Wake County Board of Education
Facilities Committee

May 24, 2012
4:00pm
Board Conference Room, Crossroads I

Chris Malone, Committee Chair
Susan Evans, Vice Chair

PURPOSE: To address facilities and operations issues.

OUTCOMES: By the end of the meeting, Committee Members will have:
- Approved Facilities Committee minutes from April 11, 2012 meeting.
- Received information on and discussed draft capital planning issues and provided direction to staff.
- Received information on process for determining needs for new schools.

TOPIC	WHO	TIME
Set up • Comments • Agenda • Desired outcomes	Chair Malone	5
Approve the Facilities Committee meeting minutes from April 11, 2012 meeting.	Chair Malone	5
Receive information on draft capital planning issues. (continued)	Don Haydon, Judy Peppler, Christina Lighthall Joe Desormeaux, David Neter and Russ Smith	60
Receive information on process for determining needs for new schools.	Judy Peppler, Christina Lighthall, Don Haydon	20
Closure and next steps.	Chair Malone	5

WAKE COUNTY BOARD OF EDUCATION
FACILITIES COMMITTEE MEETING
April 11, 2012
4:00 pm – 6:00 pm

Committee Members	Staff
Chris Malone, Chair	Don Haydon
Susan Evans, Vice Chair	Judy Peppler
Dr. Jim Martin	Joe Desormeaux
Deborah Prickett	Christina Lighthall
	Jeff Larson

Chair Chris Malone called the meeting to order at 4:06 am. The agenda is included as attachment A.

1. **Review committee's charge and operating procedures:** Chair Malone addressed the Facilities Committee charge and operating procedures and noted that the Facilities Committee would be meeting once per month on the second Tuesdays on a regular basis starting with June 2012. He stated that the committee meeting for May would be on Wednesday, May 9th, due to the primary election being held. Mr. Malone addressed the subject of what would be the procedure for any recommendations that may come from this committee and stated that the information would need to go the Executive Committee. Dr. Martin suggested that any committee recommendations that received a 4-0 vote go directly to the full board for consideration.

2. **Review schedule for development of next capital improvement plan:** Mr. Haydon asked the committee to review the Steps in Development of Capital Improvement Program (CIP) handout, included as attachment B. These are the steps that are needed to develop a Capital Improvement Program and prepare for a school bond referendum. The chart lists the action steps and two timelines: one is the CIP 2006 timeline and one is to meet a spring 2013 referendum. The committee discussed the merits of spring and fall 2013, but did not make a recommendation.

3. **Receive information on draft capital planning issues:**
Mr. Haydon asked Christina Lighthall, Senior Director of Long Range Planning to review the draft planning issues; this handout is at attachment C. The Technology section on page six of the handout was skipped and will be brought back to the next committee. The committee requested that staff bring the following to the next meeting:
   a. Presentation of Technology section (#5);
   b. Data on actual capacity gained at year-round school (#8);
   c. Information on impact of calculating capacity at 95 percent instead of 100 percent (#6);
   d. Information on including small size school model (#12);
   e. Information on State allotment formulas. (#6)

Chair Malone asked committee members to let him know of any other issues to be addressed at the next meeting. Mr. Malone adjourned the meeting at 6:04 pm

Respectfully submitted by:

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Chris Malone - Chair, Facilities Committee

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Donald M. Haydon, Jr., Chief Faculties & Operations Officer

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Jan Bunn, Recording Secretary

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Kevin L. Hill, Board Chair

DRAFT 2012

Capital Program Planning Issues

May 24, 2012

Purpose

This document outlines the planning principles of the Wake County Public School System (WCPSS) long-range capital building program.

These planning principles will be used to identify and quantify the investment 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. Future bond programs will be based upon a comprehensive capital improvement plan that addresses construction of new schools and renovation of existing schools.

Project priorities should:
          1) ensure the health and safety of children and staff;
          2) ensure adequacy of facilities and technology for effective learning;
          3) reduce school overcrowding; and
          4) provide sustainable facilities.

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PROGRAM

1. School Grade Configurations:

   a. Current grade configurations of Pre-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.

2. Educational Program:

   Space will be provided to appropriately house programs to deliver the Standard Course of Study as prescribed by the State Board of Education; additional space may be provided in order to house additional educational programs approved by the WCPSS Board of Education.

   Children with disabilities will continue to be served in accordance with the Strategic plan that complies with federal and state requirements. New school design models will include spaces to accommodate these requirements.

   a. Classrooms Dedicated to Serving Students with Disabilities:
   Disability law requires the provision of special education and related/special needs services to students with disabilities, ages 3 through 21, as per the Individuals with Disabilities Education Act (IDEA), Section 300 (Placement Decisions) and Section 504 of the Rehabilitation Act, Americans with Disability Act (ADA), and the NC Procedures Governing Programs and Services for Children with Disabilities.

