Background
There is a growing concern that school siting, construction and renovation practices in the United States are inconsistent with efforts to reduce sprawl, encourage compact growth, and increase the sustainability of our built and natural environments. Current practices also undermine efforts to support walking and cycling to school, and to strengthen community-based schools.

A range of public health consequences are associated with current thinking and practice. For example, schools sited near a freeway or high-traffic roadway, an industrial facility, underground gasoline pipeline, former landfill, waste disposal facility, or other environmental hazards threaten the health and safety of children as well as teachers, administrators, and others who work at schools through their impact on air and water quality. Furthermore, schools that are not located near residences make it impossible for most children to walk or bike to school, thereby missing an opportunity for physical activity as part of daily routines. Regular physical activity reduces the risk of a number of chronic diseases, helps to control weight, improves mental health, and is associated with less use of health services.

At the heart of these problems is the fact that state and local governments rarely work with school districts on decisions related to siting, building and renovating schools, and school districts are rarely at the table when state and local governments develop land-use, transportation, or housing plans. Furthermore, in many states (although not in Florida) regulations are often biased toward the building of new schools rather than the renovation of existing ones. The issues surrounding school siting are especially important in Florida because of high enrollment growth, increasingly diverse student bodies, and the trend toward higher than average spending on school construction.

School siting & environmental health
Important constraints faced when siting schools include locating enough land at a reasonable cost and funding the needed infrastructure such as roadway improvements. The trend toward larger minimum site requirements has resulted in new schools being located at the edges of built-up areas and not within walking distance of many residences. This has consequences for environmental health that are seldom considered when making decisions such as where to locate new schools, and whether to upgrade existing facilities or to offer school choice options.

Typically, school districts use planners’ population forecasts to determine where new growth will occur and to decide when and where a new school is needed. Schools become part of the infrastructure that gives value to new developments. They help attract professionals with children to the district. A new school also may induce families with children to move out of neighborhoods with older schools in the same district and re-locate near the new school. This leads to under-enrollment and pressure to close urban schools that are deeply embedded in communities. Three scenarios help illustrate the problems.

Scenario 1
The first scenario involves a new school that is not within walking distance of most residences. This scenario occurs because schools must find plots large enough to accommodate acreage requirements and large sites are often found far from existing neighborhoods. Roads and other physical infrastructure therefore often need to be built and school districts and local governments negotiate to determine who pays the associated costs.

The potential health consequences of this scenario result mainly from the distance between homes and school which is one of the main environmental factors influencing parents’ decision to allow their children to walk or bike to school; also important are the presence of sidewalks, and the safety of intersection crossings. As more parents drive their children to school there is an increase in congestion and idling fumes around the school and a less safe environment for the children who are walking and bicycling. This in turn leads to an increase in respiratory symptoms and diseases such as asthma. The costs of these problems are shifted to the health sector and therefore are seldom considered by either school districts or local governments.

The negative health consequences of this scenario could be minimized by (1) coordinating local comprehensive plan population forecasts and land use designations with school district capital plans, (2) designing policies on school siting, construction and renovation to maximize the number of students who can walk or bike to school, and (3) separ-
rating walkers and bikers from vehicular traffic at the entrance to schools.

**Scenario 2**

The second scenario assumes the typical situation in which neither local governments nor health departments are involved in school facilities planning. It captures the paradox of existing urban schools deteriorating and/or closing while new schools are being built in rapidly developing areas. School quality is one of the main factors that parents consider when choosing a neighborhood. Failure to modernize and upgrade existing school facilities affects both perceived and measurable school quality. Old buildings need to be modernized and existing facilities upgraded in order to support today’s educational programs such as early childhood education, technology, and science education. Upgrading existing school facilities is also important for protecting the physical and mental health of school occupants which are in turn associated with levels of student achievement. For example, aging buildings with poor control of temperature and humidity levels are likely to have high levels of mold and mildew, which are associated with respiratory health problems and lower motivation among students. Poor ventilation can also boost asthma rates and respiratory illness.

The negative health consequences of this scenario could be minimized by providing incentives for school districts, health departments and local governments to work together to plan and fund the modernizing and upgrading of existing schools. In Florida there are regular opportunities to work together since by law, districts are allocated state funds (by formula) to maintain facilities in adequate condition and districts must assess facility improvement needs every five years through the educational plant survey. Another approach is to include in community and economic development strategies funding for upgrading facilities or for transforming old schools into community centers; allocation of funds could be made contingent on collaboration between local governments, health departments and school districts.

**Scenario 3**

The third scenario illustrates the competing benefits involved when school districts approve magnet programs in low-enrollment schools. A successful magnet program may allow an older school, located in a neighborhood where children can walk to school, to remain open and available to the community. When carried out as part of revitalization efforts for the whole neighborhood, it can make the walk to school more safe and create a social environment in which people interact more and are more involved in the school.

However, magnet programs also add to traffic congestion and miles driven at the district level, and to the problem of idling fumes mentioned above. To minimize the negative health consequences, strategies to increase student travel by bus will need to be considered. This might include an effective but unpopular approach at the high-school level: providing little or no parking spaces for students.

**Implications for School Concurrency?**

Florida is one of the few states that requires school boards and local governments to coordinate school planning with land use planning. Since Florida implemented its Growth Management Act (GMA) in 1985, requirements for this coordination have become increasingly stringent - including one that by December 1, 2008, most governments implement "school concurrency." The requirement is intended to ensure adequate public school facilities will be in place to serve existing and planned residential development. Early indications suggest the requirement has made the land use-school planning coordination requirements more real for many of the local governments and school boards where growth is occurring. It remains to be seen whether without an explicit focus on schools and healthy communities, this coordination will address some of the problems highlighted here.

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