# The Public School Infrastructure Problem: Deteriorating Buildings and Deferred Maintenance

By Richard C. Hunter, Ed.D.


As our school-age population continues to increase—due to births and immigration—can our schools accommodate this influx of students? Do we have enough schools and are those facilities in adequate condition?

In 2000, the mean age of school buildings in the United States was 42 years; 28% of them were built before 1950. Nine years ago during an announcement of a federal government report on the condition of America's public schools, former secretary of education Richard C. Riley said: "While the majority of our school buildings are in 'adequate' condition, three-fourths of our schools reported that they needed to spend some money to repair, renovate, or modernize their school buildings in order to get them in good condition. The cost estimate of that investment is $127 billion."

The report Secretary Riley referenced, *Condition of America's Public School Facilities*, indicated the major barrier to improving the condition of the 903 school facilities surveyed in the study was cost. The data from this survey indicated the average cost per school for improving these facilities was $2.2 million (Lewis and others 1999).

In 1995 and 1996, the U.S. General Accounting Office issued two reports to Congress on the condition of America's schools. The 1995 report indicated that the

nation's schools needed about $112 billion for repair and upgrades. The 1996 report indicated that among various states the condition of schools differed greatly, citing that 62% of the schools in Georgia needed repair vis-à-vis 97% of schools in Delaware.

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In 1997, the Northeast and Islands Regional Educational Laboratory at Brown University reported severe overcrowding in schools, crumbling buildings, and electrical systems that did not support modern technology. The lab cited several states with large percentages of schools that needed repairs and upgrading: Connecticut (77%), Maine (85%), Massachusetts (92%), New Hampshire (87%), New York (90%), Rhode Island (81%), and Vermont (82%).

## Urban Schools

The deterioration of public school buildings is more prevalent in large cities that, because of funding shortfalls, have deferred maintenance and require huge sums to bring their buildings up to acceptable standards. Cities such as New York will require approximately $680 million to address the problem of deferred maintenance for needed painting, roofing, and exterior brickwork or tuckpointing (Lunenburg and Ornstein 2004).

Jonathan Kozol (1991) has presented stark contrasts in the condition of school facilities and the overall system of school funding in the American public educational system, particularly urban versus suburban schools. In addition, he has strongly recommended that America improve the educational facilities of public schools that serve the nation's urban poor (Kozol 1995).

To illustrate this point, a study of the public schools in Washington, D.C., indicated that only 10% of the 137 schools in the District of Columbia were in good condition and 75% were in poor condition (DC Voice Ready Schools Project 2007).

## School Facility Case Studies

The following two case studies grew out of my professional experiences in facility planning and efforts to address the deteriorating condition of urban public school facilities.

### RICHMOND, VIRGINIA

As the new superintendent of the Richmond City Public Schools (RPS), I was taken aback when the school board directed me to develop a long-range capital improvement plan (LRCIP). I believed the condition of the school buildings was superior compared with most other urban areas, thanks to RPS's strong and effective Plant Services Department and great community support.

The development of an LRCIP was a major effort and took a year to complete. However upon reflection, I believe the school board's action was insightful and permitted RPS to bring all its buildings up to acceptable citywide standards. It also permitted the district to offer the city's youth a high-quality public education.

Several major steps went into developing the long-range plan:

1. The district's full-time staff architect helped with the LRCIP and supervised the work of various facilities planners, such as hiring an engineering firm to evaluate the schools' heating, air conditioning, and other mechanical systems and to estimate the costs of addressing all building mechanical system deficiencies.
2. The district selected a full-time educational planner—a former district principal with design expertise. She was assigned to work with the district's architect, Plant Services Department, and school principals.
3. RPS developed district staffing standards and educational specifications for the basic education program. It also identified several unique building design standards by working with parents in selected schools.
4. A demographer was hired to develop long-range projections of student enrollment.
5. The district updated student enrollment projections based on the cohort survival methodology.
6. A land-use seminar was held to inform RPS of changes that might affect student enrollment. Representatives from business, local and state government, and land-use developers were part of these meetings, which covered such areas as new housing construction, closing of Housing and Urban Development properties, and new streets and highways.
7. Principal surveys of the condition school buildings were conducted.
8. A series of community meetings were held to explain the project and to solicit advice and support from parents.
9. All school buildings were evaluated and rated on their ability to support the district's basic educational plan.
10. All vacant land owned by the district was inventoried and evaluated.
11. The school board, Parent-Teacher Association, mayor, city manager, union leaders, and appropriate state department of education officials were briefed on the efforts to develop the LRCIP.
12. Seven school buildings were identified for closure.

