

School District of Montour McKees Rocks, Pennsylvania
Montour High School, District Administration Offices, and Athletic Center



DEFINING OUR PURPOSE, ALIGNING OUR VISION, DESIGNING OUR FUTURE

Executive Summary | Section I

Montour High School, District Administration Offices, and Athletic Center



Executive Summary

THE PRIDE OF A COMMUNITY

The ‘Hilltop’ has long been the center of academics, athletics and activities for the Montour School District and the five communities it serves. The campus includes the high school, an athletic center with the district’s competition gym and pool, the stadium, playing and practice fields, and the district administrative offices.

Since its opening in 1957, Montour High School has evolved greatly. A second classroom building and the athletic center were added in 1966, and additional projects over the years changed the facility again and again. Eventually, the campus lacked any sense of identity or cohesion.

In late 2008, with the high school building in tatters from a stalled renovation project, the district took decisive action to put the project back on track and develop a high school that the community would be proud of and that will serve the students well into the new century. The district addressed the renovations in stages, but, at every stage, the leaders and educators remained committed to their mission. The Hilltop has been transformed into a modern environment for inspiring the growth of the students.



Montour High School Main Lobby



SCOPE OF WORK

The work was nothing less than a full renovation of the academic, administrative and athletic facilities on the hilltop campus. The high school and district administration building was vacated for a school year and 210,200 SF of existing space was renovated and 38,800 SF of additional space constructed. The athletic center was closed for a spring and fall semester and 57,700 SF of existing area was renovated and 16,100 SF of additional space constructed. The stadium renovations were put in place over a summer break and included a new turf playing field, resurfaced 6 lane track, renovated grandstands and construction of a two story press box addition.



Aerial Photo of Campus Prior to Renovations

The Montour School District celebrated its new high school dedication ceremony on Saturday, October 29, 2011. The 310,000 square foot cutting-edge facility now houses state-of-the-art technology and many innovative career-focused curriculum offerings.

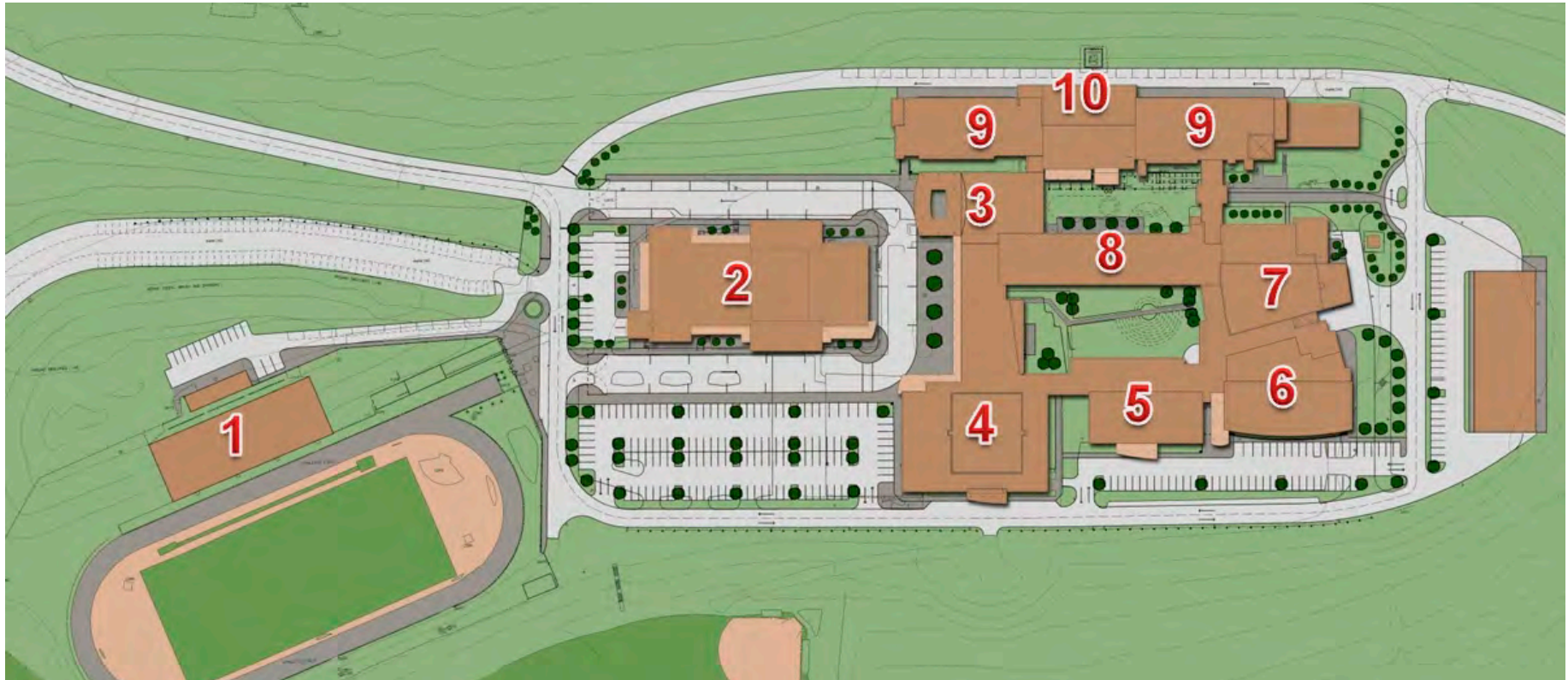
Over \$1.8 million dollars in technology has been put into the building including: Interactive [white] boards, enhanced sound systems, netbooks, laptops, desktops, digital display boards and ipads. A robust wireless network provides instant access to online applications.

An atmosphere built on academic excellence; design and innovation were at the heart of this building project. The school will serve as an inspiration to the students and the community in aspects of education, exploration and technology. The combination of unique design, curriculum, and technology ranks Montour as a leader in the educational sector.

