

Erie School District
Roosevelt Middle School

Renovate or Replace?



Design Charrette
May 30, 2008

Sponsored by
Preservation Pennsylvania

The Roosevelt Middle School, constructed in 1922, was closed in June 2007 because of on-going maintenance and safety concerns. Roosevelt students were temporarily assigned to the former Sacred Heart School, which the district has leased through the 2009-2010 school year.

School buildings generally need major renovations every 20 to 30 years. Roosevelt was last renovated in 1975.

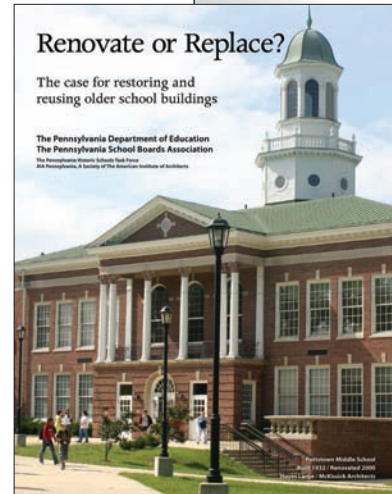
The Erie School District now faces the decision of whether to renovate, or replace, the Roosevelt School. In recent decades, many districts have chosen to replace their older schools. Yet statistics compiled by the Pennsylvania Department of Education demonstrate that in most cases, it is substantially less expensive to renovate existing schools than to replace them.

To encourage school districts to renovate existing buildings, the Pennsylvania Department of Education and the Pennsylvania School Boards Association last year sponsored a brochure, "Renovate or Replace," which states that in many cases, keeping existing schools can save tax dollars, reinforce established neighborhoods, and still provide facilities that meet 21st century educational standards.

"Keeping existing schools can save tax dollars, reinforce established neighborhoods, and still provide facilities that meet 21st century educational standards."

Specifically, the brochure points out:

- * Older school buildings, especially those constructed between 1900 and 1940 (like Roosevelt) are masonry bearing structures that rely on massive walls to provide structural stability. They can last indefinitely with good care. They are actually easier to renovate than schools built in the postwar suburban era, when cheap materials and inferior construction techniques became common.
- * The No. 1 principle of green building design is to renovate and recycle existing buildings. Old buildings with high ceilings (ample space for mechanicals and insulation) and big window openings (allowing natural daylighting) are ideal candidates for renovation as energy-efficient “green” buildings.
- * Creative design can accommodate modern educational programs in older buildings.
- * The state offers a 10 percent subsidy bonus for renovations and additions to existing schools, and another 10 percent subsidy bonus for renovating buildings to “green” standards.
- * Renovations create more local jobs than new construction because they are more labor-intensive than new construction, which requires more building materials that are manufactured off-site.
- * School districts are more likely to win community support for renovating historic buildings that have evolved into much-beloved landmarks over many generations.



With the cooperation of the Erie School District and district architect Bob Marz, a design charrette was conducted on May 30, 2008, by Preservation Pennsylvania, the Commonwealth's only statewide private, non-profit historic preservation organization. The Erie Center for Design and Preservation, which is dedicated to raising community awareness about the importance of preserving Erie's historic resources, helped make the arrangements and participated in the charrette.

Experienced architects from Pittsburgh, Harrisburg, and Erie toured Roosevelt Middle School, reviewed the school's architectural plans, and studied educational specifications by the school district, which envision using Roosevelt as a K-8 elementary/middle school for 700 students. All three architects believe the school is an excellent candidate for continued service as a school.

Each architectural team drew up its own scheme for renovating and enlarging the Roosevelt School.

Their concepts follow...

CONCEPT 1

Ellis Schmidlapp
*Landmark Design
 Associates*

33 Terminal Way
 Pittsburgh, PA 15219
 412.391.7640

The project envisions complete restoration of the Roosevelt School building including restoration of exterior masonry, new windows and a new roof. On the interior the principle corridors, stairs, and major spaces would remain with the majority of the modifications occurring in the space between the exterior walls and the corridors to provide properly sized and configured classrooms, specialty teaching spaces, and administrative spaces in accordance with the program provided by the school board.

The plan proposes to maintain the central entrance facing Cranberry Street as the main entrance with an accessible walk entering from the south to the entry terrace. The majority of the administrative spaces would occupy the current library space to the right of the entry. A small ramp would be inserted at the south entry loggia to provide access to the main corridor level and to a new elevator across the hall to provide access to both levels.



