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M C K I S S I C K  
A S S O C I A T E S  
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- East Forsyth High School
  - Circulation Improvements
  - Upgrades and Improvements to Site
  - Ball Field's New Concession Stand & Restroom Facility
- Ashley Elementary School
  - Kitchen Renovation
  - Addition of 6 Classrooms
- South Western (York) School District
  - Additions & Alterations to Markle Middle School
  - Additions & Alterations to South Western High School
- Rappahannock High School
  - Additions and Alterations
- Mount Union Area Jr/Sr High School
  - Mid-Century Modern updated style
  - Including a New District Office
  - Including a Branch of the local Library
  - Geothermal Heating and Cooling System
- C.E. McCall Middle School
  - Infill of 2-story Courtyard
  - Green Globes – Rating of 2 Globes
- Charlotte Lappla Elementary School
  - 1950s era updated for Early Elementary
- Hepburn-Lycoming Elementary School
  - Geothermal Heating and Cooling System
  - Found space conversion of Multi-purpose room
- Big Spring Phase I – Big Spring Middle School
  - Conversion of High School into Middle School
  - Geothermal Heating and Cooling System
- Big Spring Phase II – Mt. Rock Elementary School
  - Conversion of Middle School into Elementary School
  - Geothermal Heating and Cooling System
- Big Spring Phase III – Newville Elementary School
  - Addition of Classrooms, new Library, Art/Music Rooms
  - Geothermal Heating and Cooling System
- Coopertown & Chatham Park Elementary School
  - Window Replacements
- Harman Geist Stadium
  - Upgrades to 1939 stadium in downtown Hazleton

**ADDRESS**

**Winston-Salem/  
Forsyth County Schools  
2500 West Mountain Street  
Kernersville, NC 27284**

**CONTACT INFORMATION**

**Darrell Walker  
Asst. Superintendent, Operations  
tel: (336) 727-2095**

**Wayne Loflin  
Director of Capital Projects  
tel: (336) 661-4999**

**STUDY STATISTICS**

**Date of Study ..... 2009  
Number of Buildings 10 semi-detached  
Number of Pupils ..... 2,000**



Site Plan



**Circulation Improvements**

*Changes to canopies and walkways in appearance and orientation created more human-scale spaces and obscured building mechanical equipment.*

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**PROBLEM**

East Forsyth High School is a collection of 10 semi-detached structures which make up a single facility. The separation of buildings, while initially an avoidance of cost during growth of the school, deferred necessary upgrades for accessibility, safety and circulation. Additionally, the campus layout has contributed to stormwater issues and hampered winter maintenance efforts. As a result, the canopy structures which connect the various buildings have deteriorated as have the brick planters within the courtyard. The disjointed structures and the additional mechanical requirements to support freestanding facilities (typically housed outdoors) have decreased the aesthetic appeal of the school and its campus significantly.

**PROCESS**

McKissick Associates conducted a master planning study to identify specific improvements to the campus and to create a more pleasant and attractive environment. A computer model was created to explore various configurations and to communicate the effect of recommended modifications.

**SOLUTION**

The final recommendations and subsequent project included new, reoriented walkways, ornamental plantings, new fencing and numerous other practical and aesthetic improvements.

**Computer Modeling to Study Aesthetics**

*A computer site model was constructed to illustrate the effects of improvements.*



**ADDRESS**

**Winston-Salem/  
Forsyth County Schools**  
**Ashley Elementary School**  
**1647 Ashley School Circle**  
**Winston-Salem, NC 27105**

**CONTACT INFORMATION**

**Darrell Walker**  
**Asst. Superintendent, Operations**  
**tel: (336) 727-2095**

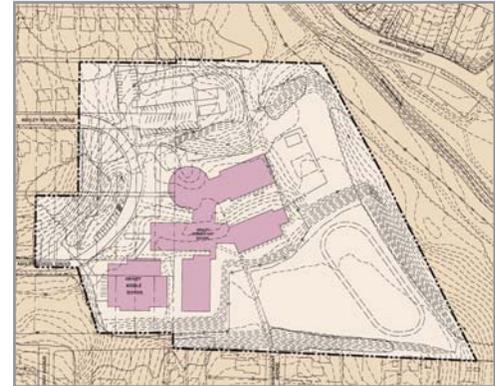
**Wayne Loflin**  
**Director of Capital Projects**  
**tel: (336) 661-4999**

**STUDY STATISTICS**

**Date of Study ..... 2009**  
**Number of Buildings ..... 1**  
**Number of Pupils ..... 450**

**PROBLEM**

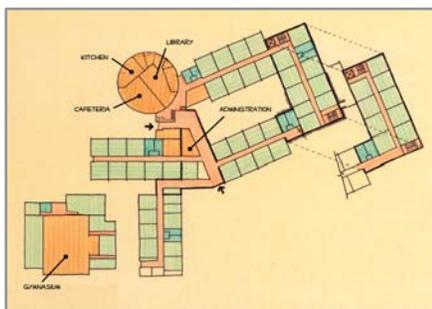
Ashley Elementary School was originally constructed in 1961 and enlarged on several occasions since including a conversion to use as a middle school before again reverting to elementary school use. Located within a residential neighborhood, the site is very compact and further complicated by severe terrain variation as well as the location of a stream which bisects the property. The school's program shift to the magnet school model has resulted in a substantial increase in enrollment from 200 to over 450 pupils which has increased congestion on the site and resulted in significant circulation issues.



**Site Plan**

**PROCESS**

McKissick Associates was retained by Winston-Salem/Forsyth County Schools to develop a plan for reconstructing and rebuilding the site. A computer model of the site was created to investigate alternatives and several options were developed for further consideration. Site plans, costs and traffic plans were presented to the district for cost/benefit analysis.

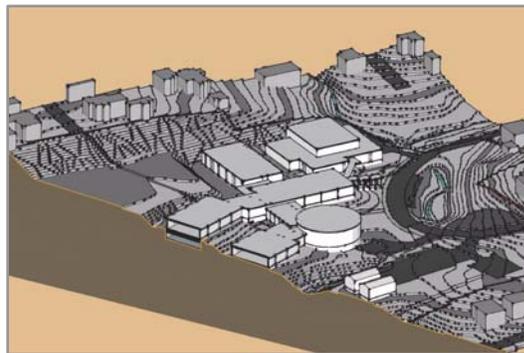


**Development of Options**

*One of many options developed to illustrate possible solutions for site and building configurations.*

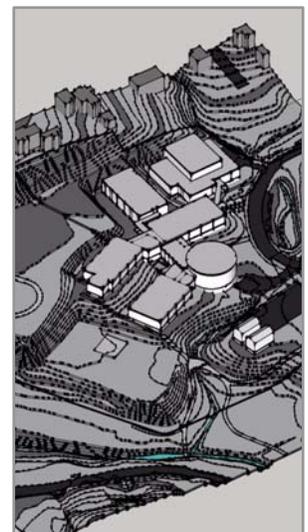
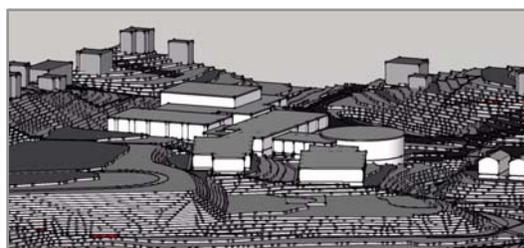
**Modeling the Site**

*A computer site model was constructed for study purposes which illustrates the complex nature of this challenging site.*



**Site Cross Section**

*The section (to the left) shows the varied terrain and building levels and the stream (shown in blue) is visible to the right of the access road.*



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# South Western Senior High School



Published in Learning By Design 1996



## Contact Information

South Western School District  
 225 Bowman Road  
 Hanover, Pennsylvania 17331-4213  
 (717) 632-2500

## Project Statistics

Construction Completed.....December 1994  
 Capacity.....1,600 pupils  
 Area of New Building.....267,000 SF  
 Total Cost.....\$ 17,000,000  
 Cost Per SF (New Construction).....\$ 82.00  
 Cost Per SF (Renovation).....\$ 52.00

## Architectural Services

Full educational planning and architectural services provided by  
 Vern L. McKissick, Project Manager (Hayes Large Architects).

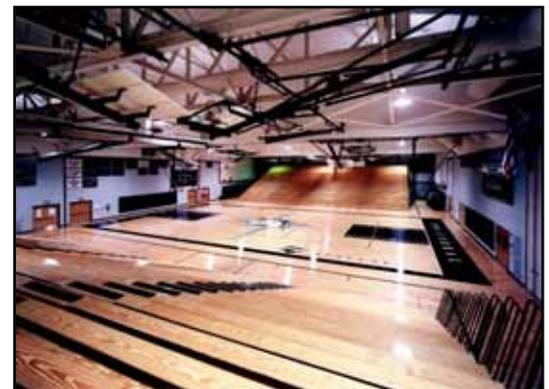
The South Western Senior High School shares a 100-acre rural site with its sister facility, Markle Intermediate School. At nearly 270,000 gross square feet (more than six acres of building), the facility is the centerpiece of the campus. Flanked by the intermediate school and a 7,000-seat varsity football stadium and track,



these additions and alterations took more than three years to complete without disrupting the educational curriculum.

Central to the design solution, was the need to accommodate more than 600 additional students while upgrading and softening the public facade. The cornerstone of the project is the new 2,000 seat, three-gymnasium field house with a bow-string trussed roof. All mechanical equipment for this air-conditioned space is enclosed with an integrated appendage, leaving the expansive, curved, ivy-green metal roof without a single penetration. The former gymnasium has been converted to a new media center totaling more than 200,000 cubic feet of volume. The expanded auditorium was completely refurbished and equipped for extensive theatrical presentations.

Both the new auditorium and gymnasium occupy anchor positions along the front of the nearly 600-foot-long main facade. Other public functions were pulled to the front of the complex and connected to the anchors via a new 160-foot radius arcade. The continuous glass arcade provides passage along the entire public realm of the building. New entries include barrel vault skylights that echo the shape of the field house roof and allow the facade to be completely re-imaged. Classrooms and technical support areas are located within three wings that branch off the public spaces and extend to the rear of the facility.