- Montour High School Website



Site Plan - After



- | | |
|--|--|
| 1. Stadium, Press Box, and Bleachers | 6. Spartan Commons / Food Court |
| 2. Montour Athletic Center and Natatorium | 7. Auditorium and Music Education Wing |
| 3. High School School Administration Offices | 8. Arts and Humanities Education Wing |
| 4. Intermediate Gymnasium | 9. S.T.E.M. Education Wing |
| 5. District Administration Offices | 10. Library and Digital Media Center |



Project Highlights

MONTOUR H.S. & DISTRICT ADMINISTRATION OFFICES - RENOVATIONS & ADDITIONS

A major renovation of the campus was performed and completed in 2011, unifying what were 3 buildings on the hilltop into one facility. The renovations integrated state of the art teaching, communication, and security equipment to provide an efficient, modern facility for the students and the community.

Project Highlights

- New main entrance plaza
- New main entrance and school office
- New cafeteria and food court
- Fully renovated auditorium
- Fully renovated gymnasium
- Fully renovated library, conference, and media center
- Distance Learning lab in World Language
- Fully renovated classrooms and science labs

Project Statistics

- 1200 Students
- 210,200 SF renovated existing space
- 38,800 SF of additions
- 17 Month Construction period
- Completed in Fall of 2011
- Budget: \$47 Million



High School Entrance Plaza

“All the technology has really upgraded the classroom, made it more 21st Century and the kids seem to be responding well.”

Eric D'Antonio, Social Studies Teacher



AUDIO, VIDEO, AND TECHNOLOGY EQUIPMENT

Computer Data and Technology Equipment

- District network equipment including core server switch
- Comprehensive wireless network

Instructional Technology Equipment

- 54 Interactive white boards
- 38 Video projection systems
- Teacher voice enhancement systems in all classrooms, labs and instructional spaces
- Teacher emergency alert systems in all classrooms, labs and instructional spaces

Information Display Equipment

- 11 video display panels
- 2 Video walls
- 2 LED tickers
- 91 SF Exterior LED video display

Project Statistics

- 5 Month Construction period
- Completed in Fall of 2011
- Budget: \$1.8 Million



Library Space Stripped to Structure (2008)



Library Space Stripped to Structure (2008)



Library and Media Center, Post-Renovation (2011)



MONTOUR ATHLETIC CENTER

The District required major renovations to its gymnasium and natatorium building, which no longer met the needs of the district, and was sorely outdated. The design of renovations and new additions to the facility updated both the natatorium and the gymnasium and included many new features such as an elevated walking track, new wrestling facilities, new locker rooms for basketball home and away, swim teams, football visitors lockers, cardio rooms, and training areas.

Project Highlights

- 1,500-Seat Multi-Purpose Arena
- 6-Lane Competition Pool
- Fitness Track
- Wrestling and Cheerleading Room
- Aerobics and Cardio Rooms

Project Statistics

- 57,700 SF of existing area
- 16,100 SF of additions
- Completed in Spring of 2013
- Budget: \$14.5 Million



Conceptual Rendering of Athletic Center from Campus Entrance



Conceptual Rendering of 1,500-Seat Multi-Purpose Arena



THOMAS J. BIKRO STADIUM

The modernization of Montour Stadium required structural analysis, and select demolition of the existing press box to accommodate a new, larger prefabricated press box. This renovation also included the replacement of the existing grandstands a new artificial turf field, resurfacing the existing six-lane track, and all new stadium lighting. New accessibility ramps, railings, building graphics and signage were provided. The project was completed in August of 2009, and the stadium was ready for the Spartans first home game of the season.

Project Highlights

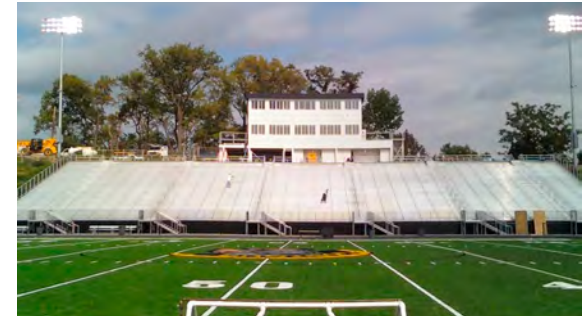
- New synthetic turf playing surface
- Resurfaced running track
- Renovated grandstands
- New press box
- New Lighting

Project Statistics

- 3 Month Construction period
- Completed in Fall of 2009
- Budget: \$2.9 Million