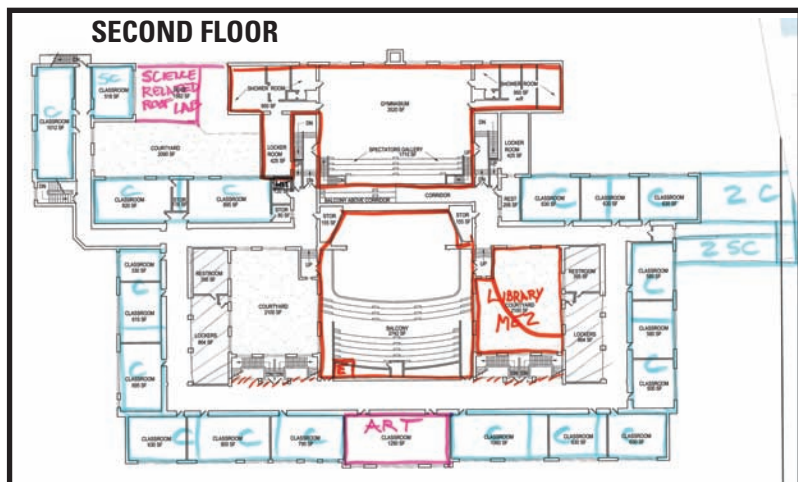


The existing classroom areas would be reconfigured to provide new rooms ranging in size from 725 s. f. to 850 s. f. with the majority being in the 750-800 s. f. range. The north courtyard would be enclosed to provide a library which would be at the heart of the school. The south courtyard would be landscaped as a protected outdoor play area.

If the building is proposed to be used K-8 area we propose that the south wing on the first floor be used for K through second grade with a dedicated play area immediately to the south.

The existing cafeteria would be modified with a corridor, which is wide enough for a lift to make it handicapped accessible. Specialty classrooms including a science room and music room would be installed in this area. The auditorium and gymnasium would be completely rehabilitated.

An addition is planned at the north side of the building projecting toward 22nd Street. On the first floor a new cafeteria and kitchen would be



constructed with a loading dock directly off the service drive in this area. The second floor would provide space for the two additional classrooms and three additional group meeting rooms.

The project contemplates complete new services for the building including all new heating systems, electrical systems and lighting, and data and communications systems. We propose that the building be fully sprinklered so that the grand stairs may be open and no fire ratings would be required between the corridor and the classrooms thus allowing the corridors and stairs to retain their original appearance and character.

The outdoor spaces are projected to include an outdoor eating area to the east of the new cafeteria and outdoor activity areas for older children to the west of the cafeteria as well as supplemental parking at the far west end of the property along 22nd Street.

The completed facility would include 99,000 square feet of renovated space and 10,470 square feet of new space. Using summer 2008 budget costs of \$250/square foot for new construction and \$140/square foot for renovation, we project a construction cost in the range of \$16,500,000.

Biography

Ellis Schmidlapp is president of Landmark Design Associates, which was incorporated in 1978. Major work under his direction has included the original master planning, restoration, and new construction at the 52-acre Station Square project in Pittsburgh; and restoration of the Old City Hall in Richmond, Virginia, a National Historic Landmark.

Recent projects include restoration of and major additions to the Greene County Courthouse, construction of an addition to the Heinz Memorial Chapel on the University of Pittsburgh campus, and restoration of the Schenley Park Visitor Center.

Current projects include a Preservation Plan for H. H. Richardson's Allegheny County Courthouse, expansion of visitor facilities at the Duquesne Incline, and interior restoration of the Cathedral of Learning at the University of Pittsburgh.

School projects include the renovation of two elementary schools for the Brentwood School District and renovations and additions for three elementary schools in the Crawford Central School District.

Mr. Schmidlapp has served on the Pennsylvania State Historic Preservation Board and National Register Review Committee as well as the Board of Preservation Pennsylvania. Mr. Schmidlapp is a founding board member of The Green Building Alliance. He has been an instructor, panelist, and jurist for the Urban Land Institute, the National Trust for Historic Preservation, the Pennsylvania Historical and Museum Commission, and Carnegie Mellon University, among others.

