2015 Exhibition of School Planning and Architecture

Watkins Education Center (WEC)

Category: New Construction

New Mexico School for the Blind and Visually Impaired

Alamogordo, NM

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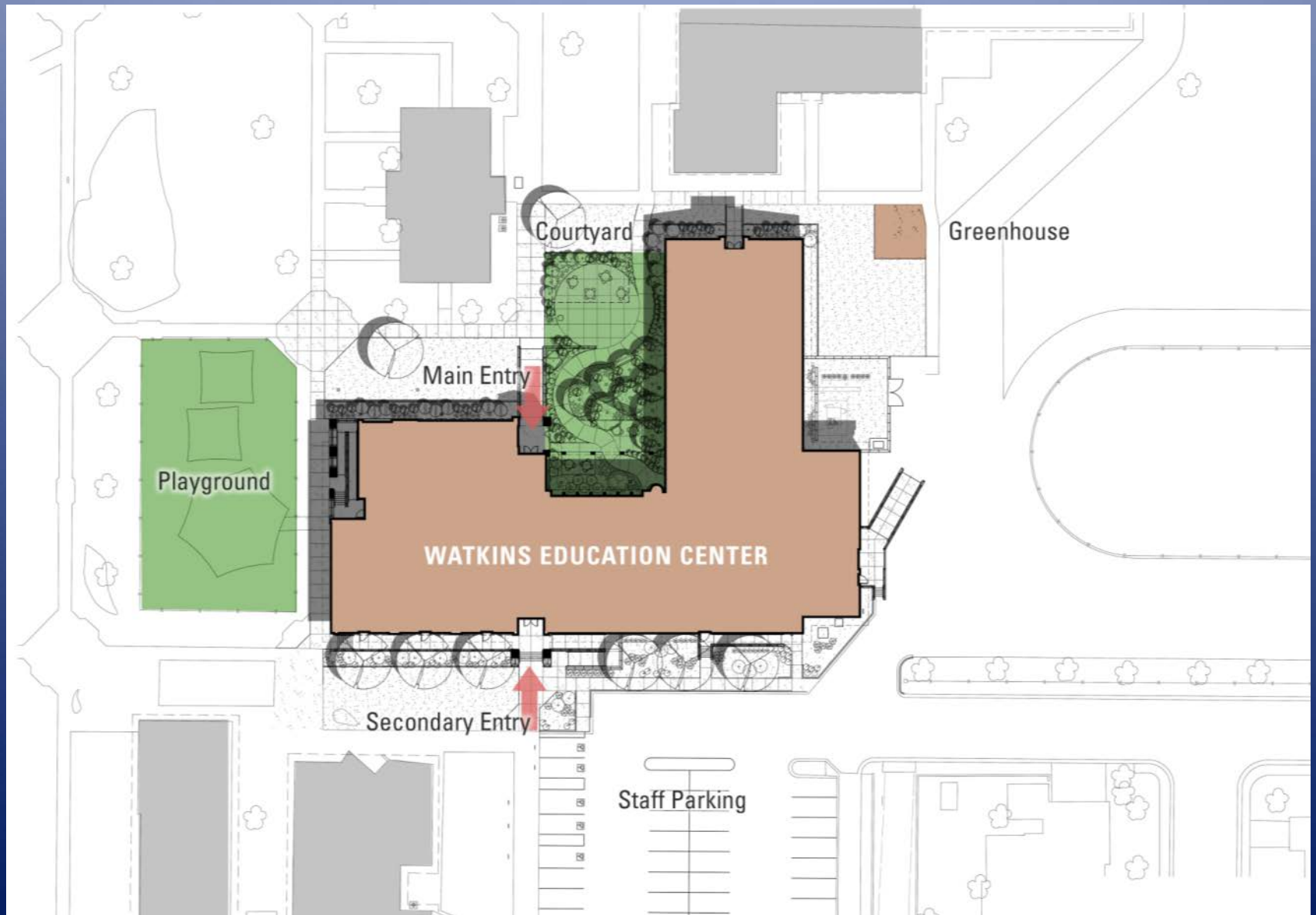


Serving a Unique Community

Community Environment:

New Mexico School for the Blind and Visually Impaired (NMSBVI) serves students statewide who are blind or visually impaired, and who often have additional physical or cognitive impairments, through a combination of short-term on-campus residential education and long-term outreach and supportive services. NMSBVI is also part of the broader community of schools for the blind, and hosts a variety of academic and athletic events.

