

# SUMMIT ELEMENTARY SCHOOL

Natrona County School  
District #1  
Casper, WY

2014 Exhibition of School  
Planning and Architecture



# SUMMIT ELEMENTARY SCHOOL: Overall Exterior



# SUMMIT ELEMENTARY SCHOOL: Site Plan





**COMMUNITY ENVIRONMENT:** The new 56,000 square foot Summit Elementary School in Casper, WY, which accommodates 450 students in grades PreK-5, was the result of a collaborative effort between design team, school district, and community. From the beginning, the district desired to create a learning environment unique to Casper. Community members were actively engaged in brainstorming and decision making processes. Spaces were designed that could be opened up for community use after school hours while securing the remainder of the building.

# SUMMIT ELEMENTARY SCHOOL: Designed as Part of the Landscape



**COMMUNITY ENVIRONMENT:** Design details, such as the striated exterior brick pattern evokes the regional geology, providing a sense that the building is another feature of the landscape. The theme of convergence – towards Casper's history, the surrounding geography, the interdisciplinary nature of 21<sup>st</sup> Century learning, and the desire for the school to serve as a crossroads for the community – shines strongly throughout Summit's design. Enhancements, funded by private donations from businesses, encourage community collaboration. A private preschool also operates out of the facility.

# SUMMIT ELEMENTARY SCHOOL: Learning Communities

**LEARNING ENVIRONMENT:** The school's educational philosophy emphasizes integrated, hands-on, and real world learning. Guided by this the Reggio Emilia philosophy, the building is an active learning and teaching tool. The layout of the core learning space was created with the children will learn in a smaller, multi-age, flexible learning communities. Each learning community includes:

- A **central gathering space** to encourage communication between students and teachers.
- **Smaller breakout spaces** plug into the central space but provide privacy for project based learning and small group work.
- **Flexible spaces** to meet the multiple needs of students throughout the day.
- Space is defined with **movable furniture** and can be reconfigured as class and activity size fluctuates.



# SUMMIT ELEMENTARY SCHOOL: Information Commons

**LEARNING ENVIRONMENT:** Art, music, science and performance spaces foster collaboration. **Creativity Studios** include an art/science studio and a music/performance studio. These areas have connections to the outdoors and the school's common space. The **Village Center** serves as the heart of the building. It serves as a large commons area connecting learning communities, administration, the community entrance, and learning. The space supports physical education, eating, and performance uses. It can display student work and is sized to accommodate the entire student body. It supports after hours community use and is accessible after hours while securing the remainder of the building. Stepped seating, textured surfaces, and an operable curtain surrounding the physical education area are all details within the Village Center. Connected to the Village Center, **Information Commons** recognizes traditional and contemporary means to access information, including technology. Book storage, as well as secure media storage and computer connectivity, defines the area. A media presentation system is integrated into this space, so teachers can present information in digital format and access student work. A reading alcove and large window seat add variety.




# SUMMIT ELEMENTARY SCHOOL: Village Center



**PHYSICAL ENVIRONMENT:** The final design functions as a community center and resembles a village for Summit's 450 students in grades PreK-5, where different functions are expressed by individual forms, shapes, materials and color. Evocative of plazas and town squares, the "Village Center" acts as a place to come together and a foundational component for the building. The Village Center provides a large, indoor space for students to use for free play in extreme weather, and is connected to the music education areas with a performance stage. The classroom spaces are designed to nurture a familial quality, and three "Learning Houses" (communal classrooms in which approximately 150 students have their day-to-day lessons, and which can be shared by students in different age ranges,) radiate from the Village Center. Movable furniture transforms classrooms into intimate spaces or presentation halls depending on the needs of the instructors and students. Each communal classroom has direct access to the outdoors and the entire building is crafted so that the environment and daylight have a significant presence within the interiors. Art and science were combined into a single space – the Creativity Studio – in which children can experiment with and investigate their environment or their imagination.

# SUMMIT ELEMENTARY SCHOOL: Daylighting and Outdoor Views



**PHYSICAL ENVIRONMENT:** The building is supported by a hyper-efficient ground source heat pump mechanical system, daylighting, and environmentally preferable materials throughout the 11-acre site. The design employs several high performance strategies. Space conditioning is provided by a centralized heat pump geo-exchange system connected to a vertical bore field and hydronic solar panels. This system harnesses two renewable resources: the relatively constant temperature of the Earth (underground) and the sun's energy. Daylighting increases visual comfort by reducing glare and contrast while decreasing the need for electric lighting. Lighting power density is held to 0.75 watts per square foot, 25% below the ASHRAE standard, utilizing T5 fluorescent, LED, and induction sources. Insulated low-e glazing, spray applied foam insulation, and careful detailing enhance the performance of the building envelope. Design energy targets were established using the "2030 Challenge" and Energy Star programs. High winds necessitated a protected entrance to the building. An onsite wind turbine offsets a portion of the building's electrical load and feeds real time data to a weather station accessible to the students.

