MUSIC IN MONTGOMERY COUNTRY

The Music Center at Strathmore is a symphony hall for the suburbs

By David Barbour

Symphony halls are, by definition, urban phenomena. While rock and hip-hop long ago headed to the suburbs, to arenas that can accommodate thousands of fans in a single evening, serious music remains city-bound, where it can attract affluent, educated audiences. Yes, there are rustic venues like Tanglewood in Massachusetts and Blossom Music Center in Ohio, but these are summer retreats for city orchestras.

But patterns of living have changed in America in the last half-century; as more people forsake cities, it's inevitable that the arts will follow them. Consider the opening of The Music Center at Strathmore in North Bethesda, Maryland. Built for the citizens of Montgomery County, the suburban area that links Washington, DC and Baltimore, Strathmore may be the first serious-music center built for an urban-sprawl community.

As Glen S. Howard, president of Washington, DC's United Arts Organization told *The Washington*

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The Music Center is designed to bring together suburbanites who feel no particular allegiance to Baltimore or Washington, DC. "We are adding to the audience base in the region," says a country executive.

The building's exterior features an undulating roof that is meant to mirror the landscape.

Post on the occasion of Strathmore's opening, "The arts are not for downtown alone anymore."

Built at a cost of $100 million, The Music Center at Strathmore is situated on 11 acres of rolling landscape, a package of land located near the intersection of the Capital Beltway (I-495) and I-270. It is the main venue of Strathmore, which has been presenting performing- and visual-arts programs since 1983 from a mansion on a hill in North Bethesda. The Music Center is designed to be a performing-arts destination, an education center, and an institution that will bring together the scattered suburbanites who feel no particular allegiance to either of the nearby cities.

The Music Center's resident partners include The Baltimore Symphony Orchestra, which will divide its time between Strathmore and its home base of Joseph Meyerhoff Symphony Hall; the Washington Performing Arts Society, a presenter of classical music, jazz, gospel, contemporary dance, and international music; the National Philharmonic, which also performs in Rockville, Maryland; the DC-based Levine School of Music, a community school with sites in Maryland, Virginia, and Washington; the Maryland Classic Youth Orchestra; and CityDance Ensemble, which *The Washington Times* calls "Washington's pre-eminent modern dance company."

At this early date, the promise of diversity is being fulfilled. A glance at the schedule for the month of April lists the Boys Choir of Harlem, the Baltimore Symphony performing an evening of Saint-Saens and Ravel; the comics Colin Mochrie and Brad Sherwood from the TV show *Whose Line is it Anyway?*; tap dancer Savion Glover; an evening of bluegrass music; the jazz singer Dee Dee Bridgewater; and the National Philharmonic with an all-Brahms program—not to mention a doo-wop concert featuring the Coasters and the Marvelettes.

But who will be attending these events? According to *The Washington Post*, a 2002 Urban Institute study, suggested that Montgomery County residents wanted more access to the arts. Douglas M. Duncan, Montgomery County executive, told the paper. "We are a community of almost one

The walls are covered in 19,000 sq. ft. of white birch paneling. Other features include mesh wall panels and alabaster art glass fixtures.

million, double the size of the District and 50% bigger than the city of Baltimore. We had a study that showed you have a whole lot of people going to the Kennedy Center and National Theatre in the District, but there is a whole group of people who aren't going anywhere. They won't go to the Kennedy Center, because it isn't convenient for them, and they have the education and income levels to want to go somewhere. We are adding to the audience base in the region."

For that matter, Strathmore expects to draw audiences from downtown Washington and Baltimore. It is only 15 minutes away from the center of Washington on the Metro Line. For those who drive, a parking lot is linked to the main building via a covered walkway.

A design to celebrate democracy

The design team behind Strathmore includes William Rawn Associates Architects, of Boston; acousticians Kirkegaard Associates, of Chicago; and Theatre Projects Consultants, of South Norwalk, CT (Gene Leitermann, principal-in-charge). All three firms worked together on Seiji Ozawa Hall at Tanglewood, one of the more successful music venues of recent years. (Grimm + Parker Architects of Bethesda Maryland served as associate architects on the Strathmore project). Speaking of the 190,000 sq. ft (and 104' high) building at a press event, Rawn said that his goals were essentially democratic in nature—the project was conceived with an eye toward preservation of the landscape and creating a venue that would be accessible to a diverse audience. He noted that the building itself was designed to have "a warm, embracing" quality and to create a connection between the audience and performers. "It's about a community of music," he added.

