

Virginia Chapter
Association for Learning Environments
2019 Annual Conference
April 8-9, 2019

ARCHITECTURAL EXHIBIT AWARDS
APRIL 9, 2019

Re-Imagining Learning Spaces 2.0

RENOVATIONS PROJECTS ELEMENTARY SCHOOLS

**ARCHITECTURAL EXHIBIT AWARDS
APRIL 9, 2019**

JURY COMMENTS

- Exciting to see that design process incorporated students input
- Student surveys
- Use of flexible furniture provides opportunity for multiple layouts impact physical behavior
- Diversity of spaces created in design provide opportunities to make choices and on learning behavior

JURY COMMENTS

- Comfortable and cozy spaces
- Good use of colors: the green color used is lively;
- Color scheme is bold, yet minimalistic – not over stimulating
- Incorporation of natural elements in spaces highlighted
- Use of windows to incorporate view of exterior

CLARK ELEMENTARY SCHOOL CLASSROOM ENOVATIONS

**CHARLOTTESVILLE CITY PUBLIC SCHOOLS
VMDO ARCHITECTS**

Clark Elementary School Classroom Renovations

Charlottesville City Schools | Charlottesville, Virginia



Modern Upgrades for a Culture of Reading

The Clark Elementary School renovation is the first in a series of \$1 million elementary transformations for Charlottesville City Schools. The classroom modernization focused on transforming Clark's 4th-grade spaces into model learning environments that support the school's core values around literacy, student comfort, and social-emotional learning objectives.

The renovations build upon staff, teacher, and student preferences for in-class reading areas, flexible spaces, enhanced technology, expanded student storage, and improved natural lighting that enhance spaces aligned with their culture of reading and personalized learning pedagogy.

While all Clark's homerooms received new furniture, technology, white-boards, and fresh paint, it is the 4th-graders who now enjoy the most renovated spaces, including new in-class libraries and book-nooks that enrich, as students say, their "home away from home."

Literacy Strategy + Culture = Built Space

"Book Nooks" with Unique Spaces for Reading

The project team set out to reimagine how a classroom could best serve the outlined priorities that Clark's Principal, Dr. Anna Isley, introduced at the beginning of the project: **their school-wide goal of celebrating books and reading.** Dr. Isley and Clark's Instructional Coach have been working with every teacher to ensure that each classroom has dedicated "library" spaces to promote positive and frequent interactions with books. This programming is supported by a well-established body of research demonstrating that access to books is a key element connected to children's literacy.

Renovations Backed by Literacy Research

These new in-class libraries emphasize Clark's culture of reading that exposes children to more books in more unique and fun ways, called "book-oriented socialization." Supported by numerous studies, this kind of exposure and emphasis on reading and proximity to books is vital to improving educational outcomes, especially with lower-income populations.

"Both physical and psychological proximity to books matter when it comes to children's early literacy skills." - Susan Neuman, Prof. Childhood Literacy at NYU

Neuman, Susan B. and Jillian Knapczyk. *Reaching Families Where They Are: Examining an Innovative Book Distribution Program.* Urban Education. 2018.

Neuman, Susan B. . *Books Make a Difference: A Study of Access to Literacy.* Reading Research Quarterly, vol. 34, no. 3, 1999.

Sikora, Joanna, et al. *Scholarly Culture: How books in adolescence enhance literacy, numeracy and technology skills in 31 societies.* Social Science Research. v.77. 2019



Improved Window Areas for Adaptable Learning Configurations

Improving Natural Light and Standing-height Counter Space with Enhanced Storage:

The large windows were previously an underutilized asset due to darkness needed for the existing, fading smartboard projectors. In addition to improved window treatments, large new touchscreens relieve the conflict with natural daylight. The renovation harnessed the full potential under the windows with a continuous work counter, bathed in daylight and with a great view creating another kind of "place" for students in the room. The counter has USB charging, storage drawers, and rolling storage units below; it is also wheelchair accessible, like the new sinks.