# SUMMIT ELEMENTARY SCHOOL: Non-Traditional Spaces

**PLANNING PROCESS:** Summit was a new school with new administration and a new population. Therefore the design team, District, and the larger community was able to begin the creative process with a clean slate. Each stakeholder imagined what education could be like in the future, rather than reacting to an existing building and educational program. New possibilities were explored in place of traditional aspects of the contemporary American school.

Over the course of two months, the team gathered information from diverse constituents in the Casper community to inform the school's design. The District supplied information relating to curriculum, parent concerns, teacher requirements, technology, and the future of education in the district. These resources were the foundation for the design to shape the interactions and information gathering sessions that followed.



# SUMMIT ELEMENTARY SCHOOL: Window Reading Alcove

**PLANNING PROCESS:** The design team and client visited two alternative schools in the Casper area. These visits were followed by six Visioning Charettes with community members to identify design direction. All participants expressed their visions for their new school and included requests for everything from flexible learning environments to design details. These ideas, along with careful research into curriculum standards and contemporary educational theories and approaches, served as primary inspiration for the project concepts and design. The following month, the design team presented information from the Visioning Charettes and collaborated with a core team of advisors (school administrators, teachers, parents, and District officials) to refine the program of spaces and overarching concept for the school.

As design progressed, the design team revisited initial goals and themes to ensure the project design remained true with its early intent. Stakeholders/ Contributors in the early planning process included the design team, district administrators, community members, teachers, students, and representatives from the Wyoming School Facilities Department.