The building's exterior features an undulating roof that mirrors the curves of the surrounding parcel of land. The façade is done in German limestone, whose warm colors are meant to blend in with the landscape. However, one's view of the building is most shaped by the 64' high wall in the North Lobby, which features 402 panels of glass and opens to an outdoor terrace. Inside the lobby, the birch walls are slanted so they "incline towards the landscape," says the architect. (The glass panels are a combination of clear and frosted elements; this is meant to add to the building's visual allure when it is lit from within at night.) Also inside the lobby, the blue ceiling is meant to recall the undulations of the ceiling in the hall itself (and, again, the landscape surrounding the building).

The concert hall itself conforms to the shoebox model, resulting in a relatively narrow space with upper-tier seating for both audience members and chorus that wraps around to the side walls; the effect is to link the performers and audiences in a circle of music. Again, the curve is the defining shape: the flowing, curved ceiling follows the pattern of the exterior roof (and, one supposes, calls to mind a sound wave). The ceiling, which is high at the rear of the hall, slopes down as it approaches the stage, thus fulfilling

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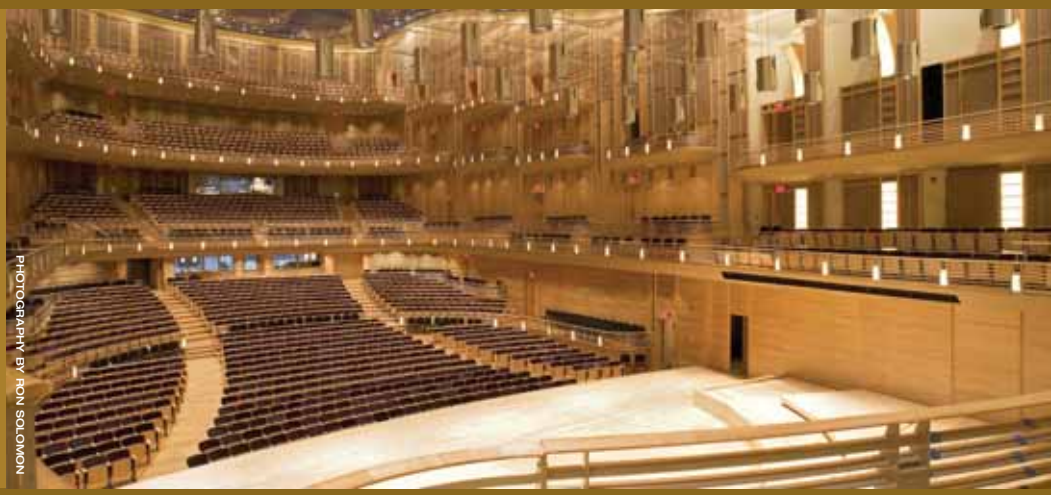

PHOTOGRAPHY BY RON SOLOMON

Kirkegaard’s request for a low ceiling over the performers. The hall seats 1,976, a fairly intimate number, spread out over four levels.

The hall is finished in 24,000 sq. ft. of maple wood floors and 19,000 sq. ft. of custom white birch wall paneling, with red birch details. Other details include 700 bronze mesh wall panels, 250 alabaster art glass light fixtures, and seats made of maple wood and aubergine velour, provided by Irwin Seating. Onstage, eight doors on each side can open to provide wings for dance performances.

Adjusting the acoustics

Because the concert hall is meant to adapt to so many kinds of presentations, including dance, a variable acoustic system was mandated. “The vision here is to bring in the whole community, to accommodate different musical tastes,” says acoustician Larry Kirkegaard. “It’s hard to imagine anyone feeling unwelcome.”