SketchUp Rendering - New Window Counter Spaces, Storage, + Furniture

Improved Wet Learning Zone

Flipped Sink Orientation: Adding Wet learning Zone and Relieving Congested Alcove Space:

The sink was kept in the same location but flipped away from the previous alcove (in the back of the room) toward the main classroom for easier access. The new design and improved orientation not only relieves congestion for easier hand washing, but it also creates better space as a wet learning zone. Teachers now use it for science or culinary activities, like washing and preparing the “vegetable of the week.”



SketchUp Rendering - Renovated/Flipped Sink Area



Before + After: Model for Future Transformations

Clark's 4th-grade classroom transformations, inspired by the values and learning objectives from the Clark community, are serving as a model for Charlottesville City Schools as CCS begins similar modernization projects for the other elementary schools.

"I love coming into these classrooms every day because they feel so bright, so homey, and cheerful and the kids seem so comfortable and safe. I can't imagine these classrooms any other way."

Dr. Anna Isley
Principal, Clark Elementary

"I felt like I had won the teacher lottery."

Melissa Powell
4th-grade Teacher, Clark Elementary



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RENOVATIONS PROJECTS SECONDARY SCHOOLS

**ARCHITECTURAL EXHIBIT AWARDS
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JURY COMMENTS

- Good design element by reducing the locker to open the dining space
- Incorporation of a usable overhanging countertop on lockers provides an incidental collaborative space
- Creative use of landscape to introduce amphitheater seating outdoors
- Flexible learning spaces provide opportunities for collaboration and self –origination for students
- Commendable job of converting a 1960's job to a modern façade introducing plenty of natural lighting into the building

LANGLEY HIGH SCHOOL

**FAIRFAX COUNTY CITY PUBLIC SCHOOLS
PERKINS EASTMAN**

LANGLEY

HIGH SCHOOL

This comprehensive modernization and expansion of a bland and aging 1960's building knits the school more closely to its community and transforms it into a **civic landmark and welcoming learning environment.**

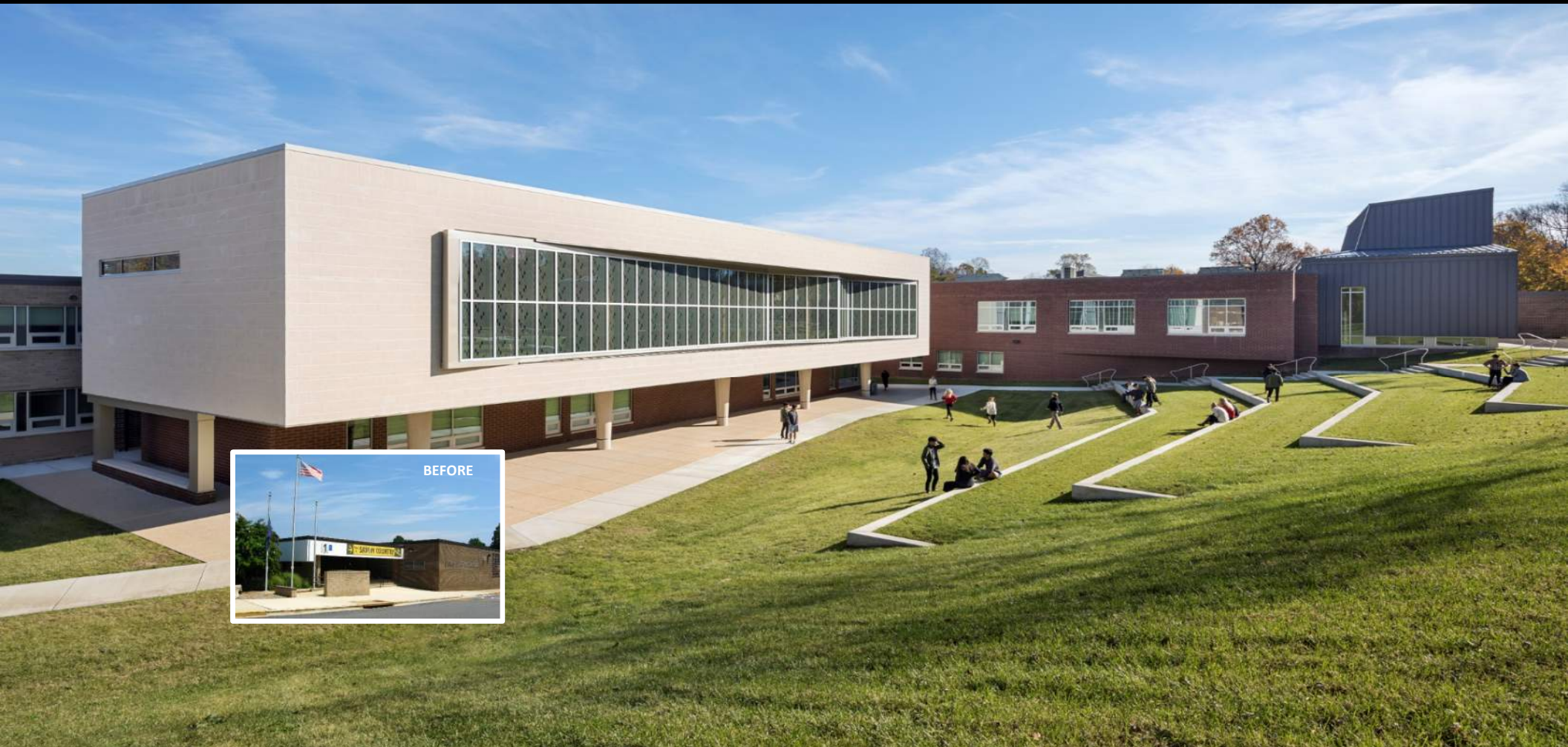
The low-slung two-story structure is reorganized around a substantial but underutilized courtyard that was **reimagined as the heart of the school community.**

