

FINDING SOLUTIONS AND APPLYING STRATEGIES

Overcoming the Economic Picture

As the charts and graphs clearly indicate, both initial and life cycle facility costs are considerably higher for typical small schools than for larger schools serving an equivalent number of students. This is a very significant factor for boards of education facing extremely limited funds, especially when the mood of the citizenry may be to reduce costs of education and their accompanying taxes.

How, then, can small schools be made more economically feasible? Several approaches to this dilemma include:

- Partner with other agencies or groups to contribute to or share in the additional cost
 - Joint-use agreements (with joint funding) with other governmental or private agencies
 - Increase community use of school to increase desire of citizenry to fund facilities
- Find innovative ways to maximize the use of all spaces, so that less building area is required
 - Strive to schedule a class or program in every space every period (reduce/eliminate "teacher-owned" classrooms used only by teacher during planning period)
 - Make more use of "multi-purpose" classrooms
 - Year-round or double-shift scheduling of the school building
 - Use off-site facilities where possible (kitchen, special programs, athletics, etc.)

The interesting thing about many of these approaches is that they share or are the same as many of the tenets of "Smart Growth," "Walkable Communities," and "New Urbanism." An informed and concerned board of education can accomplish multiple goals by attempting to find ways to make small schools economically feasible. They can improve their relationship with the community, serve a larger portion of its citizens, save money on facilities, reduce sprawl, place less stress on utility/road infrastructure, improve student safety/reduce violence, and most importantly, potentially boost student academic performance. This multitude of positive benefits are the very reasons that so many people are promoting these philosophies.

Careful thought must be given to any new strategy; each has its own limitations, as well as positive features. Unless very well thought out and implemented fully, a particular strategy may not achieve the desired result and could, in fact, result in unexpected outcomes.

Small and Walkable Middle and High Schools: The Dilemma

Small and walkable elementary (K-5) schools are relatively easy to achieve in many of North Carolina's cities, especially if they are located in a relatively densely populated area with predominately young families. Even with this assumption, however, as the families in the neighborhood which the school serves begins to age, it is likely to become more and more difficult to fill the school with a surrounding walkable population. Typically, over time, it may take two generations (or more) for a neighborhood to transition from young families with small children through middle/high school aged children, through grown children, through retirees and back to young families again. This poses significant challenges to a school facility that is designed to be both small and walkable.

Establishing small and walkable middle and high schools based upon feeder schools from small and walkable elementary facilities is much more difficult:

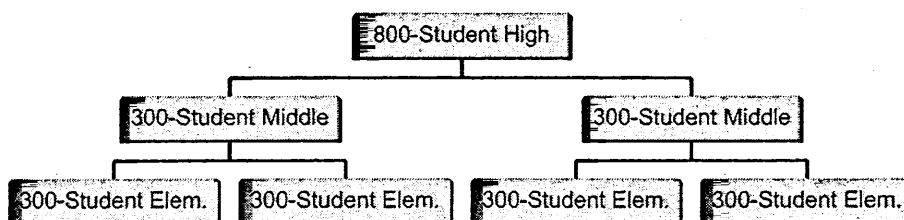
- Assume an elementary with two classes (50 children) per grade. This translates to a 300-student K-5 school. This is probably the upper limit of what size school can be walkable for most of the higher-density communities across North Carolina.
- A walkable middle school serving the same youth density/geographical area of 50 children per grade could then be no larger than 150 students and a high school would only serve 200 students. Such a small size middle or high school would be very difficult to operate, even with innovative community joint-use and multi-purpose shared classrooms. Because of this, it may be necessary to consider a different grade organization. Although not considered generally the most desirable, perhaps an organization such as K-8/9-12 or K-6/7-12 would provide sufficient population to make the school facility economically feasible. If so, some sort of physical separation within the facility for the different age groups during the majority of the day should probably be considered as well. It should be noted that these unusual grade organizations are usually only established in remote geographical locations.

A more achievable arrangement may be to provide small, walkable elementary schools and small but non-walkable middle and high schools:

- A non-walkable but still small middle school could be fed from two, three or four 300-student walkable elementaries for a middle school size of 300, 450 or 600 students respectively.
- A small but non-walkable high school could be fed from a number of small walkable elementaries and two small (or one medium sized) middle schools.

Using the latter approach, it may be possible to provide small schools throughout the district. Further, walkable elementary schools could serve those neighborhoods with sufficient population density to support them. Sample feeder plans follow.

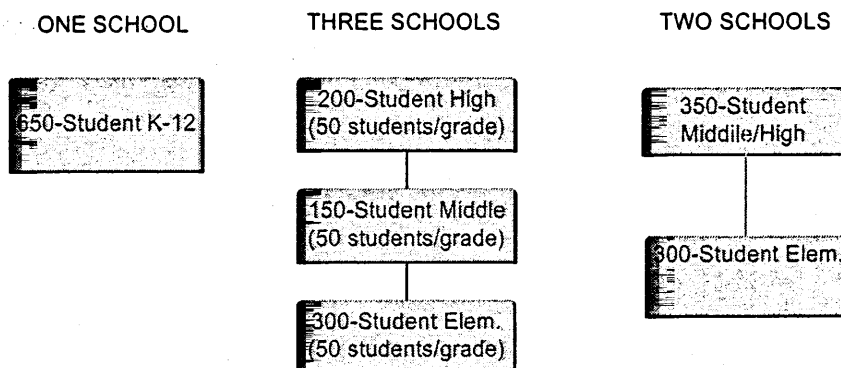
Four Elementary Feeders



Note: Only the elementary schools are likely to have sufficient walkable population.

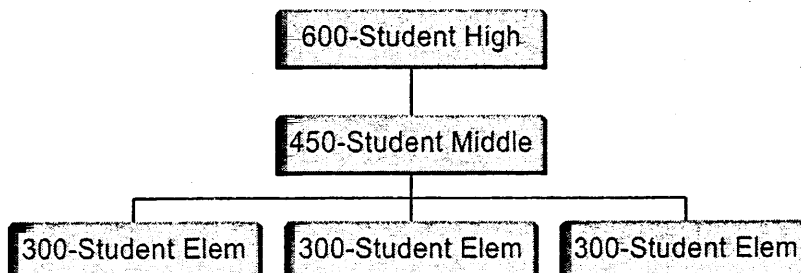
The Diversity – Walkable School Dilemma

Single-Feeder Walkable Systems



Note: Middle and High schools of such small size as shown herein are likely to be too inefficient to construct or operate unless geographically remote.

Three Elementary Feeders



Note: Only the elementary schools are likely to have sufficient walkable population. Achieving diversity in schools, in many cases, appears to be mutually exclusive with

walkable schools. Small walkable schools, by definition, can only serve a single geographically compact community due to walking distance limits. If this community is not diverse, then how can the school, which reflects the community, be diverse?

There is no simple solution to this dilemma. A careful population analysis of a district may reveal areas where diverse populations are adjacent to each other. In that case, it may be possible to locate a walkable school on the border between such neighborhoods and achieve some measure of walkability for the majority of a diverse student population.

Another consideration, especially in more rural areas, is to accept that it may not be possible to establish a 100% walkable school. A reasonable goal may be to strive toward a sizable walkable population percentage and provide transportation for the remainder. The difficult choice for this approach is deciding which group will be bussed and which can walk.

Planning for Smart Growth

What does this mean for schools?

- Involve community stakeholders early and continuously in the planning process for new schools, additions and renovations to improve relations, enhance facility improvements and potentially improve funding.
- Locate schools with and within the urban or community fabric. Avoid developing larger sites with their own self-contained parking lots, drives and extensive, stand-alone playfields. These features contribute to urban sprawl. Make use of existing infrastructure: water, sewer, pedestrian ways, transit systems, parking as well as nearby businesses (food service, office support, etc.) That can provide outside or contracted services & support normally a part of the school. Note that this can be a substantial construction savings also. On-site water and sewer (wells and septic systems) costs have escalated dramatically.
- Design buildings that relate to the existing neighborhood fabric: as close to the street as adjacent buildings for friendliness/urban context.
- Use two or three-story where possible to promote density and reduce sprawl, develop facades/aesthetics that relate to its surroundings yet still say "school".
- Share/make use of other joint amenities: parks, libraries, restaurants, civic facilities, etc. rather than constructing duplicate ones.
- Open the school for other community uses, work out joint use arrangements (including funding) to promote the school as a community center rather than "just a school."

Examples of older small schools in a community setting:

Travel across North Carolina, stop in almost any small town or community, and one can find a good example of older, small school which serves a local, mostly walking community. Historically, this is the way towns and schools developed. The schools were built prior to the two (or more) cars in every household phenomenon and prior to the consolidation movement and widespread bussing. Many of these schools were originally "union" schools and housed the local population all of the way from 1st to 12th grade. With the advent of consolidation, most of these small schools have now been converted to elementary and usually serve a slightly more widespread population. They remain, however, a vital part of community life. Town meetings, social and recreational events are often held at the school with a substantial proportion of the community's adult population making use of the facilities.