   Student/teacher ratio changed from 9 to 8 as a result of The North Carolina Policies Governing Services for Children with Disabilities, June, 2007, which modified the student class size requirements (NC 1508-3). These modifications remain in effect.
   Go to: http://www.ncpublicschools.org/docs/ec/policy/2007policies.pdf;
   NC 1508 Class Size: School Age and Preschool on page 139.

   > Elementary: 2 Adaptive Curriculum classrooms @8 students average and 6 Special Education Services classrooms

   > Middle: 4 Adaptive Curriculum classrooms @8 students average and 9 Special Education Services classrooms

   > High: 2 Adaptive Curriculum classrooms@8 students average, 3 Occupational Course of Study (OCS) classrooms @ 12 students average, and 10 Special Education Services classrooms @ 12 students average.

   b. Classrooms Dedicated to Serving General Education Support:
   The general population of students with special needs is housed in regular classrooms with "pulled out" programs for special services to include:

1) Classrooms dedicated to serving <u>Academically Gifted</u> (AG) programs: – 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) <u>Intervention</u> - 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) <u>English as a Second Language (ESL)</u>: 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) <u>Title I</u>: Title I 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.

General Education Support (AG, Intervention, LEP, Title I):

      Elementary: 4 classrooms

      Middle: 3 classrooms

      High: 2 classrooms

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.

3. <u>Pre-kindergarten, Ages 3 through 4</u>:

Elementary schools will include two classrooms and an outdoor learning environment for students at risk or with disabilities, ages 3 through 4, 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." Title I Guidance strongly supports Pre-K programs and Section 1112(c)(1)(F) of the Elementary and Secondary Education Act requires LEAs to provide an assurance that they will take into account the experience of model programs for the educationally disadvantaged.

These programs are funded from state and federal initiatives. WCPSS has self-contained and blended classes, based on the needs of the students. If the classrooms are not used for these programs, then the room(s) converts to space to accommodate students in grades K-5. Otherwise, capacity for this space is reported separately from the K-12 calculations.

4. <u>Kindergarten Program</u>:

Full-day kindergarten will continue to be offered.

5. <u>Technology</u>:

Development of 21st century skills in our students, effective instruction by our teachers, and assessment of student progress, requires the utilization of technology in our classrooms and schools. Effective utilization of technology leverages the capacity of the teacher, expands the physical boundaries of the classroom to the world, and engages students in ways that other instructional tools cannot. It is paramount that the next WCPSS Capital Program provides resources to equip new schools and renovate technology in existing schools to meet the expectations and challenges of our teachers and students.

a. General Assumptions

1) Technology is in a continual state of change. Assumptions made at the beginning of a Multi-Year Capital Program may become stale or no longer appropriate before the end of the Program. It is important the plan have capacity to amend the technology component of the Program during its term.

2) WCPSS targets attainment of a one to one student computing device ratio to provide the basis for development of 21st century technical skills and provide basis for delivery of 21st century learning content. Such initiatives are becoming the norm across the country. Meeting this standard will require a complete implementation of one to one devices for all students and the deployment of the necessary underlying infrastructure to support one to one devices. North Carolina currently has over 50 LEA's implementing initiatives to provide universal access to personal learning and teaching devices for both students and teacher

3) Costs associated with the deployment of technology infrastructure in new schools, deployment of technology renovation in existing schools, and deployment of technology in mobile modular classrooms is an integral component of the overall Program

4) Central Administration Leadership from Instructional and Technology areas will guide the decisions and standards for the technology infrastructure of newly built schools and the technology renovation of existing schools

5) The leadership of the Wake County Public School System recognizes that the utilization of technology is a key component of the learning and teaching process and preparation of our students for graduation and competing in the world. Further, the leadership understands the need for Central Administration to continue to drive the infusion of technology into curriculum, the expectation that School Administrators and Teachers understand how to effectively utilize technology infrastructure during instruction, and the provision of professional development to Central Administration, School Administrators, and Teachers to accomplish this.

6) Central Administration leadership recognizes that development of instructional technology standards for the district, and comprehensive utilization of technology infrastructure in the schools is essential for leveraging the capacity of teachers, engaging all students, developing 21st century skills in our students, and maximizing return on the significant investment made in technology.

b. New School Assumptions

1) One to one devices for students and staff will become the norm. Networking, wired, and wireless infrastructure must have capacity to support fully implemented one to one device initiatives for students and staff.