Program elements are arranged so that **every aspect of the student experience touches and returns to the heart throughout the day** – reflecting an integrated person who is, all at one time, a scholar and an athlete, a scientist and a musician, a collaborator and a friend.

Visitor's Entrance



ACTIVATING THE LANDSCAPE: The impressively scaled and simple volume of the Library addition anchors a collage of new forms that assert **a civic presence in the community**, and provide the backdrop to a new landscape amphitheater. Art classrooms form its plinth, and the patio space becomes their outdoor gallery.



EAST ENTRY: While visitors approach from the south, every day users approach from the east and are welcomed under the protection of a broad portal, which hints at the expansive gathering space within.



LET'S MEET IN LANGLEY HALL:

Negotiating points of entry from two different sides and on two different floors, Langley Hall is **the crossroads and casual meeting place** of the school community. The “theater of life” gives way to the actual theater, as the wall of the Black Box swings open to reveal the performance within.

As a gift to their school, the graduating class of Langley High School sought to create a mural that would express their school pride and what it means to be a Saxon – being equal, creative, empowered, etc. After collaborating with the students, a vibrant 2-story graphic that fills the previously empty wall in their gathering space was created. The final design tells their story through a transition of profiles representing their diversity of Langley, each becoming more unified as they grow into their beloved mascot, the Saxon.

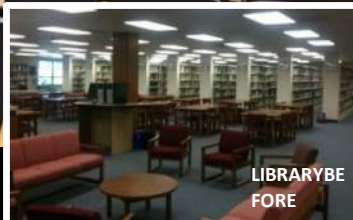


A COMFORTABLE ROOM FOR READING: The bright and energetic reading room overlooks the amphitheater forecourt. A gently undulating ribbon of glazing is softly screened with ceramic frit to control glare and heat gain.

DRAMATIC ARTS: A rich color palette, subtle lighting, a touch of wood, and simple but acoustically effective ribbons shape the performing arts theater. New seating galleries also provide universal access to the stage.



THEATER
BEFORE



LIBRARYBE
FORE

RETHINKING THE DINING ROOM: Removing the corridor walls and a few classrooms liberated the cafeteria and expanded the dining options by inserting a more intimate and versatile café space. Open to the central courtyard, the social life of the cafeteria spills outside even as the daylight spills in.