**ADDRESS**

**Rappahannock County Schools  
Rappahannock Middle/High School  
Washington, VA**

**PROJECT INFORMATION**

**Service Date..... 1998-2000**  
**District Size..... 267 sq miles**  
**Grades..... 6-12 w/Vocational**  
**Capacity..... 550 students**  
**Building Area ..... 82,500 SF**  
**New Construction..... 27,500 SF**  
**Renovation ..... 55,000 SF**  
**Total Project Cost .....\$ 4,200,000**

Vern McKissick (as partner-in-charge for Hayes Large Architects) was initially retained to conduct a district-wide feasibility study and further engaged as design architect for additions and alterations to this district’s middle & high school. A small and extremely rural school system, Rappahannock County with a population of 6,900, is located 60 miles southwest of Washington, DC and 120 miles northeast of Richmond.

Programming for the this two building school district entailed expansion of their existing grade 7-12 school building to accommodate the inclusion of 6th grade and the creation of “school-within-a-school” structure for middle and high school students. In addition to ADA and maintenance renovations, space was also created to house vocational and tech prep educational programs. Other modifications to the circa 1950s building included installation of a retrofit standing seam metal roof over a low slope roof deck and a ground-coupled geothermal heat pump system for heating and cooling.

The modifications to the facility for the upper grade levels allowed the elementary facility’s programs to expand into the vacated space without requiring construction at the elementary building. The funding system in Virginia presented the additional challenge of requiring school board approval for the project before seeking actual funding approval from the county commissioners.



**New Middle School Entrance**



**Middle / High School Addition**



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# Mount Union Area Jr/Sr High School

*Renovation, Additions & Alterations, including geothermal heating & cooling to existing High School & a new District Administration Office*

- Mount Union Area School District  
28 West Market Street  
Mount Union, PA 17066  
(814) 542-8631
- Architectural Services Started..... 2006
- Estimated Construction Cost..... \$24 million
- Area of Renovation..... 142,000 SF
- Area of New Construction..... 27,100 SF
- Date of Completion..... 2011



Photo (above) Entrance by new District Administration Offices.

Photo (below - top) shows the Art Room..

Photo (below - bottom) shows the Band Room



Mount Union is on the Juniata River, at the foot of Jack's Mountain. Once called the "Silica Brick Capital of the World", the three large refractory plants made brick used to line steel furnaces and coke ovens. This 2,500 person community had long ago faced economic challenge with the closure of the three brickyards, and the end of coal mining in the "broad-top" area of Huntingdon County. With an average annual income for families of \$21,400, the community continues to face the challenge of creating opportunities for its young people.

Faced with a declining enrollment and aging facilities, the Mount Union School District had undertaken a building program in the late 1990s - which resulted in the closure of the 1920s era Mount Union Elementary School. Despite that, increases in program needs - especially special education - resulted in space needs at the elementary schools. The community experienced a decline in the business District resulting from the closure of the downtown elementary school.

The 1954 Jr/Sr High School had been partially renovated in 1992, but as a very limited renovation project, substantial aid was lost. Working with the Pennsylvania Department of Education (PDE), McKissick Associates secured a variance to the "20 year rule" permitting the project to proceed 8 years earlier than expected. A strong desire existed to better separate junior and senior high age pupils as well as improve the educational offerings.

Energy efficiency was central to the building renovations. Windows were replaced with new units featuring interior light shelves and exterior sun shades. Roof mounted energy recovery units (ERV's) coupled with a ground-coupled geothermal heating/cooling system are projected to yield substantially improved utility costs and improved climate controlled comfort.



# Library

(LEFT) The new library serves as the local branch of the Huntington County Library System with an exterior entrance for community use for when the school is closed. This new facility is a reinterpretation of the 1950s to 1960s mid-century modern interior, often called “Google Architecture” with an updated color scheme. The space includes a reading area, conference rooms, a distance learning center and a computer lab.



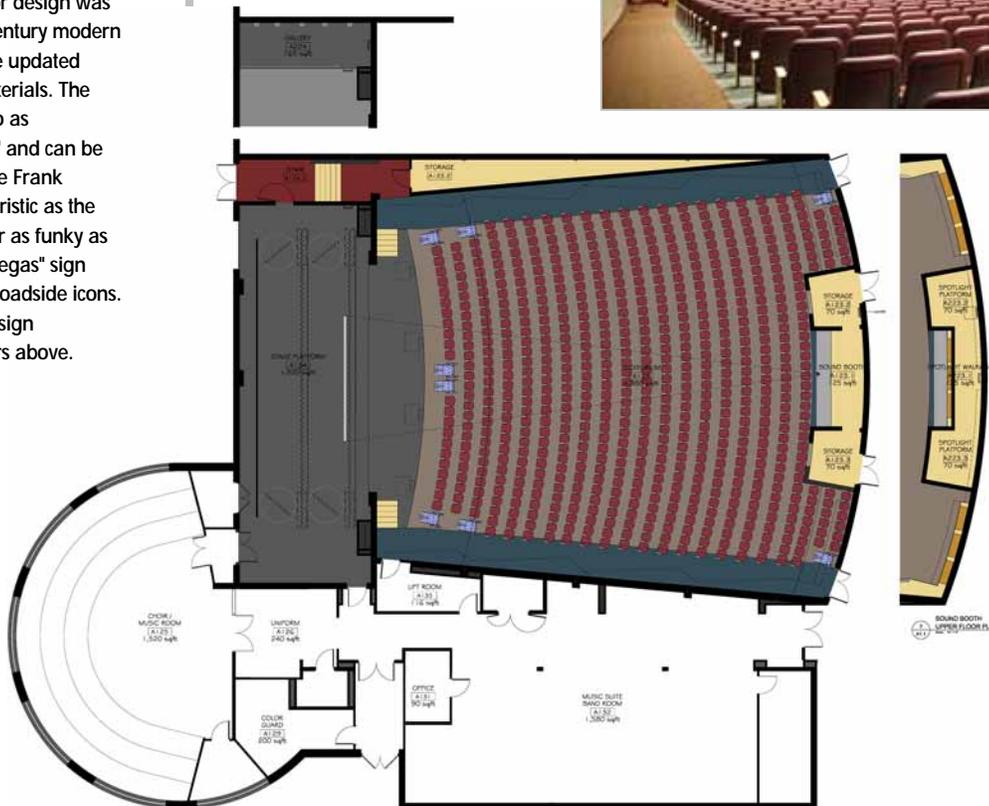
# Auditorium

(BELOW) The auditorium renovation is being undertaken as a separate project. Acoustic upgrades are of primary importance however seating, interior finishes, lighting, stage, and sound systems were also design considerations.



## Google Architecture:

This project involves a small addition to a very large mid-century modern junior/senior high school. Because the budget is constrained, the focus of the interior design was to embrace the mid-century modern design style with some updated color palettes and materials. The style is often referred to as “populuxe” or “google” and can be as sophisticated as the Frank Sinatra House, as futuristic as the LAX Theme Building or as funky as the “Welcome to Las Vegas” sign and other wonderful roadside icons. One of our interior design interpretations appears above.





The Library's (photo above) interior with floating clouds and "trees", are several of the many features that create an inviting environment for students and staff alike.

The Cafetorium (photos below) serves a variety of functions. It is the school's cafeteria during the day and yet can be reconfigured for assemblies and concerts.



## C.E. McCall Middle School

*Green Globes rated Additions & Alterations, infill of an enclosed courtyard, at an existing Middle School.*



- Montoursville Area School District  
900 Spruce Street  
Montoursville, PA 17754
- Mr. Dominic Cavallaro, Superintendent..... (570) 368-3500
- Architectural Services Started..... 2008
- Estimated Construction Cost..... \$16.5 million
- Area of Renovation..... 142,586 SF
- Area of New Construction..... 6,600 SF
- Date of Completion..... 2011

As the outcome of a District-wide feasibility study performed by McKissick Associates, the Montoursville Area School District renovated the McCall Middle School to accommodate grades 5 through 8. Although the existing building was in fair to good condition, at 40 years of age the building systems had never been updated and the existing building did not meet handicapped accessibility requirements. The Board desired that these building upgrades be accomplished in a sustainable manner. In meeting this goal the project was designed to achieve a rating of two globes under the Green Globes Rating System. A closed loop ground coupled heat pump system serviced by 48,000 vertical lineal feet of wells and 100% heat recovery, assists in meeting the energy efficiency goals. All windows and curtain wall systems were replaced with triple glazed systems.

Internally the building has undergone a series of reconfigurations intended to provide updated core educational spaces for this 922 pupil capacity facility. A key element of these upgrades is the new library, created through the infilling of an existing two story exterior courtyard. All aspects of this space were

developed with an eye to sustainability from the use of certified lumber, daylighting to the under floor air distribution. To address the needs for a performance space, a new stage house was constructed while the removal and installation of a raised roof structure in the Cafeteria can accommodate 700 children and adults for a variety of assemblies and events.



**Before & After Photos**

*Above: Cafeteria as shown prior to any renovations & at Right: 3 photos of the new "Cafetorium"*

*Below: Courtyard as shown prior to construction of addition & at Left:3 photos of the new "Zero-Energy" Library*





AS&U 2002 Citation Winner  
for Best Renovation and  
Modernization

# Charlotte Lappla Elementary School

## *Additions & Alterations to a 1950s era Elementary School and Conversion to a Primary Center for Grades K-2*

- Wellsboro Area School District  
34 Mead Street  
Wellsboro, PA 16901
- Jerry Borden, Director of Facilities..... (570) 724-0330
- Area of Renovation.....21,274 SF  
Area of New Construction.....17,126 SF
- Construction Cost.....\$5.8 million
- Design Phase.....8 months  
Construction Phase.....18 months



Facades from within the local town were interpreted and constructed in miniature along the existing corridors.