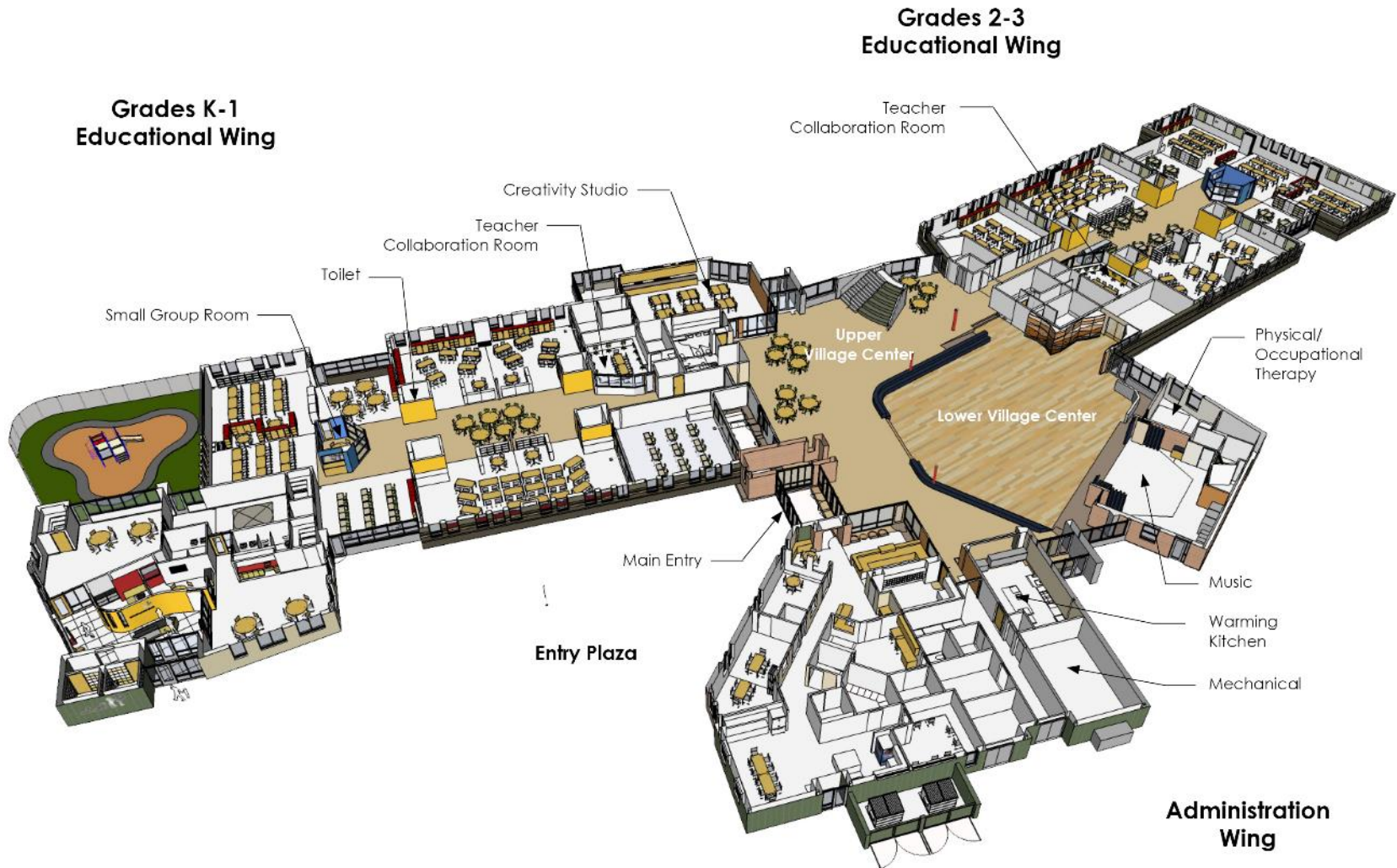
## PLANNING PROCESS TIMELINE

School Tours/Awareness/Visioning Charrettes:	11-12/2008
Work Session/5-10% Design:	1-2/2009
35% Design Complete:	3/2009
Design Completion:	6/2009
Construction Completion:	8/2010