New examples of schools with •Smart Growth• principles

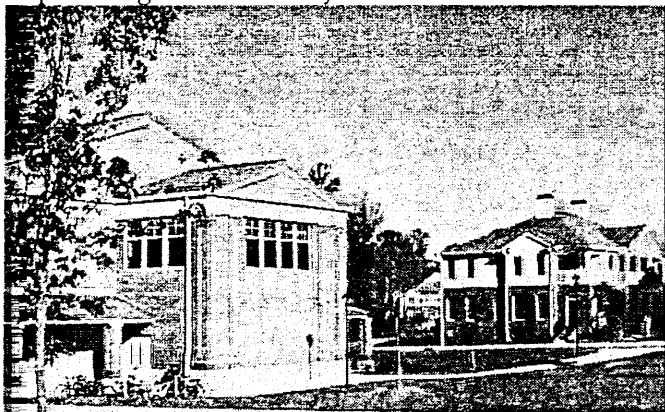
Southern Village (Marie Scroggs) Elementary, Chapel Hill



Southern Village is a "New Town Development" located adjacent to Chapel Hill, NC in which many "Smart Growth" principles were incorporated. It is a planned community with a mix of housing styles/prices (single family, apartments, condos, etc), retail stores, churches, movie theater and other support facilities all located within walking distance in the community itself. A part of this development is a new elementary school. Although not a "small school" (about 600 students), the school does draw from the new community and has a large number of walking/bike riding pupils. As one can see from the photos, the school is located very close to the street and community housing. Several, well-used bike lots are provided for the students. In addition, a privately run day care center is located just next door and the school also operates an after-school program for many of its students. This arrangement is very convenient for care of younger siblings of the school's students.

The site is small (originally six acres) by traditional standards. This was made possible by

reducing the number of busses (more walking students), sharing playfields (an additional six acres) with an adjacent city park, using a partial two-story building and minimal yard setbacks or buffers. The two-story building, coupled with being located very close to the street, increased the apparent density of the community and reduces the impact and cost of providing road and utility infrastructure.



This district is also experimenting with other “Smart Growth” and “Green Building” principles. Under construction is the new Smith Middle School which utilizes natural daylighting, a rainwater collection system and “greywater” for irrigation of the landscaping and playfields. In addition, photovoltaics are being used for demonstration purposes.

Vermillion, near Charlotte, NC., is another “New Town” using “Smart Growth” principles. The pre-existing, Huntersville Elementary is located about $\frac{3}{4}$ of a mile away, within walking distance for many of the new town’s residents. The community has also approached the local school district to plan for a new school to serve the community. The new town comprises about 400 acres, directly adjacent to the town of Huntersville and an old mill, which is planned for adaptive reuse. Shopping, business, recreational and office services are incorporated within the new town development.

Incorporating Sustainability and Green Building Practices into Schools

Most sustainability and green building practices achieve high value because of their benefit to citizens and environment. Appropriate management of stormwater runoff, waste reduction, utilization of renewable resources, pollution reduction, and good air quality make sense, they just have not always been incorporated into traditional design and construction techniques. Now that this movement is receiving national attention, it is fostering widespread development of new and emerging technologies and materials. Those materials and technologies which have yet to establish a track record of long life, durability and ease of maintenance should be used with caution. School buildings, unlike many other building

types, must provide a life of fifty or more years, often with little maintenance and very little funding to correct unforeseen problems.

Many practices are easy to incorporate, are not costly, and add substantial value to our buildings through environmental protection, improvement of the air we breathe, reduction of maintenance, and energy savings (and its accompanying high cost). Refer to the LEED Green Building Rating System, US Green Building Council for a detailed list of potential practices. Some of these principles that are routinely or often incorporated into school design include:

- Stormwater management to reduce/eliminate runoff and/or erosion
- Use of fresh air in the heating and cooling system to reduce indoor pollutants to healthy levels. Install CO2 monitoring devices for performance.
- Select sites and develop within higher-density areas to promote walkable communities and/or take advantage of existing transit systems. Provide/promote biking to school by the use of secured bike lots and safe bikeways.
- Encourage the use of car/van pools by providing more convenient and shorter-wait loading areas separate from the normal drop-off loop.
- Install as much native vegetation as possible. Reduce the need for irrigation through the careful selection of plant material. Investigate the economic feasibility of utilizing stored runoff/greywater for irrigation.
- Do not disturb natural vegetation in critical areas, such as adjacent to streams and wetlands.
- Be sensitive to the use of outdoor lighting to reduce bleed-over on adjacent areas.
- Specify water-saving devices throughout the plumbing system for the building.
- Utilize high-efficiency heating/cooling systems with energy management controls.
- Utilize recycling for reduction of waste. Carry out recycling/waste reduction programs for all portions of the building and all of its users. If cafeteria disposables are used, ensure that they are recyclable.
- Specify salvaged and/or refurbished materials wherever possible. Commonly used examples include carpet, auditorium seating, acoustical ceiling tiles, etc.
- Specify materials that are manufactured locally (to the greatest extent possible and feasible) for the reduction of fuel for shipping.
- Provide more operable and daylight windows for connection to the outdoor environment, air quality improvement and ventilation during comfortable weather
- Investigate and incorporate, where feasible, renewable resources for energy conservation and quality of life, including daylighting, photovoltaics, geothermal heating/cooling systems and the like.

JOINT-USE ARRANGEMENTS

Maximizing school facilities and making them true centers of the community seems to make a lot of sense. It avoids costly duplication of facilities and structures; it allows underused schools to be used many more hours per day and year. Ultimately this has the potential to allow each user to have more and better-equipped facilities. It increases awareness, interest and willingness to fund schools because many, many more citizens will be visiting and using the buildings for their own self-interests. Finally, and perhaps most importantly, true community schools (which also provide other community services) can save local taxpayers significant sums of money, reduce depletion of limited natural resources, and limit sprawl.

This approach to schools and community facilities is not, however, without pitfalls. It is imperative that all of the details for joint/shared use of the facilities be anticipated and carefully resolved. In addition, all of the potential users should take an active role in the planning of the facility and come to the table willing to share in all the costs for design, construction, operation and staffing. Most, but not all of the disadvantages to community/shared use can be overcome by careful planning and invoking a sense of cooperation by the using agencies. When conflicts arise (and they will) each agency must be willing to work together, for the betterment of the entire community, to solve conflicts or problems as they arise.

By far, the most common community use of school facilities by other groups is the use of outdoor athletic facilities. This use is followed closely by the gym and thirdly the auditorium. Potential joint-use agreements include school partnering agencies such as:

- Parks & Recreation: gym and playfields; potentially arts, vocational and multi-purpose rooms
- Public Library: combine with school media center, computer labs, etc.
- Community College: adult education, GED, vocational courses, special interest courses, technology and computer courses
- Parking lots: shared with non-conflicting nearby business or agencies, such as churches, or other after-school-hours businesses.
- Transportation: municipal bus service for student transportation
- Performing Arts Council: auditorium and support spaces
- Health Dept: small clinic
- YMCA: youth athletic programs, summer camp, after/before school programs
- Church Groups: church education, worship
- Eldercare: use of kitchen, certain classrooms, art/activity spaces
- Meals-on-wheels: use of kitchen, loading dock
- Daycare Providers: before/after school, holiday & summer programs

Some Key Considerations:

- Ensure that the type of facility desired by the other agency does not conflict with the needs of the school. Education of students is, by far, the highest priority. Coordination of all aspects of joint-use and their potential conflicts should be resolved in advance. Examples of problems and concerns in this respect include:
 - Construction of only baseball fields at elementary/middle schools: Elementary/middle students need an open, grassy, soccer-sized field for a multitude of different activities; skinned infields and fenced backstops cause problems.
 - Construction of an overly large and elaborate auditorium: Flylofts (with their heavy weights), orchestra pits, etc. are not only hazardous for children but in many cases reduce the effectiveness of the theater and music program for K-12 children. Too many seats in an auditorium result in most school performances being played to a "half-empty house," not a confidence-building event as it should be. Orchestra pits can be hazardous and do not allow children performing there to be seen by their parents and friends.
- Divide cost sharing (construction, operating and repair) based upon use, expense of specialized/extra facilities, etc.
- Which group will use it when -- exclusively or shared -- common or separate times
- How to resolve conflicts over attempts to simultaneously schedule the same-place same-time - who has priority?
- Separate office, storage and other specialized spaces are needed for each agency. Lockable storage needs to be provided in shared spaces.
- Responsibility to clean up/put away stuff after use of a shared space. What happens if it's not done?
- Who handles overall control of facility - who opens/locks up, turns lights and HVAC on/off, cleans, mows, repairs, etc.? Who does it if first choice is sick/unavailable?
- Liability, fire and other insurance for each agency.
- Ability to assess each other for major unforeseen repairs/improvements.
- Approval procedure for changes, modifications, improvements to individual and joint-agency portions of the facility.
- Joint contribution to deferred maintenance fund.
- Who actually owns what or do the county/town fathers own the whole shebang
- Who pays which persons salary? Will similar positions from different agencies receive similar salaries? For instance, will the county librarian earn less than the school media specialist will?
- How will security be handled?
- Ability and method to amend agreement should be worked out.
- Advance divorce agreement and division of assets should be resolved in advance.