VERSATILE CORRIDORS: Once dreary and dark, the new corridors are punctuated by moments of daylight and collaboration. Strategically placed to facilitate social interaction and wayfinding, these hubs offer comfortable places to study together, charge your phone, or gather with friends. Drop-in lockers near student entries replace locker doors lining the hallways.



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NEW CONSTRUCTION PROJECTS

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JURY COMMENTS

- Design provides a very warm and inviting entrance
- Interesting use of a variety of materials-brick, stone, wood and steel woven into design
- Plenty of opportunity for daylighting
- Successful incorporation of well road into design concept of railways

MOUNTAIN VIEW ELEMENTARY SCHOOL

**HENRY COUNTY PUBLIC SCHOOLS
RRMM**

Meadow View Elementary Henry County Public Schools

As the first new school for Henry County in over thirty years, Meadow View Elementary School holds special significance for the community. In addition to wanting modern features, the community also wanted the new school to have a design character with a civic presence they could be proud of and consider uniquely Henry County.



Meadow View Elementary Henry County Public Schools



Main Entrance

The design also incorporates the community's preference for stone and brick masonry. Polished concrete has been used for most classrooms, corridors, and public areas throughout the lower level. This is a sustainable choice given its durability and the ease of cleaning and maintenance.



Main Corridor



Main Corridor



School Sign

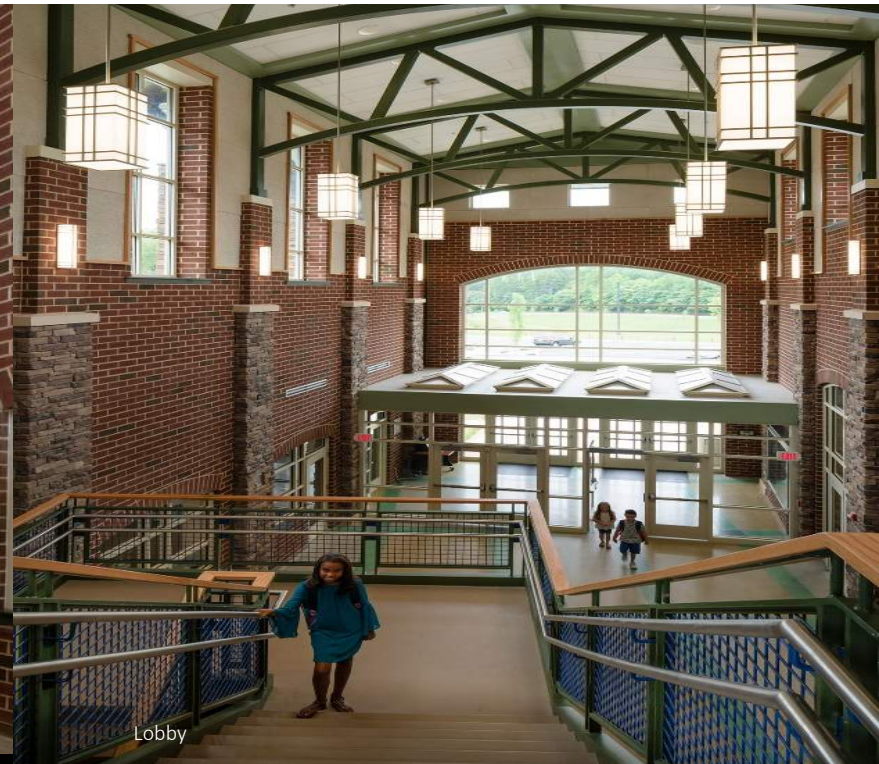


Detail

Meadow View Elementary Henry County Public Schools



Lobby

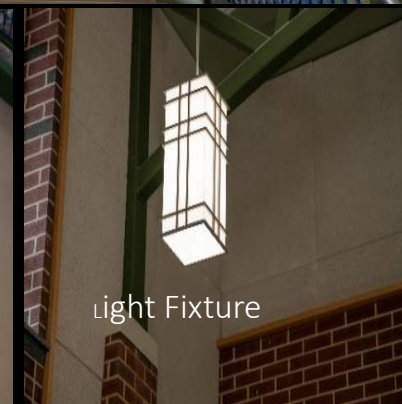


Lobby

The spacious, two-story lobby is centrally located and adjacent to the reception area and administrative offices. This allows for easy supervision of students arriving by car from the front of the building and students arriving by bus from the back. The separate entrance areas for cars and buses further promote safety and supervision of site activities. Large windows and a monumental staircase in the lobby promote not only a sense of civic space, but also a visual connection between floors and clear supervision of public areas.



