

Capital Program Planning Issues

September 21, 2005

The Board of Education
&
The Board of County Commissioners
Joint Board Meeting

Capital Program Planning Issues

September 13, 2005

Purpose

The purpose of this document is to outline the planning principles underlying the goals of the Wake County Public School System (WCPSS) long-range capital building program. A committee comprised of WCPSS and Wake County Staff jointly developed the Capital Program Planning issues. This committee collaborated to develop a coordinated strategy for addressing issues related to Wake County's growth and facility needs.

These planning principles will be used to identify and quantify the investment anticipated over the next two decades to construct new schools to accommodate the growing student enrollment, and to ensure that existing schools are safe, quality places for students to learn. The resulting project list will be prioritized and accomplished through multiple building programs. The next bond program, which will be presented to voters in fall 2006, will be based upon a comprehensive capital improvement plan that addresses construction of new schools, renovation of existing schools, and changes to school calendars.

Capital construction program planning will support the attainment of Goal 2008, which states: *“WCPSS is committed to academic excellence. By 2008, 95% of students in grades 3 through 12 will be at or above grade level as measured by the State of North Carolina End-of-Grade or Course tests, and all students groups will demonstrate high growth”.*

The impact on the health of existing schools will be taken into consideration with any decision regarding capital projects or school calendars. Characteristics of healthy schools include: high academic achievement by all students; strong parental support and commitment; strong community support and commitment; highly trained and effective staff; attractive and appropriate learning facilities; a safe, orderly, and inviting learning climate; strong and effective leadership; and a diverse student body.

Project priorities should:

- 1) ensure the health and safety of children and staff;
- 2) ensure adequacy of facilities for effective learning;
- 3) reduce school overcrowding; and
- 4) complete phased renovations.

Overview

The following is an overview of the assumptions needed to address the next phase of the Capital Building program. The joint staff committee established broad assumptions targeting the following key issues.

1. High Performance Guidelines
2. Program Magnet Schools
3. Non-traditional School Facilities - Public/Private Partnerships
4. School Grade Configurations
5. Class Size Ratio
6. Renovation of Existing Schools
7. Student Accommodations
8. Education Program
9. Pre-Kindergarten, Ages 3-4
10. Kindergarten Program
11. School Capacity Models
12. New School Size & Space Standards
13. School Site Size
14. Property Acquisition
15. Support Facilities
16. Technology
17. Year Round Calendar Schools
18. Student Enrollment Projection
19. Timeframe
20. Program Price Bases
21. Funding

Planning Assumptions

1. High Performance Guidelines:

WCPSS and Wake County support design principles that minimize life-cycle costs and energy costs, and do not have significant adverse effects on the environment. In design and construction, WCPSS will use jointly developed guidelines by Wake County and Wake County Public Schools for basic building materials (developed in January 2003) and energy efficient systems (developed June 2004). A cost benefit analysis of the proposed initiatives will be performed before implementation.

2. Program Magnet Schools:

Program magnet offerings will have no significant impact on the school building capacities.

3. Non-traditional school facilities – Public/Private Partnerships:

- a. Mobile and modular classroom structures will continue to be used to accommodate student enrollment;
- b. Complete modular school campuses will continue to be utilized as temporary start up schools and as swing space during building renovations;
- c. Consideration will be given, on a case-by-case basis, to acquisition of existing buildings that would be suitable for conversion to schools; some traditional program elements might be compromised if such a facility were used.
- a. Opportunities for public/private partnerships will be considered, if advantageous to the educational program and if such partnerships are evaluated as cost effective.

4. School Grade Configurations:

- a. Current grade configurations of K-5, 6-8 and 9-12 will be retained;
- b. Other grade configurations may be considered, based upon educational suitability, space needs, and cost analysis.

5. Class Size Ratio:

School models will be based upon maximum allowable system-wide class size ratios for numbers of students per classroom. NCGS 115C-301(c) – 115C-301(i) governs class sizes and maximum teaching loads.