Aerial Photo of Stadium, Track, and Press Box



Stadium and Press Box from Visitor Sideline



Stadium and Press Box from West End Zone



Community Engagement Process | Section II

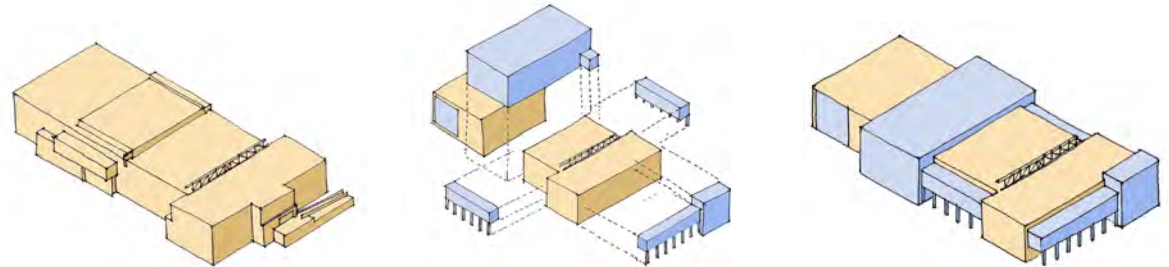
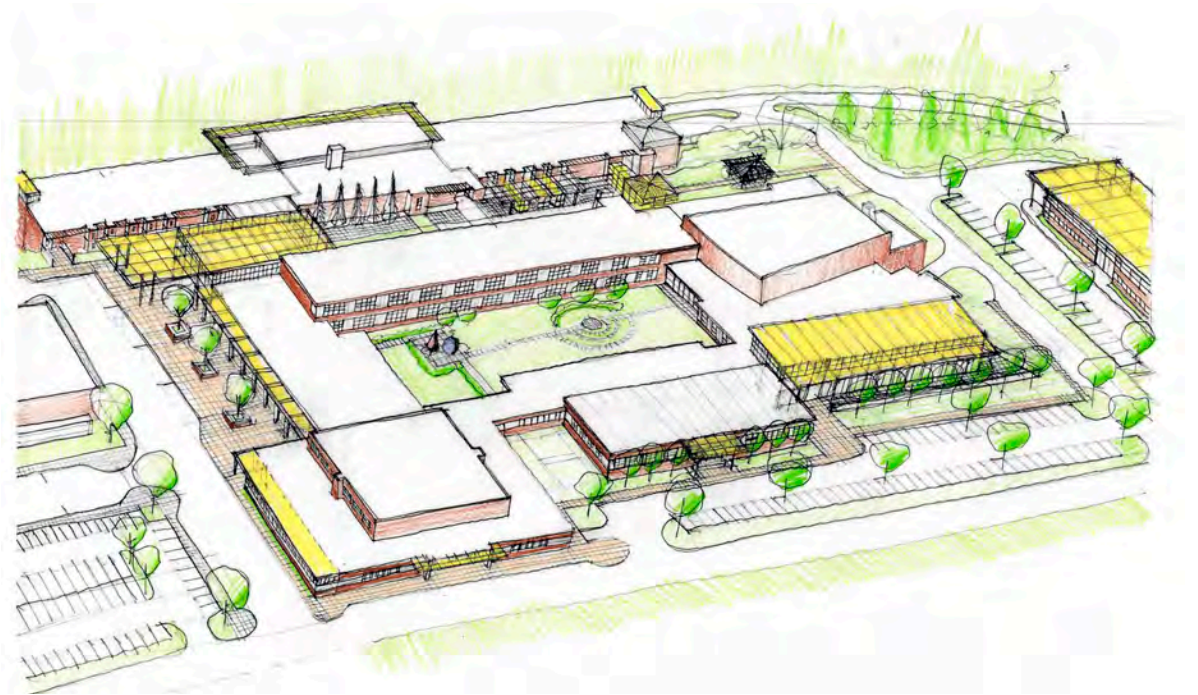
Summary

DEFINING OUR PURPOSE, ALIGNING OUR VISION, DESIGNING OUR FUTURE

The above is the slogan of the Montour School District, and it guided the project throughout the course the renovation projects. The renovation of the Hilltop campus occurred in stages, but the vision of an overall plan provided the guidance.

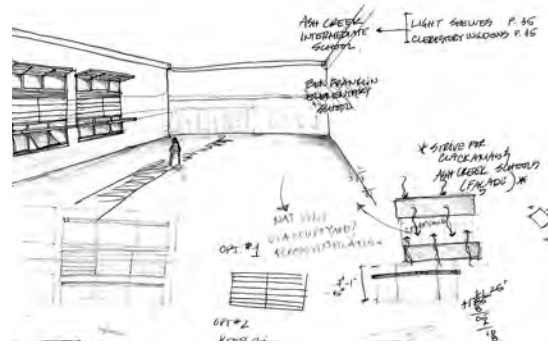
A project leadership team was established to guide the district throughout the course of the projects. The Board of School Directors appointed the Superintendent of Schools as their representative and together with the project managers from the design team and construction manager formed this leadership team. This team then tapped the assets of the district and community to formulate the renovation plans.

Challenges were identified, goals were established, plans proposed and refined by the project team during an intensive series of workshops with the district administration, school community and school board starting in early 2009. The group also led a series of public presentations and working sessions.



STAKEHOLDERS AND PROCESS

The school district committed to an intensive planning process. The project leadership team met weekly and addressed specific aspects of the renovation program at workshops that were held in conjunction with these meetings. The workshops were generally held in pairs, with an initial meeting to solicit input from the stakeholders and a follow-up to solicit comments on the proposals developed by the design team.

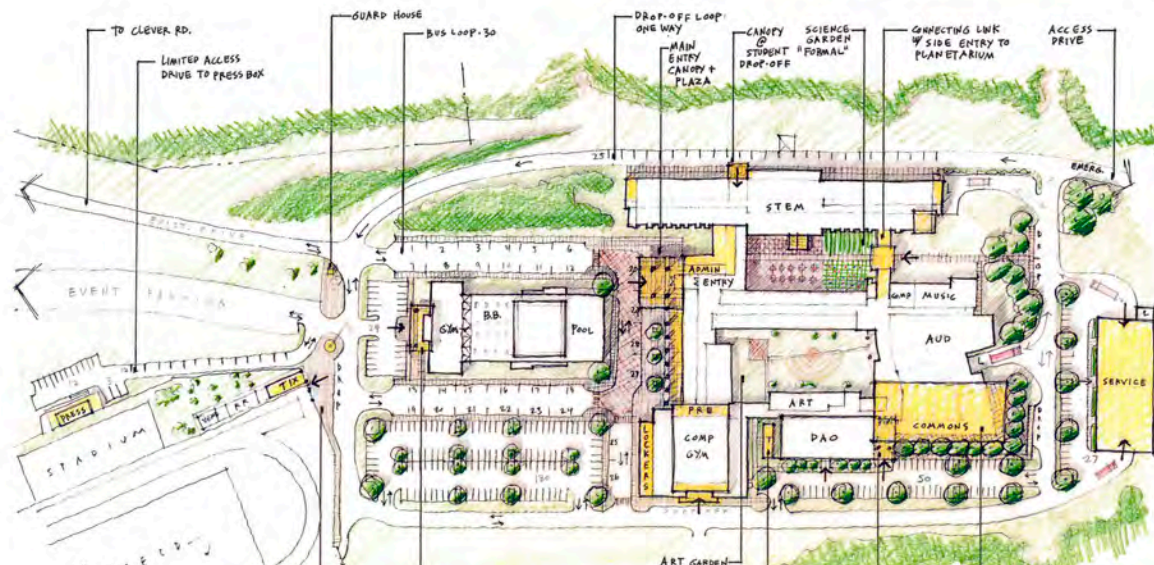


Weekly Project Meetings

- District Representatives
- Superintendent of Schools
- Director of Facilities and Operations
- Business Manager
- Design Team representatives
- Construction Manager representatives
- School Board representative

