



**WSDG**  
WALTERS-STORYK DESIGN GROUP



ARCHITECTURAL  
ACOUSTIC  
CONSULTING

MEDIA  
SYSTEMS  
ENGINEERING

**Religious**

[wsdg.com](http://wsdg.com)



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# Company Background and Structure

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## Company Background

**WSDG** - Walters-Storyk Design Group is a global architecture, acoustic, electro- acoustics and advanced audio-visual systems integration consulting and design firm. Pioneering architect/acoustician, John Storyk (AIA), founded the company in 1969 with the creation of Jimi Hendrix's Electric Lady Studios in NY.

With USA headquarters in Highland, New York, and offices in Basel, Switzerland; Buenos Aires, Argentina; Belo Horizonte, Brazil; and Miami, Florida. WSDG is the partnership of interior design partner Beth Walters and John Storyk. The firm's global team includes over fifty associates and design professionals.

WSDG's 46+ years of innovative design achievement has produced over 3500 diverse global projects. These assignments include: NY's Jazz At Lincoln Center (2006) and studios for: Alicia Keys, Jay-Z, Bob Marley, Bruce Springsteen, Celine Dion, Def-Jam Records, ESPN, MTV (Latin America), WNET, KKL (Switzerland) and Boston Symphony Orchestra.

WSDG is a ten-time winner of the international NAMM TEC Award for studio design creativity. Recent WSDG TEC winners include: Jungle City Studios, NY (2011), the Berklee College of Music – 160 Mass. Ave. recording/teaching complex, Boston (2014), and The Church Studios, London (2016). The firm's work has been published extensively, and discussed in numerous professional audio, broadcast and systems design media.

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## Company Structure

**WSDG maintains offices around the world:**

**USA:**

New York, New York  
Miami, Florida  
San Francisco & Los Angeles, California

**Europe:**

Basel, Switzerland  
Barcelona, Spain  
Florence, Italy

**Latin America:**

Buenos Aires, Argentina  
Belo Horizonte, Brazil  
Mexico DF, Mexico  
Punta del Este, Uruguay

**Asia:**

Guangzhou City, China  
Mumbai, India  
St. Petersburg, Russia  
Doha, Qatar

All WSDG offices share resources on a daily basis, however all jobs are managed and represented on a local basis. All work will be coordinated via the New York office. All offices maintain a full-time staff of acousticians, architects, engineers, designers and systems integrators.

# Services | Architectural Acoustic Consulting

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## **Acoustic Design and Consulting**

WSDG has collaborated with many of the world's leading architectural firms to provide innovative solutions and procedures towards creating excellence in acoustic and electro-acoustic design and installation. We pride ourselves in participating in the collaborative design process.

## **Acoustic Testing and Measurement**

WSDG engineers use the most advanced acoustic and electro-acoustic prediction and analysis software. This provides accurate acoustical data collection and predictive acoustical modeling. Our reports are accurate and pre-construction environment auralization, allow our clients and design partners to listen to environments before they are constructed.

## **Internal Room Acoustics and Surface Treatments**

Critical listening spaces, including studios, theaters, conference rooms, home listening rooms and all speech intelligibility sensitive spaces will all benefit from accurate acoustic design. Often the use of variable acoustic treatments is our preferred design approach. By providing design options for surface treatments using absorption, reflection and diffusion, we can accurately enhance the listening properties of these environments.

## **HVAC Noise Control Design / Vibration Control**

WSDG establishes noise criteria specifications for all spaces in our designs, while preparing creative design solutions for adherence to these goals. Careful attention is given to HVAC design, building structural systems, and room boundary design. When required, real world listening simulations allow careful value engineering before final design documentation.

## **Sound Isolation**

Critical to virtually all successful acoustic designs is the thorough analysis of external noise, vibration sources (traffic, trains, aircraft, etc.) and environment (i.e. HVAC distribution systems). WSDG provides acoustical measurement, analysis and design services to assure optimal acoustical isolation of existing or new construction, always with an eye towards economy of design and awareness of applicable building techniques for each project.