The Charlotte Lappla project consisted of the conversion of a 1956 building into an early childhood education center for pre-kindergarten through first grade. In addition to renovations to all the building's systems, the school's existing multi-purpose room was then absorbed as "found space" through its conversion into a library.

Pivotal to the project would be construction of a new 17,000 SF addition housing art and music rooms, community multipurpose room, recreation center, five new classrooms, satellite kitchen facilities and support areas. In the design phase, particular emphasis was placed upon a solution that matched this rural community's architectural vernacular.

Extensive site reconstruction was also undertaken to provide new vehicle and pedestrian routing on this hilly, two-building campus.



The library (left) was created in the former cafeteria/multipurpose room (below).



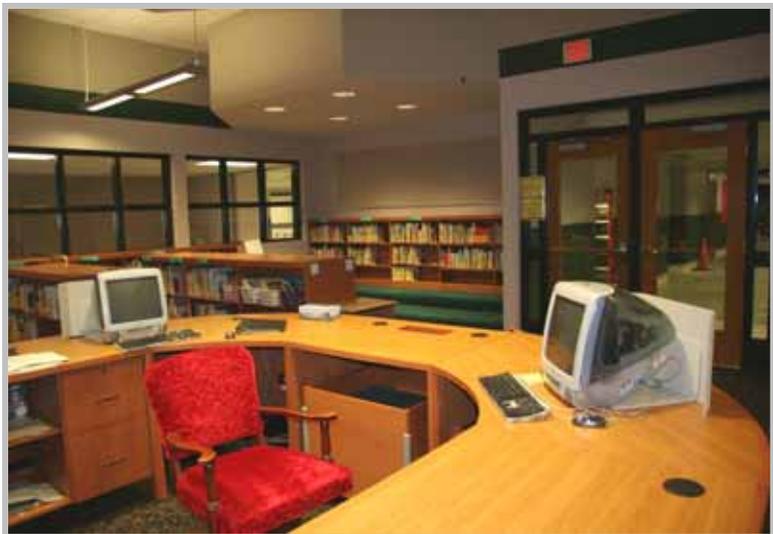
# Hepburn-Lycoming Elementary

*Addition and Alterations to an Existing Elementary School including a new Core Area for Gymnasium, Stage, Kitchen & Cafeteria and conversion of found-space to Library and Classroom Areas*

- Williamsport Area School District  
201 West 3rd Street  
Williamsport, PA 17701
- Mr. Jeff Richards, Business Manager ..... (570) 327-5500
- Design Phase.....7 months  
Construction Phase ..... 11 months
- Original Owner Budget.....\$6.5 million  
Construction Cost .....\$7.0 million
- Change Orders ..... \$152,906 or 2.31%  
(This project experienced fire damage from a dry grass hillside behind the rural property. Change order costs include a \$10,000 insurance settlement.)

The original "pod" school plan was limited by under-sized core facilities for a growing student enrollment. This led to the design of a new core area, including space for a kitchen, stage, music instruction area and gymnasium. The existing core multi-purpose room was converted into a more suitable library and remaining "found" spaces throughout the building were converted to additional classrooms and much-needed storage space.

With energy costs rising, the district also elected to integrate a geo-thermal ground-source system for building heating and cooling.





## Big Spring Phase I - Middle School

*Conversion of the existing former High School to a Middle School involving development of a shared fitness center in the former pool area and reuse of a former annex building to a District Administration Office*

- Big Spring School District  
45 Mount Rock Road  
Newville, PA 17241
- Mr. Richard Fry, Superintendent..... (717) 776-2000
- Design Phase.....8 months  
Construction Phase .....13 months
- Original Owner Budget.....\$8.9 million  
Construction Cost .....\$9.3 million
- Change Orders .....\$377,335 or 3.57%  
(This was a “dirty” renovation of a 1955 high school building. Because their original scope was so limited, their budget relied on the ability of contractors to make more repairs than were ultimately possible.)



The high school, now vacant after construction of a new facility, has the area required to accommodate most of the needs of the middle school program. The repurposing of the middle school focuses on accommodating a team-oriented approach to teaching where the sixth, seventh, and eighth grades are organized into private pods, each with its own team planning room, resource room and student restrooms. The exploratory team subjects too are clustered together to create a core of activity away from the general classrooms.



In addition to bringing the building up to current building code standards for safety and handicapped accessibility, major areas of renovation include the kitchen, cafeteria and serving areas as well as the creation of a “commons” area off the main entrance that will serve both students and visitors for a variety of school events.





# Big Spring Phase II - Mt. Rock Elementary

*Conversion of Big Spring School District's 1974 middle school into a modern, student friendly elementary school with Geothermal*

- Big Spring Area School District  
45 Mount Rock Road  
Newville, PA 17241
- Richard Fry, Superintendent ..... (717) 776-2000
- Design Phase.....16 months  
Construction Phase .....9 months
- Construction Cost .....\$4.1 million

This fourth phase of a ten-year \$40 million building program addresses the conversion of Big Spring School District's 1974 middle school into a modern, student friendly elementary school. With the building of the new high school, also designed by Vern McKissick and completed in 2002, the district was able to look at the plans for repurposing both the existing high school and middle school for new use within the district. The middle school became available once the students moved into the converted high school, having been an earlier phase of the building project also completed by Vern McKissick.

Working with an energy services contracting organization, McKissick Associates was able to leverage the \$4.1 million budget to include an additional \$1.4 million to be implemented in energy efficiency measures that will include a geo-thermal well field, dehumidification and heat recovery systems and automatic lighting and temperature controls. These additional funds were possible through ESCO programs, which allow for additional funding with energy conservation and sustainable design.

Elimination of middle school's home economics suite, locker rooms, shop areas, pupil lockers and the swimming pool allowed for the conversion of these 'found spaces' for use as elementary classrooms. All classrooms will then be organized into grade pods by level: kindergarten, grades 1-2 and grades 3-5, in order to make the best use of teaching resources.

Currently, Big Spring's elementary students are scattered throughout several small elementary schools with only one class per grade level and limited area for expansion. The creation of an elementary school at the Mount Rock facility will accommodate a 20-25% growth in enrollment in addition to permitting the closure of the small outlying schools.

# Big Spring Phase III - Newville Elementary

*Renovations and Additions to Big Spring School District's 1963 Elementary School with a conversion to a Geothermal heating and cooling system*



- Big Spring Area School District  
45 Mount Rock Road  
Newville, PA 17241
- Richard Fry, Superintendent ..... (717) 776-2000
- Renovations to Existing ..... 33,927 SF
- New Construction ..... 10,280 SF
- Construction Phase ..... 7 months
- Construction Cost ..... \$3.9 million



The current facility, built in 1963 has had no major renovations and currently does not meet the educational needs of the students. To meet the needs of this educational community, the existing 33,927-square-foot building is receiving an addition of 10,280 square feet, bringing the total building size to 44,207 square feet and will include a new Library, Art Room, Music Room, Computer Lab and 3 new classrooms. Newville Elementary School will become a “four-deep” building, with four classrooms at each grade level, kindergarten through Grade 3.



The project will eliminate the use of outdated modular classrooms, the use of storage areas for instruction and the use of hallways for student testing by creating appropriate support spaces. Administration areas and the nurses office will also be reconstructed. The installation of a new elevator and restrooms, will address non-ADA compliance as there was no handicap accessibility to the second floor.

Upgrades at the site include complete reconstruction and reconfiguration of parking and traffic flow patterns. An additional 40 parking spaces will be provided for staff and parents. Security concerns are being addressed to control pedestrian traffic and control access to educational and community spaces. This work is being undertaken in concert with a Safe Schools Route Grant in cooperation with the Borough of Newville. School safety will be improved with an upgrade to the fire safety system, replacing the current non-serviceable alarm system.

# Coopertown & Chatham Park Elementary Schools

The School District of Haverford Township began a study to determine the scope of the Board's initiative to provide sufficient classroom space for all students and to ensure that all district schools meet the highest standards for safety and cost-effective maintenance. This included renovations to both the Coopertown and Chatham Park Elementary Schools.



Coopertown Elementary School



Chatham Park Elementary School

The 2005 Window Replacement Projects have improved the Thermal Resistance of Coopertown Elementary and Chatham Park Elementary. The areas not replaced with window glass have primarily been in-filled with an insulated wall system that in many areas includes exterior Aluminum Composite Panels and interior tackable wall surface. The energy saving value for this replacement wall system is nearly sixteen times better than the glass that was removed.

## Before



Section of wall above can be seen at far right, where new insulated panels have been added to exterior, increasing the overall energy efficiency and adding a bright yellow, that will coordinate with the exterior of the New Chestnutwold Elementary School, also in the School District of Haverford Township.

For Chatham Park, as for Coopertown, the amount of glass has been reduced slightly, allowing for a greater portion of the higher valued panel in-fill area, while still providing plenty of access to fresh air and sunlight.

## After



## After



## Contact Information

Dr. William Keilbaugh..... (610) 853-5900  
 Superintendent of Schools  
 School District of Haverford Township  
 1801 Darby Road  
 Havertown, PA 19083

## Project Statistics

Architectural Services Started..... Summer 2004  
 Projected Completion ..... Summer 2006  
 Total Project Cost ..... \$2,800,000

# Harman-Geist Stadium



*This project preserves green space and play fields in this urban setting*



*Project involved the preservation & restoration of a town landmark*



This photo, taken in 2004, shows the previous stadium and field area.

Originally constructed in 1939 and located in Center City Hazleton, Harman-Geist Stadium is a fixture of Hazleton pride. McKissick Associates recommended the complete renovation of the field, bleachers, and field house, and divided the projects into three phases to limit the disruption of use by the various sports teams.

The all-weather field, complete with PIAA and NCAA regulation field markings for football, soccer and field hockey included installation of storm water piping, power, data and water lines, sports apparatus, paving and fencing with a masonry pier and steel picket fence book-ending the stadium. The stadium entrance to the concession pavilion also included a feature paving area of engraved bricks in various sizes and colors, which had been sold as a fundraising effort to members of the community. The stadium is now equipped with new lighting with light levels adequate for TV broadcasting, a new sound system, electronic message board, and security systems, including the installation of six pan-tilt-zoom cameras.