Project Workshops

- Director of Curriculum and Instruction
- Director of Pupil Services
- District Security
- District Technology
- Athletic Director
- Food Service Director
- High School Administration
- High School Department Heads and Staff
 - Core Studies: English, Social Studies, Math, World Languages, Science
 - Art, Music & Performing Arts
 - Technology Education
 - Additional courses: Business, Family & Consumer Science, Life Skills, Health



REVIEWS AND PRESENTATIONS

Regular monthly presentations and review sessions for the school community, students, parents, and the Board of School Directors were established. The Superintendent, Design Team and Construction Manager each had the opportunity to present aspects of the project. Overall goals and challenges were discussed and specific planning aspects addressing these were presented. This was followed by a formal question and answer session and an informal review & comment session where the public had the opportunity to review the material in depth with project representatives. Comments and concerns were noted and addressed in subsequent sessions.



Conceptual Elevation of STEM Wing



Conceptual Rendering of Spartan Commons (Cafeteria)



COMMUNITY ENGAGEMENT - CHALLENGES

The project team had a number of challenges to overcome.

Community concerns:

The project had a long and convoluted history. Planning for the High School was begun in 2002 and underwent a number of unsuccessful attempts at replacement and/or renovation. The new design and construction management team was tasked to execute the work and this team had to overcome the doubts and concerns of a skeptical community.

Wayward Vision:

The project had lost momentum and become fragmented and the process had become corrupted.

Aggressive Schedule:

An aggressive schedule was established for the project. Because of previous missteps the board was interested in accomplishing the project in the shortest possible timeframe.

COMMUNITY ENGAGEMENT - ASSETS

Experience:

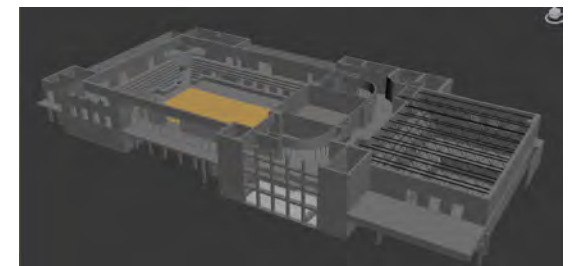
Because of the project history, the district and high school staff were familiar with the design process and excited to engage in it. The design team was able to leverage this experience in order to execute the design phase of the project within a condensed timeframe.

Flexibility:

The school community was open and receptive to a number of recommendations that changed the way the project was considered and delivered.

Leadership:

The project leadership team was established to complete the work. Together with the school community this team established and maintained focus on a well defined set of goals and overall vision for the product.



COMMUNITY ENGAGEMENT - VISION

The vision established for the high school was nothing less than a first-class, modern and inspiring learning environment that the community could take great pride in.

Goals were defined to address specific aspects of the project that reinforced the vision:

- Modernized building systems
- State of the art instructional areas, accomplished through a comprehensive technological and environmental upgrade with an optimized internal configuration of classrooms and support spaces
- First-class instructional & student support areas, representative of a twenty-first century learning facility, including an introduction of atypical spaces that would enhance the educational environment.
- Upgraded athletic facilities to be used to support a healthy lifestyle for the students, to support the district's championship caliber athletic teams and as showcases for the district when hosting events.
- Enhanced student safety by a reconfiguration of the site traffic pattern and creation of a single educational building with a primary façade and main entrance



Educational Environment | Section III

Educational Environment

LEARNING ENVIRONMENT

The renovations to the high school building were designed to transform the way the school operates and support the district's mission "to provide an exemplary and comprehensive educational experience that enables each individual to achieve maximum potential, to respect themselves and others, and to become a responsible and productive citizen."

Three primary strategies were identified and implemented to redefine the educational facilities at Montour High School. Learning centers were established, state-of-the-art technologies were integrated, and the physical structures were comprehensively transformed.

***"The class is more streamlined,
more efficient***

Doug Macek, Science Department Head



Planetarium



Science Lab Classroom



Science Lab Classroom



CURRICULUM SUPPORT

The two classroom buildings were unified. The original building was redefined for the teaching of Arts & Humanities, and the 1966 building became the Science, Technology, Engineering and Math (STEM) Academy. Within these Academies, departments for each course of study were organized. Each department includes the instructional spaces, classrooms and laboratories, a faculty resource center for collaborative planning, and support spaces. Corridor portals and student showcase displays define each department within the school.

Through these renovations, the Montour School District has positioned itself at the forefront of academic technology integration. The thoroughly modernized classrooms are equipped with state-of-the-art teaching tools including interactive white boards and teacher voice enhancement systems. Students and faculty members use notebooks and netbooks that are supported by a robust computer network and facility-wide wireless access.

The Media Center features iPad tablets that expand the offerings beyond the traditional books, magazines, and newspapers. The Planetarium has been upgraded with a state-of-the-art curriculum supported by a new digital sound and display system. Cutting-edge labs and workspaces have also allowed the Technology Education department to expand its offerings.



High School Main Entrance Canopy



Media Center



DIVERSITY

The spaces in each instructional area of the high school were designed to meet the specific needs for the respective course of study. Learning labs, alternative instruction and student activity spaces are distributed throughout the structure. In addition the high school's design provides ample interior and exterior spaces for student interaction outside of the classroom environment. The network technologies and advanced instructional equipment and systems afford an extreme amount of flexibility to the faculty and students.

The educational and student support areas are also planned to provide more than the typical functions. The Spartan Commons is more than a cafeteria; it is an expansive and welcoming multi-purpose gathering space with a wall of windows opening onto the surrounding forest. The student body considers the Spartan Café, a coffee shop adjacent to the Media Center, a natural place to retreat and recharge. The Art Gallery is known as a place for quiet collaboration and reflection in addition to the exhibitions.