Examples of Joint Use Arrangements:

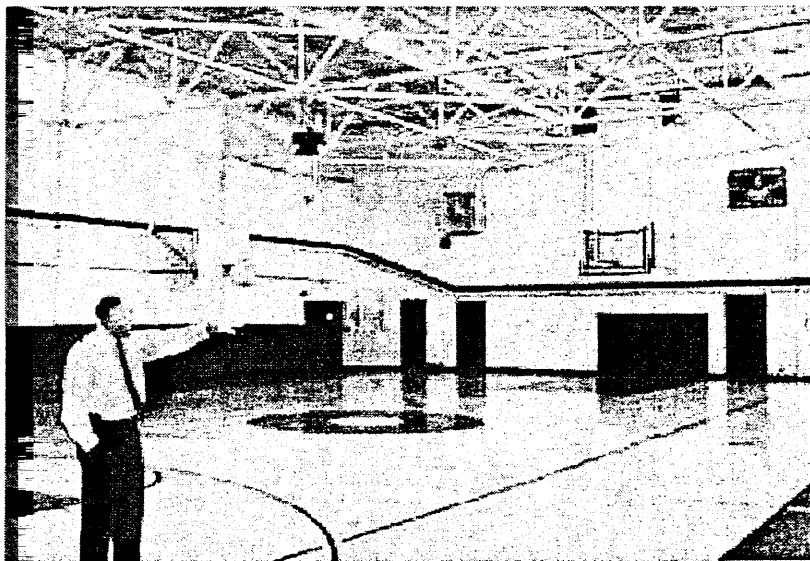
Cumberland County Parks and Recreation and Schools

Cumberland County has developed numerous joint-use projects between schools and parks/recreation facilities. In this county the joint-use has progressed much further than the typical park adjacency model found in most areas. At five+ locations, the Parks Department has made substantial investments (several hundred thousand dollars each) at school-owned sites. In addition, the Parks & Recreation Department has developed indoor facilities either directly adjacent to or connected to the school's gymnasium/indoor athletic facilities.

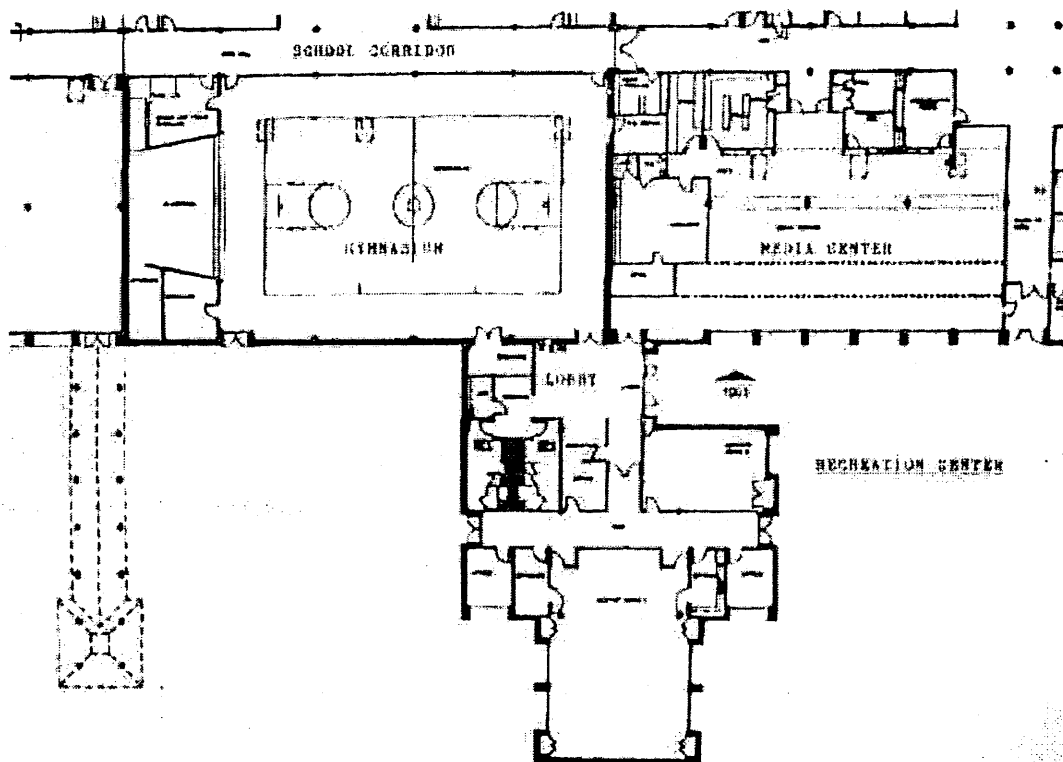
Stedman Elementary School

This is an older school, originally built as a high school, serving a small community. Parks and Recreation was given the 1930s vocational shop building, which they completely renovated, as well as constructing a small addition.

The building is located immediately adjacent to the gymnasium building, which was also renovated. As a result, the facility offers an extensive recreation program during the evenings, weekends and summer vacation, while the elementary school utilizes the gymnasium during the school day. Another plus, the recreation program offers an after-school program



Lake Rim Elementary School & Recreation Center



This is a new school and recreation center joint venture currently nearing completion (the school opened fall of 2000; the recreation center will open mid year). The facility was designed to support independent operation of either the recreation center or the school. When the recreation center is open after school hours, a separate entrance allows the gymnasium and/or media center to be used with the recreation center, yet restricting visitors from entering the school itself.

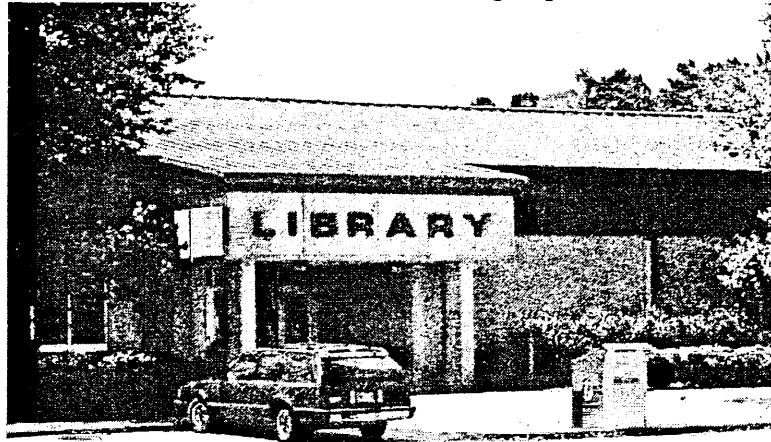


Pamlico County High School: School Media Center/Public Library/Computer Lab

This example is located in rural eastern North Carolina and has been in operation over 20 years (opened in October of 1978). The facility combines a high school media center with a public county library. In addition, a computer lab was constructed and equipped in March of 2000 for use by students during the school day and by the community after school, on weekends and during the summer. Both facilities are well used by the community and school with very little conflict between the two groups. Numerous

factors were observed that may play key roles in the success of this school media center/public library joint-use arrangement. These factors include:

- The library has two main entrances: a direct entrance from the school for students and a separate entrance from the street (with adjacent parking) for public library use.
- The library is staffed by both school media personnel and public library personnel, each with their own budget for purchasing materials and staff salary. Both senior staff members are committed to the success of the joint facility and work together to avoid duplicating material and to ensure that good materials for both groups are available.
- The facility is open for extended hours beyond the school day, including evenings and weekends.
- A formal written agreement was developed and executed prior to the establishment of the facility. A joint board of directors was established whose primary interest is that of the success of the joint facility. The Board meets regularly to oversee the operation.
- The facility is well equipped/supplied with books and media material useable and desirable by both the school and community.




The joint school/community computer lab is a separate operation from that of the public library/school media center. It was constructed and is staffed and funded as a separate entity. During the school day, it is only available for student use. After school hours and weekends it is available for public use. Although only several months old when visited, it is experiencing good use by both the school and community. To date, community use has been primarily in the following areas:

- Basic computer use and operation. An interesting aside: after basic instruction, and when the more affluent adult user appears to have gained confidence, they rarely return. It is presumed that they have purchased and installed their own home computers.
- Internet job search and word processing of resumes.
- Internet access by community users for research, e-commerce, on-line banking and other tasks.
- E-Mail. Users are typically shown how to establish a free e-mail account.
- Basic computer program use: word processing, spreadsheets, etc.