Detailed design direction was provided by a committee of over 30 people including teachers from several different subject areas, nurses, orientation & mobility specialists, and staff involved in the Expanded Core Curriculum programs that promote life skills, job skills, and personal development.

Serving a Unique Community (cont'd)

Family input was also solicited using bilingual written surveys distributed to families around the state. This method was selected because families are spread across a large state and NMSBVI's programs are designed to limit the duration that each student resides on campus.

NMSBVI's campus is a beloved local landmark and walking destination, so the exterior of the building and courtyard were designed to enrich rather than detract from the historic campus. In addition, the school provides access to the technology classroom, which is designed and located to enable after-hours use for staff and community trainings and meetings.

Hands-on learning for academic, life skills, and personal development

Learning Environment:

WEC includes general classrooms, a science lab, ability classrooms for students with severe/multiple impairments, a large woodshop, cooking/dining training room, and a flexible life skills area. The design balanced 2 key goals: reflecting a typical middle/high school environment to prepare students for attending school in their home district, while incorporating modifications to technology systems, casework, shop equipment, and furniture to meet the specific needs of students who are blind or visually impaired.

Wide classroom tables allow space for braillers and assistive technology and enable furniture to be easily rearranged. White boards support the tactile SC^2 system for teaching science and math concepts to blind students.

Hands-on learning for academic, life skills, and personal development

Flexible spaces are used to teach necessary life and job skills, and expose students to potential lifelong hobbies. The Life Skills area is currently set up with mock office, store, and bedroom environments used to teach everything from how to shop in a store to how to check out and bag groceries, and how to make your own bed to how to clean motel rooms. The kitchen/dining training area exposes students to typical residential appliances including gas and electric stoves , and is used to teach a variety of skills in cooking, baking, cleaning, setting a dining table, and dining.

The shop and mock environment area have high ceilings and ample lighting and power to allow for reconfiguration as student needs change over time.

A supportive but challenging environment

Physical Environment

Since WEC students are middle or high school aged and spend much of their academic career in typical schools, it was important that the physical environment build student confidence while presenting typical real-world challenges.

The exterior of the building respects the historic brick campus while providing controlled daylight to support instruction and navigation. Classrooms have typical windows, and different circulation areas are sidelit from low-silled windows or toplit from clerestory windows to provide navigation cues.

Interior materials were selected to support student health, including low-emitting paints and urea formaldehyde-free casework.

A supportive but challenging environment

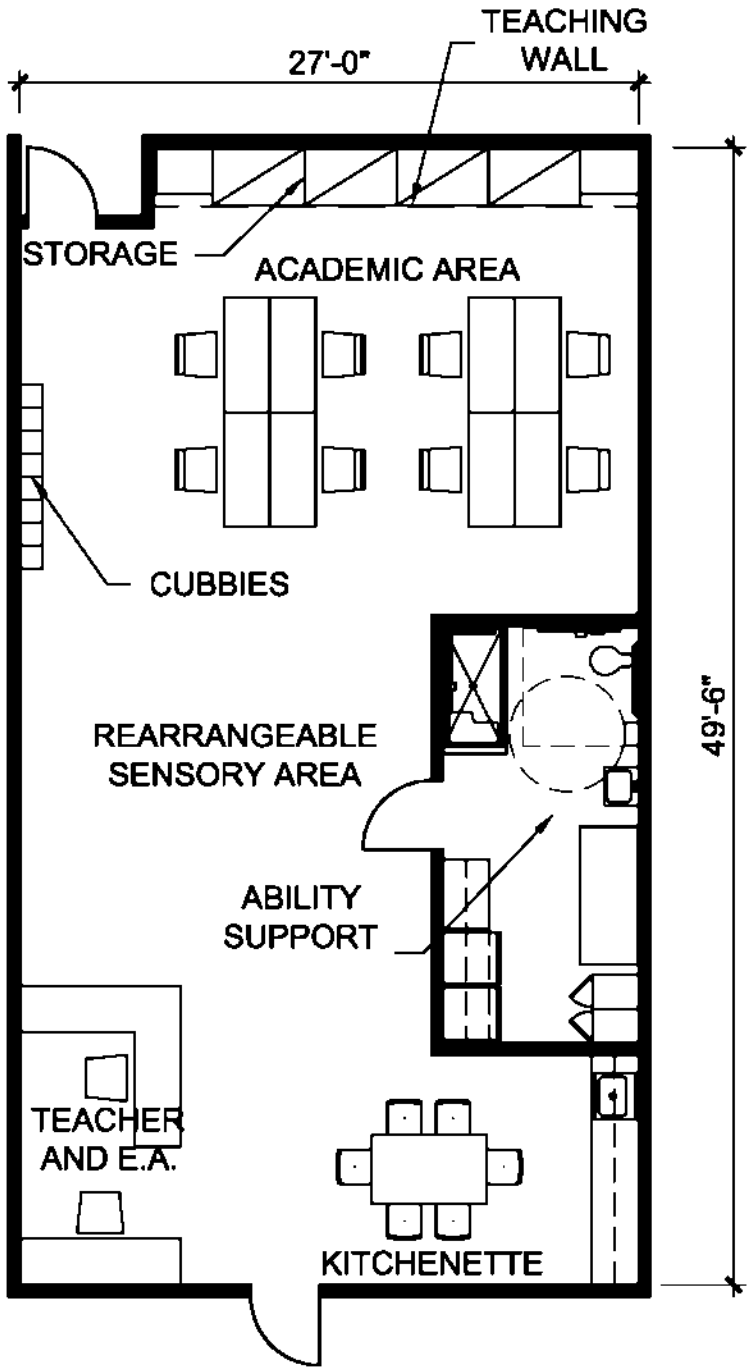
In the lobby and main hall, flooring patterns provide visual contrast and opportunities to build confidence navigating patterned areas. A revolving door provides another orientation and mobility opportunity, and leads to an exterior courtyard.