CONCEPT 2

Jeff Kidder, AIA
*Kidder Wachter
 Architecture & Design*

140 East Fifth Street
 Erie, PA 16507
 814.452.2414

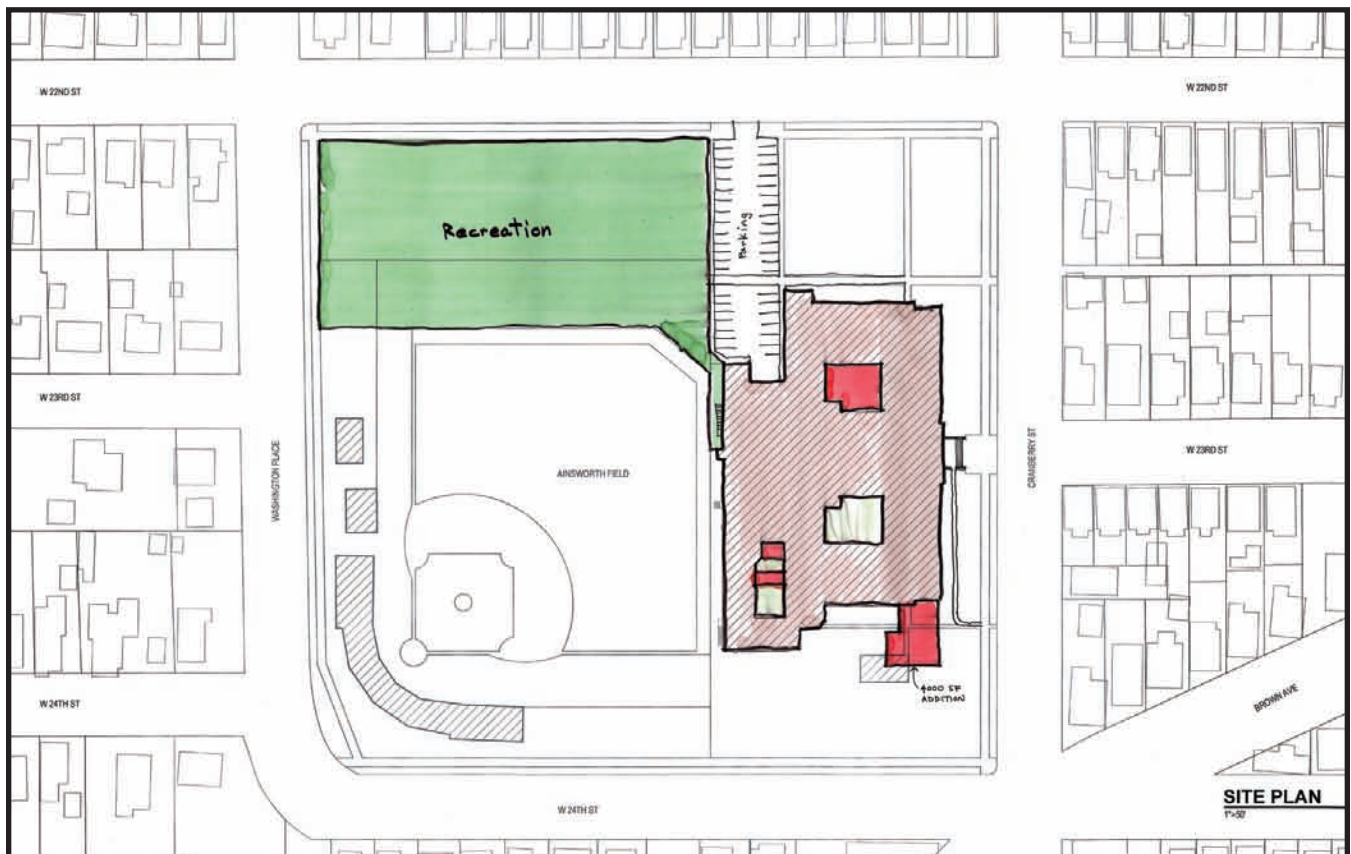
*Joined by Margaret Kennedy,
 Chris Magoc and Tom Maggio*

Our goal was to fit the K-8 program into the existing building by preserving its original design layout and architecture while minimizing the need for new additions. Our solution began with preserving the main entrance, as it is a powerful visual terminus to West 23rd Street and landmark in the neighborhood. This entrance is the most architecturally elaborate area of the building and would be returned to its original appearance by removal of the current doors to recreate the arcaded entrance.

Handicap access to the front door would be provided by a gently sloping walkway from the south along the front façade of the school.

The exterior work would include masonry cleaning, repairs and pointing. The existing windows would be replaced with new commercial grade aluminum windows that would replicate the look and detail of the original 1922 windows.

The grounds around the school would be retained. The parking lot would remain to the north of the school and the current non-functioning tennis courts would be removed and converted into a playground and athletic field. Student drop-off would remain at the front door.



Biography

Kidder Wachter Architecture & Design was founded in 2005 as a partnership between Jeff Kidder and Richard F. Wachter II. The partners share a common vision and philosophy about architectural design and its impact upon a community.