Pamlico School - Community Technology Center

- 25 - 450 MHz Pentium
- 311 Computers
- Laser printer
- Color Printer
- Scanner with slide
- adapter
- T-1 connection
- Friendly assistant B-I



Summer Hours

Mon & Wed.	2:00-5:45 pm
Tues. & Thurs.	2:00-7:45 pm
Friday	2:00-5:00 pm
Saturday	9:00-11:45 am

Both of the Pamlico County facilities appear to work very well. Obvious contributing factors to this success are that the community is relatively small and that the sense of cooperation between agencies is very high. Although not necessarily a contributing factor, only one high school and one library exist for the entire county. This is the only choice available to the community for these services without travel to another county.

When planning a joint school/community library, it must be recognized that the collections for each are considerably different (the adult fiction and reference collection is significantly larger). Extra space for the collection and support areas, as well as convenient after-school-hours access, must be included in the initial planning.

Other Examples of Joint-Use Public Libraries/School Media Centers:

Athens Drive High School – Wake County Public Schools

A large high school in an urban area that operates an extensive evening adult/community college program as well

McDougle Elementary/Middle Schools – Chapel Hill-Carrboro Public Schools

Library open two nights per week and weekends

Typical schools located in a very community-conscious community

Ocracoke K-12 School – Hyde County Public Schools

A remote school serving a small community

Princeton K-12 School - Johnston County Public Schools (currently under conversion)

A small school serving a close-knit community

First Flight & Cape Hatteras Elementaries – Dare County Public Schools

Remote schools serving smaller remote communities

Recycling Older Small, Community Based Schools for Continued Educational Use

When evaluating older schools for continued educational use, two major areas of concern must be considered:

1. Function:

Can the building be effectively renovated and modified to function appropriately using current and anticipated educational teaching methods?

- Older classrooms are often only 650-700 square feet and only 20 to 22 feet wide. Can they be economically enlarged and/or widened to present-day 900-1200 square feet for elementary and kindergarten use?
- Will remodeling to new room sizes and configurations result in very few useable classrooms and extraordinary amounts of "leftover spaces," resulting in high operational costs and poor building efficiency?

2. Condition

- Is it economically feasible to renovate the building's major structural, fire safety, waterproofing, envelope, mechanical, electrical and other systems? How good or poor of a condition are they in?
- Does the building's site allow safe expansion of the overall facility? Is there space enough for all the needed playgrounds, parking, drives, bus lots, etc. that we seem to need today?

Many school districts have established standard school capacity sizes (i.e. all elementary schools sized to accommodate 500 students). Many older schools are constructed of load bearing masonry walls. Because of this factor, coupled with the higher construction cost for large open areas, it will often be cost-prohibitive to attempt to enlarge the core spaces (cafeteria, multi-purpose/PE room, media center) . A more cost-effective

approach is usually to accept the school as a "small" school and make improvements as necessary for function, updated infrastructure and life-safety.

Recycling Older Small Schools for New Community Uses.

Sometimes, older schools have simply outlived their usefulness *as a school*. However, it is very important to keep in mind that just because the facility may not be a good candidate for reuse as a school does not mean that it could not be economically renovated for another use. Housing for the elderly, civic centers, governmental office space, retail and myriad other uses are possible.

Most notably this occurs for one or a combination of several reasons that include:

- The estimated cost to remodel the facility to current educational needs and standards approaches or exceeds the cost of a new facility. Many older schools were designed and built to fulfill a completely different educational style and often a different age group than current needs. Many older buildings that now house elementary programs were originally built as small union (first through twelfth grade) schools for a small community.
- The building's condition, design or construction technique makes remodeling costs prohibitive.
- The facility is too small to operate economically and the site is too constrained to allow sufficient expansion or current requirements.

Small and Urban Site Strategies

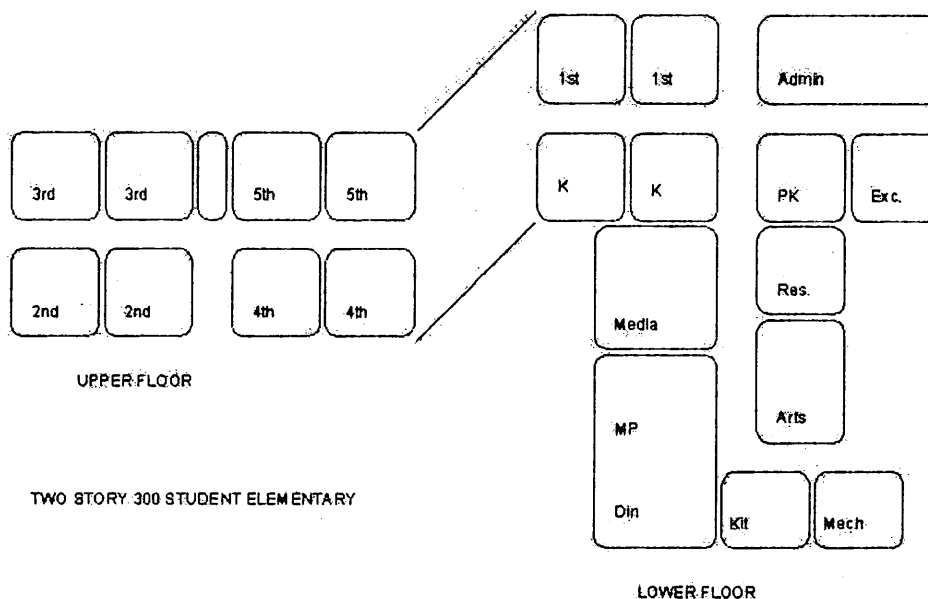
Increase the Density of Development

This strategy involves reducing open space around buildings, drives and other site improvements. Locate buildings closer to the street, provide limited "yard" spaces between buildings and drives and generally push everything closer together. This strategy reduces overall acreage requirements, enhances the urban image of the facility and reduces walking time and distance. Another advantage to this approach is that the building generally feels friendlier because of its proximity to the street and invites interaction between users and passersby.

Design a Compact Building

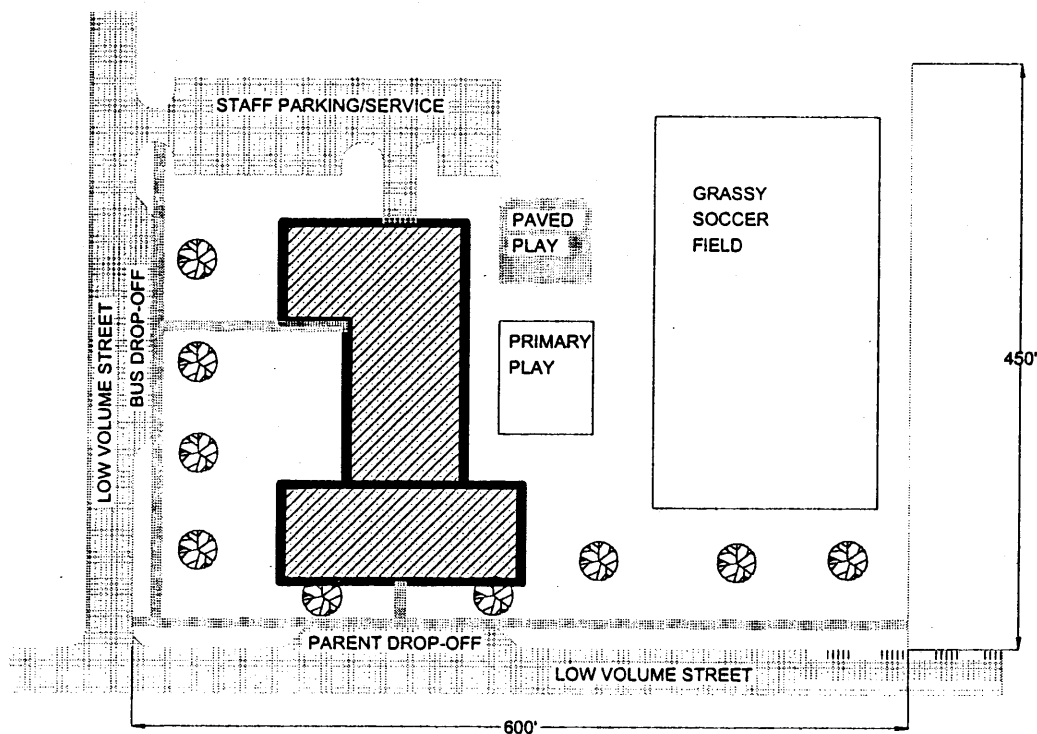
Compacting the development involves a building approach in which sprawling or campus types of buildings are discouraged. Two and three-story buildings are encouraged, where feasible. Floor plan schemes should avoid long, widely spaced wings, have very efficient circulation systems and locate spaces that don't need outside windows or doors on the interior of the building. Rooms that are or can be rectangular should be located with their short dimension on the corridor so that the building length is reduced.