2) Decreasing unit costs for laptop computers to a point close to desktop units, directs that the primary computer devices become a laptop creating utilization flexibility.

3) During the transition to a one to one device environment, the practice of equipping all classrooms with a minimum of 5 desktop computers should be revised with a shift to laptop carts capable of bringing an entire "computer lab" to the classroom.

4) Alternative one to one devices, including tablet computers, will provide a complement to traditional laptop computers as instructional tools. Deployment of one to one carts will provide maximum utility and flexibility.

5) All instructional areas should be equipped with an interactive device such as a Smartboard or Promethean board and student response devices.

6) Acquisition of underlying operating system licenses, office productivity software licenses, and other application software licenses, device management applications, and initial set-up/installation, shall be a component of the program. Technology hardware, operating systems, and applications are all components of the technology itself, and all must be present and installed for use.

7) For schools built in areas not having adequate signals from WCPSS' cell phone provider, funding shall be allotted for in building repeaters and related equipment to ensure emergency phones and communications take place in an effective manner.

8) Voice over IP is becoming the new norm for wired phone communication and shall be considered for all new schools.

9) Building automation infrastructure shall be incorporated within new facilities.

c. Existing School Assumptions

1) School facility and technology infrastructure life cycles differ significantly. Components of the facility have life cycles of decades, while most technology life cycles run in the three to five year range. The Program must recognize this and provide for renovation of technology in existing schools to be on par with the equipping of newly constructed schools.

2) The technology infrastructure of a large number of existing WCPSS schools is significantly overdue for renovation. Technology shifts from blackboards and chalk to white boards and dry erase markers have not been maintained to the current technology of interactive boards. Many existing schools have limited access for all students in a class utilizing one to one devices on a regular basis during the course of instruction. Regular leveraging of teacher's time through utilization of technology cannot be accomplished in many of our existing schools.

3) Technology infrastructure in the schools also includes all aspects of the technology backbone required to support end devices used by students and teachers. Infrastructure supporting student and teacher device use includes wired and wireless networking equipment, wiring, servers, backup UPS systems, switches, etc. In the effort to drive costs down and improve levels of service, as school renovations take place, alternatives for provision of the back-bone infrastructure will be considered including cloud based technology.

4) To drive the renovation of technology infrastructure and equipment in existing schools to be on par with technology in newly built schools, the Program will target investment of $200 per WCPSS student per year for the term of the Program. Further, the Program will seek funding streams to maintain this level of investment in technology renovation on an ongoing basis subsequent to the termination of the facility building/renovation component.

5) Voice over IP is becoming the new norm for wired phone communication and shall be considered for all existing schools.

d. Mobile/Modular Unit Assumptions

As mobile or modular units are added to a school campus, the Program will provide for a technology infrastructure on par with that found in a regular classroom. This will include the investment necessary to provide the temporary classrooms with interactive devices and related assessment systems, access to laptop and/or tablet carts, and complete wired and wireless networking capacity. In the 21st century, the utility of network/internet wired and wireless access is a basic requirement similar to water and electricity.

SCHOOL CAPACITY & MEMBERSHIP

6. School Campus Capacity:

   a. Utilization – Facilities utilization will be based on class size averages and the optimum number of temporary classrooms supported by each school's program and site. The new Choice Student Assignment Plan provides controls for capacity to target optimal facility utilization at 100%. This plan offers the opportunity to align overcrowded schools with under-utilized ones and eventually bring all schools' utilization in line with their core facilities and site constraints. This will require the reallocation and eventual reduction of temporary classroom units, targeting those older than 25 years.

   b. Class Size Ratios – School models will be based upon allowable system-wide class-size ratios for numbers of students per classroom. NCGS 115C-301 and Session Law 2011-145 (House Bill 200) governs class sizes and teaching loads. "Local boards of education must maintain a LEA-wide class size average no higher than the class size ratio of teachers to students of the following: [Kindergarten – Grade 3: 1 to 21]"

Grade Level	Class Size Requirements (Grade Span Average)
K-3	21
4-8	26
9-12	24
Special Needs - Self-Contained	8 (Range of 4 to 12)
Pre-K	10 (Range 4 to 18)

   Note: Special Education average usage is based on Policies Governing Services for Children with Disabilities: NC 1508-3 Class Size Chart. See Planning Issue #2. High school total reflects average usage.

   See Appendix

7. Temporary Classrooms:

   Optimum temporary classrooms should not exceed the maximum that can be supported by the core facilities (dining, office support, parking, playfields, etc.) with consideration of site limitations. Standard designs accommodate ~100 more seats or the equivalent of four temporary classrooms when the site allows. This does not include units utilized as swing-space for renovation projects. Mothballed or surplus units will be redistributed to better align a campus' efficiencies with its program.