Work included compliance with the American with Disabilities Act (ADA) for the field and upgrades to the bleachers. A new two-tiered press box, with rooftop camera platform, is fully wired for communication between the field, field house and all media outlets. Also included were renovations to the home and visitor locker rooms, shower rooms, equipment storage, coaches' and official's offices, trainer's office and physical therapy room, and enlarged (ADA compliant) public restroom facilities. An addition to the field house provided a new concession stand and security office. The field house alone accounts for 7,460 SF of renovated space and 940 SF of new construction with an estimated total cost of \$900,500.



The \$3 million rehabilitation of downtown Harman-Geist Stadium kicks off the start of this combined project. The upgrades to the field, completed for the first season game in 2005, is being followed by a renovation of the field house building in 2008.

## Contact Information

Mr. Frank Victor, Superintendent of Schools  
 Hazleton Area School District  
 1515 West 23rd Street  
 Hazleton, PA 18202  
 (570) 459-3101

## Project Statistics

Architectural Services Started ..... Fall 2004  
 Construction Started ..... Spring 2005  
 Construction Completed ..... Fall 2005  
 Project Cost ..... \$ 1,865,690

## Architectural Services

Full feasibility study, sports field design and field graphics design services provided by McKissick Associates.

**ADDRESS**

**Pine Valley Central Schools  
Junior/Senior High School  
South Dayton, NY 14138**

**PROJECT INFORMATION**

**Service Date..... 1994-1997**

**Grades..... 6-12 w/Vocational**

**Capacity**

**Elementary..... 450 students**

**Middle/High School..... 749 students**

**Building Area ..... 101,258 SF**

**New Construction..... 25,658 SF**

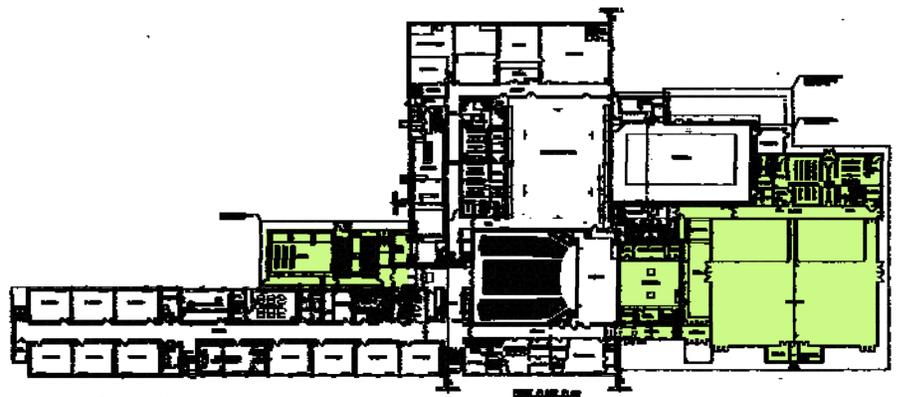
**Renovation ..... 75,600 SF**

**Total Project Cost .....\$ 4,550,000**

The Pine Valley Central School District (New York State) is a rural district which covers an area of approximately 120 square miles in the northeast section of Chautauqua County and the northwest section of Cattaraugus County in western New York State. The Pine Valley Central School campus itself is approximately fourteen miles from the Village of Fredonia and twenty-five miles from the city of Jamestown.

Vern McKissick (as partner-in-charge for Hayes Large Architects) was initially retained to conduct a district-wide feasibility study and further engaged as design architect for two projects: the elementary school expansion and the renovation and expansion of the middle & high school. As part of this assignment Vern McKissick provided public relations assistance to the Board of Education in assistance with securing voter bond referendum approval.

The first phase, an \$850,000 addition at the district's grade K-5 elementary school, consisted of four new classrooms. The second phase, two additions totaling \$3,700,000 at the grade 6-12 middle & high school housed a new double 1,000 seat competition gymnasium, locker rooms, athletic storage, library, 80-pupil large group instruction area and home economics suite. Additional renovation work included ADA upgrades as well as asbestos abatement and finish replacement as well as extensive alterations to the art suite while the former library was converted into science labs.



**First Floor Plan**

M C K I S S I C K  
A S S O C I A T E S  
A R C H I T E C T S

# Penn Cambria Senior High School

## *Additions & Alterations to existing High School*

- Penn Cambria School District  
201 6<sup>th</sup> Street  
Cresson, PA 16630
- Mrs. Mary Beth Whited, Current Superintendent..... (814) 886-8121
- Completion Date ..... 1994
- Construction Cost .....\$9.7 million
- Design Phase..... 11 months  
(design through the completion of Construction Documents)
- Construction Phase ..... 16 months
- Change Orders ..... - \$42,688 or - 0.53%

In response to growing enrollments, changing educational program needs and a District-wide grade reorganization, five separate additions and extensive renovations to existing spaces were undertaken. The additions provide a new library, five additional general classrooms, two special education classrooms, two science classrooms, one home economics laboratory, one auxiliary gymnasium and expanded boys and girls locker rooms, kitchen, cafeteria and support spaces.

At the same time many areas have been converted to more appropriate uses and instructional spaces have been relocated. Particularly successful was the conversion of former shop areas into a total of 8 new science labs/classrooms. Additionally, Mr. McKissick (while a partner with Hayes Large) was instrumental in obtaining a \$100,000 urban forestry grant from the USDA, which was used to develop on-site outdoor learning areas, a greenhouse and stream/stormwater quality upgrades.



Penn Cambria Senior High School was completed by Mr. McKissick while he was a partner with Hayes Large Architects. Photo (right) shows the exterior library addition and photos (above - from top down) show the main entrance, the auxiliary gymnasium and the library's interior.



- Chestnutwold Elementary School
  - New Replacement Elementary, small urban site
- Manoa Elementary School
  - New Replacement Elementary, small urban site
- Plainfield Elementary School
  - New Replacement Elementary, LEED™ Silver
- Wellsboro Area High School
  - Award Winner, Designed to LEED™ Silver
  - **Green Brochure** – Wellsboro High School
- Lycoming Career and Technology Center
  - Award Winner, Fast-track - completed in 12 months



# Chestnutwold Elementary School

*Construction of a New Elementary School, Designed as a Prototype School for Re-adaptation to a Second Site in the District (Manoa Elementary School)*

- School District of Haverford Township  
1801 Darby Road  
Havertown, PA 19083
- Dr. William Keilbaugh, Superintendent ..... (610) 853-5900
- Original Owner Budget..... \$12.1 million  
Construction Cost ..... \$13.3 million
- Design Phase.....7 months  
Construction Phase ..... 18 months
- Change Orders ..... \$237,205 or 1.98%  
(largest contributing change orders related to extensive discovered poor soils)

This project involved construction of a new replacement 3-story elementary school housing 600 students in Kindergarten through fifth grades. Located on an existing site, the building required demolition of an existing school dating from the early 1900's. Numerous architectural elements from the existing building were retained and reinstalled in the new structure, including the stone façade and window lintels as well as replicating the wainscoting in the classroom hallways.

As the existing site is a small urban parcel, this necessitated the positioning of the building within the required setbacks of the local zoning codes. Although in the end 38 zoning code variances were required in building the school, these

variances permitted the use of existing township streets for bus loading and parent pickup and drop-off, thereby allowing for the creation of new green open-space playfields for the school and community's use.



# Manoa Elementary School

*Construction of a New Elementary School based on the prototype developed for the Chestnutwold Elementary School and adapted to a second site in the district*

- School District of Haverford Township  
1801 Darby Road  
Havertown, PA 19083
- Dr. William Keilbaugh, Superintendent ..... (610) 853-5900
- Building Area (all new construction) ..... 85,355 SF
- Construction Manager on Project ..... CB Development
- Project Completion ..... Winter 2008  
Multiple-prime bid
- Construction Cost ..... \$20.1 million

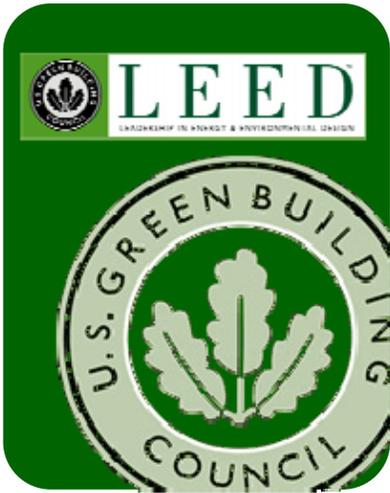


When the school district began design on their prior new elementary school, they did so with the goal that the plan developed in conjunction with a revised educational curriculum would be able to be used as a prototype for other sites in the district. Our design for the Chestnutwold Elementary School (completed in 2006) was adapted for the Manoa School by enlarging the building for greater student capacity and making adjustments for the more level site.



Designed for an initial student population of 620 and a staff compliment of 83, including volunteers and aides, the facility houses four classes per grade level from grades K-5. The new 3 story building located on 3.1 acres maximizes the amount of athletic field space that has remained available to the district and community for sports including lacrosse, soccer, field hockey and football.





# Plainfield Elementary School

*The new LEED™ Silver Rated K-5 school to be constructed as a replacement for the school on the existing site. The existing school will be demolished on completion of the new school.*

- Big Spring School District  
45 Mount Rock Road  
Newville, PA 17241
- Mr. Richard Fry, Superintendent..... (717) 776-2000
- Estimated Date of Completion..... on hold
- Estimated Cost..... \$ 12,600,000



Recently completed renovations to the Mount Rock Elementary (2007), Big Spring Middle (2005) and the District Administration Office (2006) by McKissick Associates provided the Big Spring School District some much needed space. With a growing population and new housing developments planned for the area, the district asked McKissick Associates to explore options for the expansion or replacement of the existing Plainfield Elementary School. Lifecycle Cost Analysis indicated that building replacement was the most responsible option for the 40-year future of the Plainfield site.