The example below shows a small elementary school for about 300 students. A two-story solution is shown for classroom areas, with kindergarten and first grade located on the first level as required by building code. To improve flexibility, one may also wish to include some or all of the second grade classrooms (for conversion to a lower grade) on the first level so that a larger-than-normal kindergarten or first grade population can be accommodated.



Strategies for Reducing School Acreage

- Consider remote (off-site) staff parking
- Bus loading/parent drop-off on low-traffic, one-way or closed street
- Provide minimal outdoor play consisting of a large, soccer-sized grassy field (elementary & middle schools), a primary grades play equipment lot, and a paved play area (use bus loading lot if no day bus parking)
- Possibly share play areas with adjacent park (maybe gym too)
- Share parking lots with an adjacent user whose parking need does not conflict with school use (churches, movie theaters, etc.)
- Contract with municipal/other bus system to provide student transportation where bus routes cover similar territory.



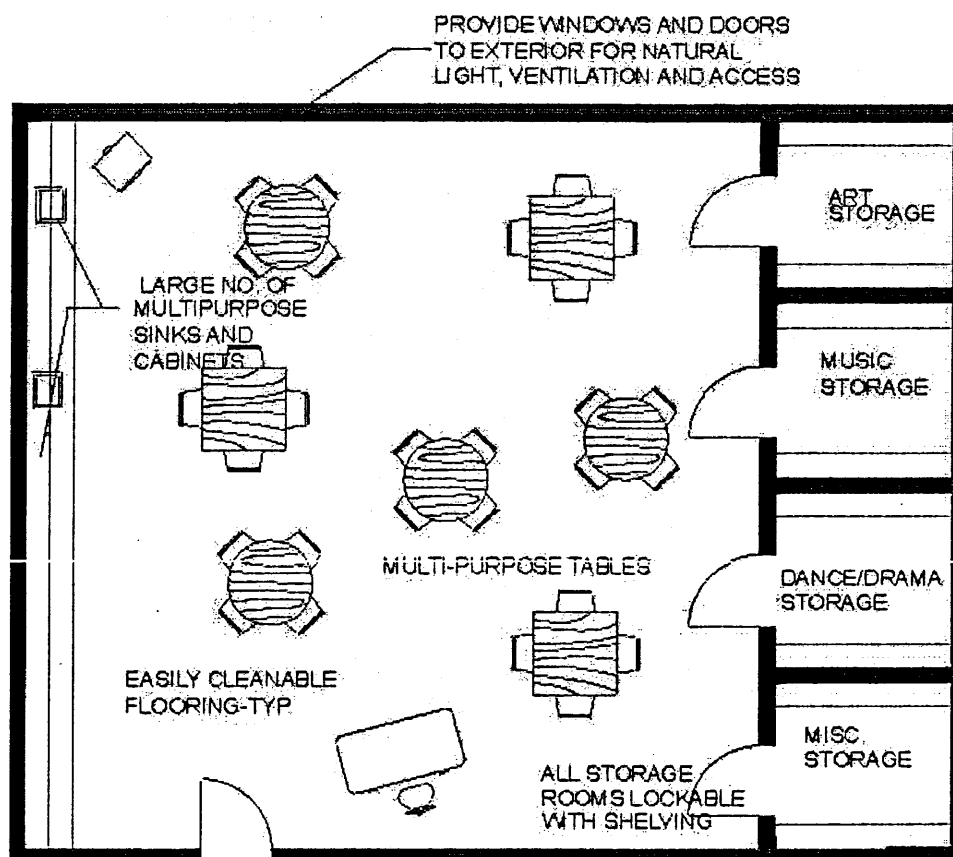
300 STUDENT ELEMENTARY ON A SMALL, 6 ACRE, URBAN SITE
(Assumes that entire site is "buildable" and relatively level)

Small Elementary School Building Strategies

Shared Multi-Purpose Classroom

Rather than construct separate classrooms for programs that aren't used every day, all day long, share a single multi-purpose classroom for art, music, resource, etc. with lockable storage for each program.

A single 1,000 square foot classroom equipped with several sinks and a variety of casework and adjacent 80-120 square foot storage rooms for art, music and any other special programs could suffice for a small student population. Teachers would be itinerant (serving several schools) and may need a remote office for records, paperwork, etc when the classroom is used by another program. Before proceeding with this approach, it will be necessary to calculate the number of each program classes that will be needed to serve the school population and schedule each teacher and program to ensure that the classroom is available .



MULTI-PURPOSE CLASSROOM

Shared PE and Multi-Purpose Programs

This is a similar strategy to the one previously described, except rather than constructing both a PE space and a multi-purpose classroom, this strategy would use the same space for all of these programs. A single 3600-4000 PE and multi-purpose space plus separate storage rooms for each program (art music, drama, PE, etc.) would be required.

Rather than constructing separate classrooms for programs/curricula that are not taught every day, or all day long, construct one large multi-purpose room than can be used by as many of those programs/curricula as can be scheduled into the space. This will require a detailed analysis of each curriculum (such as PE, art, music, drama, etc.), the number of hours it will need to be offered to serve the entire school, and comparison to the number of hours that the space will be available.

Flexibility in Classroom Design

All classrooms 1000 sf (useable for all of K-5)

In small schools, "bubbles" of certain age groups can cause problems. In some years three full-size first grade classes may be needed while only one fourth grade is necessary. This "bubble" of same-age children will advance through the grades each year, sometimes requiring a complete additional class and other times a mixed grades class. Designing each classroom as grade specific puts restrictions/difficulties on using that classroom for other ages. Having all classrooms of similar size, with multi-height countertops, will improve flexibility. Perhaps a larger-than-normal number of primary classrooms could be equipped with self-contained toilets (1/3 to 1/2 of the classrooms, rather than just kindergarten) and be located on the ground level to meet building code egress requirements.

PE/Multi-Purpose/Dining (Cafetorium, Audnausium, etc.)

With a small school, the multi-purpose room has much less demand load for PE activities. Efficient scheduling and the use of rollaway tables can allow quick set-up/take-down of dining seating for morning and afternoon use of space for PE or other activities.

Catered Kitchen

The use of remote cooking (perhaps at the nearest high school or contracted with an adjacent restaurant), delivery trucks equipped with warming racks, and a minimal warming kitchen could save significantly on space and the very high initial cost to build and equip kitchens.

Small Middle School Strategies

Middle schools are usually less efficient than elementary or high schools. "Homeroom" or "core" classrooms (language arts, social studies, math and science) are usually empty of students for two or more periods a day when the students from that team are attending classes in PE, technology, music, art or other electives. In order to improve the building's efficiency (and subsequently reducing building area and construction cost):

Expanded Use of Core Classrooms

Design and equip science rooms for exploratory pre-vocational double use. Provide the storage, casework, and equipment needed for both courses. Design and plan for the other core classrooms to be used for other elective courses. Provide separate teacher planning offices rather than have teachers use a classroom for planning.

Shared Multi-Purpose Classroom

Provide a single multi-purpose classroom for art, music, resource, etc., with separate storage room or casework for each program. This is similar to the elementary school approach.

Grade Reorganization

Consider a different school grade structure by including middle school students within the elementary or high school facility (a K-8 or 6-12 school) so that some or all of the very expensive core spaces can be shared. These spaces include administration, guidance, PE/gym, cafeteria, kitchen, media center, art and general music.

Shared Inter-Scholastic Outdoor Athletic Facilities

Rather than construct competition athletic facilities at each school that are only used a few times a year, construct a single multi-purpose practice field instead than can accommodate all team sports. Construct a single competition complex at a remote site that can be used by the all of the schools of this grade level in an entire school district or conference. By scheduling an early and late game on both Friday and Saturday, a single field with one set of bleachers and one concession/toilet facility could serve up to eight schools (four games per week).

Small High School Building Strategies

Shared Inter-Scholastic Outdoor Athletic Facilities

Similar to, but perhaps more extensive than the approach for middle schools, several high schools, or even an entire district or conference, could share football and baseball stadiums, as well as a competition gymnasium with a large seating capacity. Competition athletic facilities are one of the most expensive and land-hungry facilities associated with high schools. From an economic standpoint, it is difficult to justify a 4,000-seat stadium, complete with concession stands, very large restroom facilities, lighting and other amenities, that is only used for four or five games a year. Likewise, providing seating for 2,000 or more at an indoor gymnasium significantly increases the size and cost of providing a physical education program. Multi-purpose practice fields would still be needed at or adjacent to each school, but these fields can be significantly less elaborate and do not necessarily even need to be full-sized.