The courtyard provides a tempting destination with shaded seating areas, and additional challenges in the form of winding pathways, paved and gravel walkways, and striped shadow patterns from an overhead trellis. All of the colors, patterns, and challenges were deliberately incorporated based on input from NMSBVI teachers and mobility specialists, to create an inviting and energizing environment while also challenging students with usable vision and those that use cane navigation.

Metrics and options for unique space needs

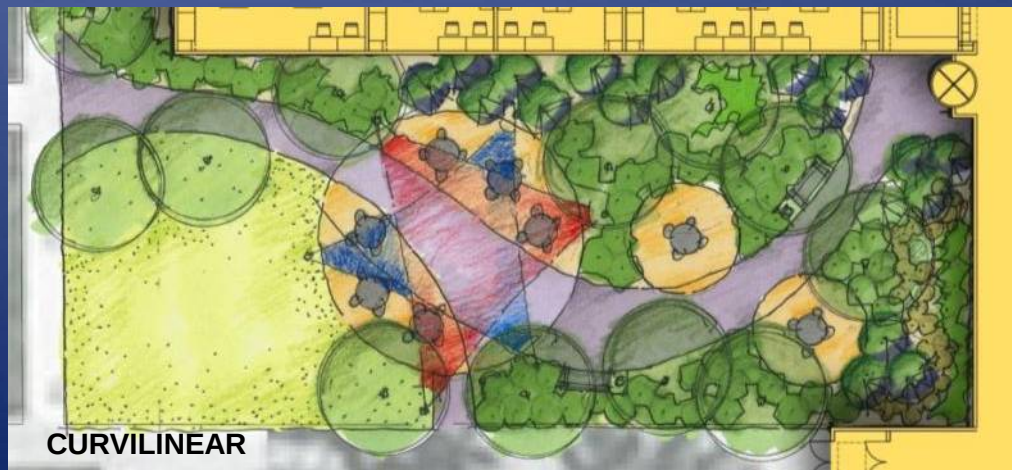
Planning Process:

NMSBVI's design committee formulated over 20 goals to guide planning and design. Programming was completed in May 2012, and design in November 2012. A numeric program and testfit diagrams (example shown) were created for each space. General classrooms were programmed based on their small class sizes: typically just 1-3 students for Braille and Math, and up to 8 students for Language Arts and Social Studies, with longer than typical student desks, ample storage for Braille materials, and designated activity stations. Typical classroom projection/AV equipment is not used in many spaces due to visual impairments , but presentation equipment was incorporated into a few spaces to give students experience with this equipment for future use.



Metrics and options for unique space needs

WEC is designed to promote employability and independence in a population with daunting statistics: only 20% of employable blind adults are employed nationwide, and of those, 80% are under-employed. In addition, unless skills such as orientation and mobility, social interaction, and independent living are learned, these students are at high risk for leading isolated, unproductive lives. WEC provides spaces for teaching these skills and features that encourage independence. Multiple options were studied with the committee for all major design decisions. Five initial schemes were studied that each fit the tight building site and met requirements for space adjacencies. A similar process was used to study options for the courtyard design, floor patterns, and other features which would have a significant impact on learning and navigation. The entire planning team remained involved through design, construction, and occupancy.



