

2016 Exhibition of School Planning
and Architecture

Prairie Heights Middle School

Category: New Construction

Weld Re-6 School District
Evans, Colorado



Prairie Heights Middle School

Main Exterior



Prairie Heights Middle School is a new facility built to serve students in the western area of the school district. It was partially funded through the State of Colorado's BEST grant program. The new school has replaced the former John Evans Middle School, which was identified as the district's most deficient facility following a 2011 master planning effort. Prairie Heights was designed to host an International Baccalaureate program which feeds into the nearby IB High School, Greeley West.

Prairie Heights Middle School

Site Plan



Site Plan

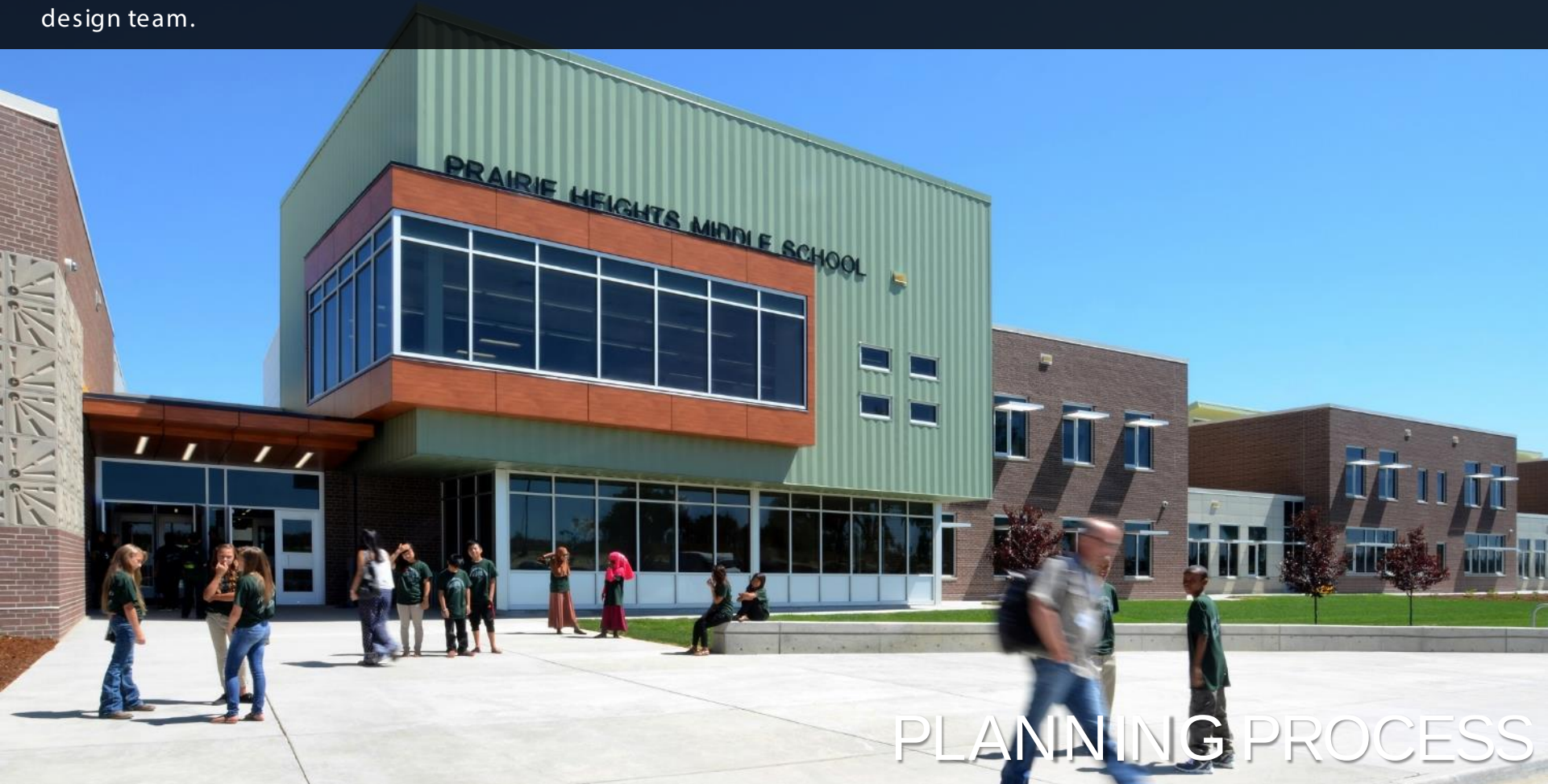
The site plan was developed to allow for a future district high school on the property as well as to maximize the sharing of outdoor facilities with an adjacent public park.