Handrail Detail

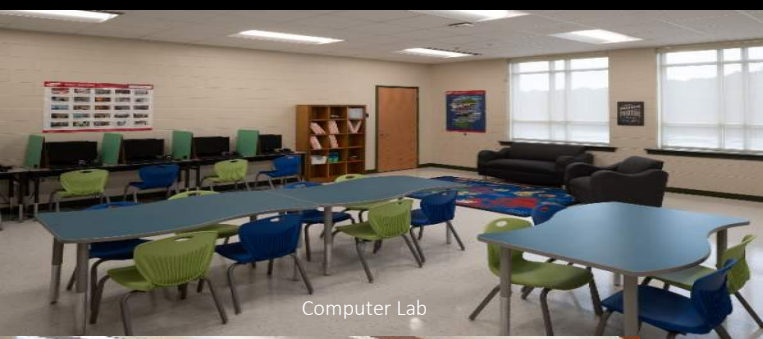


Light Fixture

Meadow View Elementary Henry County Public Schools



Music



Computer Lab



Typical Classroom



Typical Classroom



Typical Classroom

Each classroom wing has been positioned for ideal solar orientation to achieve well-controlled natural daylighting. Carefully engineered window openings and diffuse glass are coupled with automatic lighting controls to create aesthetic classroom spaces and conserve energy.

Non-bearing metal stud and drywall partitions are utilized between classrooms to promote ease in changing infrastructure, such as for electrical power and data, as well as possible relocation of walls.

Meadow View Elementary Henry County Public Schools

Library

The library enjoys a sweeping curve of large windows under a deep overhang, offering an unobscured view of the serene, wooded perimeter.

Meadow View Elementary

Henry County Public Schools



View from
Parent Drop-Off

DESCRIPTIVE DATA

90.5 Acres

Size of Site	90.5 Acres
Student Capacity	776
Area of Building	98,494 SF
Total Project Cost	\$20.2 M
Cost per Square Feet	\$204.84 / SF
Cost per Student	\$26,000
Space per Student	127 SF / Student



View of Academic Wing



JURY COMMENTS

- Well designed facility
- Provides plenty of daylight
- Design meets and supports all sensory needs of student age group
- Interesting use of space:
 - creation of Side rooms
 - Nook areas
 - a gaming space
- Nice exterior walking arcade
- Well-designed media center
- Design incorporates versatile seating opportunities
 - provides M.S. students opportunities for different social interaction

POWHATAN MIDDLE SCHOOL

**POWHATAN COUNTY PUBLIC SCHOOLS
MOSELEY ARCHITECTS**



Powhatan Middle School Addition and Renovation



Existing Site



Demolition Site



New Site



The Planning Process

Design Efficiency and Community Involvement

The design team hosted a series of design workshops to solicit ideas of faculty, administrators, students, parents, and staff.

As a result of this analysis and consensus-building, the core committee selected an option to demolish a major portion of the existing middle school, creating a major two-story infill addition, and renovating the existing gymnasium and career and technology education (CTE) wing.

A facility assessment identified portions of the building that could be preserved and improved through renovations.

As a result, Powhatan County Public Schools (PCPS) avoided disrupting the local ecosystem with construction on a new site.

The design team collaborated with PCPS to select mechanical, electrical, and plumbing systems and roofing materials that improved energy efficiency.

Powhatan Middle School Addition and Renovation



The Physical Environment

Spatial Organization and Design Efficiency

A two story in-fill between the gymnasium and CTE wing provides modern facilities for classrooms and labs, media center, administration, food service, and mechanical/electrical systems.