The new elementary school will be approximately 52,000 SF to house 450 pupils. This LEED™ Silver building and the redeveloped site plan will create safe parent drop-off areas and preserve the community green space for play fields.





# Wellsboro Area High School

*Construction of a New "Green" High School in a rural area  
(construction cost of \$143 per sf)*

- Wellsboro Area School District  
2 Charles Street  
Wellsboro, PA 16901
- Phil Waber, Superintendent of Schools ..... (570)724-0303
- Design Phase..... 10 months  
Construction Phase ..... 20 months
- Original Owner Budget..... \$19.4 million  
Construction Cost ..... \$20.2 million
- Change Orders ..... \$206,976 or 1.02%  
(includes \$80,000 in owner added scope)



The new high school building has a total area of 126,000 square feet on three levels. The new building used the LEED™ guidelines for "green" buildings, utilizing energy efficient ground source heat pumps for heating and cooling and incorporating "sustainable green design principals" whenever readily achievable.

The multistory configuration minimizes travel distances and provides for energy efficiency. High-sloped roofing systems visually break up the overall building mass into more small-scale elements, an architectural solution that is appropriate to and reinforces the character and local vernacular of the borough.

With this project, the district has significantly expanded their curriculum to include a comprehensive vocational education and technology preparation ("tech prep") programs in 12 areas including building construction, production industries, data networking technologies, computer applications, graphic design, institutional foods, secretarial, health care occupations, natural resource management and forestry products.



Pennsylvania's first

# green

## high school

*126,600 sf*

*\$143.86 building cost/sf*

*\$20,600,000 construction cost*

*\$23,340,000 project cost*

*802 regular students &  
205 vocational students*



*4 teaching houses  
12 integrated technical preparatory  
& vocational programs  
community fitness center*

WELLSBORO AREA HIGH SCHOOL



# WELLSBORO AREA HIGH SCHOOL

Close-loop water circulation pipes feed the ground source heat pump system with air-to-air heat recovery.



Heat Pumps



Automatic temperature control systems are monitored real-time via the internet.

Piping



This elegant floating staircase connects the commons and the upper levels.

The acid-etched concrete flooring is one of the many low-maintenance finishes made from recycled, low VOC materials.



The parent/teacher entrance at the middle level leads from the secure administration area onto the commons' mezzanine (at left).

Large Group Instruction Distance Learning Equipped



Clerestories at computer commons provide daylighting to classrooms (below). The entire building has 100% wireless data coverage.

The front portion of the bottom floor of this 3-story structure is built into an embankment which provides additional insulation.

geothermal well fields

Locker rooms, team areas and the gym sport school colors.



Thermally broken exterior stud walls with additional perimeter insulation minimize heat loss.



This dramatic, naturally lit passage connects the evening event entrance in the soaring commons area to the gymnasium (above) and community fitness center (below).

The Mary Jo Putman Fitness Center was built by a generous donor and other community fundraising efforts for use by students and the community at large.



parent & teacher entrance

student entrance

vocational outdoor plaza

Exterior windows throughout are triple glazed (0.24 U-value)



Horticulture Greenhouse



12 vocational and tech prep programs were developed as a component of the educational specifications completed as part of the design process.



Exterior materials such as block and wood siding were manufactured locally (within 100 miles).



The student commons entrance is shielded by a triple-glazed curtain wall system (0.16 U-value). The commons ceiling uses tongue and groove planking from sustainable harvested wood.

The library, adjacent to the commons, provides access to continuous broadcast news-media stations to engage students in current events.



Low VOC paints, stains, coatings & floor coverings contribute to better air quality.

Recycled materials were used in the structural steel framing, ceiling tile, rubber flooring and concrete (blast slag).



The former high school (left-foreground) is to be renovated as a performing arts center for the school and community.

The commons area (below) showcases outdoor views of the athletic stadium against a backdrop of beautiful mountains.

This special area, with its floating staircase, not only serves as the primary student entrance and cafeteria, but has hosted its share of formal evening events.



A thermal imaging scan (above) shows superior insulation values for the triple glazed curtain wall (see picture, left) in the commons area.



2-story atrium corridors create inspiring student project areas with adjacent private “houses” for teacher work areas.

 **MCKISSICK  
ASSOCIATES**  
HARRISBURG, PENNSYLVANIA

317 North Front Street, Harrisburg, PA 17101  
717. 238. 6810 phone 717. 238. 6830 fax

*With offices in Winston-Salem, North Carolina*



# Lycoming Career Center

## *Fast-track construction of a New Vo-Tech School in less than 12 months*

- East Lycoming School District  
349 Cemetery Street  
Hughesville, PA 17737-1020
- Dr. David Price, Superintendent ..... (570) 584-2131
- Design Phase.....3 months  
Construction Phase .....8 months
- Original Owner Budget.....\$2.6 million  
Construction Cost .....\$2.4 million
- Change Orders .....\$18,000

When the lease on their former facility became suddenly unavailable, this new vocational building was taken from the start of design to occupancy in less than 12 months (including completion of full 10-part Pennsylvania PlanCon process). The facility houses automotive shops, full food service kitchens, health occupations, general classrooms and a restaurant practice area accessible to the community.

Using a third party Energy Services Contracting Organization to provide and install the heating systems for the new facility reduced the initial capital outlay for the member districts. The cost of these systems was further offset by energy savings measures put in place at other East Lycoming School District buildings.



# Cambria Heights Elementary School

## *New Elementary School*

- Cambria Heights School District  
426 Glendale Lake Road, PO Box 6  
Patton, PA 16668
- Mr. Michael Strasser, Current Superintendent ..... (814) 674-6072
- Completion Date ..... 1992
- Construction Cost ..... \$7.5 million
- Cost per Square Foot ..... \$84

Built as a reflection of the high school, the white masonry exterior welcomes students and the community to the facility with a series of curved features. The white circular staircase in the lobby area is a whimsical feature in what might otherwise be a stark white space. Terrazzo floors and wood trim soften the interior palette, adding warmth and providing durable surfaces that are easily maintained.

Skylights and plentiful windows provide daylight, and offer many views of the site where features such as the colonnade reading court and the outdoor amphitheatre were included in this thoughtful design. The 7.9 acre site had numerous challenges that turned into positive educational opportunities. A portion of the site required that a wetlands area be disturbed. Due to environmental concerns, the area was mitigated to a corner of the property, where the creation of a nature study area and songbird habitat create outdoor classroom space to enhance the learning environment.



Cambria Heights Elementary School was completed by Mr. McKissick while he was a project manager with Hayes Large Architects (eventually becoming a partner). Photo (right) shows the amphitheatre and photos (above - from top down) show the reading colonnade, the administrative offices and the circular staircase. All illustrations of the curves and repetitive circular design that makes this building student friendly and provide visual interest.





Bedford Elementary School was completed by Mr. McKissick while he was Partner-in-Charge with Hayes Large Architects. Photo (right) shows the overall view of the main entry and photos (above - from top down) show the main entry and circulation loop, the library & multimedia center, Large Group Instruction (with views of the stage and gym) and the art pavillion.

# Bedford Elementary School

## *New Elementary School*

- Bedford Area School District  
330 East John Street  
Bedford, PA 15522
- Dr. Glenn Thompson, Current Superintendent..... (814) 623-4295
- Completion Date..... 1998
- Construction Cost..... \$12.1 million
- Area of New Construction..... 107,000 SF

Designed to blend harmoniously into the historic Bedford community, this new elementary school will house 1,050 students in grades K-5. In addition to a high-slope pitched roof, the brick and stone exterior uses materials common to Bedford County. Although the structure is large, the massing of the facility into three units sitting relative to the slope of the site gives the impression of several smaller scale buildings.

Arranged into public and student zones, the school allows community members to access the multipurpose room and community room for after-hours activities without intrusion into the main academic areas.

The academic areas of this two-story school are divided into four pods in two wings and separated by a core of support areas. Each wing supports the smaller grade groupings: kindergarten, first & second grades at the north end and third, fourth & fifth grades to the south.



- Reading Citadel Intermediate High School
  - Adaptive Reuse conversion, Hospital c. 1885
- Hazleton “Castle” Intermediate Elementary School
  - 1926 Historic Renovation (abandoned)
- Summerfield Elementary School
  - 1940s Local Vernacular (Summerfield, NC)
- Alice C. Wiltsie Performing Arts Center
  - Auditorium of “Castle” (see above item)
- St. Stephen’s Episcopal K-8 School
  - Adaptive Reuse conversion, Garage c. 1929
- J. Henry Cochran Elementary
  - 1926 Historic Renovation
- Roosevelt Middle School
  - 1951 Historic (Art Deco style)
- Williamsport District Service Center (at the Roosevelt Middle School)
  - 1951 Historic (Art Deco style)

# Reading Citadel Intermediate High School

*Conversion of an Urban Hospital Campus to an Intermediate High School for 3,000 students, arranged in 4 magnet schools, in grades 9 & 10*



- Reading School District  
800 Washington Street  
Reading, PA
- Dennis Campbell, Principal..... (610) 371-8392
- Project Completion ..... Fall 2010  
Fast-track project, bid with multiple-primes
- Construction Cost ..... \$58.5 million  
(\$3.5 million under cost estimate provided by independent 3rd-party estimator)



The 8.3-acre St. Joseph's site will be completely transformed through the demolition of 150,000 SF (primarily built between 1950 and 1970), and the renovation of 200,000 SF of existing buildings. Dating from the 1872 and 1892, original walls (including a four story high stone chapel, a bell tower and 30" thick stone walls) will be incorporated as exterior elements in the new additions. Existing hospital areas will be converted to classroom use, whereas new construction will accommodate large group instruction areas, cafeteria, food service kitchens, pupil locker rooms, gymnasium, band/choral rooms, black box theatre and internet



café. The existing City street grid is utilized for traffic flow around the building. One parking deck and one garage will be demolished while a third 360-car garage will undergo structural support. Waste material from the demolition will be used to create a hillside terrace to create an onsite playfield.