Planning Process:

In 2011, Weld County School District 6 and the design team conducted a Master Plan study and needs assessment for 25 schools within the District. A comprehensive ranking of the schools by needs and deficiencies led the team to prioritize a new middle school project that would both accommodate the growing population and replace the ailing John Evans Middle School – a building with no windows, pie-shaped classrooms and riddled with hazardous materials. The evaluations included input from facilities staff and teachers as well as the administration and design team.

Following a BEST grant award and successful bond election in 2012, the design phase kicked off with interviews and workshops with students, staff and community members. During the conceptual and schematic phases, the project was guided by a Design Advisory Group composed of a large group of school staff, students and local community members. Successful planning activities included visioning what their school should be like. Community meetings involved voting on priorities that ranged from Sustainable Design and 21st Century Learning Environments to establishing strong Community Connections.



PLANNING PROCESS

The vision and goals for the project developed largely out of a reaction in contrast to the restrictive characteristics of the former middle school. Providing high performance classrooms – including a variety of learning spaces and integrating technology (which was previously infeasible) – rose to the top of the list of priorities. Throughout the process, three-dimensional modeling of typical classrooms was used to communicate the design with stakeholders and the community.

Live digital model presentations were used to explore the arrangement of learning spaces and interior circulation; photorealistic renderings helped to communicate materials and exterior character as they developed. Many of the facilities staff that participated through the master planning and design phases also were in regular attendance at construction meetings to ensure that the district's original goals remained in focus and brought to fruition in the final design.



PLANNING PROCESS

Learning Environment:

Due to the large size of the student body, the planning team envisioned a set of smaller grade-level houses within the overall facility. The houses are open and flexible, allowing interaction between the separate grades. At the same time, the houses serve as distinct spaces with an organizational clarity, reducing the apparent scale of the school. The spaces have a distinct character and are bright and welcoming. Visual transparency was central to the design – one can see through the entire school as a result.



LEARNING ENVIRONMENT

Due to the industrial and energy economy in Weld County, the Greeley community welcomes numerous first-generation American students from immigrant families, many of whom have never spoken English, leading to a population of learners with a wide variety of academic and social needs. Each house within the middle school is provided with a generous mix of small group rooms, hallway breakout areas, and dedicated English-Language Learner rooms. The program even houses a "Newcomers" room that allows small groups of new students to transition into the social and academic environment presented by Prairie Heights. Architectural elements within the houses, such as the guardrails and the sunshades, represent an abstract collection of flags, symbolizing both the student population and the International Baccalaureate program.