Video displays and LED tickers throughout the building keep students informed of district activities, events, and accomplishments as well as local, national, and international news.



Learning Laboratory - Classroom



Spartan Cafe - Student Coffee Shop



Spartan Commons - Cafeteria





High School Auditorium

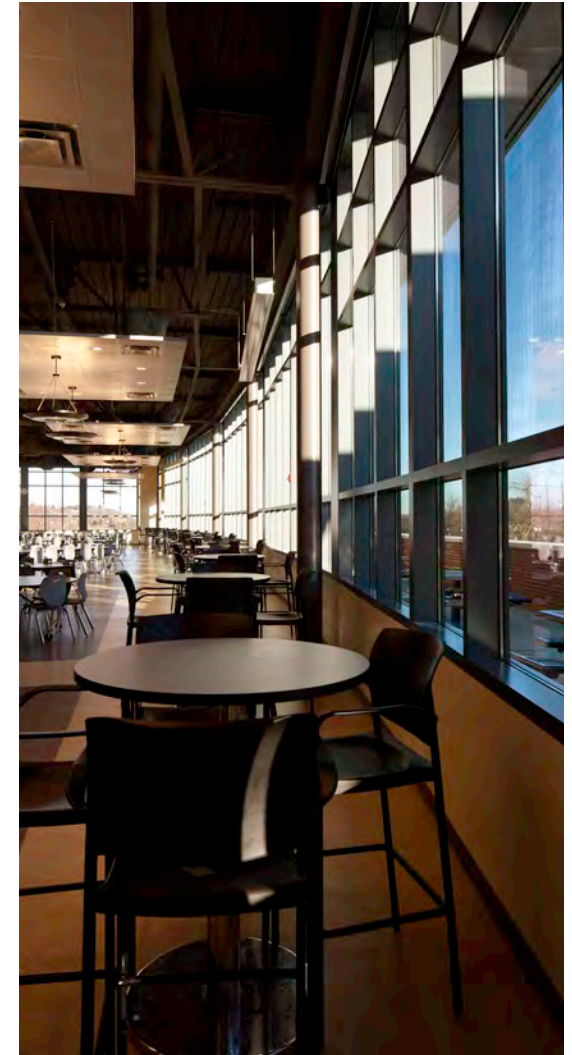


Instructional Space Highlights

- 46 Classrooms
- 12 Science Labs, Greenhouse and Planetarium
- 5 Technology Education Labs
- 5 Computer Technology Labs
- Distance Learning Lab
- 2 Large Group Instruction Rooms
- 3 Small Group Instruction Rooms
- Music & Performing Arts Suite including a Music Technology Lab
- Art Suite Including a Graphics Technology Lab
- Life Skills Suite
- Family and Consumer Science Suite

Student Support and Assembly Highlights

- Media Center including library, IT learning/ conference center, and the Spartan Café
- Art Gallery
- Auditorium
- Primary and Secondary Gymnasium
- Natatorium
- Fitness Track
- Weight and Conditioning Center
- Aerobics Room and Cardio Fitness Room
- Wrestling & Cheerleading Room
- Golf Training facility
- Spartan Commons - cafeteria, food court and kitchen



Spartan Commons



Green House and Courtyard



Physical Environment | Section IV

Physical Environment

Since its opening in 1957, Montour High School has evolved greatly. A second classroom building and the athletic center were added in 1966, and additional projects over the years changed the facility again and again. Eventually, the campus lacked any sense of identity or cohesion.

Students, faculty, staff, alumni, and visitors marvel at the renewal of the Hilltop. Strategic additions and careful material choices unify the building's exterior. The materials chosen, inside and out, project a modern, high-tech attitude while still being warm and welcoming. This has created a stimulating—but not distracting—environment for learning and activity.

"I am just so excited that we have a gallery to showcase the talent we have here at Montour."

Diane Bauman, Art Teacher



Patio at Spartan Commons



Stadium Press Box



Montour High School Auditorium



COMMUNITY IN CONTEXT

The buildings of the Montour High School are situated in a wooded area, well off of the road and above their immediate neighbors. The immediate surroundings are wooded areas and the playing and practice fields. The renovation sought to take advantage of this natural setting in many ways. At the Spartan Commons, an outdoor terrace is elevated above the adjacent parking. This screens the parking and roadway from the interior of the commons and the focus of the view is the wooded hillside beyond. The library, situated on the third floor, has also been provided with a wall of windows that is oriented to take advantage of a view across the adjacent valley. Careful selection of site materials, lighting and plantings minimize the impact of the school buildings on the few adjacent houses.



Aerial Photograph of Campus Site, During Construction of the Athletic Center



ATTRIBUTES

Primary amongst the concerns of the renovation was the integration of the classroom buildings into a single structure. This accomplished many positive results. Security for the students was greatly enhanced. They no longer needed to travel from building to building to get to the next class. A primary façade and a single main entrance with a secure vestibule were established. An entrance plaza, suitable for gatherings and events was created.

The site circulation was re-configured. The main traffic route was removed to the outside of the academic buildings and a courtyard was created where the old road bisected the school. A student drop-off area established and bus traffic was rerouted into a loop at the main entrance, separated from all other traffic on the site.

A combination of materials was used throughout the structures, metal was used to communicate a modern, high-tech image but it was tempered with the use of wood paneling to provide a natural and comforting component.



Intermediate Gymnasium Exterior - Metal and Brick interface where New Addition Meets Renovated Building





Spartan Commons



INSPIRATION

The renovation projects have greatly improved the environments of the Hilltop facilities. Improvements to the building envelopes work in conjunction with upgraded building mechanical and electrical systems to create a high-efficiency structure.

The updated building systems are ready to meet any needs the future may bring. The mechanical system features the latest in filtering, treatment, and monitoring to ensure superior air quality. The electrical power and lighting systems also feature updated controls, monitoring, and technologies to limit power consumption while maintaining reliable service. Both systems use the computer network and allow remote notification and control.