   The six 2003 adopted criteria for determining optimum instructional temporary classrooms (what the core can support) are reflected in the annual Facilities Utilization report:
   1) can be physically accommodated on the site;
   2) are permissible by the authorities having jurisdiction and by zoning, etc.;
   3) can be supported by no more than one toilet trailer unit;

4) can be supported by dining room facilities with no more than 3 seatings based on Department of Public Instruction Guidelines;

5) can be accommodated within 300 feet of the closest building access point; and,

6) can be supported by specialized educational program spaces like Career Technical Education, science, gym, etc.

... plus can be supported by vehicle traffic patterns (added in 2010).

See Appendix

8. Year-Round Calendar Schools:

The multi-track, year-round school calendar is a strategy to increase the capacity of schools and, as a result, decrease the number of school buildings required to accommodate student enrollment. When new school facilities are designed and operated around a multi-track, year-round calendar, a maximum 33% gain in student capacity over a traditional calendar can be attained at full utilization with all four tracks loaded.

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 renovations of existing schools, assignment choice, feeder patterns, as well as the number of year-round schools. Objective would be to maintain the minimum portion of year-round schools.

See Appendix

9. Student Enrollment Projection:

a. Staff from the Wake County and WCPSS will jointly produce enrollment projections. Enrollment projections will be reviewed and subsequently presented to the Board of Commissioners and Board of Education at a joint board meeting for approval.

b. Enrollment projections will be developed for operating budget and capital budgeting purposes. The methodology for capital projections may vary from the methodology used for the operating budget projection.

Capital projections are based on an economic cycle model, based on the need to project capital budgeting projections for a longer period of time over a varying economic climate. Economic indicators such as unemployment, sales tax revenue growth, building permits, as well as student enrollment indicators such as market share are taken into account. The operating budget is approached differently, based on the same rate of growth as the previous year.

LAND AND BUILDING

10. Energy and Environmental 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. On all projects, WCPSS will comply with the Guidelines for Design and Construction of Energy-Efficient County Government Facilities and Schools, dated June 2004 (jointly developed and adopted by Wake County Government and WCPSS).

WCPSS will incorporate sustainable design features, wherever most financially responsible, consistent with the recommendations of the US Green Building Council in its LEED for Schools certification guidelines. A sustainability checklist will be used to optimize the use of "green" features in design and a sustainable energy cost benefit analysis will be conducted during Design Development of each project.

11. Renovation of Existing Facilities:

a. Existing facility projects will be included in one of the following categories:

   1) Life Cycle Replacements – individual systems to be replaced before failure;

      b) Systems that are approaching or have exceeded system life will be targeted based on facility assessments
      c) All Life Cycle replacement projects will be summarized in one line item in the CIP
      d) Projects will be prioritized using a priority matrix that focuses on health, safety and immediate needs

   2) Major Renovations – may include complete renewal or replacement of structural, mechanical, electrical plumbing, codes and educational program;

      a) Facility square footage approaching or exceeding 40 years since a major renovation will be evaluated for a potential project
      b) Projects will be prioritized using a weighted evaluation sheet that includes the Facility Condition Index (FCI), academic improvement, student assignment, and health and safety...
      c) Each project will be listed as a separate line item in the CIP
      e) The 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 major renovation vs. demolition/replacement
      h) Existing campuses will be reviewed to determine ability to add capacity
      i) Funding will be included for replacement of furniture, equipment, and technology if required

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WCPSS will conduct a facility assessment on 1/7th of the total square footage each year. The assessment will identify facility deficiencies and system life cycle due dates. This data will be used to establish initial project scopes, determine facility condition index, establish priorities and project future requirements.

See Appendix

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 additional seats in potential temporary classrooms. Utility infrastructure and site plans will provide for temporary classrooms where site conditions allow;

b. Alternate and non-traditional sizes of schools and sites will be considered based on availability of property.

c. Square footage totals are based on the latest space standards and subject to change pending program and operational needs. School model sizes are:

	DPI Capacity Guidelines	Building Capacity: Traditional Calendar	Building Capacity: Year-Round Calendar	Space Standards (Square Feet)
Elementary (lg)	700	780	1058	105k
Middle (std)	600-800	1,280	1,592	200k
High (std)	800-1,200	2,228	N/A	335k

1) Capacity totals reflect capacity models and the reduction in the special education student ratio;
2) Capacity totals include Special Needs teaching spaces to include both Special Education Services and General Education Support; elementary - 12; middle - 16; high - 17.
3) Elementary (lg): Year-round has all double loaded tracks with 2 temporary classrooms; Middle (lg): Year-round has 1 double loaded track and 3 single tracks.