Shared Specialty Course Classrooms

For courses that need to be offered, yet receive relatively low enrollment, consider constructing flexible, multi-purpose spaces that can accommodate each of those courses. During the planning phase, the specific spatial and equipment needs for each potential course/program should be identified and noted. The ensuing design for the space should incorporate the amenities needed for each program, as well as separate, lockable storage for each program. Although the ensuing multi-purpose classroom, with its multiple storage rooms, will occupy more space than a "standard" classroom, the overall space constructed will be far less than building three or more separate, stand-alone classrooms. Certain workforce development courses, specialty science or arts courses, and many others may have a potential for sharing of spaces. For instance, earth science and agriculture and perhaps even photography could utilize a single well-equipped classroom.

Career and Enrichment Centers

Several school districts have established central career or enrichment centers serving the entire district, rather than duplicating these spaces and staff at each school. Typically, these central, specialized schools do not serve a base population, but rather serve all of the schools in the district. Basic, core and introductory courses are taught at each school, but for high-level or specialized courses that typically have small enrollments, the spaces and courses are taught at a remote, centralized site. Courses such as Latin IV, calculus, cosmetology or auto body repair can be offered at several times with full enrollment when students are drawn from several schools. These students may attend their home school during the morning, then ride a shuttle bus to the career and enrichment center for specialized courses for a couple of hours in the afternoon.

Teacher Commons Offices

This is a strategy that increases the efficiency of a high school building and can be used to reduce the number of classrooms required, rather than the usual increase in the number of students the facility can accommodate. The concept is based upon the

college model for assignment of classrooms. In this model, each instructor is assigned an office space consisting of a desk, limited storage and a telephone, along with access to duplicating equipment and other office machines. Usually, large common office areas are established at key locations, either geographically, by department or a combination with individual cubicles for each teacher. General classrooms are assigned for a specific class, rather than a specific teacher. One period may be for English 10, the next for French 1, and the next for algebra. Different teachers use the same classroom each period so that as many classrooms are used for as many periods as possible, rather than have an "empty" classroom during a teacher's planning and lunch periods. By simply maximizing the use of all classrooms, fewer classrooms are required, which substantially offsets the space allocated for the teachers' offices.

Operation Strategies

Year-Round Schools

Year-round, multi-track operation of schools is another way to increase the efficiency of a facility. By increasing the efficiency of a building, the number of students it can accommodate is increased, or conversely, a smaller building can accommodate the same number of students and the building cost per student is more economically feasible. The typical 45/15, four-track calendar of year-round schools increases the buildings enrollment by about 25% over a traditional calendar. Each track's calendar is staggered from the others and is in school 45 days, then off 15 days (see sample calendar from Wake County Public School System). For a truly small school, this approach will require careful design and planning; each classroom must be more flexible than usual because the same classroom may need to serve different grades during different tracks.

The disadvantages of year round schools should also be considered. The normal summer vacation will no longer be available for major maintenance tasks, and because of the increased number of students, the building will receive harder wear and may experience a shorter life. Another major factor is that some of the personal interaction between students and staff will be reduced due to the overall larger number of students being served by the same principal and administrative staff.

2000-2001 YEAR-ROUND SCHOOL CALENDAR

45/15 MULTI-TRACK SCHEDULE

WAKE COUNTY PUBLIC SCHOOL SYSTEM

☒ TRACK 1 ☒ TRACK 2 ☐ TRACK 3 ☒ TRACK 4 ☐ WEEKEND ☐ STUDENT HOLIDAY

JULY							AUGUST							SEPTEMBER						
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31					29	30	31				

OCTOBER							NOVEMBER							DECEMBER						
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31					29	30	31				

JANUARY							FEBRUARY							MARCH						
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31					29	30	31				

APRIL							MAY							JUNE						
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31					29	30	31				

If for any reason the school district must close schools, this adopted 2000-2001 year-round calendar may be amended by the Board of Education to provide additional school days on Saturdays or during vacations to meet legal requirements. Extended learning time will be determined at individual schools. There will be a 2-hour delay on Tuesday, November 7, 2000 (Election Day).

Double Shift/Overlapping Schedule Schools

By operating a school on a double, overlapping shift schedule one can also increase the efficiency of a facility. Once again, with this higher efficiency, a smaller building can accommodate the same number of students and the building cost per student is more economically feasible. This can be accomplished by using a time shift overlap during elementary or middle school electives/non-core classes. In this way, the same group of classrooms can be used by two different tracks of students.

	8	9	10	11	12	1	2	3	4
Track A	Core/Basics				Arts/PE		Out		
Track B	Out		Arts/PE		Core/Basics				

Using this oversimplified model, Track A uses the regular academic classrooms during the morning and Track B uses the same classrooms during the afternoon. During the overlap time, one of the two tracks is attending arts, lunch or PE in a different space. A careful analysis of proposed student populations and scheduling for all classes must be performed to ensure that each child will be offered the opportunity to participate in all programs.

Double shifting will have similar disadvantages to year-round school facilities, except the personal interaction between students and administrative staff will be further reduced due to the larger increase in number of students. Maintenance could still occur during summer vacations as with traditional schools.

Staffing Strategies

Itinerant Teachers and Staff

When operating small schools, it is obvious that providing full-time teachers, especially for enrichment and resource programs, is simply not possible. These teachers must serve multiple schools, either by spending a part of each day at each school or by rotating days between different schools (or some combination thereof). This is quite commonplace, especially for such programs as arts, music, PE and various resource programs (Title I, AIG, etc.) in elementary schools and even in middle or high schools where limited enrollment in specialty courses occurs. What is not as common a strategy is to use itinerant administrative staff or itinerant basic/core teachers.

Itinerant teachers need a space to perform planning, make phone calls and store materials, preferably in each school. One possible solution is to provide an "open" office area with cubicles for each (or even shared) itinerant staff member. Teaching can then occur in a shared, multi-purpose classroom.

Opportunities also exist for sharing administrative and guidance staff between several

small schools. Some of these staff members could also be stationed at one school and linked electronically to one or more other schools. This is especially true with SIMS operators, administrative assistants, bookkeepers, secretarial and clerical personnel. Custodial staff can rotate among several smaller schools, as could assistant principals, guidance, media specialists and technology staff.

Other Approaches

School Within a School

A number of school districts have subdivided large schools into several small "schools-within-a-school." An excellent definition of this arrangement follows.

"A school-within-a-school is a separate and autonomous unit formally authorized by the board of education and/or superintendent. It plans and runs its own program, has its own staff and students, and receives its own separate budget. Although it must negotiate the use of common space (gym, auditorium, playground) with a host school, and defer to the building principal on matters of safety and building operation, the school-within-a-school reports to a district official instead of being responsible to the building principal. Both its teachers and students are affiliated with the school-within-a-school as a matter of choice"⁵

Schools-within-a-school have typically been done in an effort to improve student achievement and/or school climate and order. The concept is that by breaking down a large school into smaller groups, it will foster more interaction and "closeness" between individual students, their teachers and others, similar to that found in a stand-alone small school. Definitive results on the success of this approach are not yet available; however, research from various sources seems to indicate that effectiveness of this solution relies on several key factors:

- Each "sub-school" should be completely autonomous with its own separate principal and administration, its own budget, teachers and staff, interscholastic and extracurricular activities.
- As much separation as possible (physical and social) should be incorporated between each "sub-school"
- Each "sub-school" should have its own physical and perceived identity.
- As few shared spaces between "sub-schools" as possible should be included.
- There is some "upper limit" on how many students can physically be located on one campus and still expect to see positive results.

Similar strategies have been around for some time. "Teaming," "houses" and grade-wing separation are all commonly in use as means of breaking down larger schools into more easily managed components or as an attempt to improve closeness and interaction. With this approach, however, the overall facility usually retains its identity as one large school and non-core programs or courses are usually shared among all groups.

⁵ Raywid, A. A. (1995). The subschools small schools movement--taking stock Madison, WI: Center on Organization and Restructuring of Schools. (ERIC Document Reproduction Service No. ED 397 490)

The concept of "schools within a school" could also be combined with that of a year-round or double-shift school. In this instance, each track could be established as a separate school as an alternative method of subdivision.

Distance Learning/Technology

The use of technology and the concept of distance learning can be an effective method of enhancing and enriching the educational opportunities for a small school. Where enrollment in a specialty or advanced course is too limited in a small school to justify the teaching of that course, distance learning can be used to gather sufficient students from a number of remote sites for instruction. This system uses cameras, microphones and other technology from each site so that the teacher and each participant has the opportunity to see and hear all of the other participants, regardless of where they are located. A technology staff member is usually required to monitor each site and operate the equipment. This staff member can significantly reduce efficiency; however, future improvements in technology such as individual PC-based tools may reduce this need as well.