After one year, RPS submitted the long-range capital improvement plan to the school board. The LRCIP was to be phased in over several years to equalize the annual cost to Richmond taxpayers. (RPS is a fiscally dependent school district. Annual capital improvement budget requests were submitted and evaluated by the city manager and city council; if approved, they were incorporated into the overall capital improvement budget of the city.)

## Clearly, it is easier to defer maintenance and to put these problems off for future generations.

Over the years, all district schools were renovated and three new schools were constructed. This effort was started by the school board, whose members demonstrated great leadership and insight, and kept RPS from allowing its school facilities to deteriorate, as has been the case in many urban communities. Most recommendations were approved, and millions of dollars were appropriated to update the 60 school facilities of the RPS.

### KANSAS CITY, MISSOURI

For several years, I was an educational consultant and expert witness in school desegregation and facilities planning with the Kansas City, Missouri, School District. The KCMSD undertook one of the most ambitious plans to update its school facilities.

This district operated under the supervision of a federal court, which ordered the development of a long-range capital improvement plan, similar to the one described in Richmond. KCMSD schools had not been well maintained and were in great disrepair. The condition of the district's buildings was a direct reflection of the long-standing lack of community support, which was evidenced by the community's refusal to approve a tax increase for 25 years. Because of this, school building maintenance was limited; several buildings had not been painted for decades; many schools had roofs that needed to be replaced; and buildings needed tuck-pointing.

I was initially retained to develop educational design specifications for the magnet school program ordered by the federal court. After completing this assignment, the district asked me to develop the LRCIP.

That process entailed the following steps:

1. Personally inspected all 90 district school buildings and 15 schools in neighboring communities to assess their condition and comparability. The inspection included examining all classrooms and specialized facilities, such as gymnasiums and auditoriums. Throughout this process, I photographed every space and audiotaped comments made during inspections.

   After each inspection, I completed a school data sheet and developed photo albums illustrating the condition of each school building. The photographs became a valuable tool in presenting evidence to the federal court about the condition of each school building during testimony.
2. Inspected all district athletic and citywide facilities using those same procedures.
3. Reviewed district documents about the age, condition, and capacity of each school building.
4. Interviewed principals or other school and district administrators, head custodians, city and regional planning authority officials, and union leaders about the condition of KCMSD school facilities and land-use plans for the city and metropolitan area.
5. Asked district personnel to update their long-range school enrollment projections using the cohort survival method.
6. Asked district officials to update school building capacities using new program specifications for magnet schools and the general education program.
7. Selected a demographer to develop three long-range enrollment project scenarios for the district.
8. Determined the capacity of each school and the district by level and program.
9. Met with district officials and the demographer and selected the district enrollment scenario for each level, elementary, middle, and high school that would be used in the LRCIP.
10. Developed criteria to identify schools for closing and identified buildings that should be closed. The criteria included enrollment and demographic projections, magnet school and basic education program requirements, and building conditions.
11. Identified new schools for construction and the grades served.
12. Calculated the acreage needed for magnet schools, the basic educational program, and new school facilities. Some magnet programs called for highly specialized facilities, such as a track and Olympic-size swimming pool for the Classical Greek Magnet program or a 25-acre farm for the Agriculture Magnet program.
13. Selected a team of four architectural firms to prepare cost estimates for renovating schools using the program specifications for magnet schools and the basic educational program. The architects were also asked to develop cost estimates for constructing several new schools that would be included in the LRCIP.
14. Wrote the LRCIP and included a project management team to address the scope of work that was too great for KCMSD staff to supervise. I also included other pertinent information in the LRCIP, such as the enrollment scenarios and cost estimates from architects.

15. Presented the plan to plaintiff's attorneys, board of education, district monitoring committee of the federal court, and the federal court in official hearings.

The federal court approved all the recommendations, and the state of Missouri was required to pay the costs of implementing the LRCIP, which was estimated at about $500 million.

## Conclusion

Our nation must take major steps now to address the school infrastructure problem before it worsens. Clearly, it is easier to defer maintenance and to put these problems off for future generations. In Kansas City, this was the case until the judge issued his order, whereas in Richmond the community acted before its school facilities deteriorated. I recommend the latter course.

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**Richard C. Hunter, Ed.D.,** is a professor of educational administration and former head of the Educational Organization and Leadership Department at the University of Illinois at Urbana-Champaign. He has worked as a superintendent in the public schools of Richmond, Virginia, Dayton, Ohio, and Baltimore, Maryland. Email: rchunter@uiuc.edu