13. School Site Size and Property Acquisition:

Land will be the minimum practical needed for educational program and regulatory requirements. Future capital programs will utilize Department of Public Instruction (DPI) guidelines, plus two acres for temporary classrooms and/or additional municipal requirements such as extra queuing. North Carolina Department of Public Instruction guidelines and recommended site sizes are as follows:

Grades	Developable Acreage	Applied to WCPSS Standard School Sizes (without temporary classrooms)	WCPSS Net Usable Acres
K-6	10 + (1/100 ADM)	10 + (796/100 ADM) = 17.96	20
5-8	15 + (1/100 ADM)	15 + (1,304/100 ADM) = 28.04	30
9-12	30 + (1/100 ADM) + 10 acres for parking & stadium	30 + (2,223/100 ADM) + 10 = 62.23	64

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;

b. New school sites will be evaluated to determine the feasibility of joint development with other governmental agencies;

c. The use of smaller tracts will be considered when necessary, but may require changes to a school's capacity and educational program;

d. Sites will be sought for schools five years in advance of the construction start dates and opportunities to identify sites will be actively worked with municipalities;

e. Location and schedule of new schools will be guided by current crowding, projected growth, and needs identified from data in the Choice Student Assignment Plan; new schools may also provide temporary swing space for renovations of schools in the area;

f. The projected cost of public infrastructure and site development will be included in analyzing candidate school sites;

g. 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;

14. Support Facilities:

a. Projects for essential health and safety items in existing support 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 and regional shops for maintenance personnel. Where appropriate, expansion may require property acquisition.

15. Security:

Project priorities include ensuring the health and safety of children and staff; that schools are safe quality places for students to learn. To that end, the following assumptions will ensure that these objectives are met. All new and existing schools shall have consistent security systems with the most up to date technologies equivalent to those used in all new schools. All new facilities and major renovations shall utilize Crime Prevention through Environmental Design (CPTED) principles. The purpose of these proposed assumptions is to have a centralized security system for all schools.

System	Elementary	Middle	High
Closed Circuit Television System	Integrated IP based: minimum 16 camera system	Integrated IP based: minimum 32-64 camera system	Integrated IP based: minimum 64-80 camera system
Access Control	Enterprise based access control system	Enterprise based access control system	Enterprise based access control system
Visitor Management	Networked kiosk for visitor sign-in and sex offender checks	Networked kiosk for visitor sign-in and sex offender checks	Networked kiosk for visitor sign-in and sex offender checks
Intrusion Alarm System	Upgraded to audible	Upgraded to audible	Upgraded to audible
Public Address Systems/Intercoms	Broadcast location added for designated incident command (principal conference room)	Broadcast location added for designated incident command (principal conference room)	Broadcast location added for designated incident command (principal conference room)
Bi-Directional Amplifiers (BDA)	Up fit schools as needed	Up fit schools as needed	Up fit schools as needed

FISCAL

16. Program Price Bases:

   a. Project estimates and cost models will be developed for pricing the new bond and will be independently validated;

   b. Costs are based on BoE approved space standards, ed specs, design guidelines, and existing prototype designs. Cost may include: construction cost, 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 and due diligence costs are budgeted separately from construction project cost and the land acquisition budget is based on the cost trend of recent land purchases and economic projections;

   d. Public infrastructure costs will be listed in a separate line item and will be based on the actual costs of current market trends;

   e. The cost of annual facilities 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. The inflation estimate will be determined based upon information provided by up to four different independent construction companies; project costs will be adjusted each year based on anticipated annual inflation.

   h. The building program will have a 1.5% funded reserve budget. This budget would be used for funding of emergency projects or in the event critical assumptions (class size, school site size, cost of property acquisition, enrollment projections, etc.) differ substantially from actual experience. The reserve budget will be the designated location for any savings and will be held by the Board of Commissioners. Board of Education will review any critical needs and, if appropriate, request reallocation of funds from the Board of Commissioners.

   i. Program management budget will be based on the number of projects and timing of delivery.

   J To maintain a continuous building program, each CIP will include funds for the property acquisition and early start design of new projects funded in the next CIP.

17. 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 non-capitalized technology and equipment. Alternate means of funding schools should be considered.

   c. Lottery funds awarded to the county and WCPSS will be used towards debt service costs of WCPSS general obligation bonds

   d. Opportunities for public/private partnerships will be considered, if advantageous to the educational program and if such partnerships are evaluated as cost effective.