* Reflects average usage

Grade Level	Class Size Requirements (Grade Span Average)
K-3	21
4-8	26
9-12	24 * (State Maximum = 29)
Special Needs - Self-Contained	9 * (Range of 4 to 16)
Pre-K	10 *

6. Renovation of Existing Schools:

- a. The target of eliminating the backlog of deferred major renovation projects and deferred life cycle replacement projects will be attained by 2012 (5 years from the start of the next building program).
- b. Existing school requirements will be included in one of the following categories:
 1. Life Cycle Replacements – individual systems to be replaced before failure;
 2. Major Renovations – complete renewal of structural, mechanical, electrical, plumbing, codes and program; renovation cycle is 40 years;
 3. Deferred major renovation and life cycle replacement projects -- buildings that are past the 40 year major renovation cycle, or systems that exceed industry recognized life;
- c. Major renovation projects will be based on renovating 1/40th of the total system-wide square footage each year;
- d. Major renovation projects (both deferred and cyclical) will be listed as separate line items on the prioritized project list; life cycle replacement projects will be summarized as a line item, with detail projects listed on back-up documentation. Project status will be reported in the annual “School Building Program Report to Stakeholders.”
- e. The school models, amenities and finishes (walls, floors, etc.) in renovated schools will be of same standard as new schools;
- f. Spaces in existing schools will be considered adequate if the size is not less than 75% of the approved space standards;
- g. Renovation costs exceeding 75% of new construction will trigger a life-cycle cost analysis of renovation vs. replacement;
- h. WCPSS will assess by 2010 the total system-wide square footage. After 2010, WCPSS will assess 1/7 of the total system-wide square footage each year. WCPSS and Wake County will enter into an inter-local agreement for the purpose of developing facility and maintenance standards for all classifications of buildings and develop benchmark comparisons for annual budgets for facilities maintenance.
- i. Whole-building major renovation projects will be prioritized using the facility condition index (FCI) with an emphasis on Indoor Air Quality (IAQ), health and safety, and infrastructure preservation. Life-cycle replacements will be prioritized using the priority matrix that focuses on health, safety and immediate needs.
- j. Existing sites will be reviewed to determine ability to add seats.
- k. Major renovation projects will include funding for replacement of furniture, equipment, and technology if required.

7. Student Accommodations:

- a. The goal is for no more than 8% of students to be in mobile/modular units, including modular schools; this does not include units provided as swing-space for renovation projects. This target will be attained by 2012 (5 years from the start of the next building program).

- b. Long range capital planning will be based on a target of 95% utilization of permanent elementary and middle school seats, 97.5% utilization of permanent high school seats, and 100% of mobile and modular spaces. This allows for a 2 ½ % to 5% student management factor for flexibility in student assignment and classroom utilization, in recognition of the facts that: a) any given school’s enrollment may increase during the school year; and b) it is not reasonable to achieve a one-to-one ratio (100% utilization) of students to available seats in a school, at a grade level, or in a classroom. Utilization targets will be reached by 2015.

8. Educational Program:

Children with specific needs will continue to be served in accordance with federal and state requirements. School models will include spaces to accommodate these requirements. Specific statutory references are listed below:

a. Students with Disabilities:

Disability law requires the provision of special education and related/special needs services to students with disabilities, ages 3 through 21. It is inclusive of the Individuals with Disabilities Education Act, (IDEA), Section 504 of the Rehabilitation Act, Americans with Disability Act, (ADA), and the NC Procedures Governing Programs and Services for Children with Disabilities.

- Elementary (std): 3 Self-contained classrooms @ 9 students average; 2 Resource Classrooms (pull out)
- Middle: 5 Separate Services classrooms @ 9 students average; 5 Resource Classrooms (pull out)
- High: 2 Separate Services classrooms @ 9 students average; 7 Resource Classrooms @ 12 students average; 3 Occupational Course of Study @ 12 students average.

b. General Education Support:

General Education classrooms serve the general population that is identified with special needs. These students are housed in regular classrooms and “pulled out” for special services.

- 1.) Academically Gifted, (AG): – G.S.115C-150.7 requires local school districts “...to demonstrate it “is providing appropriate services to meet the diversity of identified academically or intellectually gifted students”.
- 2.) Accelerated Learning Program (ALP): - State Board Policy 16 NCAC 6D.0505 requires local school districts to provide “...focused intervention to all students who do not meet statewide student accountability standards.”
- 3.) English as a Second Language, (ESL): Title VI of the Civil Rights Act of 1964 and subsequent federal and state legislation and case law require local school districts to serve limited English proficient (LEP) students. LEP students are given special instruction in English.
- 4.) Title 1: Title 1 of the Elementary and Secondary Education Act of 1965 requires local school districts “... to ensure that all children have a fair, equal, and significant opportunity to obtain a high quality of education and reach, at a minimum, proficiency on challenging state academic standards and state academic assessments.”
 - Elementary (std): 3 General Education classrooms (pull out)
 - Middle: 2 General Education classrooms (pull out)
 - High: 2 General Education classrooms (pull out)

- c. Some parts of the county may have a higher proportion of special needs children and programs than others. Additional classroom spaces may be considered for some schools in order for special needs students to remain in close proximity to their residence – a requirement of federal law.