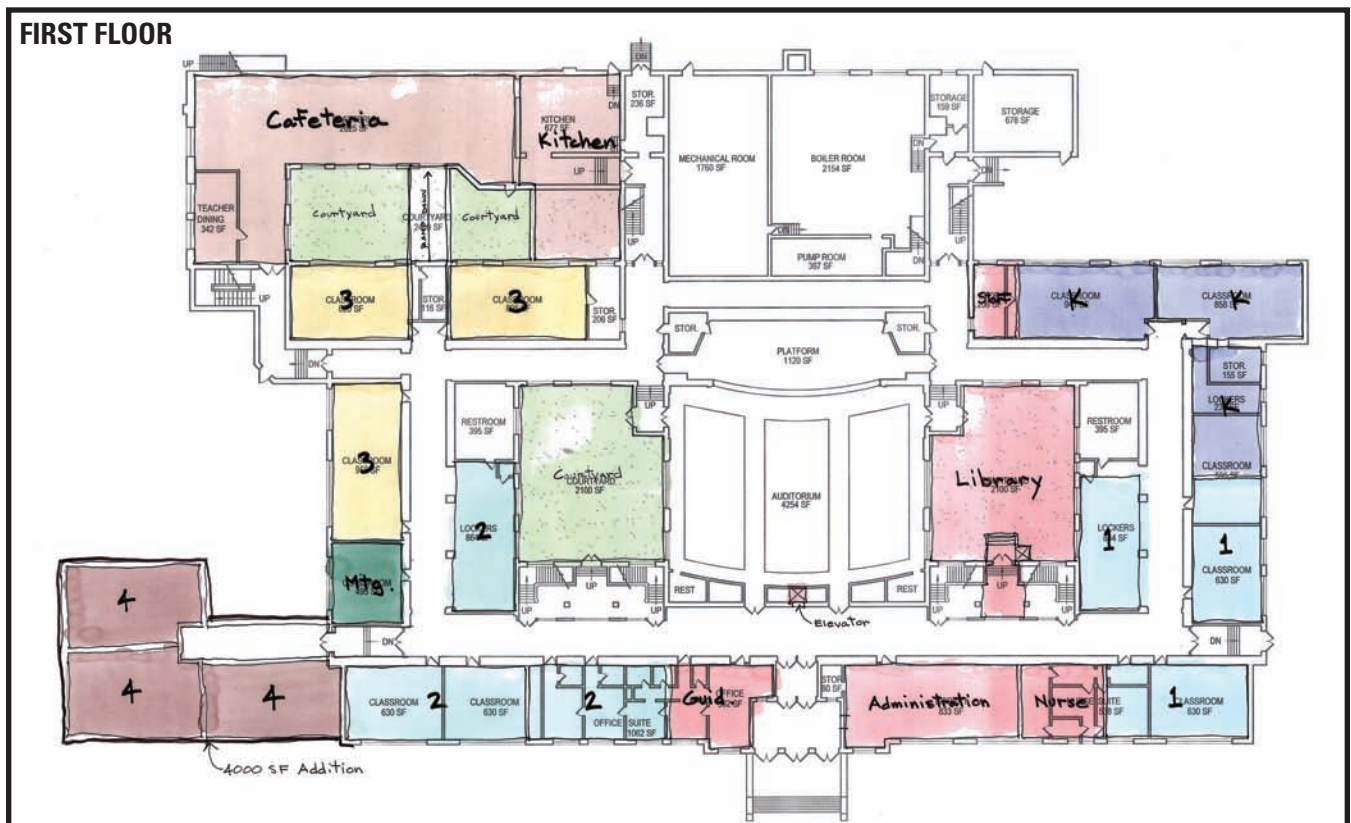
As natives of Erie County, both partners are committed to the Erie area and have chosen to focus on all types of projects within their community. These projects range from small to large existing buildings and new construction.

Mr. Kidder has 18 years experience working with the preservation and adaptive reuse of historic buildings in Northwestern Pennsylvania. Mr. Kidder received a Master Degree in Architecture and a Certificate of Preservation from the University of Virginia and a Bachelor of

(continued)

Overall the building appears to be in very good structural condition. The finishes and the HVAC, electrical and plumbing systems will need to be replaced. The interior renovation goals were to retain the auditorium, music room, cafeteria and gymnasium in their current locations. The office administration would be relocated to the current library. A new library would be inserted into the north courtyard.

The K-4 classrooms would be located on the first floor with three classrooms per grade. The 4th grade class rooms would be in a 4,000 square foot addition constructed at the southeast corner of the school. The addition's exterior would match the existing building. This addition would be the only exterior change to the original design.



Biography, (continued)

