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TheatreSquared

A Home for New Theatre in Arkansas

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Arkansas' TheatreSquared gets a stylish new home

By: Mel Lambert



Opposite: "The new 0.8-acre site was a former parking lot with 50 – 60 spaces," Miller says. Above: A sculptural stair frames the entrance, connecting two levels of the lobby and providing seating for casual performances.

Serving as Northwest Arkansas' only year-round professional theatre, TheatreSquared is considered to be a vital cultural resource for the region. Located in Fayetteville, some 180 miles northwest of Little Rock, local audiences have demonstrated a continuing taste for theatre drama; each year, the company stages over 300 performances serving more than 60,000 patrons. Realizing that the single-theatre complex had run out of space, in 2015 staff began to consider how to take the next step.

"For our opening seasons, we operated out of a converted beer distribution warehouse," recalls TheatreSquared's executive director, Martin Miller. "We had a single, 175-seat performance area, limited dressing rooms, and a scenic department located three miles away. With only basic acoustic isolation, performances were

often impacted by trains passing less than a block away, and we often had to call a 'rain hold' to wait out rain falling on our metal roof!"

TheatreSquared's staff—including artistic director Bob Ford and associate artistic director Amy Herzberg—investigated an available space directly opposite its current location and bordered by Spring Street and West Street. "The new 0.8-acre site was a former parking lot with 50 – 60 spaces," Miller says. "It offered more than enough room to accommodate our plans for a 50,000-sq.-ft. facility, comprising a main performance space that accommodates between 275 and 350 patrons—the West Theatre—a 130-seat experimental black-box space, since renamed the Spring Theatre, plus the flexible Walker Rehearsal Room; the open-all day Commons Bar/Café, an on-site scenic shop, dressing rooms, and other facilities. Next season, we will stage eight plays, a five-script new play festival, and a tour of 80 schools. We will also be hosting other events, including a local ballet company."



The bright, airy commons area is open all day.

The budget for the new complex was \$31.5 million, comprising design, construction, and equipping two state-of-the-art theatres, a dedicated rehearsal space, offices, education and community spaces, production workshops, eight guest artist apartments, outdoor terraces, and patios, plus the open-all-day public common area. The new building is close to restaurants and bars, the University of Arkansas, and a new 250-space garage. Groundbreaking began on June 23, 2017.

TheatreSquared's' grand opening season occurred in August 2019, with *Shakespeare in Love*. Although the current program has been impacted by the global pandemic, the next anticipated productions are *My Father's War* and *Matilda the Musical*.

A team effort

With support from the Walton Family Foundation's Design Excellence program, the theatre began design work in spring 2015 and finalized its design team in November 2015. Charcoalblue led the design team and oversaw the theatre, acoustics, stage engineering, stage lighting, and AV designs. The Charcoalblue team was led by Chicago studio principal Clemeth Abercrombie and included partner John Owens; team leader Owen Hughes; theatre designer Ben Hanson; acoustician Bruno Cardenas; stage engineers Caroline Rouse and Chris Holland; stage lighting designer Eric Furbish; and audio-visual designer Joe Boxshall. Charcoalblue also served as theatre planners for the Royal Shakespeare Company's new Courtyard Theatre,

Stratford-upon-Avon, England, and the 2014 RIBA Sterling Award-winning Everyman Theatre, located in Cheltenham, England.

TheatreSquared and Charcoalblue selected New York-based Marvel Architects from over 70 international applicants to design the theatre building. The company's portfolio includes the new Brooklyn Public Library, a national competition-winning entry for the new Constitution Gardens on the National Mall, and, in collaboration with Charcoalblue, a new home for the New York theatre St. Ann's Warehouse.

Marvel's creative team was headed by principal Jonathan Marvel and partner Lissa So and included project architects/designers Zack Griffin and Ariel Poliner. "In our design, the artistic theatre spaces are far from hidden and actually project from the façade," So explains. "The main stage, studio, and rehearsal space are plainly visible from the street, so that no matter where you stand, it is clear that the building's purpose is to create and experience live theatre. Behind the building, the outdoor patio is constructed out of reclaimed brick from a 150-year-old nearby structure." A sculptural stair frames the entrance, connecting two levels of the lobby and providing seating for casual performances.