## **Recording Studio Design**

WSDG creates world class professional critical listening environments which provide a platform for an array of mixing consoles, audio monitors and professional equipment – both digital and vintage analogue – to be used to optimum effect. Successful projects start with a well-developed plan. WSDG designers help their clients in the initial evaluation and development program / requirements summary, site selection, design and construction documentation.

## **Media Facility Planning and Consulting**

Ergonomic design and concise operation of a facility are most critical. Our team of architects and engineers will evaluate a building site, help develop the project program and educate clients about the process of designing and building a media facility. We provide cost analysis for budgeting as well as preliminary design and renderings for presentations. WSDG designers, architects and engineers can provide a proven expertise in all and every phase of design and construction.

# Services | Media Systems Engineering

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## Electro-Acoustical Systems Design

The most visible part of the Electro-Acoustical System is the loudspeaker system. Loudspeakers are complex electromechanical devices so varied, extensive and rapidly shifting that is hard to oversee even for professionals. WSDG recommendations are based on technical, aesthetic and budgetary criteria tailored to the project at hand. Selecting the electro-acoustic system most suitable for the room enables WSDG to achieve and exceed target parameters such as loudness level, frequency range, coverage, directivity control and speech intelligibility.

## Systems Design and Integration

In today's world of increasingly complex technical media installations, multi-functional devices and computer controlled sound and video systems the integration of all equipment pieces into a working system is a complex engineering task. WSDG provides services that start with the design and end with the complete implementation of solutions for commercial, corporate and residential areas that seamlessly integrate, in such a way that the system is operable by personnel with differing needs and technical skill.

## IT and Communication Systems

WSDG offers global IT and Communication design services including: Research of existing current conditions, consultation with clients and systems analysis of required specifications. With that information we produce designs that utilize suitable software and hardware solutions, liaising with other IT staff such as software engineers and programmers. WSDG assists in producing, installing and implementing the new system, testing and modifying it to ensure that that it operates reliably.

## Home Theater and Residential Systems Design

At WSDG the theater experience starts with the design that architecturally incorporates all the interior design, acoustical requirements and carefully selected audio, video and control equipment. A detailed plan of the home theater will provide room and structural acoustic design, interior design, architectural renderings, custom electronics specifications and integration design.

## Theatrical Technology

WSDG provides theatrical technology and lighting design services for professional theater designers, educational workshops and special events. We work closely with diverse and complex production and design teams to make every project a success. We blend science with art to create beautiful environments and captivate audiences. We will work with you through the programming and implementation periods, up to finalization and final set-up of the systems.

## Control Systems

Our Control and Automation system design services provide the full scope of engineering services and solutions to meet all specific needs. From defining the project concept and initial specifications, to front end engineering and design, our team can help you identify the right technology. Once complete, the team moves into the build, test and delivery stage to prepare for installation, commissioning and ongoing project support.

# Relevant Experience

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Walters-Storyk Design Group and its principals have an extensive body of clients in the fields of architectural design, acoustical consulting, noise isolation design, facility design and audio-visual systems design and integration. A list of projects that supports our company profile and credentials follows. For a more extensive client list, please see [www.wsdg.com](http://www.wsdg.com). Our experience spans over 47 years in architectural design, internal room acoustics, advanced noise isolation, and systems design required for acoustically sensitive projects of all sizes. Moreover, WSDG has the ability to work seamlessly within a team design environment.