9. Pre-kindergarten, Ages 3 & 4:

All new elementary schools will include one classroom and outdoor play space for special needs students, ages 3 to 4. This is in accordance with the Individuals with Disabilities Education Act (IDEA) Part B, the federal law that states that children with disabilities age 3 – 21 “have the right to free and appropriate education.” Capacity for this space is reported separately from the K-12 calculations.

10. Kindergarten Program:

Full-day kindergarten will continue to be offered.

11. School Capacity Models:

New schools will be planned in accordance with the latest annual capacity report. The next building program’s designs and construction will be based on the October 2005 Capacity Report’s models, definitions, and assumptions.

12. New School Size and Space Standards:

- a. School infrastructure, cafeteria, media center and other core spaces will be designed to accommodate the number of students in permanent buildings, plus optimum number of mobile/modular units, as defined in capacity models;
- b. The current capacity models for WCPSS are based upon research on school size, and support the personalization of teaching and learning, rigorous instructional program and community expectations.

School model sizes are:

Model	DPI Capacity Guidelines	Building Capacity: Traditional Calendar	Capacity with 4 or 6 mobile Classrooms (a&b)	Building Capacity: Year-Round Conversion (c)	Space Standards (Square Feet)Space Std. (d)
Elementary (std.)	400	655	747	843	86,880
Elementary (lg.)	700	800	892	1,124	102,970
Middle	600-800	981	1,137	1,293	159,752
High	800-1200	1,663	1,807	Note (e)	261,744

- (a) “4 or 6” mobiles: 4 for elementary; 6 for secondary;
- (b) Includes Special Needs teaching spaces; Elementary standard: 8; elementary large: 12; middle: 12; high: 14;
- (c) Elementary (std.): 2 single & 2 double loaded tracks with 3 mobiles; Elementary (lg.): All 4 double loaded tracks with 3 mobiles; Middle: All single loaded tracks with 1 mobile.
- (d) Actual prototypes may vary depending on code requirements. Elementary square footage reflects a 1 story design.
- (e) A multi-track schedule for high school is not recommended from an educational program and cost analysis perspective. A year-round capacity of 2,491 requires redesign to construct 10 “special” teaching spaces (art, band, CTE, etc.) and use of 10 mobile classrooms. Conversion of an existing high school would require renovations of approximately 20 classrooms to create 10 “special” teaching spaces and use of 20 mobile classrooms.

13. School Site Size:

- a. The size of new school sites is based upon the educational program needs, the environmental/regulatory requirements of the jurisdictions in which they are located and configuration/topography of the site (refer to table below);
- b. New school sites will be evaluated with Wake County and municipalities to determine the feasibility of joint development;
- c. Land held by WCPSS will be the minimum practical number of acres needed for educational program and regulatory requirements;
- d. The requirements of environmental and local ordinances will be met;
- e. Continue the practice of building multistory middle and high schools. Elementary school height will be evaluated based on the cost of land versus the cost of multiple story construction. Elementary schools will be two stories, unless an analysis of construction cost versus land cost indicates single story is more economical.
- f. For capital planning purposes, property acquisition will be based on average acreage requirement of 19 acres for elementary, 31 acres for middle, and 65 acres for high.

School Type	Acres required for current Standard Program	Average acres required for compliance with environmental regulations and local ordinances
Elementary	10	9
Middle	17	14
High	37	28

- g. *NC Department of Public Instruction guidelines are as follows:*

Grades	Developable Acreage	Applied to WCPSS Standard School Sizes
K-6	10 + (1/100 ADM)	10 + (655/100)=16.55
5-8	15 + (1/100ADM)	15 + (981/100) = 24.81
7-9	20 + (1/100 ADM)	N/A
9-12	30 + (1/100 ADM) + (10 acres for stadium and parking)	30 + (1,663/100) + 10 = 56.63

14. Property Acquisition:

- a. WCPSS will actively work with municipalities to create a multi-jurisdiction coordinated study to establish standards for land-banking;
- b. Sites will be sought for land-banking five years in advance of the construction start dates;
- c. Location and schedule of new schools will be guided by current crowding, projected growth, and increasing student assignment stability; new schools may also provide temporary swing space for renovations of schools in the area;
- d. Due to the dynamic growth in real estate prices and the varying prices in different parts of the county, the trends in land cost data will be used for escalation of future prices;
- e. Off-site utility and road construction will be budgeted as a separate line item;
- f. The cost of off-site infrastructure and projected site development costs will be included in analyzing candidate school sites;
- g. School sites are currently allowed in watersheds zoned R-40W. The additional siting and development of school sites within designated watershed areas will require significant policy discussion and potential legislative action. WCPSS, Wake County, municipalities, and stakeholders will be convened to discuss all relevant policy implications;
- h. Note: The ownership of land remains an outstanding policy issue yet to be resolved.