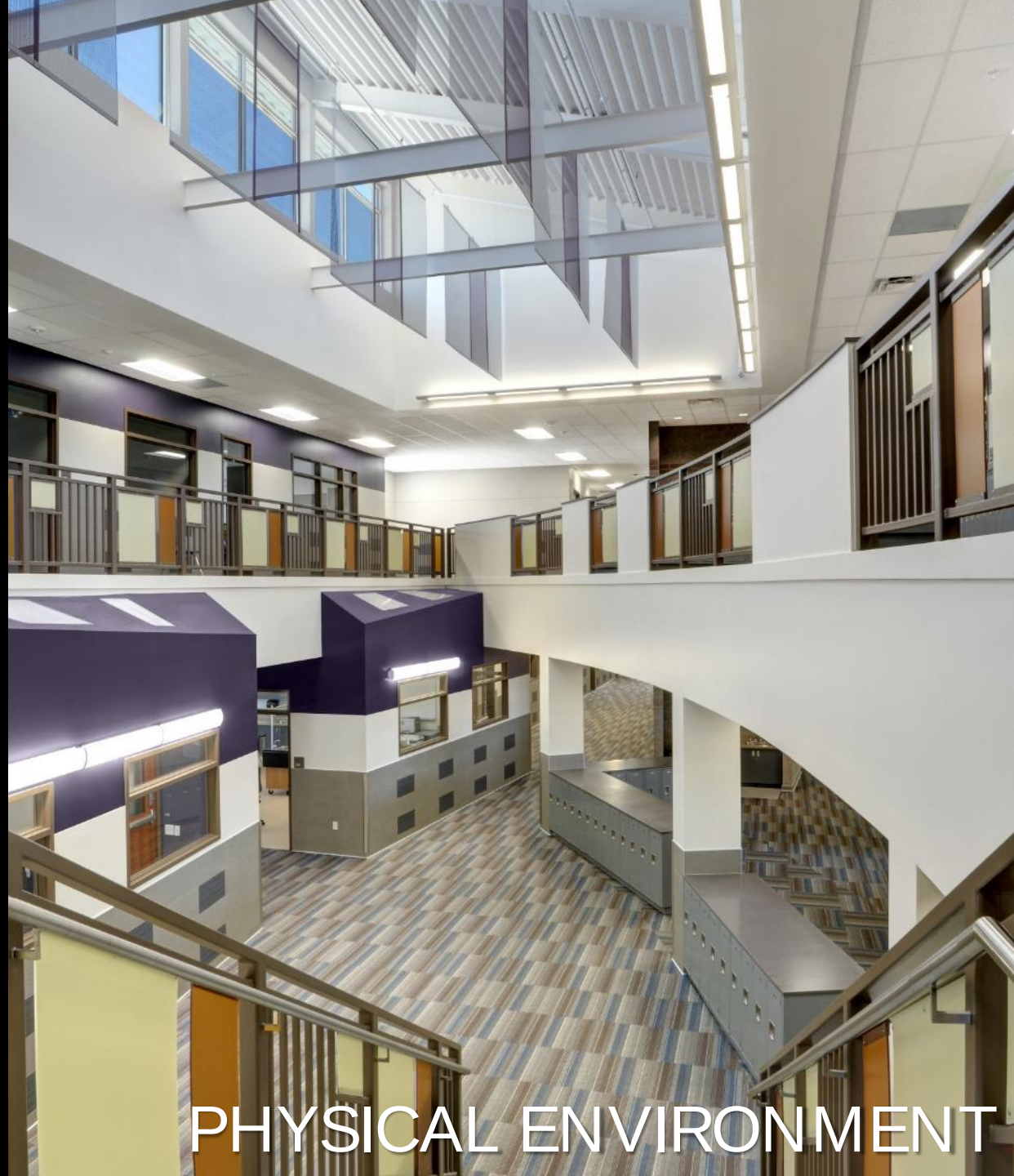


LEARNING ENVIRONMENT

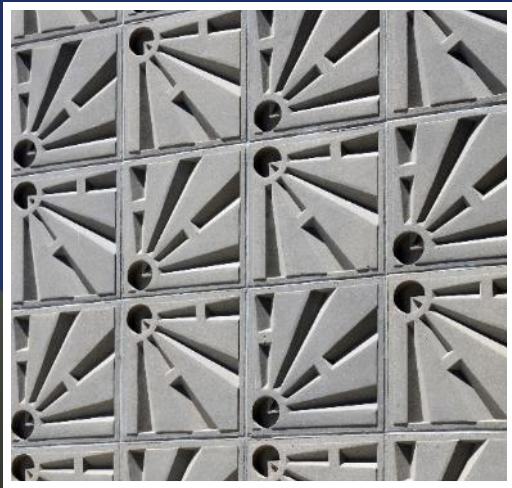
Physical Environment:

On track to obtain LEED Gold Certification, Prairie Heights incorporates aggressive daylighting and integrated south shading to provide high levels of natural light and exterior views. The building also incorporates displacement ventilation, an HVAC system that delivers fresh air low at the students' level. The system is very quiet due to low-velocity air movement and is quite energy efficient. A photovoltaic system was also designed at Prairie Heights; sized at 499kW, it will offset 92% of the buildings loads based on the estimated annual production of 819,960 kWh per year.

The school's classroom wing is completely separate from the amenities shared with the community. It can be secured at night to allow for limited access to the gymnasium and cafeteria-commons areas. Both main hallways in the school can be supervised from a single point, just outside the main offices.



PHYSICAL ENVIRONMENT



Transparency and openness between the upper and lower levels of each house is maintained so that supervision is simple and the classrooms feel connected and more intimate. Direct views through multiple areas reinforce a sense of community as well as safety and security. Creative use of concrete panels at the main entry gives the school a unique character. The repeated pattern of the concrete tile is a custom pattern developed by the design team and symbolizes major tenets of education displayed on Greeley's original high school: Justice, Liberty, Literature, Art and Science. The design is derived from the spread pages of an open book.