## **We have assembled a list of projects that underscore our experience with multiple project types:**

Central Synagogue  
New York, USA

Young Israel Synagogue  
Miami, USA

Iglesia Los Olivos  
Buenos Aires, Argentina

Crossroads Tabernacle – Boden Center  
Bronx, USA

St. Ursen Cathedral  
Solothurn, Switzerland

KKL Concert Hall  
Luzern, Switzerland

VSL Synchron Stage  
Vienna, Austria

Aura Club Events Hall  
Zurich, Switzerland

Morro de Chapéu  
Belo Horizonte, Brazil

Electric Lady Studios  
New York, USA

Vassar Chapel  
Poughkeepsie, USA

Igreja Batista Central - IBC  
Belo Horizonte, Brazil

Church Le Noirmont  
Noirmont, Switzerland

Diante Do Trono  
Belo Horizonte, Brazil

Jazz at Lincoln Center  
New York, USA

Flughafenkopf – Zurich Airport  
Zurich, Switzerland

Rio 2016 – Barra Olympic Park  
Rio de Janeiro, Brazil

ESPN Digital Center 2  
Bristol, USA

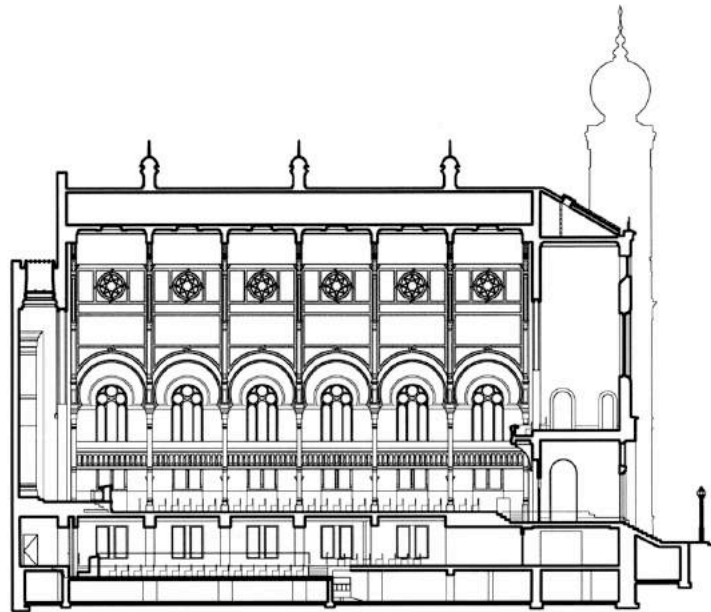
The Metroplex at KITEC  
Hong Kong, China



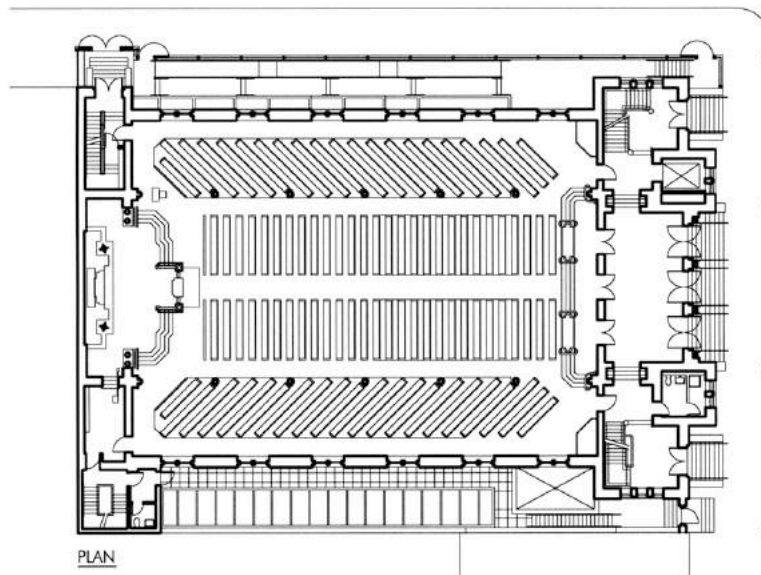


# Central Synagogue - New York, USA

Devastated by a catastrophic fire in August 1998, the Central Synagogue (Lexington Avenue and 55<sup>th</sup> Street) was reduced to a burnt out shell. Following this disaster, architect Hugh Hardy, recognized for his restorative work on New York City landmarks, was called in to rebuild the treasured synagogue. WSDG played a key role in the facility's rebirth as the acoustical / audio-visual consultant.



SECTION



PLAN

0 5 10 15 20 METERS  
0 10 20 30 40 FEET

## Central Synagogue - New York, USA



## Vassar Chapel - Poughkeepsie, USA

Founded in 1861, Vassar College is recognized as one of America's leading Liberal Arts colleges. Located in the scenic Hudson Valley, 70 miles north of New York City, this lovely campus is particularly proud of its magnificent Norman Revival Chapel.

Storyk and Noy conducted a series of tests to measure, analyze, and eventually calibrate the chapel's acoustics. The results revealed that RT60 reverb time was measured at 2.5 seconds in mid frequencies, far afield from the room's optimal 1.5-second requirements. It was fixable, yes, but complicated by Vassar's aesthetic "hear all speakers; see no speakers; make no changes to the chapel architecture" mandate.