Environmentally friendly materials and products enhance the buildings' beauty, longevity, and low-maintenance requirements.



Corridor Adjacent to Intermediate Gymnasium

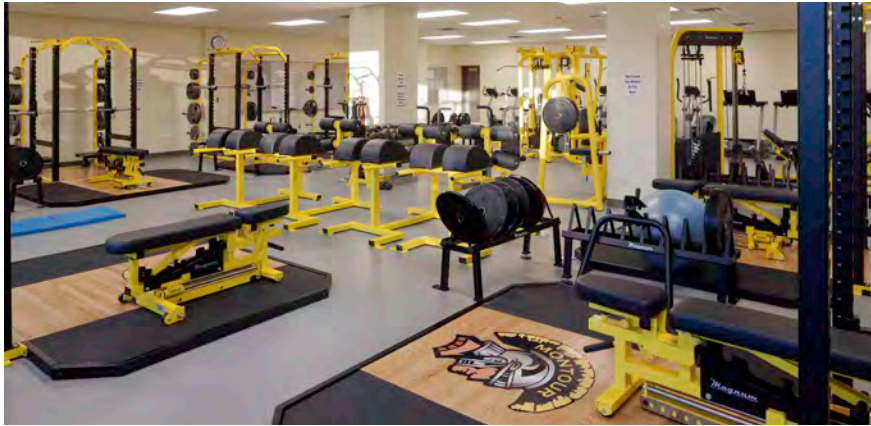


Corridor with Entry Portal and Departmental Display Case



Wall Finish Example





Weight Training and Conditioning Facilities



Elevated Track at Athletic Center



Elevated Track at Athletic Center



High School Entrance Canopy



Results of the Project | Section V
Results of the Process

Results of the Process, Results of the Project

The renovations at the hilltop allow the district to fulfill their mission. The prior facilities were relics of the last century; the renovations have provided facilities that will serve the students and the district well into the current century.

Through the renovations Montour has become a 21st Century technological leader in the educational sector.

It has “enhanced my ability to connect with my students. It has made them more engaged learners and we are really enjoying it.”

April Fisher, Business Teacher



District Administration Offices





Exterior Evolution of Montour Athletic Center [Top: Pre-Renovation/Addition; Middle: Conceptual Renderings; Bottom: Post-Renovation Building]



EDUCATIONAL GOALS AND OBJECTIVES

The renovations at the high school have afforded the district the ability to greatly expand their curriculum with an emphasis on post-secondary education and career choices. Advanced Placement courses are offered in the English, Math, Social Studies and Science departments. Alliances have been established with local Universities, including Carlow, Robert Morris and the University of Pittsburgh to offer expanded Computer Science, Business and Finance, Mathematics and Natural Science curriculum. A Biomedical Science curriculum has been introduced, facilitated by Project Lead the Way, a program recognized for excellence by the National Science Foundation.

With the campus renovation yielding a modern workspace with all the technological needs of the classes, the Technology Education department has introduced more classes, including Civil Engineering & Architecture as well as Computer Integrated Manufacturing for students to explore more specific areas of engineering than was previously offered.



STEM Building Prior to Renovation



STEM Building After Renovation



Natatorium Prior to Renovation



Natatorium After Renovation

***“We are able to bring more authentic materials into the class...
If we didn’t have the technology available we wouldn’t be able to do that.”*** Rachel McVeagh, World Language Teacher





Spartan Commons Exterior, With Pre-Renovation Cafeteria Inset



DISTRICT GOALS

The combination of unique design, curriculum and technology ranks Montour as a leader in the educational sector. The renovations have provided a modern, sustainable environment that supports the mission of the Montour School District

Montour's mission is to provide an exemplary and comprehensive educational experience that enables each individual to achieve maximum potential, to respect themselves and others, and to become a responsible and productive citizen.

The District maintains a tradition of providing students with a superior educational experience. Our students are consistently recognized for their academic, musical, and athletic achievements and our programs ensure that students receive the academic and social challenges necessary to succeed.



