

Argo Community School District 217 Adds New Performing Arts Center



The Argo Community School District 217 Richard & Sharon Portillo Performing Arts Center Addition includes a 450 Seat auditorium, stage, prop construction area, Band, Choral and Theater Classrooms, Practice Rooms, Lobby, Mezzanine Student Commons area and related support spaces.

Argo Community High School is located in Summit, IL on a urban/suburban site landlocked by 2 major arteries and dense residential, and industrial sites. One of the most significant design challenges was finding the space for 37,000 + addition on such a tight site. The design team from DLA Architects reviewed many design options with the School Board and District Administration including remodeling their existing auditorium. It was determined that remodeling the existing 100-year-old auditorium was not an option due to cost and site constraints and the lack of ability to bring the antiquated facility up to 21st century educational standards.

A site was chosen to do an addition at the South of the existing building. However, there was no easy way to connect the new addition to the south end of the school because of a drive that provided access to the Auto-shop classroom and was the main bus queuing area. The design team's solution was to provide a connection to the new addition through a bridge at the second-floor level. This solution would allow the buses to pass underneath and vehicle circulation around the site to be maintained while providing a secure, indoor connection for students.

The Project Details

Project Name:

Argo Community School District 217
Richard & Sharon Portillo Performing Arts
Center, Summit IL

Architect:

DLA Architects, Ltd.

Acoustical Consultant:

Threshold Acoustics LLC

Structural Engineer:

Pease/Borst Associates

Mechanical & Electrical Engineer:

Berg & Associates

Civil Engineer:

W-T Civil Engineering

Construction Manager:

IHC Construction Companies

Mason Contractor:

Iwanski Masonry, Inc.

Material Distributor:

Northfield Block Company

Project Scope:

First & Second Floor

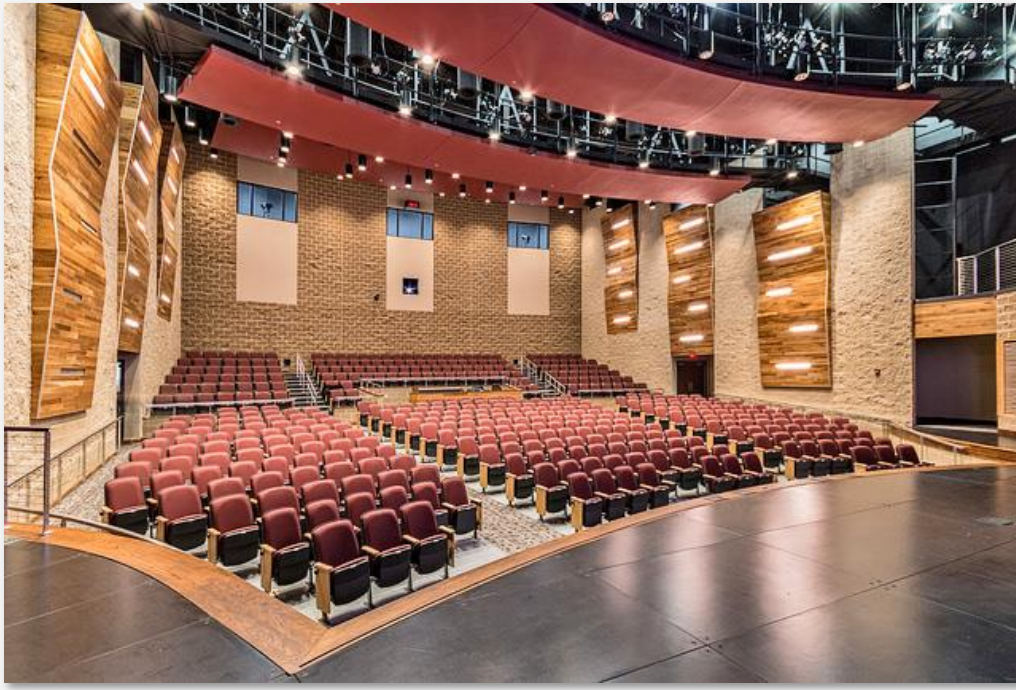
37,383 sq. ft. Addition

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Threshold Acoustics LLC, Partner



Reducing Noise For Rich, Acoustic Performances

Argo Community High School is located just southwest of Chicago, a few miles from Midway Airport and near heavily traveled roadway and heavy rail lines. Grout filled CMU has the acoustic mass required to assure sound isolation of this exterior noise in the Theater, providing the essential quiet background noise for performances and presentations.