Thus Kirkegaard and his associate Carl Giegold, working with Michael Nishball of Theatre Projects, developed the machinery and controls for this function; the control system was fabricated by Larry Eschelbacher and his team at JR Clancy. The centerpiece of the system is the acoustical canopy, consisting of 43 clear acrylic panels, hung over the stage. As Nishball notes, one acoustical panel reflector (APR) with three axes of movement can create an unlimited number of positions; when combined with 42 more panels, the configuration possibilities are limitless.

Nishball notes that the goal was to create an interface that could show the canopy’s movements in real time and which would also allow for previsualization of the other possible configurations. He writes, “We succeeded with an industrial-grade 15” touch screen, programmable logic controller, and graphic language that are stunning. With its positioning accuracy and resolution, it is unlike anything that has been done before. By importing digital images of the hall and being able to zoom, orbit, pan, etc. within the visualization display, the APRs onscreen can accurately mimic what is onstage in the current position and display what the preset target position will be for one or all of the APRs.”

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He adds that the accuracy of the system is more important than anyone envisioned, “for, as is the case in many cutting-edge endeavors such as this, we did not realize until the 1/2” acrylic reflectors were rigged and unwrapped that the combined clarity of the material and the concert lighting made it difficult to accurately see exactly what attitude the APRs were in. We began to rely on the production control panel’s [PCP] graphics to preview new system presets backstage.” The production control panel includes a display screen, plus preset and status pages for the system, along with a 9” touch screen.

According to Nishball, the APR hoists are based on a similar system designed in 1992 by George Van Buren for Davies Symphony Hall in San Francisco. “The 6’6” x 6’6” reflectors weigh 125lbs and are safely suspended with 1/8” wire rope at the corners. Borrowing from

the world of aviation, the complex movement of the APRs is categorized as a 'roll' axis in positive and negative degrees from level and a 'pitch' axis in the same manner." He adds that the Strathmore system improves on its predecessor in terms of precise control of elevation and attitude, aided by the three-dimensional display on the PCP's display screen.

There are other important acoustical aspects, as well. Tunable sound-absorbing curtains, located behind the bronze mesh walls, can be used to dampen or enliven the sound; the banners, which are made of felt, roll in behind the mesh walls (and in the ceiling) and are never seen by audience members. A second set of visible banners can be manually hung on the first and second balcony walls to create further dampening. In addition, says Kirkegaard, "The hall is built as its own building; the walls come up to the surrounding structure, meeting it but not touching it," an approach that provides good sound isolation. He also notes that the air-handling system is designed to enter from the floor, a further acoustical aid.

Kirkegaard also says, "The audio systems include both a high-energy center-cluster sound reinforcement system and a smaller speech reinforcement system integrated with the architectural design, so that announcements and narration of orchestral works can be presented without visible loudspeakers. Both systems are designed as extensions of the natural acoustics of the hall."

Richard Laidman of Kirkegaard Associates specified the audio gear for the room. The main speaker cluster features four EAW 760s on top and four EAW 761s on the bottom. In under-balcony positions are placed Tannoy CMS 65 ICT loudspeakers. Coverage for the third balcony is provided by five EAW JF100es. Sound Advance CT12F flat-panel loudspeakers are installed behind the listeners in the upper side balconies, providing speech coverage and infill for sound reinforcement in places that can't quite be reached any other way. Other elements include 98 EV 405s in what Laidman calls "a quasi-random stage-lip line array that is continuous across the whole room. It covers the first five or six rows overall. It supports the cluster, as we can't point it straight down. It helps bring the sound down to the human level." Adding side fill are EV FR159s, along with EAW SM122e wedges, and stand-mounted Galaxy Hot Spots. Also, says Laidman, "We also have Crown's K Series power amps for the main cluster. We chose them because they're exposed to the room and we need-

> The acoustical canopy consists of 43 clear acrylic panels hung over the stage, with limitless configuration possibilities.

Below left: One of the rehearsal rooms in the Education Center. Below right: The acoustical canopy over the stage.