The building has been programmed to create a small supportive learning environment. Construction of an additional story above an existing building will create four standalone grade 9-10 schools arranged around the District's newly developed magnet programs; Arts & Humanities, International Business, Technology, and Agriculture Ecology & Science. Each of these 600 student schools within a school are arranged to be self-contained, supporting the four 150 pupil "teaching teams" (each including science and special education). Looping of instructors will permit two years of contact with professional teaching staff. Taking advantage of the natural slope (over 160 foot drop over a three block distance) no student will be required to move more than two stories to reach core educational facilities.



Preservation Pennsylvania  
Award Recipient 2007

# Hazleton "Castle" Intermediate Elementary School

*Additions & Alterations to Historic 1920s former High School and Conversion to an Intermediate Elementary for Grades 3 through 8*

- Hazleton Area School District  
1515 West 23rd Street  
Hazleton, PA 18202
- Mr. Steve Hahn, School Board Member..... (570) 788-3547
- Design Phase.....7 months  
(design and construction were fast-tracked to allow construction to begin on certain sections before the remaining design was completed)  
Construction Phase ..... 15 months
- Original Owner Budget..... \$23.9 million  
Construction Cost ..... \$20.9 million
- Change Orders ..... - \$475,454 or -2.25%  
(actually negative due to value engineering efforts by McKissick Associates throughout project construction)



In 2003, McKissick Associates, PC, was retained by the District to provide a comprehensive facilities evaluation. In the study, the former high school was identified as cost effective rehabilitation to provide much needed space for the District, and would easily reconfigure into a school for grades three through eight. Equally important, the study also identified the architectural significance of the old high school, and the sense of pride associated with it by many residents. As a result, a fund was established by the District to receive donations for the rehabilitation of the Castle with great success.

The Hazleton Intermediate Elementary renovation and addition project utilized a construction manager from project inception. The owner had a fixed budget based on available state funding and an urgent need to open the facility as soon as possible. Both before and after bid, extensive value-engineering exercises were undertaken to allow additional scope to be included in the project. As a result, change orders, in conjunction with value engineering, have actually decreased the overall anticipated project cost.



The drawing at the right was found by our preservation specialist in the Pennsylvania State Archives. When this school was built in the 1920s, it was the first school to ever cost more than \$1 million in Pennsylvania.

**ADDRESS**

**Guilford County Schools  
Summerfield Elementary School  
Summerfield, NC**

**CONTACT INFORMATION**

**Andrew LaRowe**  
COO .....(336) 370-3490

**PROJECT INFORMATION**

**Grades..... PK - 5**  
**Capacity..... 700 students**  
**Site..... 8.8 acres**  
**Building Area ..... 94,400 SF**  
**New Construction..... 52,400 SF**  
**Renovation ..... 42,000 SF**  
**Demolished ..... 14,000 SF**  
**Total Project Cost .....\$ 17,950,000**

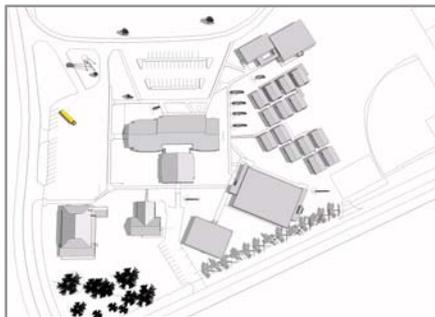
The Summerfield Elementary School consists of 21 buildings constructed between 1940 and 1985 including 14 modular classrooms. Not only does this 8.8 acre site lie within the town of Summerfield’s historic overlay district, but one of the site buildings which also serves as the community gymnasium is a treasured historic structure. Additionally, site challenges are complicated by seven septic drain fields which could not be disturbed, two community baseball fields, is bisected by a high tension 14.4 KVA power company line, an inactive AMTRAK right of way, a Daughters of the American Revolution (DAR) memorial and is the site of a Revolutionary War battle.



**Historic Gymnasium**

Unlike prior building projects, this project was envisioned as a total reconstruction of the site. The solution to maximizing the buildable area was a two story classroom wing and the creation of an internal kindergarten play courtyard. Extensive green features have been utilized in the design, driven by necessity as much as responsibility. For example, to limit water pressure requirements and reduce demand on fresh water use, an underground cistern will collect roof water for use in fire protection as well as use in non-potable uses such as toilets and irrigation. Bio-remediation swales will treat infiltration of storm water on the site.

The building itself is primarily ICF (insulated concrete form) construction in order to create a high-performing envelope and allow a faster-paced low construction schedule.



**Site Before Project**

**Core Area Roof**

*Raised areas provide ventilation & lighting.*

**New 2-Story Classroom Wing**



**Site at Project Completion**



M C K I S S I C K  
A S S O C I A T E S  
A R C H I T E C T S

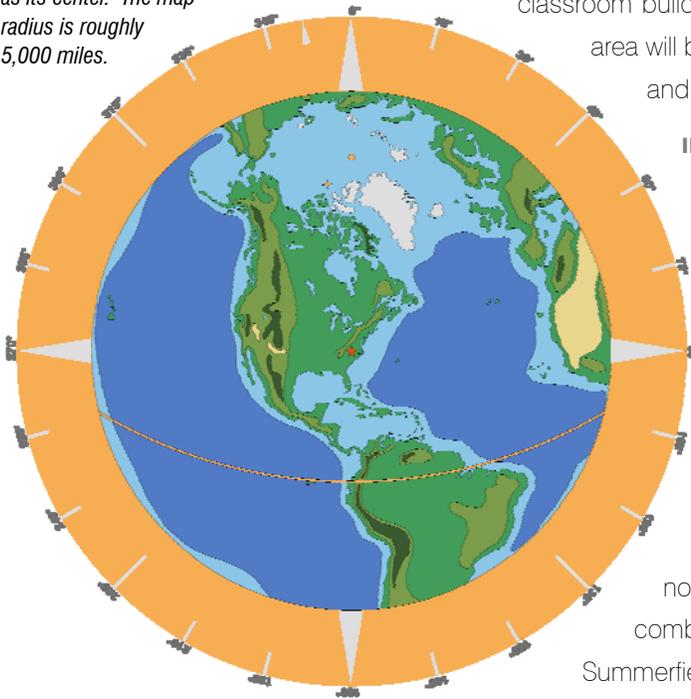
**SUSTAINABLE FEATURES**

Although the building will not pursue a formal green rating, numerous sustainable features include:

- post industrial fly ash in the concrete for floors and foundations
- rapidly renewable agricultural products for casework & interior doors
- recycled steel in metal roofing
- energy star roof coatings to reduce heat buildup
- building products manufactured within a 300 mile radius of Greensboro

**The World from Summerfield, NC**

*This floor pattern has been interpreted from an azimuthal oblique projection map (similar to great circle maps but with a non-polar, non-equatorial center point) using Summerfield, NC as its center. The map radius is roughly 5,000 miles.*



M C K I S S I C K  
A S S O C I A T E S  
A R C H I T E C T S

8/18/2011

Careful selection of plantings will serve to shade paved areas to reduce the heat island effect, as well as extend the development of the nearby Kent Derr Community Park being constructed by the Town of Summerfield.



**Moving Experience**

*Two 21' diameter fans with a bent wing design (similar to airplane wings), use only 40 watts of electricity each when operating. They provide air circulation in the library and the cafeteria/multipurpose room.*

While the current classroom area is designed for 700 students, the core areas have been designed to accommodate 850. This will allow one more future expansion by replacing the remaining two older

classroom buildings with another two-story wing at which time, all school area will be enclosed under a single roof allowing better accessibility and more controlled security access and safety.

**INTERIOR DESIGN FEATURE: FLOOR PATTERN**

This floor pattern will fill a 27' diameter circle where the main corridor's gathering area looks into the kindergarten courtyard at the entrance to the cafeteria and the library. Not just a pretty design, it has been designed as a mathematical and geographical teaching tool. This map is created with the elementary school in the exact center. Distances can be measured using a uniform scale from the center point. The numbers outside the compass indicate degrees from true north and the locations of cities can be approximated using a combination of compass bearing and scaled distances from Summerfield.

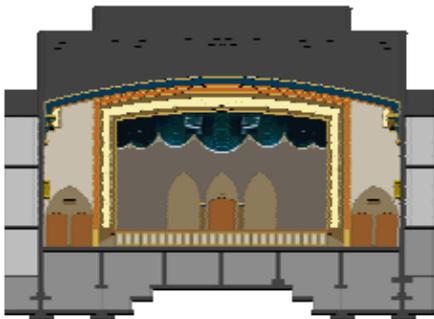
	Bearing from Map Center (decimal degrees)	Actual Distance from Map Center (in statute miles)	Scaled Distance from Pattern Center (in feet & inches)
Summerfield, NC, US	0 deg	0 mi	0 ft 0 in
New York, NY, US	44.0 deg	445 mi	0 ft 11 in
Hollywood, CA, US	277.0 deg	2,156 mi	4 ft 6 in
Honolulu, HI, US	281.0 deg	4,701 mi	9 ft 10 in
Timbuktu, Mali	86.0 deg	4,811 mi	10 ft 1 in



# Alice C. Wiltsie Performing Arts Center/ Hazleton "Castle" Auditorium

*Renovations & Alterations to the Auditorium at the Historic 1920s former High School and Conversion to a community performing arts center*

- Hazleton Area School District  
1515 West 23rd Street  
Hazleton, PA 18202
- Mrs. Elaine Maddon Curry  
Vice President, Castle Auditorium Board of Directors ..... (570) 501-4800
- Mr. Steve Hahn, School Board Member..... (570) 788-3547
- Construction Began..... December 2005
- Phase I (2006).....\$750,000
- Phase II (2009)..... \$1,442,000
- Phase III (2011)..... \$1,950,000
- Total Project Construction Cost ..... \$3,042,000
- Project Related Costs.....\$429,600
- Total Project Cost..... \$3,472,600
- Area of Project..... 11,722 SF