APPENDIX

6. School Campus Capacity:

   a. Utilization – System-wide Long Range School Campus Capacity [LRSCC] utilization based on 2011-12 20th day membership and optimum temporary classrooms:

	2011-12 20th Day Student Membership	LRSCC Seats (Including Program Adj.)	Optimal # Temporary Classrooms	% Utilization (Including Program Adj.)
Elementary	70,526	72,579	408	96.50%
Middle	33,604	33,957	60	99.00%
High	42,143	37,916	68	111.10%
Special/Optional	414	414	4	100.00%
TOTAL	146,687	144,866	540	101.30%

7. Temporary Classrooms:

   a. Temporary classrooms compared to total school capacities as of 2011-12:

	Optimum Long-Range Temporary Classrooms (Max Supported by Core*/Site) Total # / Percentage	Actual Temporary Classrooms Total # / Percentage	Difference
Elementary	408 / 12.5%	607 / 17.1%	199
Middle	60 / 4.5%	189 / 13.2%	129
High	68 / 4.2%	309 / 17.0%	241
TOTAL	540 / 8.5%	1106 / 16.4%	566

*Core includes dining, office support, group toilets, parking, playfields, traffic, etc

   b. Schools and Temporary Classrooms as of 2011-12:

	Number of Schools that Exceed Optimum Temporary Classrooms	Number of Temporary Classrooms /Number of Seats that Exceed the Maximum
Elementary	50	269 / 6,187
Middle	16	138 / 3,588
High	19	252 / 6,048
TOTAL	85	659 / 15,823

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8. Year-Round Calendar Schools:

	Number of Year-Round Schools / Total Schools as of 2011-12	Number of Year-Round Seats / Total Seats as of 2011-12
Elementary	40 / 104	35,163 / 76,351
Middle	9 / 34	12,174 / 37,233

11. Renovation of Existing Facilities:

   a. 850 thousand out of 21.1 million permanent square feet exceed 40 years since a major renovation as of December 2011.

   b. $85 million in unfunded deferred life cycle projects have been identified as of December 2011,

   Square Footage by Year:
   1) The square footage that turns 40 in 2012 = 87,983 GSF
   2) The square footage that turns 40 in 2013 = 19,028 GSF
   3) The square footage that turns 40 in 2014 = 57,162 GSF
   4) The square footage that turns 40 in 2015 = 279,568 GSF

   Total: 2012 - 2015 = 443,741 GSF
   Total: 2016 - 2020 = 134,556 GSF (estimate)

The State Planning Allotment Formulas for 2012-13:

Instructional Personnel and Support Services	
Category	Basis of Allotment (Funding Factors are rounded.)
Classroom Teachers	
Grades Kindergarten	1 per 18 in ADM. (LEA Class Size Avg. is 21)
Grades 1 - 3	1 per 17 in ADM. (LEA Class Size Avg. is 21)
Grades 4 - 6	1 per 22 in ADM. (No LEA Class Size Avg)
Grades 7 - 8	1 per 21 in ADM. (No LEA Class Size Avg.)
Grade 9	1 per 24.5 in ADM. (No LEA Class Size Avg.)
Grades 10 - 12	1 per 26.64 in ADM. (No LEA Class Size Avg.)

WCPSS 2012-13 Allotment Formulas for Schools:

Teacher - ADM Teacher
Calculations based on 10th day student membership. All students in kindergarten through Grade 12 are reported.
The formula applied on the allotment webpage is: Elementary: Integer ((Kindergarten)/20.97 + (Grade1+Grade2+Grade3)/19.97+ (Grade4+Grade5)/27.10)*10   Middle School: Integer((Grade6+Grade7+Grade8) /24.97)*10   High School: Integer((Grade9+Grade10+Grade11+ Grade 12)/26.47)*10

COMPARISON OF FACILITY COST PER STUDENT FOR VARIOUS SIZE HIGH SCHOOLS

CAPACITY	ACRES	SITE PURCHASE	SITE DEVELOPMENT	OFFSITE IMPROVEMENTS	BUILDING SF	BUILDING COST	TOTAL	COST PER STUDENT
1200 (DPI)	54	$3,780,000	$7,148,000	$2,000,000	229,418	$27,071,324	$39,999,324	$33,333
1663	64	$4,480,000	$9,408,000	$2,500,000	268,725	$32,247,000	$48,635,000	$29,245
2223	64	$4,480,000	$10,048,000	$3,000,000	330,562	$40,328,564	$57,856,564	$26,026