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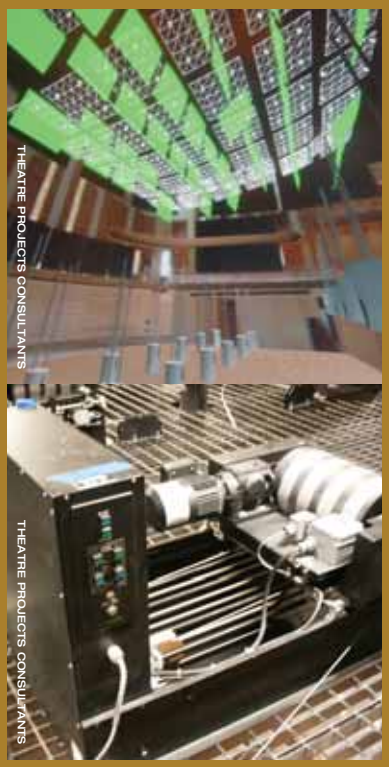
THEATRE PROJECTS CONSULTANTS



Top: The display screen of the production control panel. Bottom: One of the acoustical panel reflector hoists.

ed fanless, nearly silent, operation." Also provided were a series of 22 connection points offstage around the perimeter of the room for surround-effects loudspeakers, as might be needed for experimental music, surround sound, or other uses desired by in-house or touring sound engineers.

The speech-reinforcement package consists of the already-mentioned underbalcony and side balcony loudspeakers, working with Intellivox loudspeakers from Duran Audio; Laidman says they're "built into the frames of the double doors just downstage of the stage lip. We have the Intellivox 2c covering the orchestra level and first balcony; it has two steerable sound lobes—one for the main floor and for the first balcony. Then, on the stage, so musicians can hear talkback from the conductor, we have Intellivox 1bs built into the downstage side of the door jamb; this is a smaller line array that gives us speech coverage onto the stage."

Also available is a 44-channel Midas Legend 3000 mixing console, which may be set up inside the booth for casual mixing. For more sophisticated mixing, the console can be located at the in-house mix position ahead of the booth. If a touring act brings in its own console, the house board can be wheeled out of the way. Overall management of the audio system is handled by a Peavey MediaMatrix. "It is the main brain for everything," says Laidman. "It provides signal-processing crossover and distribution for the main system in the auditorium as well as monitor and page systems throughout the building."

Benton Delinger of Theatre Projects notes that stage lighting in the hall is provided by a number of ETC Source Four PARS in a custom housing, with 516 Strand CD-80 dimmers (house lighting is controlled by an AMX system). The Clancy control system that controls the acoustical canopy also handles the sound absorption banners, the concert lighting system, and the loudspeaker cluster hoist. On-stage, the concert-riser system, designed by Kirkegaard, was fabricated by Chicago Scenic; it is designed to optimize conditions for the orchestra and can be easily removed for other kinds of performances. The stage lifts and wagons were provided by Gala.

Then again, Strathmore is designed to also be a place of learning. The building's Education Center features four rehearsal spaces, including a dance studio with sprung floor and two rehearsal rooms with 40' high ceilings (one of them, for orchestra and chorus, is also outfitted with its own acoustic canopy and drapes). Other features include a children's music classroom and electronic music lab, a small two-story rehearsal room, and nine solo and small group practice spaces. This portion of the building is visible to anyone entering the building from the parking garage and heading to the box office; this was a deliberate choice on the part of Rawn, who has noted his intention was to "put the educational wing of the building out front."

There are other aspects to the building that add to the welcoming atmosphere. The walkway linking the parking garage and building proper also features an undulating roof; inside, on the ceiling, a light installation is designed to mimic, in an abstract way, the look of a musical score. The interior atrium above the grand foyer staircase features a sculpture by artist Meryl Taradash. Titled *The Music of Light,* it is a suspended work made of shaped acrylic prisms, curved metal supports, and reflected light; it spans 96' of vertical space.

Eliot Pfanstiefhl, Strathmore's president/CEO, has said, "This new hall is the culmination of a vision to establish a dynamic, world-class performing arts and education center under one roof that is alive with activity day and night, all year around." Think of it as a kind of social experiment in limestone; if it works, expect to see many more performing arts centers going up outside city limits.