To ensure adequate sound isolation between the various performance spaces, Charcoalblue and Marvel specified formed concrete and a steel skeleton. "Board-formed architectural concrete wraps both theatre volumes," says So. "The theatre's main stage is designed for perfect acoustic isolation, even from the blast of a freight train's horn a block away." A 1" air gap separates the concrete volumes from the steel structure. As board-formed walls were completed, the wooden boards were wire-brushed and stained for use as interior cladding.

Structural engineering was supervised by Jason Tipold, Jennifer Chan, and Pat Arnett from Silman. Melanie Chamberland, Andrew Clark, and Patrick Regan from Buro Happold oversaw mechanical, electrical, plumbing, fire protection, and IT dimensions. McClelland Engineering handled civil and geotechnical engineering. Baldwin & Shell was the construction management firm, fronted by project leader Mario Beltran, superintendent Morris Vines, and company president Patrick Tenney.

Jim Conti, of Jim Conti Lighting Design, supervised the architectural lighting, while Ryan Cole, of WengerJR Clancy, oversaw stage engineering; Dean Sternke and Tripp Oliver, of MainStage Theatrical Supply, handled stage lighting; and Spencer Cox, of Keystone Digital, oversaw audio-video systems.

"TheatreSquared, Charcoalblue, and Marvel Architects traveled to more than 20 theatres in the US and the UK to study a variety of theatre designs," says Abercrombie. "We combined that international perspective with the local fabric of Fayetteville to create a new home for the company

that will set a new standard for purpose-built professional theatres at this scale."

Responding to aspirations from the TheatreSquared team and the public, Charcoalblue and Marvel Architects "drew up plans for a facility that marries incredibly intimate and adaptable theatres with all of the integrated production facilities needed to ensure that TheatreSquared remains on the cutting-edge for generations to come," Abercrombie says.

The West Theatre

Charcoalblue took special care within the theatres to design spaces that make performers feel naturally supported in their communication with the audience, "with the farthest seat just nine rows away from the stage, and the use of naturally diffusive and reflecting brushed and charred wood finishes," Abercrombie says. "The West Theatre's acoustic is as intimate as the seating. The mid-band reverberation time was measured at 1.1 seconds, well within the design target of 1.0 – 1.2 seconds."

Although the theatre's stage might be considered large for its audience capacity of between 275 and 350, "it plays a critical part in the epic nature of a production and, although it may seem contradictory, the intimacy between actor and audience," theatre designer Hanson explains. "The stage form wraps the seats to the apron stage, and allows a crossover between performer and audience, enabling the latter to embrace the action."

Because the main program for both spaces was theatre, and the West Theatre's auditorium was designed for enhanced flexibility, Charcoalblue selected point-source loudspeaker systems. "We specified eight d&b audiotechnik E12 loudspeakers and two B4 subwoofers," AV designer Boxshall confirms, "and four d&b E8 loudspeakers and two E12X subs for the Spring. Our idea was that, since they are all from the same manufacturer, with a similar frequency range, and are powered by d&b D20 amplifiers located in a combined rack room, it will be possible to share stock between spaces."

Charcoalblue wanted to ensure mixing compatibility between the two performance spaces "and that staff only needed to learn one new console," continues Boxshall. "The Yamaha QL5 64-channel digital console is intended primarily for front-of-house mixing in the West Theatre, and the smaller Yamaha QL1 thirty-two-channel mixer for the Spring Theatre. But, depending on show requirements, the QL1 may become a monitor-mix console for the West Theatre. Or the Spring might have a band playing that will need the QL5's extra channel count." The facility's audio infrastructure is built around an Audinate Dante digital network, "which these Yamaha consoles handle natively, and makes for simple integration wherever they are needed." A dedicated control room at the rear of the theatre houses audio and lighting consoles.

Both the West and Spring Theatres were designed to support multiple seating formats. "TheatreSquared's past production history demonstrated a clear ambition to regularly re-invent the relationship between their audience and the stage," says Hanson. "Design of the stage engineering systems needed to fully support and enable that ambition."