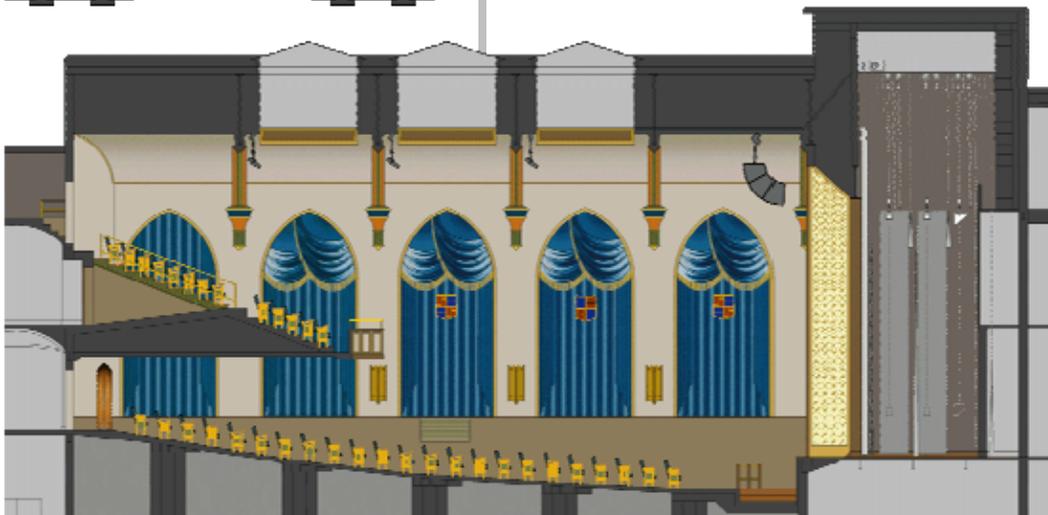


The Hazleton High School was constructed in 1926 and abandoned in 1996. Having survived numerous demolition threats, ultimately resulting in the school being named by Preservation PA as one of the 10 most threatened buildings in 1999, the building was adopted by community members who wished to see the ornate 1,250-seat auditorium with 2/3 flyspace made available for community use. Funding could not be secured, but in 2003, McKissick Associates Architects was retained by the Hazleton Area School Board to develop solutions.

A fast tracked renovation of the school followed – but due to District finances, renovation of the auditorium (now located in an elementary/middle school) was

not a priority. The renovation project proceeded between 2005 with the building reopening in January 2007. Meanwhile the auditorium remained in its original state of disrepair as the renovated school opened to wide community support.

While elated that the “Castle” had been saved, members of the community remobilized to pursue the reopening of the



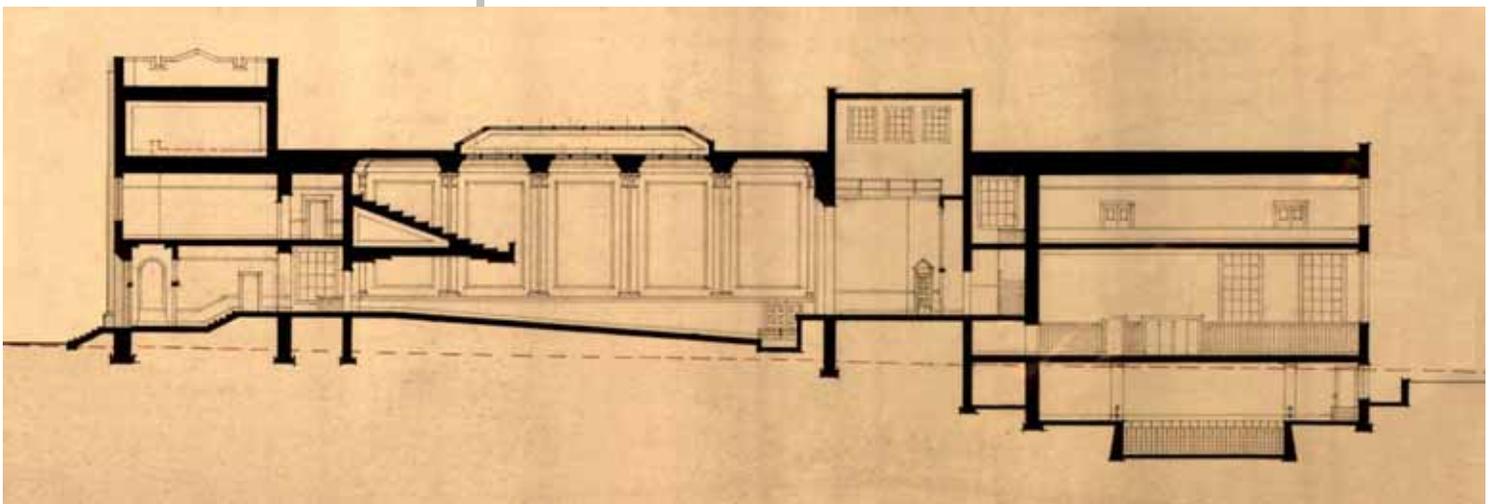
Auditorium as a community asset. Supporting this goal, between 2007-2009 McKissick Associates provided ongoing pro bono assistance to the “Castle committee” including development of marketing materials, web site graphics, presentation boards, as well as special presentations to the Governors’ office.

Ultimately in March 2010 the necessary funding was obtained, with funding being a mixture of school district dollars in phase One/Two, a \$1,000,000 grant in RACP monies from the Commonwealth of Pennsylvania, \$300,000 in federal funds, \$50,000 from the CANDO Foundation, and \$600,000 in local donations.

In 2009 interior finishes and building systems were bid with costs split between the school district and Castle Auditorium Committee. This included restoration of all interior finishes including the installation of donated gold leafing, installation of all electrical/data infrastructure to support theatre systems, air conditioning, as well as general lighting, and reinstallation of long lost and reclaimed 600 pound brass wall sconces.

The final phase of this project is currently been bid and construction will begin in the first quarter of 2011. Work includes the installation of new seating with reproduction aisle standards, installation of new digital theater lighting, new theatre rigging (including an “Austrian” curtain paid for by a \$25,000 bequest from a local community member), new audiovisual systems, installation of new loading dock access for stage/production vehicles, access stairs to lower level dressing rooms, and installation of telescoping orchestra pit filler/stage extension.

Upon completion the auditorium will be leased to the non-profit 501 3C who will staff and operate the facility on behalf of the greater Hazleton community. McKissick Associates preservation staff is also completing the process of applying for the overall building, including the renovated auditorium’s placement on the National Park Services - National Register of Historic Buildings.





Grand Award Winner from the  
Green Building Council of  
Central PA 2007

# St. Stephen's Episcopal K-8 School

*LEED™ Silver Rated K-8 School created from a Campus of Adjacent Historic Buildings in an Urban Neighborhood.*

- St. Stephen's Episcopal Cathedral  
221 North Front Street  
Harrisburg, PA 17101
- Rev. Churchill Pinder, Pastor ..... (717) 236-4059
- Design Phase.....14 months  
(included public relations and fundraising assistance for the church)  
Construction Phase .....12 months
- Original Owner Budget.....\$2.8 million  
Construction Cost .....\$3.2 million



St. Stephen's Episcopal Parish expanded its K-8 facility from 180 to 300 pupils and unified the campus consisting of various properties that make up a complete 1 block, urban site located less than 2 blocks from the Pennsylvania State Capital. The renovation encompassed five existing buildings, including a 177 year old Cathedral and its adjacent, 158 year old Chapter House, both of which are designated historic structures. An unheated concrete frame brick exterior 1920's 4-story, garage was transformed into classroom space and multipurpose room space for grades K through 5. Also included in the project were renovations to the 1840's school building and a new stair tower addition inter-connecting both structures. Other improvements included renovations to the internal circulation spine that now connects the campus buildings while providing handicapped access.

*Before*



The "overcroft" or third floor kitchen, cafeteria and multipurpose room as it appeared before work began (above) and near completion (right)

*After*



# J. Henry Cochran Elementary

## *Additions & Alterations to Historic 1920s Elementary School*

- Williamsport Area School District  
201 West 3rd Street  
Williamsport, PA 17701
- Mr. Jeff Richards, Business Manager ..... (570) 327-5500
- Project Completed ..... 1999
- Original Owner Budget ..... \$ 8.2 million
- Construction Cost ..... \$ 8.1 million
- Total Area ..... 72,000 SF



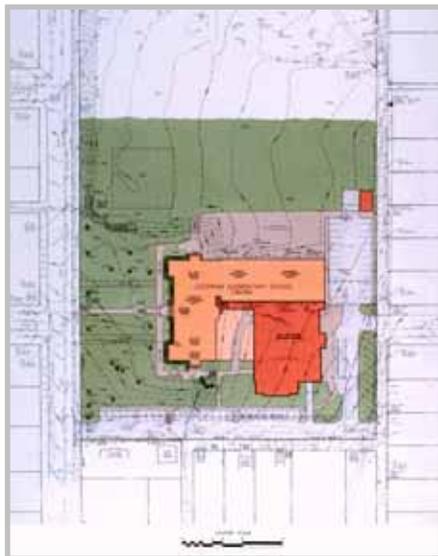
A 1950's wing had been added to this 1926 Collegiate Gothic school. The architecture of this mid-century addition was insensitive to the style and neither referenced the original building nor complemented its design aesthetic. Along with a new addition in 1999, the facade of the curtain wall to the 1950's 3-story wing was reconstructed with masonry and trim to blend with the new addition and reference the original 1920's architecture.

Space in the 1950's wing was then converted into support core spaces, a Library, a Large Group Instruction area and an Art Room.

The new 1999 addition, approximately 14,000 SF and designed in

a similar Gothic style to the original school, added a Multi-purpose room (Gymnasium, Cafeteria & Kitchen and a music room with stage). The new addition enclosed a former asphalt play area creating a new courtyard. To minimize the need for new construction on this tight landlocked site in an established residential neighborhood, the coal bins and boiler room in the basement of the original building were converted into a kindergarten classroom suite.