Extensive research and planning led the WSDG team to recommend a sophisticated, digitally controlled, electro-acoustical solution capable of covering the entire seating area and balcony. A combination of modern line array and conventional passive speakers were selected. To ensure the integrity of the manual mix mode, a password must be entered into a programmable remote before integrating multiple microphones, an additional analog mixer, and other sources into the system.



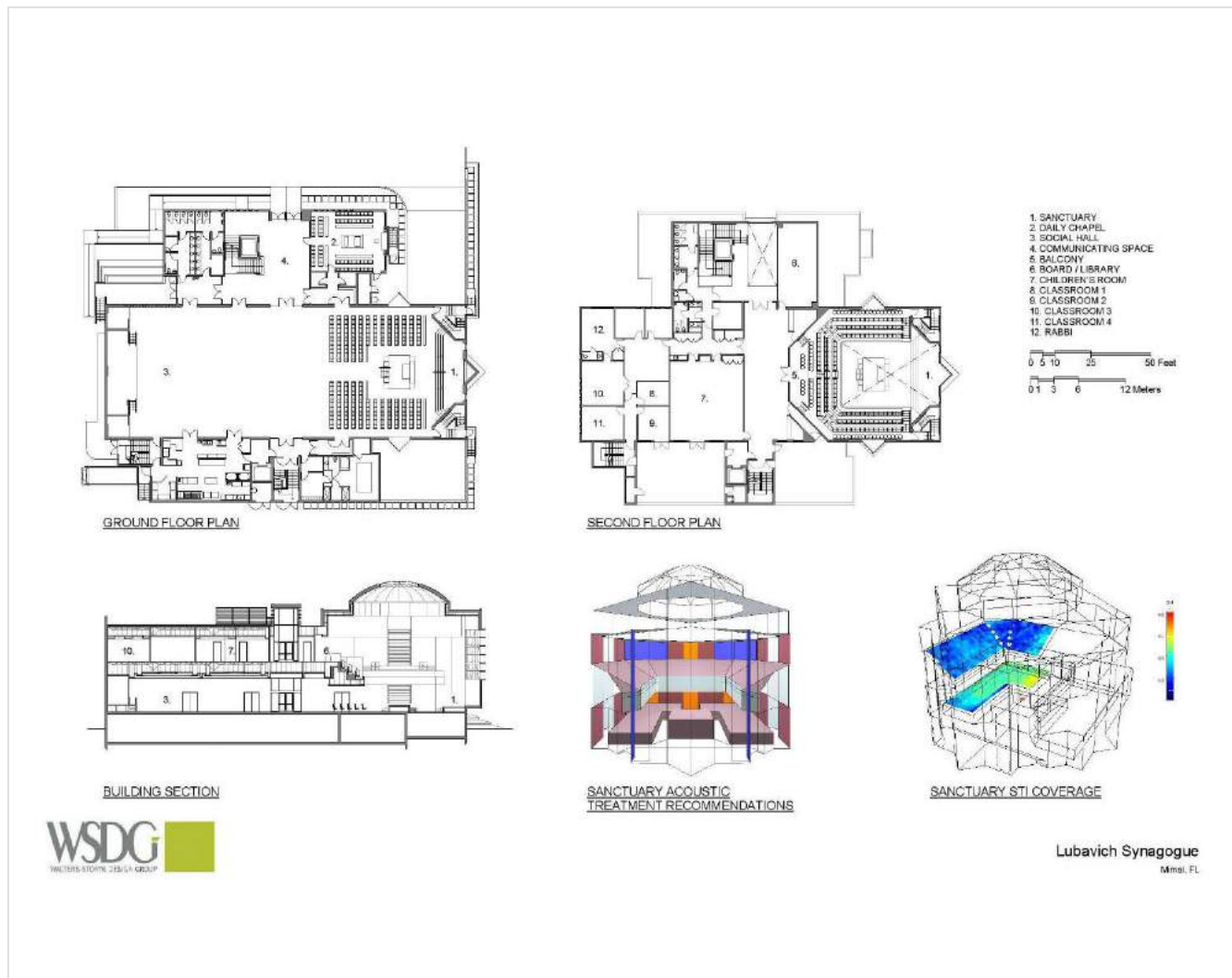
## Vassar Chapel - Poughkeepsie, USA



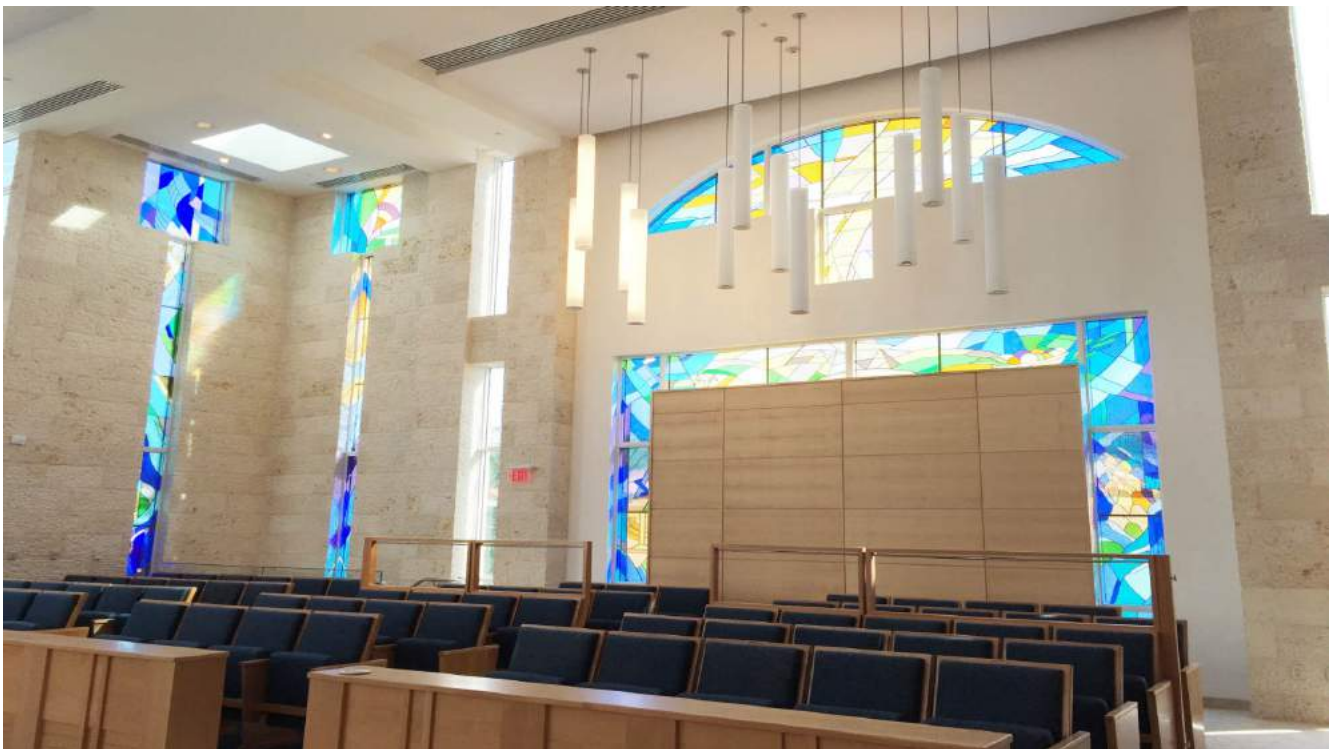