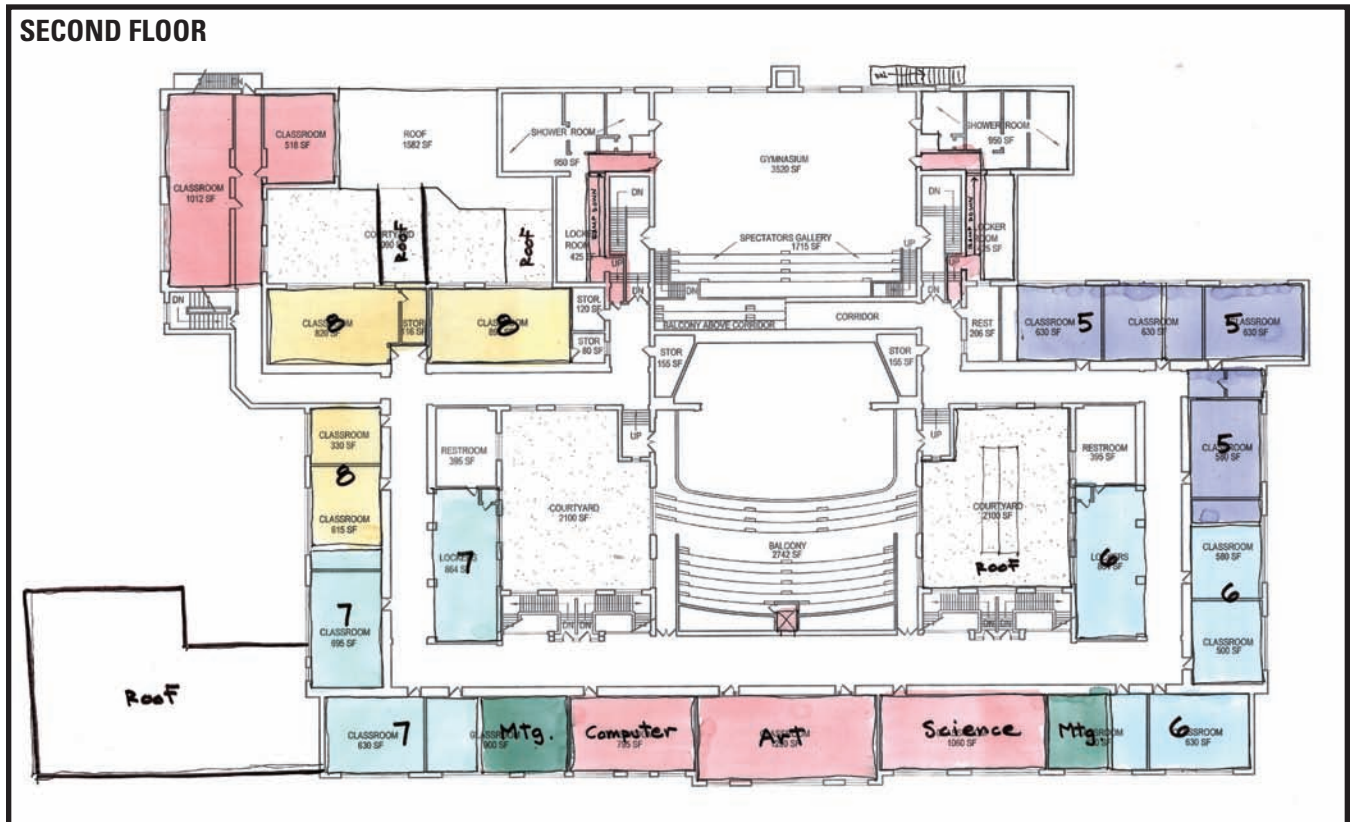
Science in Architecture from Arizona State University. As a resident of the City of Erie since 1991, Mr. Kidder is active in promoting the importance of architecture, urban design and historic preservation. His current community activities include member of the City of Erie Planning Commission, Erie County Historical Society Properties Committee, Erie Downtown Partnership, Perry Square Alliance and the Pennsylvania Historical and Museum Commission's Historic Preservation Board.

The 5-8 classrooms would be located on the second floor with three classrooms per grade. The second floor would also contain up-graded science, computer and art rooms located along the front of the school.

Handicap accessibility would be improved with the installation of an elevator between the entrance lobby and the auditorium. The mid-level gymnasium would be accessed by ramps inserted into current locker room spaces.

Knowing that renovation costs are typically less than new construction, we chose to keep this renovation pretty straightforward by preserving and restoring as much of the original structurally sound school while upgrading the systems and technology required for a modern academic facility.

Our Concept would be 99,000 square feet x \$140/square foot = \$13,860,000 + 7,200 square feet new construction x \$250/square foot = \$1,800,000 + \$500,000 for site work = total cost of \$16,160,000.