Site reconfiguration with new access drives on neighboring adjacent lands permitted a separate parent pick-up, the circulation of which is independent of the existing city grid.



# Roosevelt Middle School

*Extensive Renovations & Sustainable Design to an Existing Building that will seek LEED™ Silver*

- Williamsport Area School District  
201 West 3rd Street  
Williamsport, PA 17701
- Dr. Kathleen Kelley, Superintendent ..... (570) 327-5500
- Architectural Services Started..... 2009  
Phase I (2009 – District Service Center) .....\$ 3.8 million
- Project Budget (all Phases) ..... \$ 42.5 million
- Area of Renovation.....60,000 SF
- Area of New Construction.....89,000 SF
- Estimated Date of Completion.....2012

**Budget Breakdown**

MEP Replacement, Code Upgrades & Educational Upgrades	\$ 13.8 million
Site Upgrades	\$ 3.24 million
New Construction	\$ 17.16 million
Project Related Costs	\$ 8.3 million



Constructed in 1951, this is a unique school due to its poured in place concrete construction. The existing structure contains a total area of 93,489 SF and occupies a total site of eleven acres. Originally designed to support the 1940's view of junior high school instruction, the inflexible environment acts as an obstruction to true middle school programming with the original architectural and mechanical systems dating from 1951.

Based upon developed programming, the Roosevelt School upgrades consist of extensive renovations to 60,000 SF of the existing building, and new additions of approximately 89,000 SF. An additional 33,000 SF of the current building will be converted to house the District

Administration Offices. The building was partially renovated in 1999-2000 with the intent of extending its usable life by eight to ten years.

Plancon construction aid is being pursued for this project with a waiver having been applied for and granted to the "20 year rule". When the building is complete, it will have a PA Department of Education full-time equivalent capacity of approximately 1,398 students.



The reconstructed and expanded facility is being designed to a LEED Silver rating level with the USGBC's guidelines.



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## Increasing Energy Efficiency

The scope will involve the revamping of the existing structure to achieve increased energy efficiency, thermal performance, and a reduction in water use and achieve a LEED Silver rating. Examples of work being proposed include:

- ◆ Architectural
  - The remaining exterior building envelope will be upgraded, replacing the existing window units with triple glazed window/curtain wall assemblies.
  - Furring of cast in place exterior concrete walls to increase overall "U" value.
  - Installation of new hi-albedo roofing system with additional rigid insulation.
- ◆ HVAC
  - Installation of a ground source geothermal heat pump HVAC system with a total of 175 400' deep-closed loop wells.
  - 100% heat recovery through installation of energy recovery ventilators.
- ◆ Plumbing
  - Replacement of all fixtures with new low flow fixtures.
  - Installation of a rainwater capture for non-potable uses.
- ◆ Electrical
  - Lighting – replacement of all lighting with the use of extensive daylighting with interior light shelves in classroom areas.
  - Installation of a 60 KW photovoltaic array.



# Williamsport District Service Center

*Renovations to an Existing Building including Art Deco references for exterior and interior spaces*

- Williamsport Area School District  
201 West 3rd Street  
Williamsport, PA 17701
- Mr. Jeff Richards, Business Manager ..... (570) 327-5500
- Architectural Services Started..... 2009
- Construction Cost .....\$ 3.8 million
- Area of Renovation.....38,000 SF
- Estimated Date of Completion..... 2010

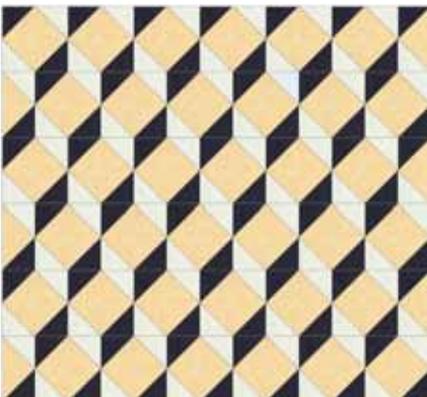


Above: (2) computer generated 3-D rendering for interior conference and meeting rooms.

Right: Colored rendering of the exterior with renovations complete.



Below: An Art Deco floor pattern, often in stone or inlaid wood, that is being considered for use in the lobby area of the Administrative offices.



Built in 1950, this structure was originally used as a middle school. Renovations will involve excess space (38,000 SF) in a wing of an existing 2-story 97,000 SF middle school. This wing will then serve as the new District Service Center. Work will include demolition of all existing mechanical, plumbing, and electrical systems. Installation of a new heat pump based system is planned. New windows will be installed and Asbestos abatement will be undertaken with new floor, wall, and ceiling finishes.

The building references the Art Deco style (a style popular from 1920 until 1939, but some influences lasted into the 1950's). This style will be reinterpreted for the interior finishes based on mathematical geometric shapes and patterns, and updated materials will be used to mimic those popular with the Art Deco movement such as stainless steel, inlaid wood, lacquer and Chrome. Art Deco, with the more industrial feel of design elements, will suit this town whose hey-day came with the lumber barons at the turn of the 20<sup>th</sup> Century.

## Pottstown Middle School



Originally slated for potential demolition, the Pottstown Middle School elected to save the building and expand the campus. The 1932 building was restored and updated to accommodate changes made to the educational programs and allow "teaming" by grade level with significant resource and technology upgrades made as well. Each grade occupies one floor of this 3-story school, minimizing movement between floors and improving traffic flow in the circulation areas.



New construction on this limited site provided all new core facilities: cafeteria, kitchen, gymnasium, locker rooms, large group instruction areas, music areas, an art suite, and 12 new classrooms. Renovations included major asbestos abatement work (including structural elements) as well as creation of new classroom capacity in converted former support areas. A floor was inserted in the former gymnasium to accommodate a new library on the third floor and a new teaching team area was constructed on the floor below.

The additions nearly doubled the size of the facility, retaining the grace of this colonial revival school. In support of the schools music programs, the instrumental and choral groups now enjoy the high-quality acoustics in the practice and performance space of the restored auditorium.





# Bedford High School

## *Restoration of and Additions to Historic 1932 High School*

- Bedford Area School District  
330 East John Street  
Bedford, PA 15522
- Dr. Glenn Thompson, Current Superintendent ..... (814) 623-4295
- Completion Date ..... 1997
- Construction Cost ..... \$10.8 million
- Area of Renovation ..... 154,000 SF

This 950 student High School houses grades 9 – 12 and encompasses 154,000 SF. Forming a partnership between the school district, vo-tech schools, employers, community groups and local colleges and universities allowed the school to create a School-to-Work high school philosophy. The areas of emphasis include the following: Engineering and Art, Business and Computers, Liberal Arts and Humanities and Human Services.

Powerful new teaching tools required similarly intelligent rethinking of Bedford’s facilities. As the Partner-in-Charge, Vern McKissick helped to successfully transform Bedford’s historic 1932 High School into a modern school facility capable of supporting the District’s vision.

Months of interaction with school faculty and members of the school’s administration resulted in the complete reorganization of the wings to house the four career paths. Wood and metal shops were replaced with the Engineering and Applied Physics labs. Other science labs were then overhauled and expanded. A Family Living/Child Care Suite was created from the former vocational/agricultural shop. The science classrooms are configured with both a traditional teaching area and a laboratory space.



As Partner-in-Charge with Hayes Large Architects, Mr. McKissick provided educational planning & architectural services. Photo (below) shows a design sketch of the front elevation (Main Entry) and photos (above – from top down) show the main entry after completion and one a technical education classroom.



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M C K I S S I C K  
A S S O C I A T E S  
A R C H I T E C T S

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McKissick Projects in various phases of design and construction. Please note the studies completed for each client as indicated by the RED bullet.

## **Big Spring School District**

- Feasibility Studies in 1997, 2003, 2005 & 2008
- New Plainfield Elementary .....\$14.6 million
- Renovations & Additions to Newville Elementary .....\$3.2 million

## **East Lycoming School District**

- Feasibility Study in 2008
- Renovations & Additions to Ferrell Elementary .....\$1.5 million
- Senior High School - Gym Expansion/Biomass Boiler .....\$2.6 million

## **Hazleton School District**

- Feasibility Study in 2003
- Renovations to Hazleton "Castle" Auditorium.....\$2.4 million

## **Mifflin County School District**

- District-Wide Feasibility Study in 2010
- 2011 Capital Projects .....\$2.4 million

## **Milton Area School District**

- Feasibility Study 2009
- Renovations to Middle School .....\$5.8 million
- Montandon Elementary School Roof & Wall Panel Repairs ..... \$56,000

## **Montoursville Area School District**

- Feasibility Study in 2004-2005 & 2007
- Renovations & Alterations of McCall Middle School .....\$20.1 million
- Renovations to George C. Lyter Elementary .....\$1.2 million

## **Mount Union Area School District**

- Feasibility Study in 2004-2005 & 2007
- Renovation & Addition to Jr/Sr High School .....\$24.0 million
- Renovation to Auditorium .....\$2.2 million

## **Reading School District**

- Risk Analysis Study in 2004 & Feasibility Study in 2006
- Conversion of Hospital to Intermediate High School .....\$58.5 million

## **Williamsport Area School District**

- Feasibility Studies in 1989, 1997, 2003, 2006, 2008 & 2009
- New District Service Center .....\$4.4 million
- Curtin Middle School Roof Replacement ..... \$480,000
- New Middle School (grades 7-8) .....\$35.0 million
- Educational Upgrades to Williamsport High School.....\$10.0 million

## **Groton Public Schools (Mystic, CT)**

- District Wide Feasibility Study in 2010 (ongoing)

## **Guilford County Schools (Greensboro, NC)**

- Renovations & Additions to Summerfield Elementary .....\$18.1 million

## **Winston-Salem/Forsyth County Schools (Winston-Salem, NC)**

- Various Feasibility Studies in 2008 & Master Planning Study for East Forsyth HS in 2009
- East Forsyth High School .....\$2.4 million