Charcoalblue and TheatreSquared worked with British seating manufacturer Kirwin & Simpson to design custom flexible seating solutions for the West Theatre. "We deployed a unique hardware design for seating and decking systems that allows every flexible seat to connect to either the floor or channel in the riser," Abercrombie explains. "The channel-based system means that seats are not limited to being mounted in any one individual location; they can be slid horizontally to adapt to a vast variety of seating configurations."

Within the facility's intimate new mainstage, the front

row has been moved closer to the stage, while the back seating row is one row deeper than in the facility's former space, with audience members entering at a shared level with the performers. "Two rows wrap around the top of the auditorium to create a new circle level with some of the best views in the house," Hanson explains. The custom seats are self-rising, creating more room for patrons to circulate. "A third tier of seating can be activated for additional capacity as needed," the designer adds.

The West Theatre's stage is made up of custom platforms supplied by Wenger|JR Clancy that sit on a steel substructure, providing a fully trapped area over an area 44' wide x 18' deep up to the plaster line. "The same platforming system forms an 11'-deep apron," says Hughes, "thus providing the opportunity to create a small pit or additional depressed rows of seating at the front of the stage. In addition to the dramatic opportunities created by the flexible traps, lowering [stage sections] to pre-set heights also allows for quick turnovers into various deep thrust and in-the-round seating configurations."

The stage layout is mirrored above by a series of fixed catwalks with outrigged lighting positions positioned at multiple heights. Hung from structural beams above the catwalks running upstage/downstage are custom movable beams, provided by Wenger|JR Clancy, that can be locked into position and allow for an up to one-ton-rated point to be fixed almost anywhere over the house or stage. This system is complemented by a package of Columbus-McKinnon half- and quarter-ton chain hoists, with a control system by Skjonberg Controls, Inc. that is mounted in a rolling rack, allowing the hoists to also be used in the Spring Theatre.

Over the stage, Wenger|JR Clancy supplied a mix of hoists for both motorized battens and single-point flying. Custom pile-up drum hoists control four motorized line sets distributed between the fixed catwalks. Also, four customized Titan single-line point hoists with demountable mule and head blocks allow for single-point flying of scenic or technical elements anywhere over the main stage area. A Wenger|JR Clancy SceneControl motion control system can be operated via either the Model 15 desk console, Model 12 pendant console, or a Model 10 wall console mounted in the stage-left wing.

"We also provided dead-hung curtain tracks supplied by Automatic Devices Company," says Cole, from Wenger|JR Clancy. Other soft goods include onstage blackout curtains, as well as dead-hung legs and borders. "A full-height sidewall grid made of Unistrut was also installed on the stage-left and -right walls to allow for easy attachment of technical equipment or temporary rigging," Hughes adds.

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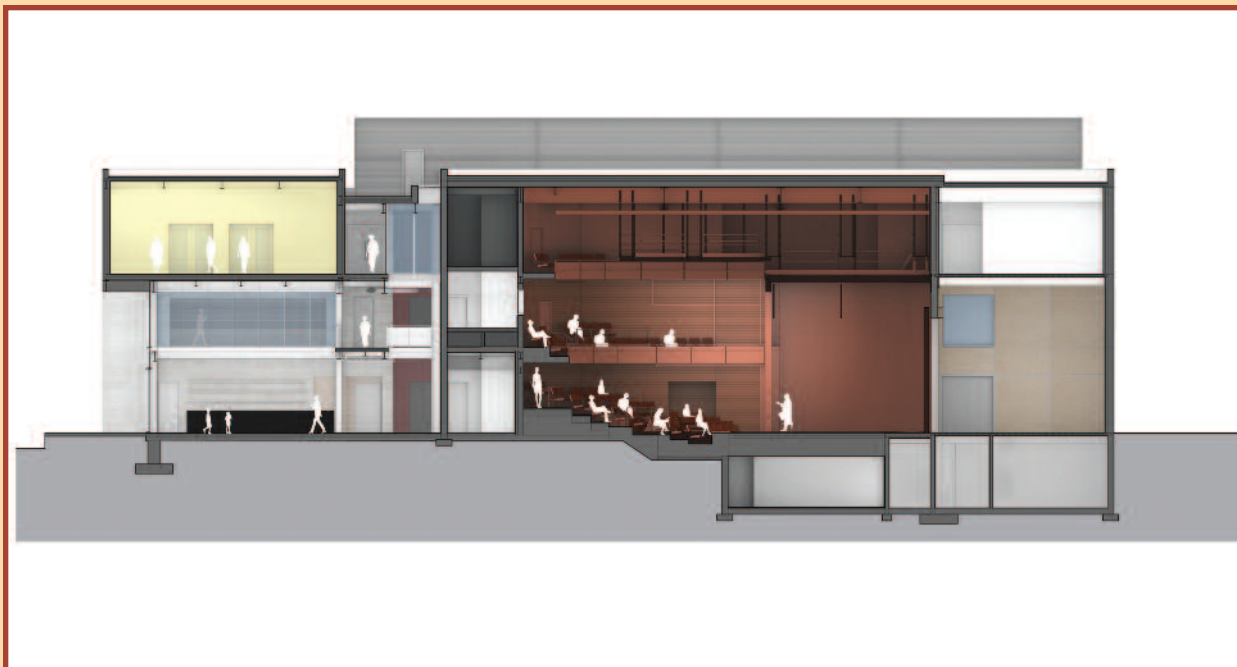
and Spring Theatres, these were a significant component of the structural design. As a result, we increased the size of the structural steel members to accommodate flexible layouts.”