Assumptions:
1) Land purchase is $70,000/acre
2) Site development is $137,000, $147,000, and $157,000 per acre for 1200, 1663, 2223 respectively
3) Building cost is $118, $120, and $122/SF for 1200, 1663, 2223 respectively
4) Stadium acreage size same for all capacities although cost reduced by $250,000 on 1200 capacity for less toilets and stadium seating
5) Site size for 1200 based on DPI size formula plus 2 acres for future modulars
6) Building footprint remains the same for all sizes although the smaller sizes have less stories

COST TO PROVIDE SEATS FOR 5000 STUDENTS

1200	$166,663,850
1663	$146,226,699
2223	$130,131,723

... how all of the pieces, such as enrollment growth, school crowding, data, and feeder patterns supporting School Choice, will be brought together to establish the number of seats needed to accommodate student enrollment and growth, where and when.

Develop system-wide/school-level student projections for capital planning
Timeframe: From collecting data in November 2011 to BoE/BoC approval in February 2012. Staff from Wake County Budget and Management Services, the Wake County Planning Department, WCPSS Long Range Planning, and WCPSS Office of Student Assignment, with assistance from the Operations Research and Education Laboratory (OREd) at NC State, update the previous year's long range building program student enrollment.

November – December 2011: The joint staffs use two distinct approaches for projecting student enrollment projections based on 2011-12 20th Day membership data.
    1) The student enrollment projections for the WCPSS operating budget that are generated once a year in advance of the preparation of WCPSS operating budget.
    2) Student enrollment projections for capital purposes that have a multi-year impact and contribute toward determining the need for new schools.

The long range projection methodology for capital purposes takes into consideration:

- Economic Climate – assess economic indicators such as unemployment, sales tax revenue growth, building permits, as well as student enrollment indicators such as market share.

- Population Changes – reflects the state demographer' official population growth projections for Wake County, an update of live births, and a review of market share and recent school population dynamics such as shifts in K-5/6-8/9-12 proportions.

- Economic Cycles – models current growth patterns after historical patterns from past periods of similar economic trends.

2012 – 2031 WCPSS K-12 Forecast – 2011-12: 146,687 to 2031-32: 236,513
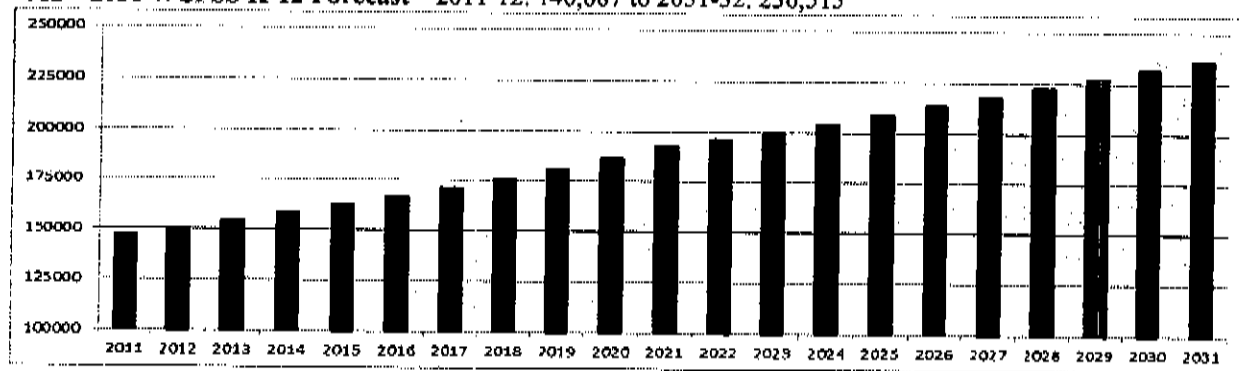
December – January 2012: Once a system-wide student enrollment projection is established, the Operations and Research Education Laboratory (OREd)'s takes these methodologies into consideration and develops twenty-year school level (elementary, middle, and high) projections for capital planning, based upon historical WCPSS student trends and projected land use data supplied by the Wake County planning community (due for update in 2012).

Generating two projections based upon two different models, avoids over projecting student enrollment that is part of the operating budget, and to issue a projection for the building program that takes into consideration potential changes in the economy, and anticipates facilities early enough to provide adequate classroom space to serve a growing enrollment.

Phase 2: The process for identifying "the need for new schools"

Create "circle" maps identifying the area/location and prioritization of new schools for capital planning

Timeframe: From collecting data in April 2012 to creating "circle" maps in February 2013. WCPSS Long Range Planning, the Office of Student Assignment, the 13 Wake County municipal planning agencies, and Operations and Research Education Laboratory (OREd) generate optimal target areas/"circle" maps and timeframes needed for new schools.

