreement between Orange County and CHCCS establishing the project budget for High School #3 at \$27.8 million plus \$1.9 million for "smart growth"

initiatives would have to be revised to reflect whatever action the BOCC may take to adjust the County's funding allocated to the project.

- The Board has indicated its intention to discuss at the January 22, 2005 annual planning retreat the implications of various school-related initiatives – such as Educational Excellence, Efficiency, and Collaboration – in the larger context of measures the Board may consider to promote greater funding equity between the two school systems in the future.

FINANCIAL IMPACT: Precise financial impacts cannot be determined, but possible changes in projected building capacity and projected growth in student membership for the next ten years will have impacts on future operating and capital budgets measured in the tens of millions of dollars.

RECOMMENDATION(S): The Administration recommends that the Board:

- Approve the November 15, 2004 actual student membership numbers;
- Receive the information about 10-year student projection averages;
- Approve the building capacity figures based on the individual school building capacity numbers for both school systems at the levels certified for 2003-04;
- Indicate the Commissioners' intention to reallocate, as necessary and appropriate, funding from the previously planned issuance of \$12.8 million in debt for CHCCS Elementary School #10 to address cost overruns for CHCCS High School #3, OCS Middle School #3, and other priority County capital projects as determined by the BOCC;
- Direct staff to revise the 2004-14 CIP to include a funding plan that would provide for the construction of CHCCS Elementary #10 along a timeline consistent with the need for new school space as identified in the updated SAPFO ten-year student membership projections (i.e. opening for the 2009-10 academic year).

OCS Student Projections (Reflects reduction in class size for grades K thru 3 from classroom average of 23 to 21) ⁽¹⁾

Prepared by: Orange County Budget Office

School Year	2002-01	2002-02	2002-03	2002-04	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16
Actual	3,078	3,095	3,091	3,048	3,078	3,078	3,078	3,078	3,078	3,078	3,078	3,078	3,078	3,078	3,078	3,078
Teacher #																
OCS Pupil/Teacher																
10 Year Growth																
5 Year Growth																
3 Year Growth																
Actual - % Level of Service	89.6%	78.1%	78.9%	77.4%	80.3%	83.7%	85.5%	88.0%	89.7%	91.5%	92.8%	94.1%	95.4%	96.7%	98.0%	99.3%
Average - % Level of Service																

OCS Student Projections (Reflects reduction in class size for grades K thru 3 from classroom average of 23 to 21) ⁽¹⁾

School Year	2002-01	2002-02	2002-03	2002-04	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16
Actual	1,824	1,897	1,891	1,871	1,893	1,828	1,828	1,828	1,828	1,828	1,828	1,828	1,828	1,828	1,828	1,828
Teacher #																
OCS Pupil/Teacher																
10 Year Growth																
5 Year Growth																
3 Year Growth																
Actual - % Level of Service	90.9%	84.7%	81.3%	81.0%	82.7%	82.2%	82.2%	82.2%	82.2%	82.2%	82.2%	82.2%	82.2%	82.2%	82.2%	82.2%
Average - % Level of Service																

OCS Student Projections (Reflects reduction in class size for grades K thru 3 from classroom average of 23 to 21) ⁽¹⁾

School Year	2002-01	2002-02	2002-03	2002-04	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16
Actual	1,872	1,770	1,828	1,867	1,867	1,867	1,867	1,867	1,867	1,867	1,867	1,867	1,867	1,867	1,867	1,867
Teacher #																
OCS Pupil/Teacher																
10 Year Growth																
5 Year Growth																
3 Year Growth																
Actual - % Level of Service	119.1%	116.9%	79.0%	74.6%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%
Average - % Level of Service																

⁽¹⁾ It is important to note that this reflects the November 15, 2004 date of membership as outlined in by the Schools Adequate Public Facilities Ordinance. It does not include CHCCS students attending the Hospital School.
⁽²⁾ The "Teacher-Model" provides for the "Linear Method" of projections for both CHCCS and OCS. Original projections used in prior years projection models included the "Linear Extrapolation Method" for CHCCS.
⁽³⁾ Annual growth rate calculated using actual membership for years 2000-01 through 2003-04 and average membership for years 2003-04 through 2014-15.