The dining and performance space is adjacent to the gymnasium along the main corridor. Powhatan County Public Schools (PCPS) and the design team collaborated to house multiple functions in this space, which can be easily transformed throughout the day.

Primarily used for meal service, the dining area has a stage and soft, retractable seating for performances and community meetings.

Because Powhatan Middle School has an active music department, the band, ensemble, and choral spaces are centrally located and have direct access to the stage.

The elevated music suite connects the stage with a ramp that eases the transportation of instruments and equipment.

A new fitness studio connected to the gym features a separate exterior entrance for after-hours use by Powhatan Parks and Recreation.

Powhatan Middle School Addition and Renovation



Learning Environment

Programming, Innovation, Technology, and Community

Three multipurpose rooms provide flexible spaces for collaboration throughout the school. This space supports health classes and multi-class collaboration during the day, and can host teacher training or small public forums after-hours.

The second phase of the renovation focused on the career and technology education (CTE) wing. The design team worked closely with Powhatan County Public Schools (PCPS) and the school staff to design innovative learning spaces for the new CTE programs.

The second-floor science, technology, engineering, and mathematics (STEM) lab is divided into three work zones to facilitate project-based learning and collaboration.

Powhatan Middle School Addition and Renovation



Learning Environment

Programming, Innovation, Technology, and Community

The passionate media center specialist advocated for a space that resembled a community coffee shop and bookstore. The resulting design features an open floor plan, soft, mobile furniture that creates various collaborative and individual study areas.

The interiors palette was inspired by the school's emblematic orange and blue colors. Furniture with built-in charging stations allows students to power electronics while working.

Students interested in the design, science, and engineering behind digital animation and video games can gather in the media center's gaming lounge. This space houses gaming consoles, board games, markerboards, and soft seating.

The fine art rooms located in the career and technology education (CTE) wing have large walls of glass with shelves that face the corridor. These features allow student work to be on display and invites inquisitive students to take a glimpse into the fine arts program.

The STEM lab cantilevers over the interior courtyard creating a prominent focal feature visible from various points in the school including the main entrance.

Powhatan Middle School Addition and Renovation



Learning Environment

Programming, Innovation, Technology, and Community

To support Powhatan's rural community, the design team worked closely with PCPS and the PMS staff to design innovative learning spaces that correspond with a new CTE program. The agriculture lab's casework and plumbing systems support hydroponic stations for studies in sustainable growing. The technology classroom houses a sound room dedicated to audio and news production.

The agriculture and technology classrooms connect with a maker space that has 3D printers and a large door that opens to an outdoor learning environment. A wall of windows in the maker space filters natural light through the agriculture and technology classrooms and into the hallway. This extensive visibility allows students passing by to observe various career opportunities.



Powhatan Middle School Addition and Renovation



JURY COMMENTS

- Outstanding design reflect the thought of providing spaces to accommodate the curriculum
- The design incorporates flexible universal spaces to meet “today’s needs as well as be adaptable to meet changing needs of tomorrow”
- Plan creates open spaces that promote social interaction and collaboration
- Remarkable central commons creates a “Hub Space” offers opportunities for Incidental learning, serves to connect the academics
- Commendable use of light tubes to bring natural light indoors
- Roof terraces create an open collaborative space
- Effective site development and use allows for future growth

ACADEMIES OF LOUDOUN

**LOUDOUN COUNTY PUBLIC SCHOOLS
STANTEC ARCHITECTURE**

Academies of Loudoun

Loudoun County Public Schools
Loudoun County, Virginia



AET

Planning.

As we learn more about the benefits of project based learning and appreciate the ways in which STEM and CTE courses emphasize learning by doing, we are moving beyond program and pathway isolation toward interdependence. Such is the case at the Academies of Loudoun, which fused three independent programs – the Academy of Engineering and Technology (AET), Academy of Science (AOS), and the Monroe Advanced Technical Academy (MATA) – to leverage opportunities at their intersections.

Tours of local industry research and fabrication centers led to a desire to provide more flexible, universal space that could deliver instruction today while adapting over time to meet changing needs tomorrow and beyond. A new language around educational space types helped planners dismantle silos and break free of preconceived notions about traditional classrooms and labs.