Stage lighting systems

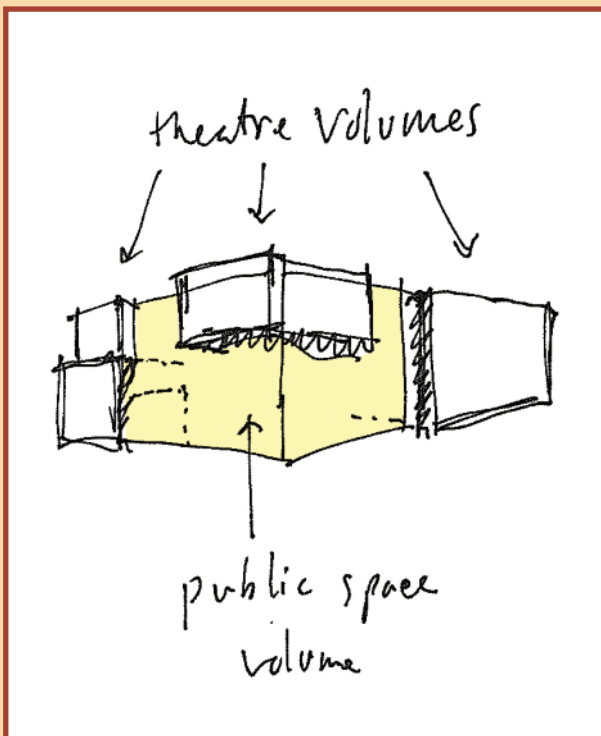
The West Theatre’s stage-lighting systems comprise luminaires, control infrastructure, and consoles from Electronic Theatre Controls, including three Sensor3 48-module dimmer racks and 144 Dual-20A ThruPower modules. A master DMX patch bay handles 32 DMX output controls and connects to a DMX patch bay that handles 10 DMX inputs and 14 DMX outputs for both theatrical and architectural

lighting control. Four Cisco SG300-28PP switches interlink the CAT5 networks with PoE+ and connect to ETC Net3 four-port gateways. Multiple three-phase PowerSafe Pro 200A and 100A company switches were specified, along with APC Smart-UPS rigs.

An ETC Ion Xe lighting console handles 2,048 outputs, linking to an Eos 20-fader wing and augmenting existing Eos consoles. Existing fixtures include a pair of 14° and six 19° lens tubes with lenses, plus Source Four variable-angle ellipsoids; new fixtures comprise 46 Source Four 26° ellipsoids, 26 Source Four 36° ellipsoids, six Source Four Zooms, and twelve Altman Lighting 65Q Quartz Fresnels. A total of 18 ETC ColorSource PAR moving lights



Above: A cutaway view of the building showing the West Theatre and commons areas. Below: A rough architectural sketch, working out the relationship between the theatres and public spaces.



with diffusers were specified and 20 ColorSource Spot Engines with barrels plus 26°, 36°, and 50° enhanced-definition lenses. Other moving-head/LED fixtures include six High End Systems SolaHyBeam 1000s and nine Chroma-Q Color Force II 72s.