Floor plan


ACADEMIC
Science Lab
ADMINISTRATION
Main Entry
Workroom
Shop
Shop Deliveries
Life Skills
Tech Classroom
Teaching Kitchen
ABILITY CLASSROOMS
Secondary Entry
SPECIALIZED TRAINING

Exhibition of School Planning and Architecture Project Data

Submitting Firm :	Dekker/Perich/Sabatini
Project Role	Architect
Project Contact	Julie Walleisa
Title	Principal/Architect
Address	7601 Jefferson NE, Suite 100
City, State or Province, Country	Albuquerque, NM 87109
Phone	505-761-9700

Joint Partner Firm:	
Project Role	
Project Contact	
Title	
Address	
City, State or Province, Country	
Phone	

Other Firm:	
Project Role	
Project Contact	
Title	
Address	
City, State or Province, Country	
Phone	

Construction Firm:	Bradbury Stamm
Project Role	General Contractor
Project Contact	Dennis Towne
Title	President
Address	7110 2nd St NW
City, State or Province, Country	Albuquerque, NM 87107
Phone	505-765-1200

Exhibition of School Planning and Architecture Project Details

Project Name	Watkins Education Center (WEC)
City	Alamogordo
State	NM
District Name	New Mexico School for the Blind and Visually Impaired
Supt/President	Linda Lyle, Superintendent
Occupancy Date	August 2014
Grades Housed	6-12
Capacity(Students)	80
Site Size (acres)	2
Gross Area (sq. ft.)	24,486
Per Occupant(pupil)	306
gross/net please indicate	gross
Design and Build?	Yes
If yes, Total Cost:	$7,086,900
Includes:	Demolition of old building, new site development, building, & equipment
If no,	
Site Development:	
Building Construction:	
Fixed Equipment:	
Other:	
Total:	

Supporting/Supplemental files/Images

WEC includes a freestanding greenhouse adjacent to the classroom wing that is configured to support both science experiments and life skills activities.

In the first year of occupancy, students grew tomatoes, jalapenos, strawberries, geraniums, aloe vera, basil, cilantro, snapdragons, and alyssum for sale. Life Skills teachers taught students how to plant and care for the seedlings, as well as how to operate a cash register and provide customer service during the community sale.

Supporting/Supplemental files/Images

In the first year of the building's occupancy, NMSBVI hosted the Braille Challenge in WEC classrooms. This nationwide competition tests students' skills at reading and writing Braille code as well as embossed charts and graphs.

Supporting/Supplemental files/Images

WEC's wood shop has already been used by a wide variety of NMSBVI students as they receive instruction in using shop tools safely and effectively.

These photos show students working in the shop to create beautiful , handmade pieces for a silent auction that was open to the entire community.

Supporting/Supplemental files/Images

WEC's science lab is designed to mimic the lab configuration and materials found in local middle and high schools, while enabling instruction of small groups of blind students.

In addition to typical equipment such as a fume hood, sinks, and gas turrets, the lab contains specialized equipment to better convey scientific principles without relying on visual instruction. The large demonstration station in front of the windows is a stream table used for tactile simulation of land forms, erosion, sedimentation, rainfall, and other earth science concepts.

The bottom image shows students exploring a chemical reaction using magnesium and flame to produce an extremely bright light as well as a source of heat.

Supporting/Supplemental files/Images

"[Firm name removed] has been able to translate the mission and goals of the school and the needs of the staff and students into realistic, creative designs that produced effective, beautiful learning space. Because the firm is dedicated to master planning, every decision we have made has been linked to our long-term goals and our vision for ourselves. In looking at the two new buildings designed for us, one can see that each design reflects the type of student and the unique needs of that age group of students. The buildings are very different from one another and clearly reflect the different purpose in each building.

When they first began to work with us, the firm eagerly took on the task of learning about the field of blindness education. They layered blindness education with the knowledge they already have about buildings that promote learning to help us address our unique needs without losing our understanding that our students are more like others than different. [Firm name removed] embraced NMSBVI's commitment to the development of independence in all students across all learning environments."

- Linda Lyle, NMSBVI Superintendent