

Tioga Elementary School is a bright, colorful learning environment.



Tioga Elementary School is a prototype for the Bensenville school district—both as an educational program and as an aesthetic statement of how valuable their kids are to the community. The Bensenville school district originally closed and demolished the older Chippewa Elementary School in order to fund an addition to the existing Tioga School, which ultimately became an entirely new, 122,400-sf facility on the Tioga site. This new school reflects how closely the architects, STR Partners; the school district; and the public worked together to create a 21st century learning experience that is in line with their educational goals and programs.

STR delivered what the community was seeking: a gleaming white building with color accents in the windows and on the exterior pavement. This design defines scale and identity and offers an array of bright colors inside and out. STR's engagement with the community culminated in the building's bright, child-friendly, and welcoming aesthetic. The result is an happy, energetic, and vibrant environment that has a positive impact on learning.

The Project

Project Name and Address:

Tioga Elementary School
212 West Memorial Road
Bensenville, Illinois 60106

Owner:

Bensenville ESD 2

Architect:

STR Partners LLC, Chicago

Structural Engineer:

C.E. Anderson & Associates,
P.C.

The Builders

General Contractor:

Gilbane Building Company

Mason Contractor:

Iwanski Masonry & Builders

The Scope

Project Totals:

120,234-sf New Elementary
School on 11 Acres

Type of Materials Used:

White Brick
Slate
Natural Stone



The white brick with floor-to-ceiling glass openings provides bright, cheerful spaces. Colored glass accents, made vivid by the simple white brick walls, creates visual elements that children and teachers can relate to. Wood, slate, and natural stone add a touch of warmth to the palette.

Brick masonry's surprising aesthetic flexibility allows the school district to create an exciting, 21st century learning environment for the community.



Creating a strong visual presence in the community

White brick exteriors are complemented with bright color accents in the windows and exterior pavement. This helps to define scale and identity and is reinforced by the use of color in cheery interior furnishings, walls, and floors. The clean, bright, colorful building meets the district's ultimate goal of creating a center for the community through a strong visual presence. The gleaming white building creates a unified, modern, and open campus. More importantly, the district and designer created a place where the kids of Bensenville are enthusiastic about coming to learn.

STR chose brick materials to meet 21st century designs

Brick was chosen early during the project. The district wanted to have the community's input in deciding what the school should look and feel like, guided by the design team's knowledge that brick masonry provided infinite aesthetic possibilities. Three distinctly different images of the school were presented to and voted on by community members: a traditional scheme, a scheme resembling colored blocks, and the chosen white with colored glass scheme. The durability and low maintenance cost of brick makes it a traditional choice of many school districts.

The 21st century demands for sustainability were met through:

- Consolidation
- Reduction in heat island
- Efficient building envelope
- Energy recovery systems
- Construction waste management
- Interior thermal comfort
- Enhanced acoustical performance
- Certified wood and recycled materials

School spaces include:

- Areas for informal instruction
- Classrooms paired with flex rooms
- Gymnasium
- Cafeteria
- Administration area
- Community room
- Library
- State-of-the-art media center
- Two music classrooms
- Art classroom
- Three pre-kindergarten classrooms
- Outdoor instructional spaces
- General classrooms
- Innovation lab
- An amphitheater
- A bus loop and auto drop/pick-up

The construction of this elementary school was a successful and collaborative effort between the architect, the school district, the community, and the builders. For more information contact:

STR strpartners.com

Gilbane gilbaneco.com

 iwanskimasonry.com



The fine and performing arts area features a full performance theatre with seating for 470. A full catwalk system offers opportunities for lighting, sound and other technical aspects of the performance. Also housed in the fine and performing arts wing are the art and music rooms. A culinary arts foods lab is also located within this area and is in close proximity to the main kitchen to allow for instruction in a commercial kitchen environment.

The athletic area houses a 13,300 square foot gymnasium, an auxiliary gymnasium and weight and fitness room for physical education and athletic training. The athletic area flows to the main cafeteria on the main floor with the center-piece of the athletic area being the 1,300 seat, full-submersion gymnasium, where spectators enter from the top level and walk down to their seats.



When the bleachers are closed, the gym floor accommodates two full size basketball courts. The gymnasium can house the entire student body for assemblies and programs, and can comfortably host graduation ceremonies.

Masonry Provides Energy Efficiency, Durability, and Aesthetic Value

Exterior walls on the academic wing were constructed as mass wall construction utilizing face brick with concrete masonry unit back up. For constructability and schedule, a Dow Cavitymate Ultra Air System was employed to address the need for thermal insulation and a vapor and air barrier.

For durability, corridor walls, toilet rooms, locker rooms, and other high abused areas were constructed of concrete masonry units.

Face Brick, Split-faced and smooth faced masonry were incorporated in the main lobby, cafeteria, and athletics lobby to add durability, beauty and warmth to these spaces.

Masonry forms and earthtone colors were used to tie the school with its historical precedent. To reduce cost and save time, the shell of the auditorium was constructed of load bearing precast concrete wall panels, but a wythe of acoustical masonry was added to the interior face to enhance acoustics within the performance space.

Similar to the auditorium, athletic areas were constructed of loadbearing precast. To add aesthetic value and blend them into the architecture of the facility, thin face brick and smooth face masonry were veneered at key areas on the precast panel system.



The new school was designed to earn a Leadership in Energy and Environmental Design (LEED) Gold status by the U.S. Green Building Council.

The former school was situated on the site with a large front yard north of the school. This allowed the school to be constructed immediately north of the original building while allowing the existing school to remain in operation during construction.

A new parking lot is situated south of the school within the footprint of the original school. The new lot was constructed of ecological permeable pavers in two different colors to distinguish between drive areas and parking areas.

Designed as a LEED Gold Project

The new school was designed to earn a LEED Gold rating, recognizing best-in-class building strategies and practices.

Design features that contribute to the sustainability of the project include the following:

- Limiting number of parking stalls to meet minimum ordinance
- Stormwater features to control quantity and quality of stormwater
- Permeable pavers in parking lots and drives
- Cool roof materials
- Exterior lighting designed using Dark Sky design principles to minimize light pollution
- Water saving plumbing fixtures with a goal of achieving 35% water savings
- Energy efficient HVAC systems with a goal of achieving 35% energy savings
- Controllability of lighting and HVAC systems for occupant comfort
- Demand control ventilation to provide fresh air corresponding to occupancy loads
- Highly insulated building envelope (roof, walls, windows, doors)
- Low VOC refrigerants to minimize greenhouse gases
- Enhanced commissioning process for HVAC and lighting systems
- Recycling of construction and demolition materials diverted over 50% of waste from landfills
- Construction measures to protect absorbent materials from moisture
- Completed pre-occupancy building flush of nearly 2 billion CFM
- Use of materials with recycled content exceeding 20%
- Use of materials regionally produced exceeding 40%
- Use of materials to enhance acoustic performance
- Use of high level IAQ standards during construction
- Use of low-emitting (low-VOC) materials for adhesives, paints, composite wood, and ceilings/walls
- Management of indoor chemical and pollutant source controls

Hall High School is a quality masonry building designed and built by these Chicago-area Companies :

**HEALY
BENDER**

Architects
Planners



JIMMY'Z MASONRY CORP.