In the Spring Theatre, Wenger|JR Clancy installed a full

pipe grid and a package of StageTek platforms to create multiple tiered seating configurations, as well as railings and step units. The lighting rig is based on an ETC Sensor3 forty-eight-module dimmer rack, 47 Dual-20A ThruPower modules under DMX control via dedicated Cisco CAT-5 switches, Net3 four-port gateways, and an ECPM DMX patch bay. A plug-in DMX control station also was specified.

“Load criteria supplied by Charcoalblue let us accommodate all of the possible configurations of lighting trusses and hanging points,” says Tipold. “In both the West and Spring Theatres, these were a significant component of the structural design. As a result, we increased the size of the structural steel members to accommodate flexible layouts.”

Paging system and AV cable infrastructure

A comprehensive building-wide paging system provides show relay and calls to all back-of-house areas, and front-of-house calls, background audio, and some performance audio to key areas. “To integrate well with the surrounding architecture, we needed a range of different types of loudspeakers,” Boxshall explains, “including installed ceiling, pendant, wall-mount, and outdoor-rated speakers, plus additional full-range speakers for music playback. JBL offered the largest range of loudspeakers that met most of these requirements.”

The paging system uses JBL Control 65P/T ceiling speakers, Control 25AV wall-mount, and Control 23-1

miniature speakers powered by QSC CXD8-4W amplifiers and a QSC software-based Q-SYS networking system. Keystone Digital was responsible for installing the facility's extensive audio-video cable infrastructure, front-of-house/back-of-house paging, background music, and show-feed system. "All of the PA components and anything related to projectors or screens was owner-furnished and brought in after construction was complete," recalls Cox. "We pulled over 1,000 cables, including copper tie lines and interconnect, together with SDI coax video and shielded CAT-5. There are also 90 AV boxes around the facility for local playback and control." Existing video monitors and projection systems owned by TheatreSquared were brought over from the previous building.

Architectural lighting control systems

For the architectural lighting specified within hallways and common areas, Charcoalblue and Jim Conti Lighting Design collaborated to propose a "fully integrated control system that allows the stage lighting systems and architectural lighting control systems to function seamlessly," says stage lighting designer Furbish. "This allows theatre staff the flexibility to bring in programming a console for control of extraordinary events, or to enhance the architectural lighting within the commons area when desired, based on the production design." The architectural system centers on an ETC Paradigm control processor linked to a Sensor3 forty-eight-module dimmer rack, Echo button stations, and Paradigm touch screens.