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Projected Capacity for a Merged Orange County School System

ATTACHMENT G

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
CHCS														
Capacity - 100% Level of Service	4,302	4,302	4,302	4,921	4,921	4,921	5,521	5,521	5,521	5,521	5,521	5,521	5,521	5,521
105% Level of Service	4,517	4,517	4,517	5,167	5,167	5,167	5,797	5,797	5,797	5,797	5,797	5,797	5,797	5,797
Membership	4,444	4,474	4,551	4,745	4,925	5,083	5,235	5,405	5,498	5,585	5,673	5,761	5,844	5,928
Available Capacity	73	43	(34)	422	242	84	562	392	299	212	124	36	(47)	(131)
ORANGE														
Capacity - 100% Level of Service	3,820	3,820	3,820	3,820	3,920	3,920	3,920	3,920	3,920	3,920	3,920	3,920	3,920	3,920
105% Level of Service	4,011	4,011	4,011	4,011	4,116	4,116	4,116	4,116	4,116	4,116	4,116	4,116	4,116	4,116
Membership	3,078	2,893	2,901	2,922	2,954	2,962	3,017	3,067	3,110	3,154	3,199	3,244	3,290	3,336
Available Capacity	933	1,118	1,110	1,089	1,162	1,154	1,099	1,049	1,006	962	917	872	826	780
MERGED														
Capacity - 100% Level of Service	8,122	8,122	8,122	8,741	8,841	8,841	9,441	9,441	9,441	9,441	9,441	9,441	9,441	9,441
105% Level of Service	8,528	8,528	8,528	9,178	9,283	9,283	9,913	9,913	9,913	9,913	9,913	9,913	9,913	9,913
Membership	7,522	7,367	7,452	7,667	7,879	8,045	8,251	8,472	8,608	8,739	8,872	9,005	9,134	9,264
Available Capacity	1,006	1,161	1,076	1,511	1,404	1,238	1,662	1,441	1,305	1,174	1,041	908	779	649

Middle

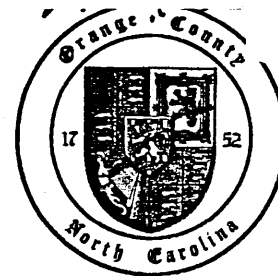
School Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
CHCS														
Capacity - 100% Level of Service	2,108	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840	2,840
107% Level of Service	2,256	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039	3,039
Membership	2,326	2,540	2,608	2,687	2,712	2,783	2,883	2,954	3,077	3,197	3,337	3,390	3,445	3,499
Available Capacity	(70)	499	431	351	326	255	156	84	(39)	(158)	(298)	(352)	(406)	(460)
ORANGE														
Capacity - 100% Level of Service	1,466	1,466	1,466	1,466	1,466	1,466	2,166	2,166	2,166	2,166	2,166	2,166	2,166	2,166
107% Level of Service	1,569	1,569	1,569	1,569	1,569	1,569	2,318	2,318	2,318	2,318	2,318	2,318	2,318	2,318
Membership	1,504	1,527	1,631	1,638	1,597	1,590	1,581	1,587	1,596	1,611	1,643	1,666	1,690	1,715
Available Capacity	65	42	(62)	(69)	(29)	(21)	736	731	722	706	675	651	627	603
MERGED														
Capacity - 100% Level of Service	3,574	4,306	4,306	4,306	4,306	4,306	5,006	5,006	5,006	5,006	5,006	5,006	5,006	5,006
107% Level of Service	3,824	4,607	4,607	4,607	4,607	4,607	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356
Membership	3,830	4,067	4,239	4,325	4,310	4,373	4,464	4,541	4,673	4,808	4,980	5,057	5,135	5,214
Available Capacity	(6)	540	368	282	298	234	893	815	683	548	377	300	221	143

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
CHCS														
Capacity - 100% Level of Service	3,035	3,035	3,035	3,035	3,035	3,035	4,035	4,035	4,035	4,035	4,035	4,035	4,035	4,035
110% Level of Service	3,339	3,339	3,339	3,339	3,339	3,339	4,439	4,439	4,439	4,439	4,439	4,439	4,439	4,439
Membership	2,815	2,963	3,162	3,250	3,425	3,552	3,629	3,719	3,790	3,889	3,981	4,159	4,310	4,447
Available Capacity	524	376	177	88	(87)	(214)	810	719	648	550	458	279	129	(9)
ORANGE														
Capacity - 100% Level of Service	1,518	1,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518	2,518
110% Level of Service	1,670	1,670	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770
Membership	1,672	1,753	1,828	1,868	1,926	1,958	1,950	1,952	1,957	1,912	1,915	1,938	1,942	1,980
Available Capacity	(2)	(83)	942	901	843	812	820	818	813	858	855	832	828	790
MERGED														
Capacity - 100% Level of Service	4,553	4,553	5,553	5,553	5,553	5,553	6,553	6,553	6,553	6,553	6,553	6,553	6,553	6,553
110% Level of Service	5,008	5,008	6,108	6,108	6,108	6,108	7,208	7,208	7,208	7,208	7,208	7,208	7,208	7,208
Membership	4,487	4,716	4,990	5,119	5,352	5,510	5,578	5,671	5,747	5,801	5,895	6,097	6,252	6,427
Available Capacity	521	292	1,118	990	757	599	1,630	1,537	1,461	1,407	1,313	1,112	957	781

MARGARET W. BROWN, CHAIR
ALICE M. GORDON, VICE CHAIR
MOSES CAREY, JR.
STEPHEN H. HALKOTIS
BARRY JACOBS

ORANGE COUNTY BOARD OF COMMISSIONERS
POST OFFICE BOX 8181
200 SOUTH CAMERON STREET
HILLSBOROUGH, NORTH CAROLINA 27278



April 29, 2003

Mr. Michael Nelson, Mayor
Town of Carrboro
300 West Main Street
Carrboro, NC 27510

Dear Mayor Nelson:

We understand that the Board of Aldermen is wrestling with some Schools Adequate Public Facilities Ordinance (SAPFO) concerns prior to making a final commitment to participation in the system. Some of those concerns are specifically laid out in your letter of February 11, 2003. Others have been outlined for us by County Planning Director Craig Benedict, who we understand participated in your discussion of this topic at one of your February 2003 meetings.

Carrboro noted concerns that high school student membership figures have recently been projected several years down the road to exceed the 110 percent level of service and that situation might lead to a de facto residential construction moratorium. I understand that during the past two months, a working group of managers, attorneys, and planners has developed a proposal that would temporarily suspend the adequacy test for new high school space in the Chapel Hill-Carrboro system. That arrangement would be very similar to the approach taken to deal with the potential for an upfront moratorium at the middle school level within the Orange County Schools system. I have been told that the attorneys for our jurisdictions are collaborating to produce the appropriate implementing documents for consideration by all SAPFO partners.

I also understand that some concerns have been raised about the possible need for an additional middle school within the Chapel Hill-Carrboro system sometime towards the latter part of this decade, and that such a facility was not included in the County's 2002-2012 CIP. You will note from the attached excerpt that CHCCS has included in their recently submitted CIP for 2002-2013 a request for funding for a new middle school that would open in August 2008. Although that project is currently unfunded, I can assure the Board of Aldermen that funding for any new school required under SAPFO will be provided in a timely way. The precise funding mechanism – whether general obligation bonds, private placement, or certificates of participation, for example – is not specified now because it would be premature to do so. However, the County's adopted CIP will reflect the need for the facility and a commitment to fund it when the time comes through the most appropriate mechanism(s) at that time.

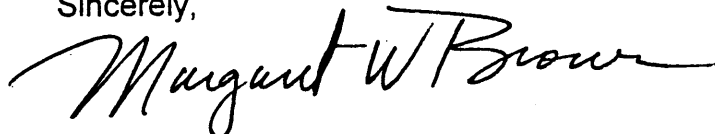
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Finally, I understand that the same working group has discussed a number of concerns about the mechanics of administering the Certificates of Adequate Public Schools (CAPS) system. I am pleased with a report I received that indicates our staffs believe they have general consensus on how to resolve those concerns so that we may all move forward with SAPFO implementation.

I hope that this letter helps to address Carrboro's concerns. Please let me know if you have additional questions or need further clarification.

Sincerely,

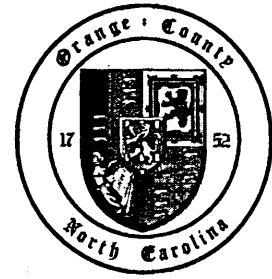
A handwritten signature in black ink, reading "Margaret W. Brown". The signature is fluid and cursive, with the first name "Margaret" being the most prominent part.