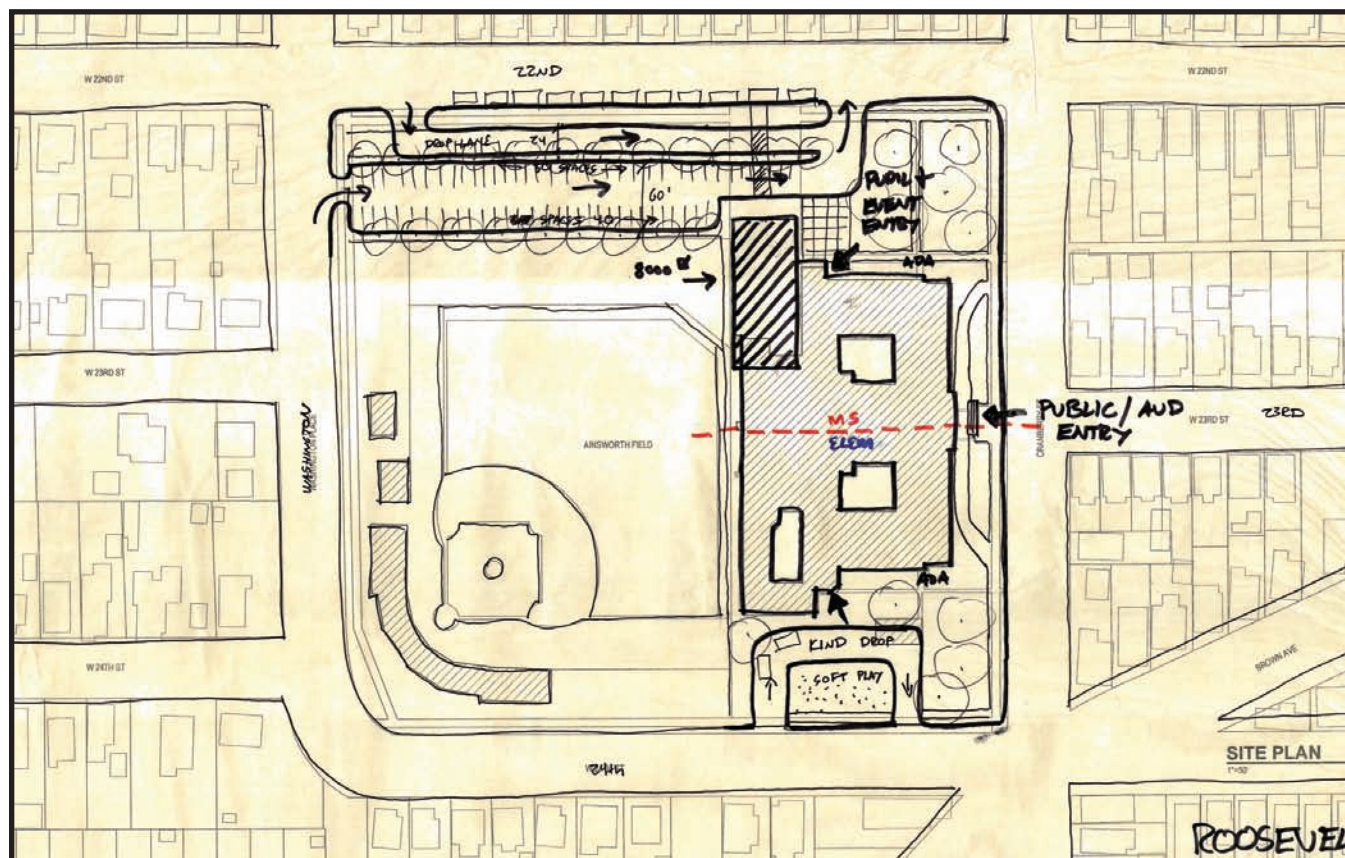
CONCEPT 3

Vern McKissick
McKissick Associates

317 N. Front Street
Harrisburg, PA 17101
717.238.6810

Existing Issues: Ceiling heights and column spacing are workable for new system installation. Exterior masonry is deteriorated, but appears to be limited to rusted lintels above windows – a condition that can be addressed. There are number of substandard sized classrooms that will need to be increased in size (merging 3 into 2). One true asset that would not be financially feasible to replace in a new building is the Auditorium, which would cost \$2.5 to \$3.0 million to replicate new – or \$1.2 to \$1.5 million to renovate if a need and use can be established.

Site: Developing an effective site is the greatest single challenge, which does not change whether it is a new school or a renovation of the current building. Energy efficiency is a concern, but up to 60% of a building's heat loss is due to mechanical systems, not the building envelope (walls, roofs, windows). As such the appropriate selection of systems can upgrade the building's efficiency. Air conditioning is a decision that will drive system design. The site is large enough to consider a geothermal well field. In either event, rooftop energy recovery equipment with ducting of fresh air only will permit easy retrofit. From the cursory evaluation, given the buildings layout and structure, it is possible to avoid a full provision of a sprinkler system.