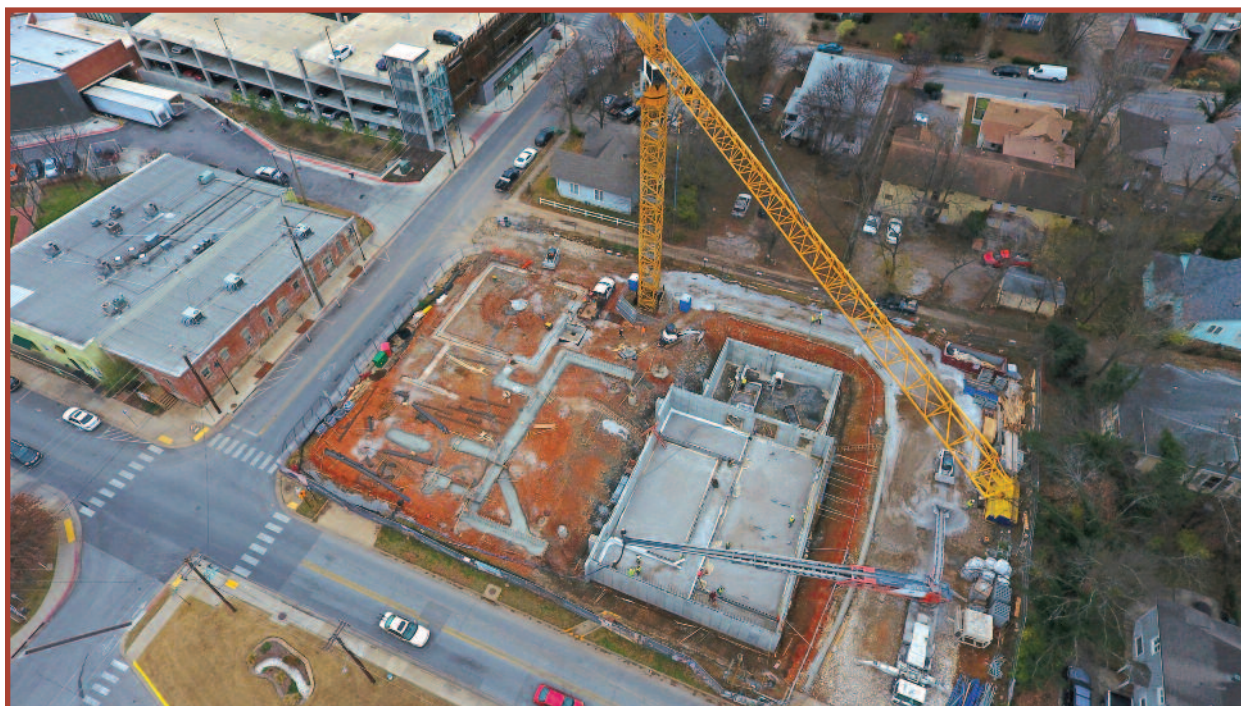
"The master ETC control system is shared for the front-of-house and theatres," Conti adds. "On the architectural side, we specified pretty much stock units including button keypads and a few touch screens." Basic lighting controls for the back of house and administrative spaces were specified by the Buro Happold crew and manufactured by Wattstopper.

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— Lissa So, Marvel Architects

The exterior façade is covered by Ecosense Lighting's Trov L50 Graze low-profile luminaires, with narrow beam angles; a hinge design allows vertical aiming from 0° – 180° in a compact profile. The exterior site and security lighting comprise Bega US light pole elements in extruded aluminum, with UV-resistant polycarbonate diffusers. Also specified: Bega Wall LED luminaires with safety glass and optical texture reflector made from anodized aluminum.

The interior commons lobby features a dramatic Sarus Mobile from David Weeks Studio that features large Sarus



An aerial view of the construction on the former parking lot site.



The building under construction.

powder-coated aluminum shades suspended from a plated-steel frame. Shades are mounted on several tiers of differing lengths; each rotates 320° and is focused to cast light down.

Decorative pendants comprise Swell LED fixtures from Pablo Designs that feature black spun-aluminum shades with gold interiors. “The black color keys off the architectural design from Marvel, and blends seamlessly between indoor and outdoor lighting,” Conti says. “For added flexibility, the fixtures can be suspended individually via interconnectable shade strings, or in a modular chandelier group via a single power source.” Accent lights comprise Maxima and MidiMax O-OBM LED fixtures from Edison Price Lighting. House lighting is provided by BeveLED BLOCK downlight fixtures from USAI Lighting, NanoLume LED cove fixtures from Boca Flasher, and Cole Lighting L603 directional LED fixtures to provide enhanced forward-throw illumination while eliminating any visible light above the horizontal. Black-finish work lights comprise Finelite HP-4 Direct LED pendants featuring a 4"-wide aperture for direct illumination.

In a nutshell

Recently recognized by the American Theatre Wing as one of this country’s 10 most promising emerging theatres, TheatreSquared now reaches thousands of patrons a year, including a large number of season ticket holders.

“TheatreSquared’s new home is the perfect example of what is possible when theatremakers, artists, technicians, designers, and architects come together around a common table to share their ideas,” Abercrombie says. “This is definitely their home.”

“Time and again, reactions from audiences to our West Theatre has been one word: Wow!” says Miller, the company’s executive director. “First-timers step into the auditorium, stop and look around. There is a strong sense of ownership. We want to honor that by making TheatreSquared an open and accessible gathering palace that is now recognized as a premier national theatre.” 📶