District Administration Office



Classroom Building from Courtyard



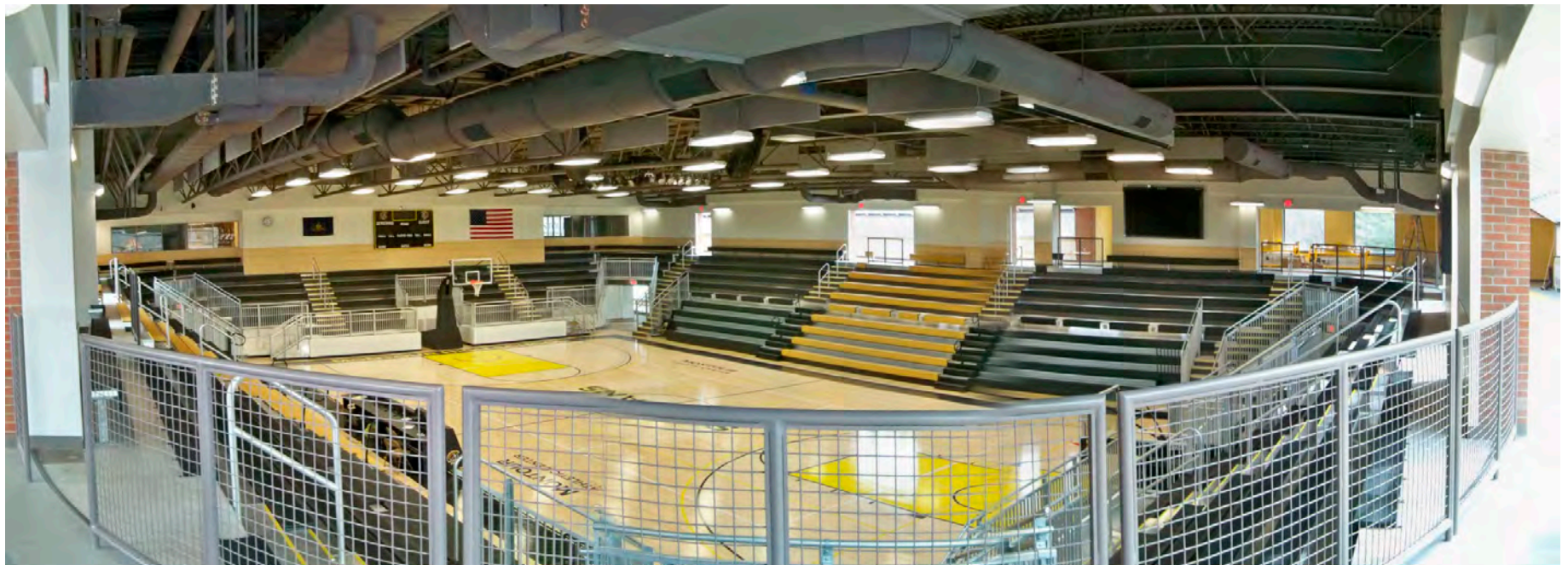
COMMUNITY GOALS AND OBJECTIVES

The five suburban communities served by the Montour School District are typical in the fact that there are not established town centers. The schools and the parks are places where the communities have the opportunity to come together. As the premier facility of the District, the Montour High School was designed to encourage community use.

“The upgraded athletic and fitness facilities provide a better teaching environment.”

Jason DeRose, Physical Education Teacher.

The student commons was planned to accommodate the needs of various community groups for meetings and events. Local organizations also have access to the music and performing arts facilities. The track at the stadium and the fitness facilities in the Athletic Center are also made available to the public when not in use by the students.



1,500-Seat Athletic Center Arena from Elevated Walking Track





1,500-Seat Athletic Center Arena from Elevated Walking Track



LEVEL ONE FLOOR PLAN

MONTOUR HIGH SCHOOL & ATHLETIC CENTER

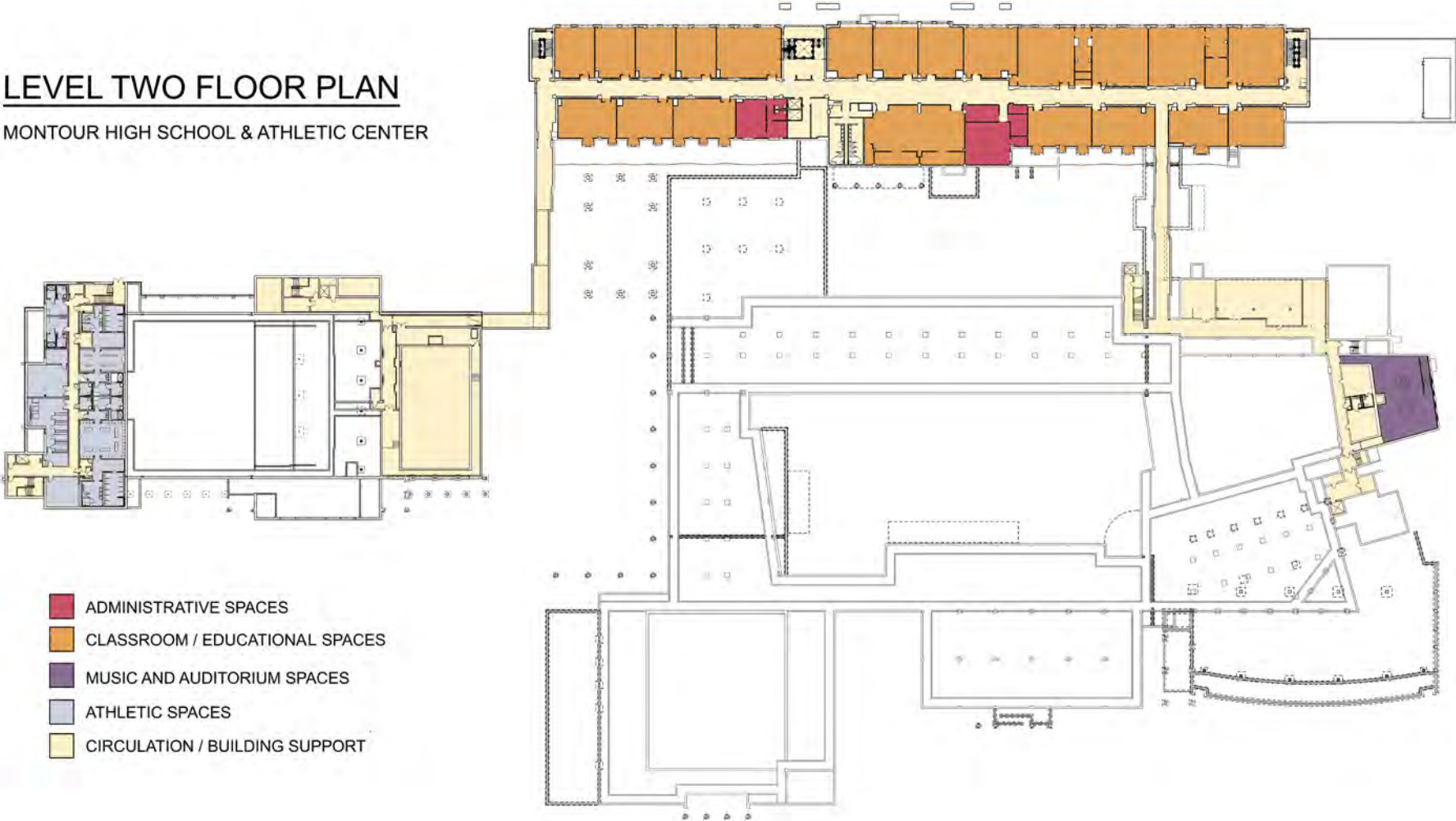


- ADMINISTRATIVE SPACES
- CLASSROOM / EDUCATIONAL SPACES
- MUSIC AND AUDITORIUM SPACES
- ATHLETIC SPACES
- CIRCULATION / BUILDING SUPPORT