Margaret W. Brown, Chair

cc: Chapel Hill-Carrboro Board of Education
Chapel Hill Town Council
Hillsborough Board of Commissioners
Orange County Board of Education

MARGARET W. BROWN, CHAIR
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ORANGE COUNTY BOARD OF COMMISSIONERS
 POST OFFICE BOX 8181
 200 SOUTH CAMERON STREET
 HILLSBOROUGH, NORTH CAROLINA 27278



MEMORANDUM

TO: *The Orange County Board of Commissioners*
The Honorable Mike Nelson, Mayor, Town of Carrboro and Board of Aldermen
The Honorable Kevin Foy, Mayor, Town of Chapel Hill and Chapel Hill Town Council
The Honorable Valerie Foushee, Chair, Chapel Hill-Carrboro Board of Education and Board Members
The Honorable Joe Phelps, Mayor, Town of Hillsborough and Board of Commissioners
The Honorable Brenda Stephens, Chair, Orange County Board of Education and Board Members

FROM: *Margaret Brown, Chair, Orange County Board of Commissioners*

DATE: *June 16 2003*

SUBJECT: *Schools Adequate Public Facilities Memorandum of Understanding and Ordinance (JUNE 2003 REVISED)*

COPIES: *Schools and Land Use Councils Members, School Facilities Task Force Members, School Superintendents, County and Town Managers, Attorneys, Planning Directors*

On December 10, 2002 the Board of County Commissioners (BOCC) unanimously recommended approval and forwarding of the Schools Adequate Public Facilities Memorandum of Understanding (MOU) and model Ordinance (Schools APFO) to the respective local governments and school boards. There have been a few revisions since then, prepared by a group of Planning Directors, Attorneys, School Representatives (PDASR), to address recent issues (since late February of this year), which are explained herein. The four-year process of developing these documents has been an important and progressive collaboration of many parties to create a policy and ordinance that will help maintain the high quality of education that serves as a linchpin to the quality of life in Orange County.

The amendments are minor and an item by item annotation of these changes are enclosed. (See Enclosure No. 1 entitled "Explanation of Revisions to the Schools Adequate Public Facilities Memorandum of Understanding and Ordinance" from the June 4, 2003 Planning Directors, Attorneys, School Representatives work group)

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Amendments

Over the past eight months, these two documents were amended from the earlier drafts of the Schools and Land Use Councils (SLUC) (November 14, 2001 approval and February 8, 2002 transmittal) and the School Facilities Task Force (SFTF). The amendments, drafted to address comments from various public hearings, are summarized below.

Some recent comments that were previously addendums are now incorporated into the Memorandum of Understanding or were resolved by a previously sent letter of explanation (i.e., long range school CIP commitments letter of April 29, 2003). Certain changes affect both district's MOU's and some are specific to the district.

1. Permit a more extensive review process when evaluating updated School APFO elements each year (both district MOU's).
2. Additional emphasis on CIP development (both district's MOUs).
3. 'Suspension' of adequacy test (for Certificate of Adequate Public Schools [CAPS]) at Orange County Middle School level until new Middle School opens (CIP planned for 2005-06) (Orange County School District only).
4. 'Suspension' of adequacy test (for Certificate of Adequate Public Schools [CAPS]) at Chapel Hill/Carrboro High School level until new High School opens (CIP planned for 2006-07) (Chapel Hill/Carrboro School District only).
5. Clarification of the historical membership projections that are used in the CIP process and housing development Student Generation Rates projections that are used in the CAPS system.

Transmittal of Documents

Accompanying this memorandum are the following documents:

1. **Schools Adequate Public Facilities Memorandum of Understanding and Model Ordinance** (*Revised by County Attorney after PSASR workgroup collaboration on 6/4/03*
[Attachment A - base MOU and Ordinance]
Amended by addendum (attachments A1 and A2 below)
[Attachment A1 - applies to the Chapel Hill/Carrboro School District Area]
[Attachment A2 - applies to the Orange County School District Area]

The MOU includes all of the general understandings used in the proposed implementing model ordinance (Schools APFO). There are three base and four annual elements of the MOU that need to be accepted prior to ordinance adoption to provide the technical basis and resulting methodology for the Schools APFO system. These elements are listed in Section 1b and 1c of the MOU and were likely previously approved by the various parties.

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Adoption and Implementation

There are only minor changes to the Schools Adequate Public Facilities MOU and model ordinance documents. The approval process may or may not include an additional public hearing and adoption meeting for the actual ordinance by local governments (but local governments may process these new amendments accordingly). The MOU minor changes and implementing ordinance can be evaluated in one process, since it is anticipated that the MOU could be approved with the chosen seven elements (in Section 1b and 1c) prior to or together with the adoption of the ordinance. It is suggested that the time for implementing the ordinance be July 15, 2003. This time frame would allow time for the necessary preliminary work and approvals. All parties, to my knowledge, are working these amendments into their agenda schedule prior to that time.

Craig Benedict, Orange County Planning and Inspections Director (and one of the PDASR work group team members that included your attorney and planning director or other representative), is available to meet with you or your board to answer questions as the public hearing and adoption process continues. They can also explain the ongoing preliminary work necessary for implementation.

Conclusion

The preparation of the Schools Adequate Public Facilities MOU and model Ordinance represents a major effort of many elected officials, contributing boards, committees, and work groups. There have been many benefits already from improved data standardization, collection, and reporting and from cooperative planning and discussion among all the parties. The proposed ordinance can help us ensure that our school construction keeps pace with our rapid growth, so that our children can be educated in facilities that truly meet their needs. Excellent schools are essential elements of our quality of life here in Orange County.

Thank you very much for your consideration of the Memorandum of Understanding and Schools Adequate Public Facilities Ordinance.

Please respond with any concerns or questions to me at (919) 929-6460 or Craig Benedict, Orange County Planning Director at (919) 245-2592.

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**JUNE 4, 2003 AMENDMENTS
PLANNING DIRECTORS, ATTORNEYS, SCHOOL REPRESENTATIVES WORK
GROUP**

**EXPLANATION OF REVISIONS TO THE
SCHOOLS ADEQUATE PUBLIC FACILITIES
MEMORANDUM OF UNDERSTANDING AND ORDINANCE**

Prologue

The following amendments are a response to comments from recent public hearings. They are minor in nature and do not affect the previous choreography of the Schools Adequate Public Facilities activities. They instead offer clarity to the distinct aspects of: 1) the Capital Improvements Program (CIP) process and their associated historically based membership projections, and 2) the Certificate of Adequate Public Schools (CAPS) system and their associated housing development related Student Generation Rate (SGR) projections.

In addition, some previously approved addendum clauses were incorporated into the original Memorandum of Understanding (MOU). The suspension of the CAPS adequacy tests for the respective school districts and school level are still addenda since they will sunset at the appropriate time.

What follows is an annotation of the proposed minor revisions.

	Location	Section	Revisions
1.	Page 2	1.d.	A Minor revision requested by the Town of Carrboro to enhance opportunity for governing boards to comment on student membership growth rates, etc.
2.	Page 3	3.a.	A clarification showing that November 15 th is the date for: 1) membership (actual), 2) school capacity, and 3) base date for future school projections and not February 15 th (see next note)
3.	Page 4	3.c. (striketrough old version)	This old version tried to explain that the projections, membership were not February 15 th but calculations were done "(utilizing the previous November 15 th data)". This is made clearer in Item 2 above.

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4.	Page 4	3.b.	A new paragraph that describes what a “base year” is and how November 15 th is the base of <u>actual</u> known capacity and membership. This base is then used for ‘launching’ CIP projections and resetting the CAPS system.
5.	Page 4	3.c.	A clarification to reference specifically that the base year date of November 15 th is used for capacity calculations of future additions, modifications, CIP capacity or closings.
6.	Page 4	3.d.	This rewritten section sets up the <u>initial</u> year CAPS system statistical platform. It also differentiates that separate from aforementioned section 3.c. CIP capacity that there are CAPS calculations that are linked to housing development and the student generation rate product which is accrued with each housing project into the CAPS system.
7.	Page 5	3.e.	This rewritten section furthers section 3.d. above that CAPS development projections continue to be <u>added</u> to the base year and other housing programmed years. Each year these CAPS projections are retained and added to the new updated actual membership base.
8.	Page 5	3.f.	Consistent with previous sections, the base date has been restated as November 15 th .
9.	Page 5	3.g.	A lead-in paragraph was added to explain the mathematical exercise that is conducted during the CAPS system process. Simply, Available (“Remaining”) Capacity (AC) equals Capacity (Existing Rated and Future CIP Capacity) minus Membership (Existing and CAPS approved SGR membership). If AC is greater than or equal to 0 then CAPS may be issued.
10.	Page 7	9	This additional paragraph was amended to all agreements to accent the importance of CIP process and program and municipal governments’ reliance on same to implement the Schools APFO.

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