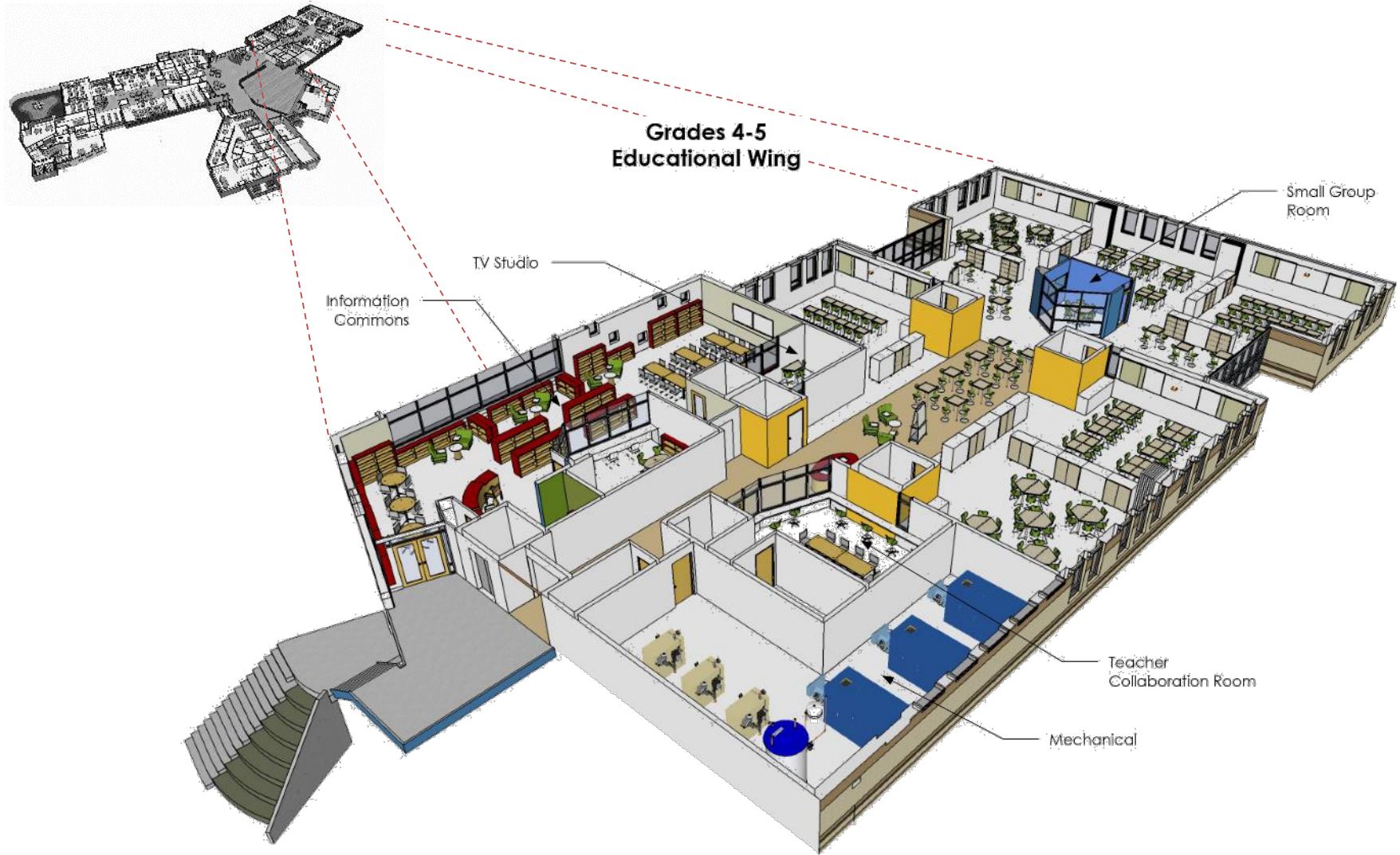
# SUMMIT ELEMENTARY SCHOOL

## First Floor Plan



# SUMMIT ELEMENTARY SCHOOL

## Second Floor Plan



# Exhibition of School Planning and Architecture

## Project Data

<b>Submitting Firm :</b>	<b>RB+B Architects, Inc.</b>
Project Role	Prime Architect
Project Contact	Lacey Reckelhoff
Title	Director of Marketing
Address	315 E. Mountain Ave., Suite 100
City, State or Province, Country	Fort Collins, CO 80524, USA
Phone	970-484-0117

<b>Joint Partner Firm:</b>	<b>Lee H. Skolnick Architecture + Design Partnership</b>
Project Role	Charrette Leadership/Concept Design Collaboration
Project Contact	Paul Alter
Title	Principal
Address	75 Broad Street
City, State or Province, Country	New York, NY 10004, USA
Phone	212-989-2624

<b>Other Firm:</b>	<b>Amundsen Associates</b>
Project Role	Local Architect
Project Contact	Ron Shosh
Title	Principal
Address	212 East Second Street
City, State or Province, Country	Casper, WY 82601, USA
Phone	307-234-9999

<b>Construction Firm:</b>	<b>Adolfson &amp; Peterson Construction</b>
Project Role	Construction Manager At Risk (CMAR)
Project Contact	John Haas
Title	Superintendent
Address	797 Ventura Street
City, State or Province, Country	Aurora, CO 80011, USA
Phone	303-363-7101

# Exhibition of School Planning and Architecture

## Project Data

<b>Project Name</b>	Summit Elementary School
<b>City</b>	Casper
<b>State</b>	WY
<b>District Name</b>	Natrona County School District #1
<b>Supt/President</b>	Steve Hopkins, Superintendent
<b>Occupancy Date</b>	August 2010
<b>Grades Housed</b>	Preschool – 5th
<b>Capacity(Students)</b>	425
<b>Site Size (acres)</b>	11 acres
<b>Gross Area (sq. ft.)</b>	55,597 SF
<b>Per Occupant(pupil)</b>	130.8 SF/pupil
<b>gross/net please indicate</b>	(Gross)
<b>Design and Build?</b>	yes
<b>If yes, Total Cost:</b>	\$15,640,843
<b>Includes:</b>	Design fees and construction cost
<b>If no,</b>	
<b>Site Development:</b>	
<b>Building Construction:</b>	
<b>Fixed Equipment:</b>	
<b>Other:</b>	
<b>Total:</b>	

# SUMMIT ELEMENTARY SCHOOL

## Supplemental Image: "Information Station"



A variety of learning spaces provide opportunities for children to learn in different settings and arrangements. This Information Station allows them to plug in their laptops and work collaboratively on a project.

# SUMMIT ELEMENTARY SCHOOL

Supplemental Image: "Reading Nook"



Reading nooks allow children to get comfortable while working on a task, either independently or collaboratively.