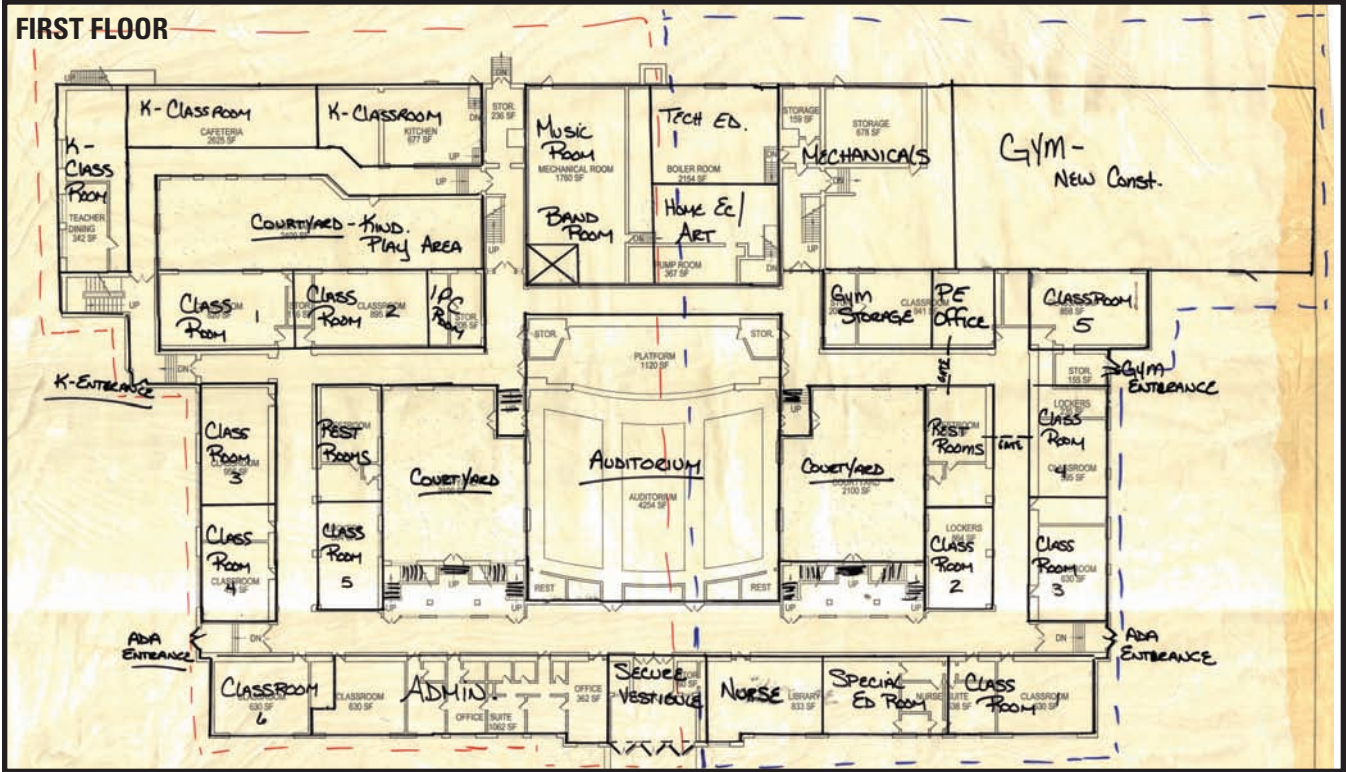


Biography

The son of a school superintendent and an art teacher, Vern McKissick is a Penn State graduate with degrees in Architecture and Construction Management. A licensed architect in six states, he has been involved in over \$800,000,000 in educational project design and construction in Pennsylvania, New York, North Carolina, and Virginia. Vern is active in the American Institute of Architects Committee on Educational Design, as well as the Council for Educational Facilities Planners International (CEFPI).

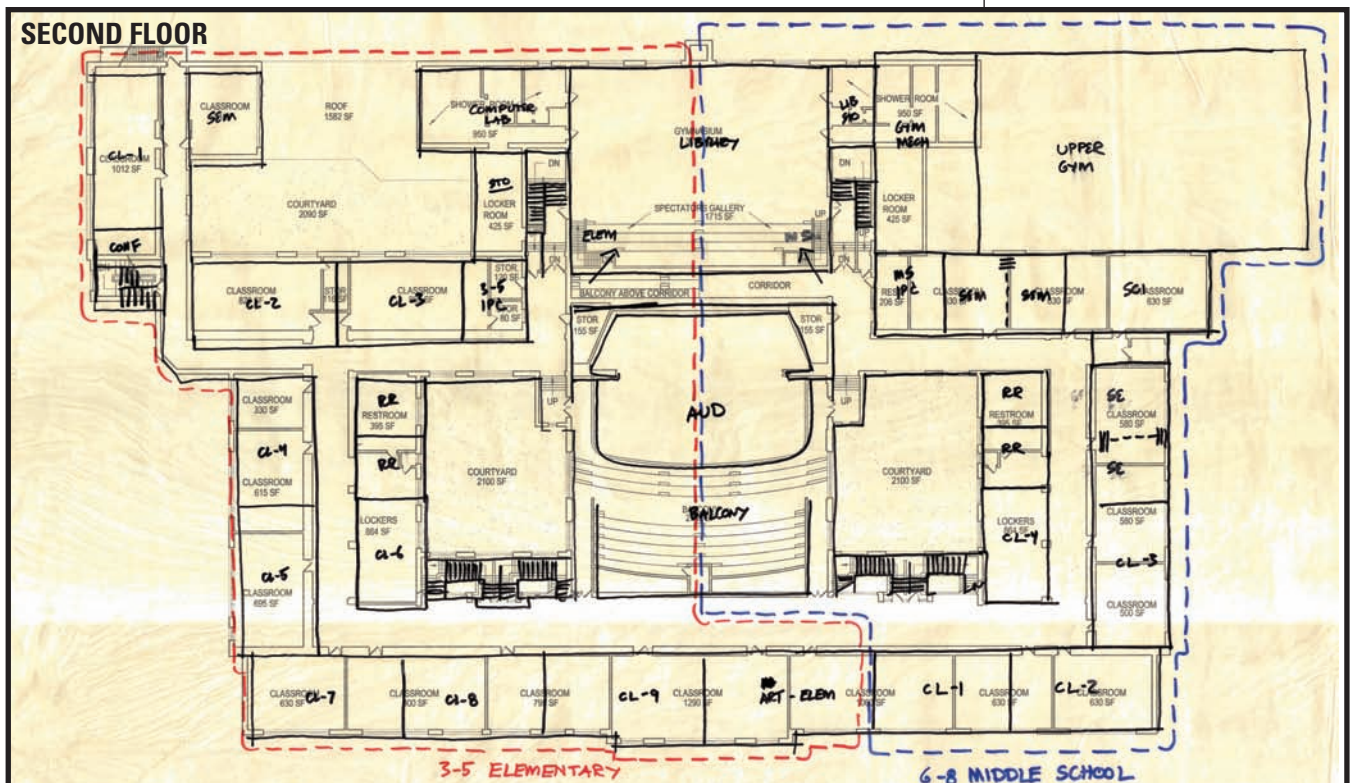
Vern has been certified by the US Green Building Council as a LEED™ Registered Professional for sustainable “green” design. His commitment to sustainable design philosophy extends to the Green Building Association of Central Pennsylvania where he is the program chair. Vern’s work on the St. Stephens K-8 School in Harrisburg was recently featured
(continued)