CMU was also beneficial for exterior noise isolation in the Band, Choral and Theater Rehearsal Rooms, which allows ease of instruction and uninterrupted archival and student recording in these rooms. This exterior wall construction was also key to controlling on-site noise by keeping the sound of marching band practice on the fields just outside the new Choral Rehearsal Room from impacting teaching and rehearsal and assuring that rooftop air handlers located directly adjacent to the Theater Stage are not audible in the space. A masonry parapet was also used to screen the new rooftop cooling tower from nearby windows of existing school classrooms.

Masonry was utilized for the interior acoustic design as a single building material that could provide robust, full-frequency acoustic response. The interior of the Theater is primarily exposed, grout-filled masonry resulting in a rich, warm sound for band and choral performances. A mix of integrally colored split-face and ground-face CMU gave Threshold Acoustics the ability to tailor the quality of sound reflection in the Theater while allowing variation in architectural design. Painted CMU was used in less visible areas of the Theater to assure good acoustic performance yet balance cost considerations.

The shape and surface of sealed, split-face masonry at wall surfaces near the Theater stage are crucial for early reflections from performers to audience. Threshold Acoustics worked with DLA to create a gentle curve for these walls to direct sound evenly across the seating area. The split-face texture provides high-frequency diffusion to mitigate any potential for echoes as sound travels across the width of the space. The timing of the reflections from these CMU walls balanced with the sound reflecting off the forestage ceiling panels give support for voices and instruments, allowing performers to communicate easily with the audience without amplification.

Full Frequency Support For Rehearsals And Classes

A mix of sealed and unsealed split-face CMU was incorporated at the rear wall of the Auditorium to provide high frequency diffusion and light acoustic absorption that provides response to the stage, giving performers needed feedback about their sound in the room while controlling overall loudness for large bands or amplified presentations.

Masonry exposed within the Band, Choral, and Theater Rehearsal spaces provide full-frequency support for rehearsals and classes in those rooms while aiding in isolation between spaces during simultaneous class use. Large-scale angling of masonry walls in conjunction with limited areas of applied diffuser panels in the Band and Choral Rooms create an even, blended sound with a cost-effective solution.



Creative Design And Architectural Elements

The Argo Community High School Board of Education and the Administration wanted the new Performing Arts Center Addition to match the existing building's traditional architecture and reflect the architectural style of the 100-year-old community high school. Therefore, exterior materials such as brick and stone were chosen for their durability, low maintenance, and aesthetic.

The proportions and scale of the addition's windows and the use of brick and cast stone architectural elements, such as the arches over the entry windows, and masonry pilasters, reflect the proportions, scale and detail of the original Argo High School.



Photography by: Alexander Romanovsky, DLA Architects, Ltd

Choosing Masonry For Acoustic Design Goals

Masonry construction was a key component in achieving the acoustic design goals of the new Portillo Performing Arts Center at Argo Community High School. Sound isolation, room shaping, and acoustic response were achieved through masonry in the exterior envelope and interior partitions of its auditorium and rehearsal spaces.

- Cast stone was specifically chosen to showcase Argo's school pride by featuring an engraved Argonauts logo at the main entrance and their Alumni Song, which faces the stadium.
- Cast Stone arches over the windows of the main entrance to the auditorium reflect the detailing of the school's original entrance architecture.
- Franklin Stone was used as an economical and modular solution to emulate a limestone water table.

The construction of this High School was a successful and collaborative effort between the architect and acoustical firms, the school district, the community, and the builders.



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