# SUMMIT ELEMENTARY SCHOOL

## Supplemental Image: "Preschool"

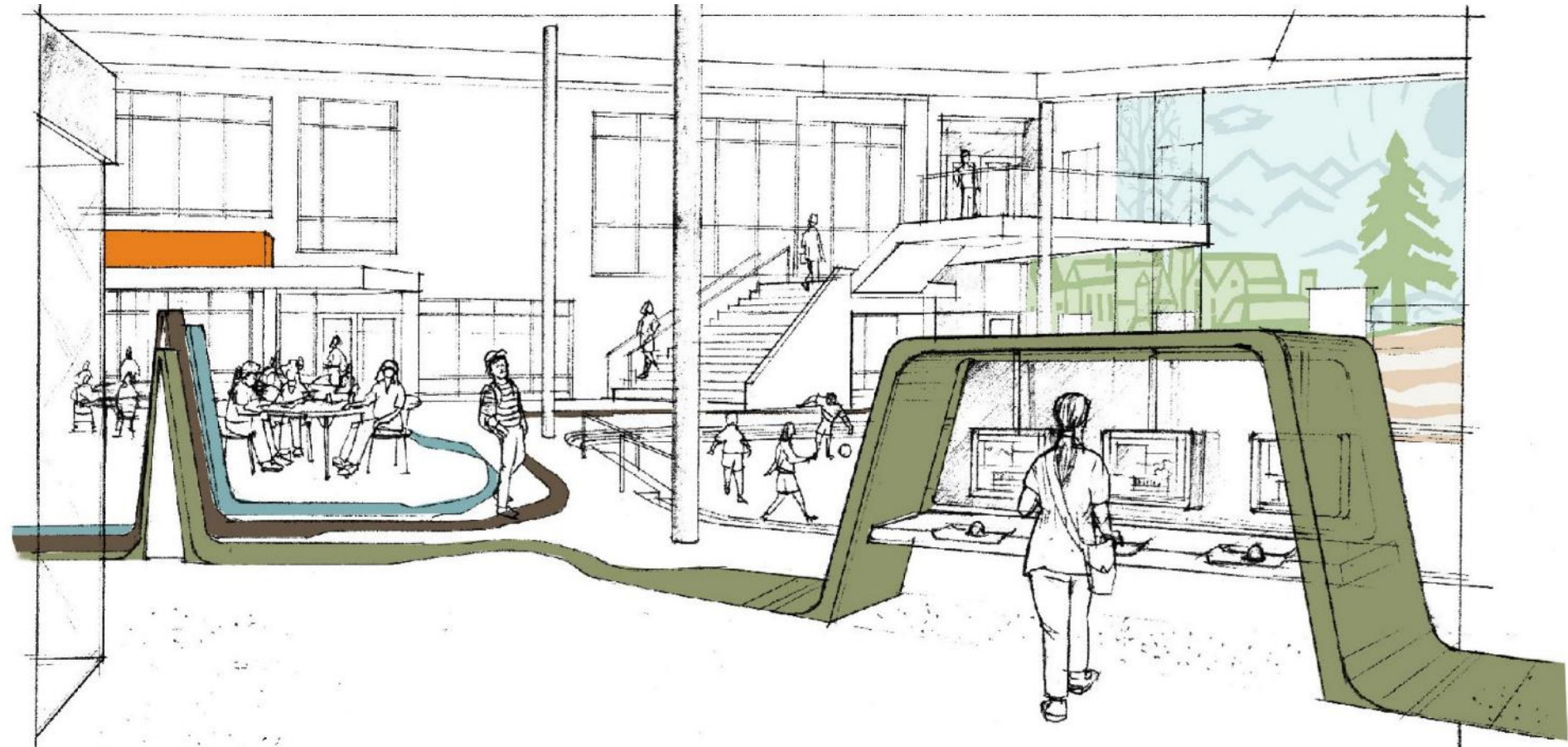
A private preschool was designed as an enhancement to the project. The room opens directly to its own playground and is secure from the remainder of the building. The preschool was funded by a private donation.



# SUMMIT ELEMENTARY SCHOOL

## Supplemental Image: "Power and Weather Sketch"

One enhancement designed in the Village Center, a Power and Weather Station with three interactive computer terminals will make data from the building's environmental energy sources available to students. Bilingual English / Spanish interactive stations will allow students to access data about the power and energy savings generated by the school's wind turbine, solar cells, and geothermal heating as well as compare and contrast this evidence with other power information. This enhancement has not yet been implemented.



# SUMMIT ELEMENTARY SCHOOL

## Supplemental Image: "Sculpture Park Sketch"

The Educational Interpretive Enhancements extend from the interior of the building onto the site, creating a holistic, indoor / outdoor educational setting that engages children in cognitive as well as physical development. The spaces dedicated to outdoor learning continue to develop the convergence themes using a variety of sculpture, paving, structure and play equipment that are designed to support directed learning and unstructured play, always connecting back to the Wyoming State Standards.