April – May: Residential parcel and Planning Unit analysis will be based on Geographic Information Systems (GIS) data with any enhancements to the Student Projection Distribution Model (SPDM) to include incorporating the Census 2010 based analyses as necessary.

- OREd collects CAMPO/Imagine 2040 data and scenarios and current Wake County GIS parcel/node layer/tax data.
- OREd conducts a comprehensive analysis of off-target Planning Units and other errors. A summary of findings will be presented to planners to use in the data collection phase.

June – July: OREd visits each municipal planning agency in the county to discuss the results of the previous forecast and collect Planning Unit data related to any changes that have been made in the projected land use since the last update in 2008. Land use data collection will focus on off-target areas and any new or changed residential development patterns.

WCPSS develops preliminary totals for new schools, by school level, based on membership growth, current crowding, optimal use of temporary classrooms, and school feeder patterns.

August: WCPSS Long Range Planning provides current and funded permanent and temporary capacity data. OREd applies new planner data into the Student Projection Distribution Model (SPDM)

September: OREd generates preliminary SPDM membership forecasts based on 2011-12 student data and that, in turn, generates a preliminary set of Optimal Target Areas for future school sites.

October: WCPSS reviews optimal target areas for new schools to include sites already acquired. Those target areas generate "circles" for new school locations with utilities, watershed, transportation, and school feeder patterns, etc. taken into consideration.

October – December: WCPSS provides 2012-13 Geocoded student layers. WCPSS & Wake County Planning generate 2012-13 long range projections*. OREd provides 2012-13 Planning Unit database and membership forecast summaries by municipal USA by Winter break 2012.
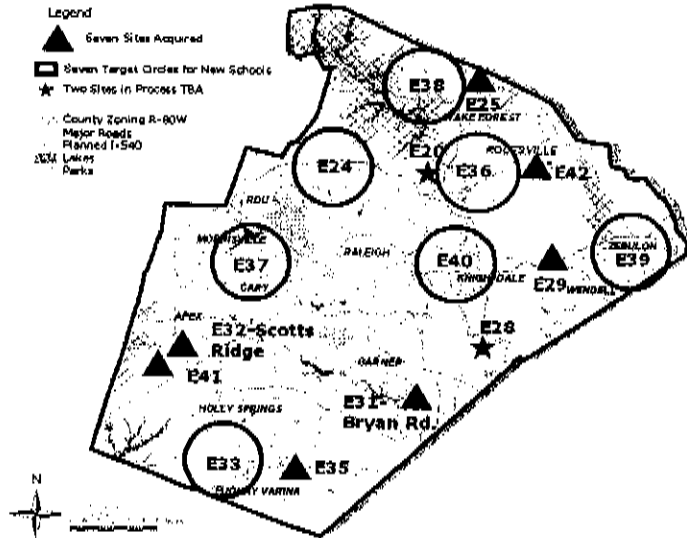   * *This data will not be Board-approved until January/February 2013.*

January – February 2013: Using the Planning Unit database along with updated WCPSS school locations, permanent and temporary capacity data, school feeder patterns, optimal target areas for each school level are generated by OREd, reviewed by WCPSS, and developed as final "circle" maps.
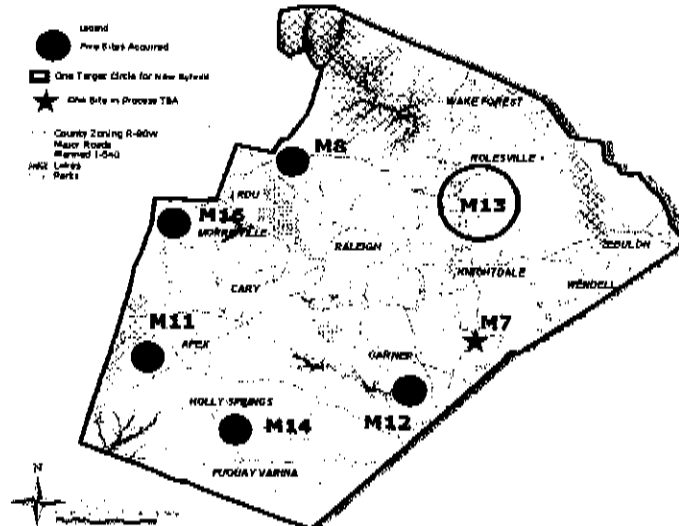
These "circle" maps can be subject to change as properties are acquired and/or membership data and forecasts are updated.

Current "Circle" Maps with limited updates from 2010-11 Student Projection Distribution Model (SPDM) forecast showing land acquisitions to date:

Elementary:

Middle:

High: