



Is it Time to Say Goodbye to Your School Building?

By Catherine Cruickshank and Robert Koehler, AIA

Renovate?
Repurpose?
Demolish? How to
plan the future of a
school building.

School districts and their communities will inevitably face decisions concerning their aging buildings: Renovate? Repurpose? Demolish? As you consider whether it's time to say goodbye to your building or to give it new life, explore four critical areas: physical condition, educational adequacy, site considerations, and potential disruption.

Physical Condition Assessment

In assessing the building's status, scrutinize the structural elements—including all mechanical, electrical, and plumbing infrastructure—and evaluate their remaining life span and ability to be expanded or reconfigured. Of course, other factors to consider are the Americans with Disabilities Act challenges (especially bathrooms and accessible

routes, such as steps and stairs), technology needs, and required code updates, including fire separations and combustible materials.

However, it's not just the condition of the building that matters; it's also the ongoing operational and maintenance costs. Can inefficient lighting and heating, ventilating, and air-conditioning systems be replaced easily to reduce operating costs? Might window replacement add significantly to the comfort and function of the structure as windows provide natural light without glare and prevent energy and heat loss.

Educational Condition Assessment

Meeting the educational challenges of providing personalized learning and skills for the 21st century may require remodeling and renovation. The size and number of



Although attached to the district's high school, Berlin Middle School enjoys a separate identity, including its own main entrance, which was missing at the previous middle school.



Top: The new middle school combined the science classroom and lab into one space. Bottom: The new mathematics lab supports and promotes personalized learning.

classrooms, the need for flexible teaching spaces, and proximity to classrooms of related subjects and grades are all important considerations.

Site Considerations

Equal attention should be given to the overall site. Can surrounding streets accommodate the circulation of buses, parents, pedestrians, and cyclists at drop-off and pickup times? If you are considering expanding the campus, determine whether it has room for additional facilities, parking, playing fields, and more.

A major addition or expansion of hard surfaces such as parking lots may affect stormwater management requirements. Be mindful that

additional space will be needed for detention and retention ponds. In the absence of space, such costly measures as underground detention and retention or vegetated roofs may be necessary. Should the current property be inadequate and no new sites are available, consider alternatives, such as reconfiguring grades to reduce the number of students at the current location or developing off-site playing fields.

Potential Disruption

If the district is contemplating a renovation or expansion project that cannot be completed in one summer, the question becomes how to handle potential disruption to the school day.

Consider the following issues:

- Can the work be phased to allow classes to continue with minimal disruption?
- If portable classrooms are needed, does the site have sufficient room for them and construction trailers?
- Will enough space be available to maintain safe site circulation?
- Can classes be held in an alternative location for the duration of the project?

Safety is the primary goal during on-site renovations that take place during the school year.

Deciding the Fate of Berlin Middle School

Berlin Middle School in Wisconsin was designed and built as a high school in 1918 and expanded with additions in 1954 and 1985. The 1954 phase of the building included lower-level locker rooms, a two-station gymnasium with stage, classrooms, and tech education and maintenance spaces. The 1985 addition was a two-story classroom configuration.

By 2011, it was clear that the three-level middle school building was showing wear:

- The boilers were obsolete and located too far from the 1985 addition to keep those classrooms warm enough.
- The plumbing was severely corroded below the floor slab.
- Daylight penetrated some of the cracks in the walls, especially in the gym where a portion of wall was bowing inward.

A structural engineer was hired to evaluate the cracks. He designed metal straps to hold the corner of the building together but recommended taking down the wall and rebuilding it if the structure would be used for more than two years.

The district began to assess the educational adequacy of the building. The seventh-grade classrooms were split horizontally and vertically between the north wing of the first

floor and south wing of the second floor, which made team teaching difficult. The eighth-grade classrooms were larger than necessary—an inefficient use of space. Several of the science labs consisted of two rooms with the lab in one and the classroom in the other, which created issues with student supervision.

A survey of the site condition of Berlin Middle School revealed many problems as well. The slope of the property made circulation challenging. The baseball diamond was several feet below the parking lot and was accessed by a long, steep metal stairway. The primary entrance to the campus was not adequately marked or welcoming. Congestion was a significant problem for buses and parents at pickup and drop-off times.

A citizen's advisory committee looked at several options for a new school versus a renovation. The district already owned 60–70 acres of land along a rural road, but the cost of widening the road and developing the site was estimated at over \$2 million. On the other hand, the current high school, built for 800 students less than 20 years earlier, had an enrollment of only 525 students.

The district determined that its best option was to build a middle school addition onto the high school to accommodate 375 students. The new addition would allow the

middle school to share the underused common spaces (cafeteria, kitchen, and auditorium) as well as the technical education and family and consumer education spaces, which had previously been classrooms in both the high school and middle school.

Housing the new middle school with the high school would save space, decrease travel time, and offer better accommodations for students in all grades.

The new Berlin Middle School, completed in August 2015, has its own identity. It can be distinguished from the high school by different colored brick, although the design elements match the high school. It has a separate main entrance, office, gym, locker rooms, science labs, art room, classrooms, and library/media room. The music suite was expanded and is shared, as is a cardio/weight room and multipurpose wrestling and cheerleading room.

Of special note is the math lab, which accommodates three classes in one large, flexible suite to support personalized learning. Berlin Middle School students using this space advanced two grade levels in math in one year—compared with the average one grade level advancement—using the new personalized learning approach.

Although money was budgeted in the referendum to raze the old

building, a developer purchased it for a nominal sum, thus saving the district money. The developer converted the building into attractive apartments, preserving the history and architectural details of the school. Now, the community benefits have doubled: a new, energy-efficient school where the students have a safe, efficient, creative learning environment and a historic school that was repurposed into needed local housing.

The Final Curtain?

Before your building takes a bow at the final curtain call, examine its physical condition, educational condition, site considerations, and potential disruption before you make a decision.

Working through this process with the expertise of outside consultants—architects and engineers—will give you the needed framework to make a wise decision that will support your educational objectives for many years to come and provide opportunities to improve the safety, security, and serviceability of your educational environment.

Catherine Cruickshank is a senior project planner/designer at Hoffman Planning, Design & Construction Inc. Email: ccruickshank@hoffman.net.

Robert Koehler, AIA, is a project architect at Hoffman Planning, Design & Construction Inc.

Facility Planning with Technology in Mind

What are some of the questions educators should think about when planning facilities? Here are some of the major questions, according to Glen Earthman, author of *Planning Educational Facilities: What Educators Need to Know*:

- What and how do students learn best with the use of electronic assistance?
- What kinds of hardware and software products are needed to implement the kind of teaching/learning strategy the school system wants?
- How will the technology systems in the new building or newly renovated building fit in with the rest of the school system?
- How can equity in technology application be assured for every student on a school system-wide basis?
- Does the school system have the expertise to plan and design an effective and efficient technology program that is as up to date as possible?

Want to know more? *Planning Educational Facilities* is available from Rowman & Littlefield Education: rowman.com. ASBO members receive a 20% discount by using the promo code ASBO20 when ordering.