AOS

MATA

Information Tech

Engineering

Teaching Lab

Math

Research Lab

Health + Human Services

Communications

Env Science + Tech

Eng + Construction

Hospitality + Tourism

Transportation Lab

Low Intensity Lab 1

Low Intensity Lab 2

Tool Box

Gear Box

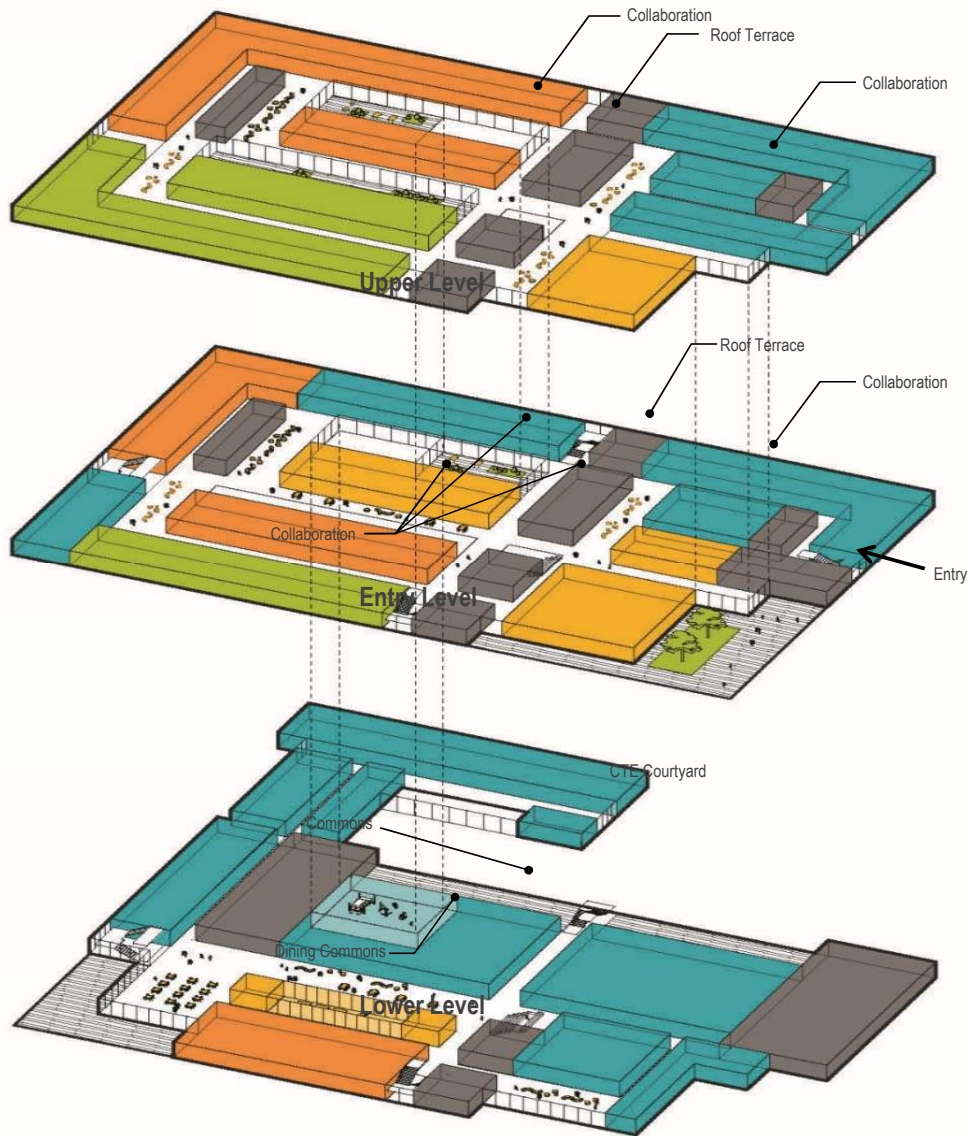
High Intensity Lab 1

Instructional Support

Classroom

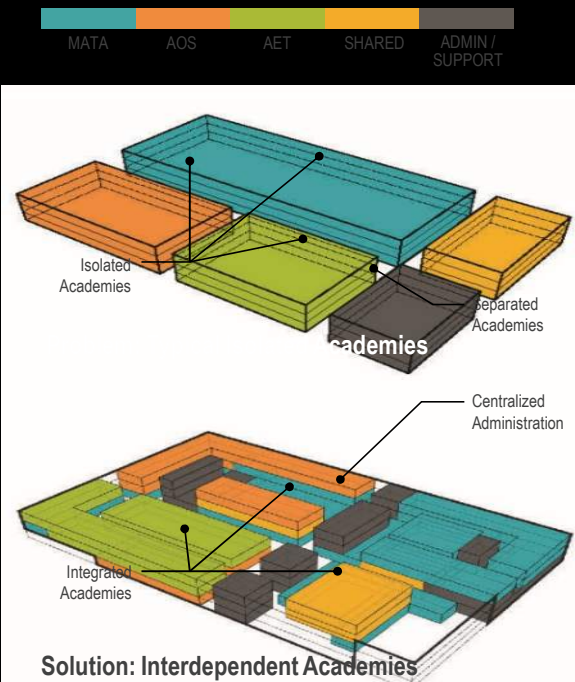
High Intensity Lab 2





Interdependent.

Program spaces from the three academies are distributed among each other to create connections between departments and efficiently share resources. Student commons and collaboration areas connect academies and are integral to interdisciplinary project work.