15. Support Facilities:

- a. Projects for essential health and safety items in existing facilities will be listed as prioritized needs;
- b. Enrollment growth as well as needs caused by normal usage and wear may require renovation and expansion of existing support facilities and construction of new facilities such as: satellite transportation centers; infrastructure upgrades or replacement of administrative buildings; and regional shops for maintenance personnel.

16. Technology:

- a. Meeting the basic technology requirements in schools enables effective delivery of instruction as specified in the WCPSS Technology Plan and in alignment with the state technology plan;
- b. the educational resources enabled by the technology infrastructure are effectively utilized in instructional delivery only with functional, capable computers;
- c. School computer needs will be based on five computers per classroom, one per teacher and administrator;
- d. A five-year replacement cycle will be included.

17. Year-Round Calendar Schools:

- a. Additional year-round schools will be established in order to reduce the number of new schools to be constructed;
- b. Consideration will be given to opening Brier Creek and Barwell Road elementary schools on a year-round calendar in 2006, and to opening future elementary and middle schools on the year-round calendar;
- c. Future consideration will be given to the addition of single-track year-round calendar high schools that would support the multi-track year-round K-8 schedules.
- d. Criteria for conversion will include over-crowding of existing schools, projected enrollment growth, health of converted school and impacted schools, the number of mobile/modular units, and other factors;
- e. The number of schools to be established on a year-round calendar will be determined as part of a comprehensive facilities plan that addresses construction of new schools and renovation of existing schools, as well as the number of year-round schools.

18. Student Enrollment Projection:

- a. Wake County Planning Department will annually generate WCPSS 20th day student membership projections, using the projection model retooled by Informed Decisions Inc. in February 2005. The projections generated in November 2005 will be based on the 20th day membership data verified by the North Carolina Department of Public Instruction.
- b. Wake County enrollment projections include a statistical range of +/-1% for the first five years, +/-1.5% for the next five years, and +/-2% beyond. The high-end projections will be used in calculating long-range student enrollment.
- c. An annual review of the projections versus actual enrollment will identify any seating shortfall or surplus.

19. Time Frame:

Capital planning needs will be projected 20 years out, through 2025.

20. Program Price Bases:

- a. Estimates for new schools and renovations are based on actual costs of PLAN 2004 projects bid in 2005;
- b. Costs are based on BoE approved space standards and existing prototype designs and include: construction cost, on-site development, demolition, design, materials testing, surveying, hazardous materials abatement (if any), moving costs, interim housing, furniture, custodial equipment, media center equipment and books, educational equipment and technology infrastructure;
- c. Land purchases are budgeted separately from construction project cost, and acquisition budget is based on the cost trend of PLAN 2004 purchases;
- d. Off-site development costs will be listed in a separate line item and will be based on the actual costs of off-site development in PLAN 2004;

- e. The cost of annual building assessments will be budgeted as a separate line item;
- f. Renovation projects will have a 10% contingency; new school projects will have a 5% contingency
- g. Project costs will be adjusted by 5% per year, through 2010, and 3.5% beyond that with an annual reassessment of actual costs;
- h. The building program will have a 2% contingency, budgeted separately. This contingency is included to provide funding of emergency projects; or to provide funding in the event critical assumptions (class size, school site size, cost of property acquisition, enrollment projections, etc.) differ substantially from actual experience. The Board of Education will review such critical needs and, if appropriate, request that the Board of Commissioners reallocate funds.
- h. Program management budget will be 3.5%.

21. Funding

- a. The building program will be funded through a variety of funding options to potentially include general obligations bonds, pay-as-you-go funds, state and federal funding.
- b. Pay as you go funds should be targeted to the non-capitalized technology and equipment.
- c. Alternate means of funding capital construction such as the lease of privately constructed school facilities and the potential for public-private partnerships for the construction of new schools will be considered.