Additions: New construction totaling approximately 8,000 square feet would provide for a new gymnasium and mechanical room. This could be constructed to the rear of the building and complete the original symmetry of the building plan. Although the building would need to be enlarged, the use of “found space” could permit a new area to be created inside the present building. As the current fan room and boiler room would no longer be needed in their present configuration, that space would be recaptured for use as a kitchen/cafeteria. The gymnasium would be decked in with main level becoming music, technology education, art, while the upper floor would house the Library (shared or separate reading rooms) for the school.



Building Reuse: The building could be easily configured to support the creation of three Schools within a school – each with own teacher instruction planning center. K-2 on ground floor (planned for full day Kindergarten), 3-5 on second, and 6-8 on the opposing side of the building. Split the building using the Auditorium and other shared core spaces to divide. Utilization of “swing” spaces to assist with cost of instruction with smaller Middle School student body for areas such as Middle School art ½ year /home economics ½ year, and Tech Ed ½ year/Computer Keyboard ½ year. The estimated floor plan area would be 115,000 SF. Based upon 68 square foot per pupil scheduled area & a 1.58 efficiency ratio (gross square foot to instructional square feet), you would need 118,000 square feet for a new school of similar design.

Biography, (continued)
as one of five model projects cited by the Pennsylvania Department of Environmental Protection on their “Green Schools” CD Rom distributed to school administrators and board members.
Mr. McKissick has over 20 years experience working with public schools, including 11 years with Hayes Large Architects. As owner and partner-in-charge of the firms 40+ person Harrisburg Office, he was responsible for designing and overseeing all aspects of project execution. In 1998, he was selected by the Central Penn Business Journal as one of the forty top businessmen under the age of 40 in the seven county (including Harrisburg, York, and Lancaster) region. Mr. McKissick has had his K-12 projects featured in 8 of the past 10 issues of American School and University Magazine’s Annual Architectural Portfolio. In January of 2003, he was awarded the “Golden Trowel” award by the
(continued)



Major focus upon the site: Need to maintain the open feel of the site, while also dealing with the fact that parents will drive walkers to school on certain days. Provide as much onsite parking as possible for staff and visitors 90 spaces +/- Provide internal drop off lane for additional car stacking where abandoned tennis courts are located. All building entrances would be made ADA accessible – the front through gentle grading, and the two sides through reconfiguration of the staircases. Pupils would enter from the side and front, while the front would be the daytime security entrance. The interior courtyard by the present cafeteria could become an internal kindergarten play area, while the outside area would be available to develop play areas.

Cost Estimates: We estimate the cost per square foot at \$120 to \$140 for renovations (99,000 square feet); \$150 to \$170 per square foot for infill at the old Gym (6,000 square feet) with new construction (10,000 square feet) perhaps a bit lighter at \$210 to \$230 based upon the type of space included for new construction. That would put this scheme in the range of \$14,880,000 to \$17,180,000. Based upon rough figures, including the 10% supplemental incentive aid from PDE for renovations, we would estimate state aid in the range of \$5.8 million (74.16% aid ratio would yield \$4.3 million in actual aid).

It is fair to say that this building can be renovated for the same cost or less than building new.

Advantages to Renovation: Community interest, incentive aid for renovations, ability to begin and complete up to 1 year sooner than a new building (also saving on construction inflation during that period), and community auditorium. Utilizing the building's existing configuration lends itself well to conversion to K-8 school. The scope of a renovation can be varied significantly, affecting costs, while new construction is not as flexible cost wise. Also, it is important to note is that renovation uses more labor (read less cost increase) and less material (read less inflation impact) than a new building in the current economy.

Biography, (continued)

International Masonry Association for the new National Civil War Museum in Harrisburg, PA. Since 1985 he has been involved in the completion of projects for over 50 School Districts including: 3 new high schools, 7 new elementary schools; 25 elementary additions & alterations; 1 new middle school; 6 middle school additions & alterations; and 16 junior/senior high school and 8 vocational projects. In addition, he has completed feasibility studies for over 40 educational clients. Mr. McKissick's experience also includes work in the sustainable design, preservation, collegiate, museum, performing arts, religious, housing, and municipal market sectors.

Summary

All three architectural teams believe the Roosevelt Middle School is solidly constructed and makes an excellent candidate for renovations that will give the building a similar life span to a new building.

All three teams propose new windows, doors, electrical, plumbing, and mechanical systems, and restoration of the building envelope including a new roof.

All three architectural teams believe the design and layout of the Roosevelt Middle School lends itself well to a K-8 educational program.

All three teams forecast that renovations will cost no more, and may well cost less, than new construction, especially if demolition of the existing building is considered.

Because renovations are more labor intensive and less dependent on new materials, renovation costs are less likely to escalate as much as new construction.

Renovations can be completed more quickly than constructing a new building.