CHCCS Student Projections (Reduced class size for grades K thru 3) ⁽¹⁾

by: Orange County Budget Office
11/20/04

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2004-06	2004-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	
Actual	4,444	4,474	4,501	4,528	4,555											
Teacher ^a						4,824	4,883	4,941	4,999	5,057	5,115	5,173	5,231	5,289	5,347	
OC Planning						4,819	4,871	4,923	4,975	5,027	5,079	5,131	5,183	5,235	5,287	
10 Year Growth						4,840	4,893	4,945	4,997	5,049	5,101	5,153	5,205	5,257	5,309	
5 Year Growth						4,829	4,884	4,934	4,984	5,034	5,084	5,134	5,184	5,234	5,284	
3 Year Growth						4,774	4,829	4,883	4,932	4,982	5,031	5,080	5,129	5,178	5,227	
Actual - % Level of Service						103.2%	105.0%	106.7%	108.3%	110.1%	111.6%	113.2%	114.8%	116.4%	118.0%	120.2%
Average - % Level of Service						103.2%	105.0%	106.7%	108.3%	110.1%	111.6%	113.2%	114.8%	116.4%	118.0%	120.2%

⁽¹⁾ Elementary #1 spots in the 2002 with additional #11 spots

CHCCS Student Projections (Reduced class size for grades K thru 3) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2004-06	2004-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Actual	2,326	2,340	2,350	2,358	2,366										
Teacher ^a						2,630	2,700	2,771	2,841	2,911	2,981	3,052	3,122	3,192	3,262
OC Planning						2,624	2,703	2,778	2,852	2,924	2,996	3,068	3,140	3,212	3,284
10 Year Growth						2,539	2,639	2,738	2,847	2,949	3,051	3,153	3,255	3,357	3,459
5 Year Growth						2,540	2,638	2,737	2,840	2,945	3,048	3,150	3,252	3,354	3,456
3 Year Growth						2,505	2,644	2,776	2,907	3,037	3,167	3,297	3,427	3,557	3,687
Actual - % Level of Service						90.4%	93.2%	94.3%	97.1%	99.9%	102.6%	104.6%	106.6%	108.6%	110.6%
Average - % Level of Service						90.4%	93.2%	94.3%	97.1%	99.9%	102.6%	104.6%	106.6%	108.6%	110.6%

⁽¹⁾ Middle

CHCCS Student Projections (Reduced class size for grades K thru 3) ⁽¹⁾

School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2004-06	2004-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Actual	2,815	2,860	2,900	2,940	2,980										
Teacher ^a						3,510	3,610	3,704	3,798	3,891	3,984	4,077	4,170	4,262	4,354
OC Planning						3,538	3,636	3,730	3,821	3,911	4,001	4,097	4,193	4,289	4,384
10 Year Growth						3,564	3,664	3,760	3,855	3,949	4,042	4,134	4,226	4,317	4,408
5 Year Growth						3,543	3,643	3,742	3,838	3,933	4,027	4,120	4,212	4,303	4,394
3 Year Growth						3,523	3,624	3,723	3,819	3,914	4,008	4,101	4,193	4,284	4,374
Actual - % Level of Service						118.2%	126.2%	128.7%	131.7%	134.7%	137.7%	140.7%	143.7%	146.7%	149.7%
Average - % Level of Service						118.2%	126.2%	128.7%	131.7%	134.7%	137.7%	140.7%	143.7%	146.7%	149.7%

⁽¹⁾ High

⁽¹⁾ High school #1 spots in 10/1/07 with 100 additional seats

⁽²⁾ Indicates first year that district surpasses Schools APPO recommended Level of Service

⁽³⁾ It is important to note that this reflects the November 15, 2004 date of membership as defined by the Bureau of Education Public Facilities Ordinance. It does not include CHCCS students attending the Hospital School. The Teacher Model provides for the "Linear Method" of projections for both CHCCS and OCS. Original projections used in prior years projection models included the "Linear Extrapolation Method" for CHCCS. Annual growth rate calculated using actual membership for years 2000-01 through 2003-04 and average membership for years 2003-04 through 2014-15.