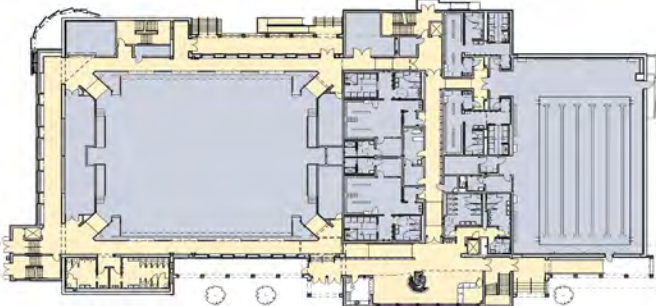
LEVEL TWO FLOOR PLAN

MONTOUR HIGH SCHOOL & ATHLETIC CENTER



LEVEL THREE FLOOR PLAN

MONTOUR HIGH SCHOOL & ATHLETIC CENTER

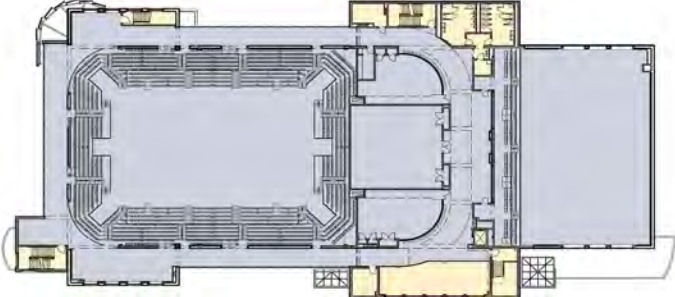


- ADMINISTRATIVE SPACES
- CLASSROOM / EDUCATIONAL SPACES
- MEDIA CENTER / LIBRARY
- MUSIC AND AUDITORIUM SPACES
- SPARTAN COMMONS / FOOD COURT
- ATHLETIC SPACES
- CIRCULATION / BUILDING SUPPORT

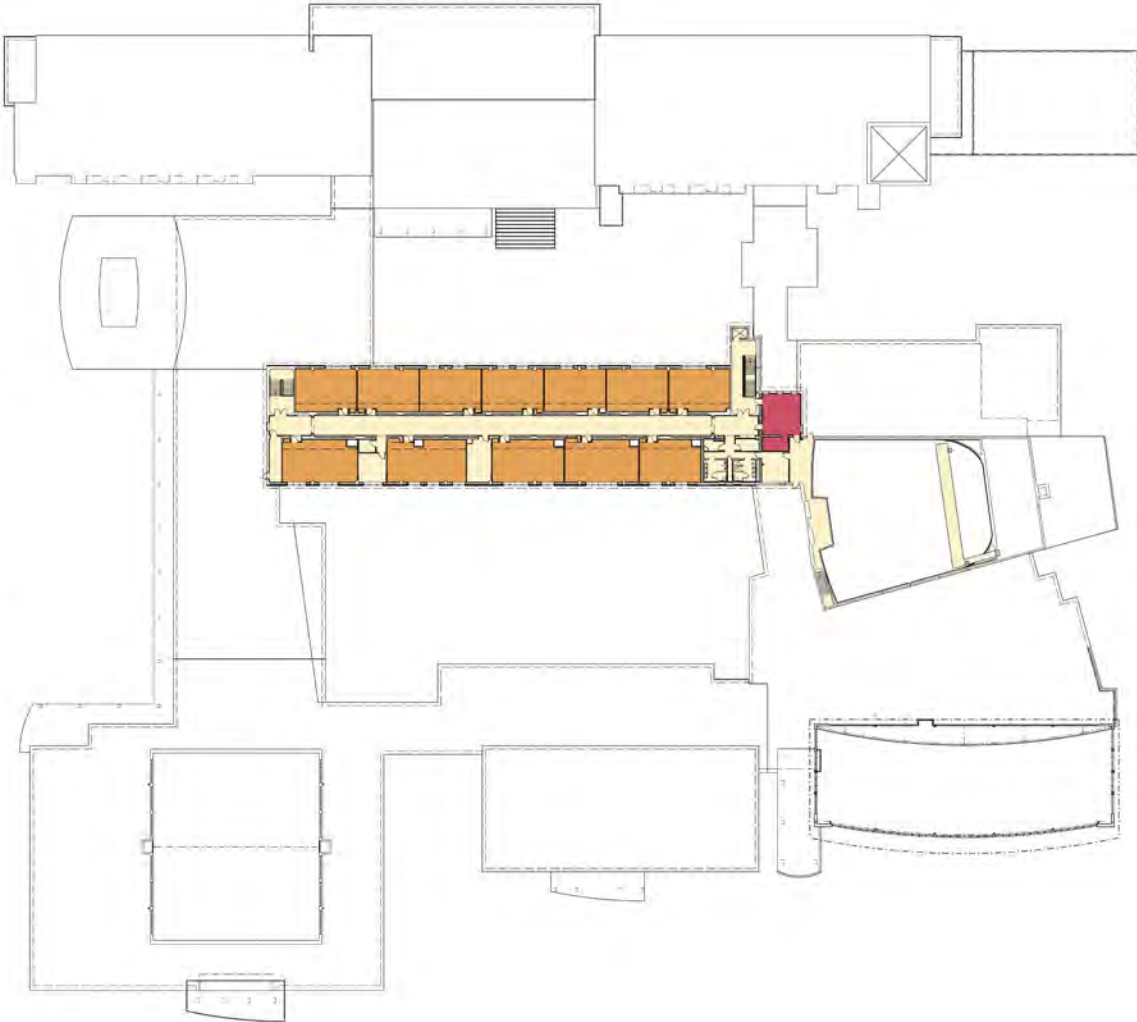


LEVEL FOUR FLOOR PLAN

MONTOUR HIGH SCHOOL & ATHLETIC CENTER



- ADMINISTRATIVE SPACES
- CLASSROOM / EDUCATIONAL SPACES
- ATHLETIC SPACES
- CIRCULATION / BUILDING SUPPORT





Montour Campus - West Elevation



Montour Campus - South Elevation





Montour Campus - North Elevation



Montour Campus - East Elevation