PHYSICAL ENVIRONMENT

Community Environment:

The Prairie Heights school site is located adjacent to a parcel that is intended for future development as a community park. Opportunities for joint-use recreational fields, parking and supporting amenities are abundant. Additionally, the middle school only occupies part of the land owned by the district. The master plan for the larger District-owned site includes access for a future park and allowances for a future district high school – all able to share amenities with the middle school in the future.



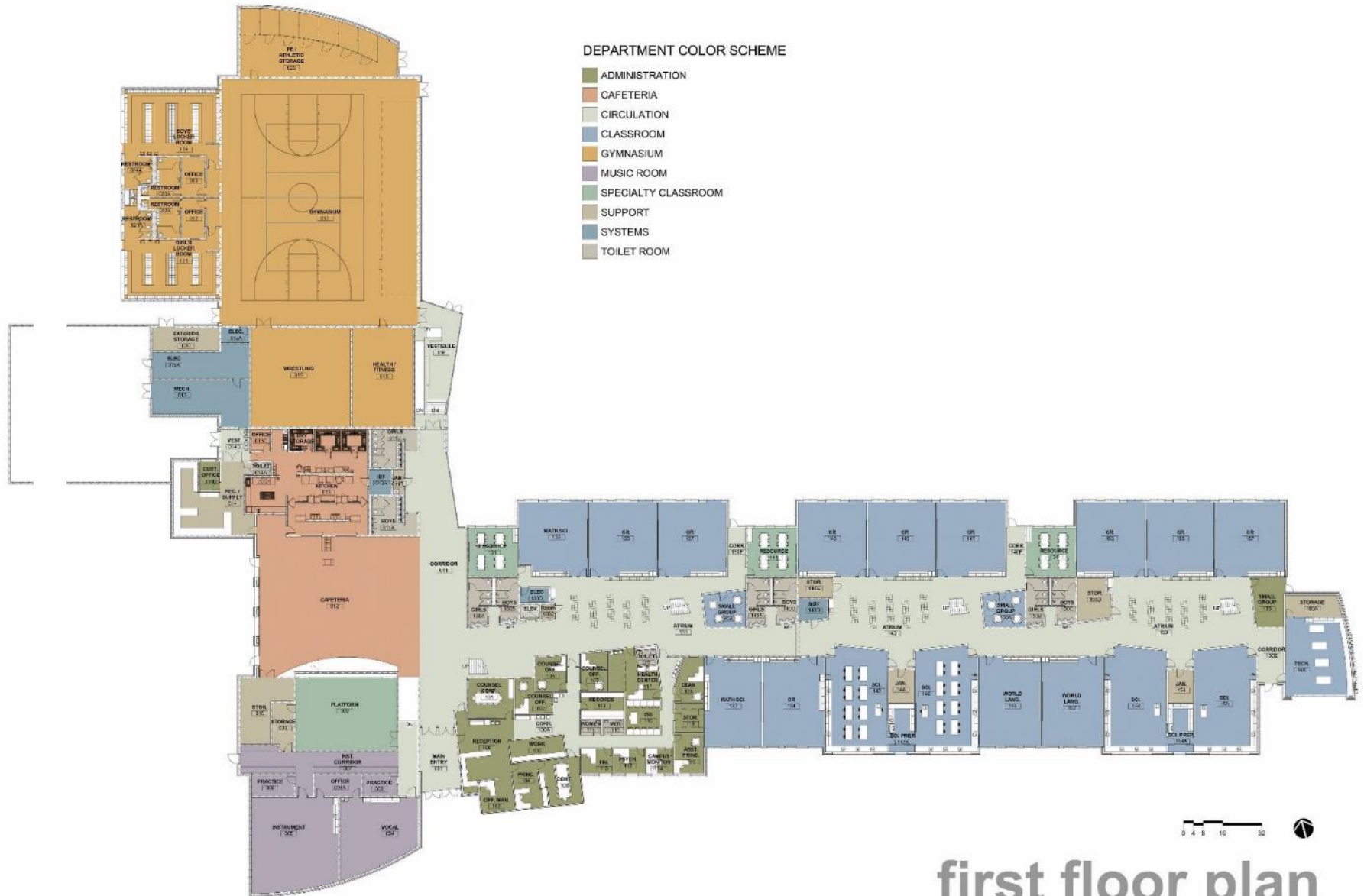
COMMUNITY ENVIRONMENT

Prairie Heights itself encourages a sense of ownership by the student body and the community at large. Generous display areas in the commons area and athletics hallway allow the school to build a visual history of achievements and greater sense of community pride.