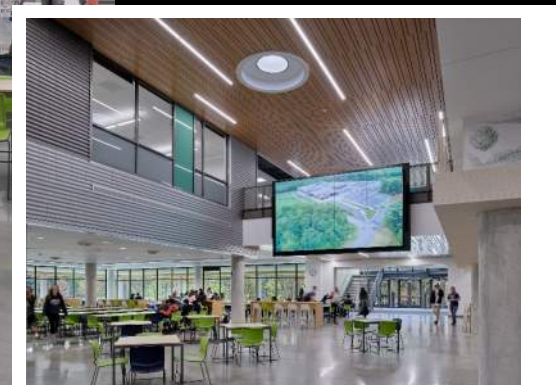
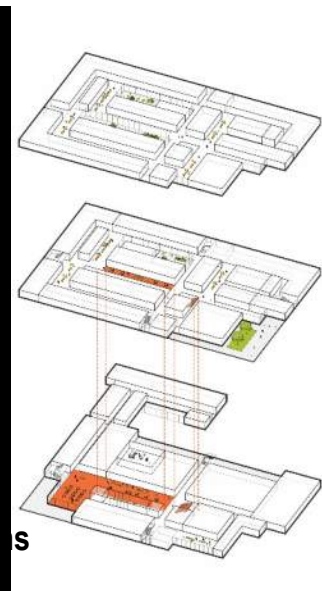


Site Plan

- | | |
|--------------------|--------------------|
| 1. Student Parking | 4. Greenhouse |
| 2. Visitor Parking | 5. Service |
| 3. Staff Parking | 6. Primary Wetland |

The compact footprint allows Loudoun County to preserve open space, take advantage of the natural setting, and leave ample room for future expansion.



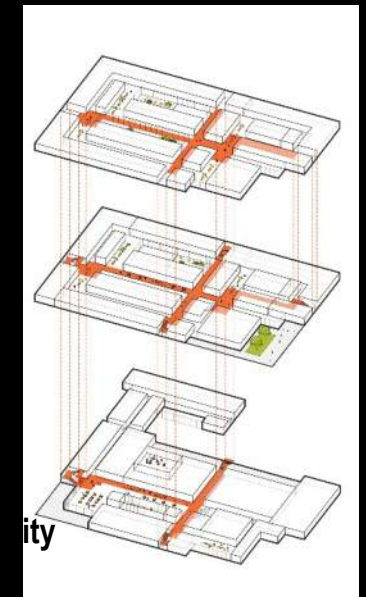




Upper Level

Entry Level

Lower Level



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