COMMUNITY ENVIRONMENT

- ADMINISTRATION
- CAFETERIA
- CIRCULATION
- CLASSROOM
- GYMNASIUM
- MUSIC ROOM
- SPECIALTY CLASSROOM
- SUPPORT
- SYSTEMS
- TOILET ROOM



first floor plan

DEPARTMENT COLOR SCHEME

- ADMINISTRATION
- CIRCULATION
- CLASSROOM
- GYMNASIUM
- LIBRARY
- SPECIALTY CLASSROOM
- SUPPORT
- SYSTEMS
- TOILET ROOM



0 4 8 16 32



second floor plan

Exhibition of School Planning and Architecture Project Data

Submitting Firm :	HCM / RB+B Architects Joint Venture
Project Role	Architect
Project Contact	(see below for contact from each firm)
Title	
Address	
City, State or Province, Country	
Phone	
Joint Partner Firm:	RB+B Architects, Inc.
Project Role	Joint Venture Firm
Project Contact	Derek Young, AIA, LEED AP
Title	Project Manager
Address	315 E. Mountain Ave., Suite 100
City, State or Province, Country	Fort Collins, CO, USA
Phone	970-484-0117
Other Firm:	HCM
Project Role	Joint Venture Firm
Project Contact	Adele Willson, AIA, LEED AP
Title	Principal
Address	1331 Nineteenth St.
City, State or Province, Country	Denver, CO, USA
Phone	303-607-0977
Construction Firm:	FCI Constructors
Project Role	General Contractor
Project Contact	Steve Walker
Title	Project Manager
Address	4015 Coriolis Way
City, State or Province, Country	Frederick, CO 80504
Phone	970-535-4725

Exhibition of School Planning and Architecture

Project Details

Project Name	Prairie Heights Middle School
City	Evans
State	Colorado
District Name	Weld 6 School District (Greeley-Evans School District)
Supt/President	Dr. Deirdre Pilch, Superintendent
Occupancy Date	August 2015
Grades Housed	6-8

Capacity(Students)	650
Site Size (acres)	20.88 Acres
Gross Area (sq. ft.)	103,395
Per Occupant(pupil)	159 sf/pupil
gross/net please indicate	Gross

Design and Build?	No
--------------------------	----

If yes, Total Cost:

Includes:

If no,

Site Development:	\$7,257,048
Building Construction:	\$16,533,600
Fixed Equipment:	\$600,000
Other:	Existing Building Demo: \$447,417

Total:	\$24,838,065
---------------	--------------

A secure main entry was one of the key design goals to making Prairie Heights a safe building. Visitors accessing the building must pass by (and check in at) the main office.

Both main hallways in the school can be supervised from a single point, just outside the main offices.



SUPPORTING FILES

Each **learning house** has a unique character. Changing the colors and materials used within each house was one of the ways the design team gave each it's own identity.



Classrooms also have windows into the hallways at a level where teachers can view out from their classrooms and daylight can filter in, but the windows are not low enough for students to see directly to the hallways, thereby minimizing distraction.

SUPPORTING FILES

Outdoor classrooms afford opportunities to make connections from the inside out, and offer alternative spaces for students to collaborate, present and learn.

The students themselves came up with the sayings inscribed on the amphitheater steps. Flags from other countries adorn the low walls to the right.



SUPPORTING FILES

The project is tracking toward LEED Gold. As part of the project, the design team pursued Innovation in Design credit #3: *The School as a Teaching Tool*. This credit incorporates the building's sustainable design features directly into the school curriculum, enhancing students' educational experiences, while getting more benefit from the school's investment in sustainability. The school itself acts as a living lab that informs students about energy and water efficiency, indoor air quality, connection to the outdoors, and motivates students to get involved in activities that promote sustainability and environmental awareness. The curriculum does not just describe the features themselves, but explores the relationship between human ecology, natural ecology and the building.

The curriculum was also vetted to meet state curriculum standards, was approved by school administrators, and provides 10+ hours of classroom instruction per year (per full-time student). Only 29% of certified projects in this rating system have earned this credit.



SUPPORTING FILES