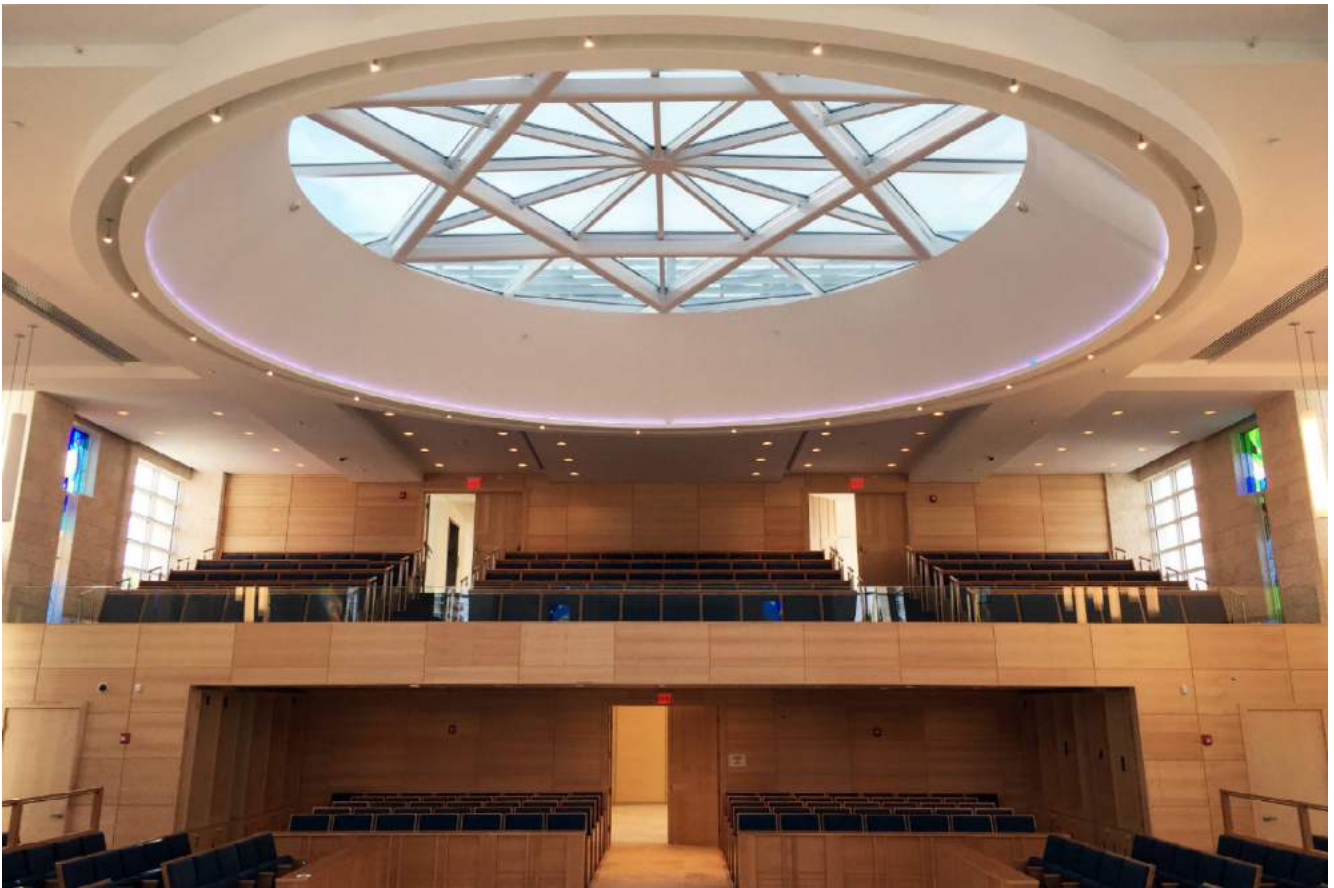
# Young Israel Synagogue - Miami, USA

Orthodox Jewish congregations are not permitted to employ electronic sound reinforcement or amplification technology in their temples. Acoustic design therefore, plays a critical role in assuring acceptable levels of speech intelligibility for their services. This issue was a paramount concern when Miami's Young Israel Temple began planning their new Shul. To compensate for the lack of amplifiers, microphones, speakers, and other electro-acoustical support, Miami-based architect Shapiro Associates retained WSDG to develop a 'traditional' program based on physical design and site-appropriate acoustic treatments to establish an environment that would clearly project prayers, song and announcements from the bema.

Engaged at the project's pre-construction stage, WSDG addressed the acoustic challenges at the design stage with proprietary 3D modeling programs. These sophisticated tools produced a series of precisely detailed interior space simulations. Guided by these 'auditory maps,' WSDG acousticians developed a comprehensive construction plan to eliminate potential sound reflection issues and enhance speech intelligibility by implementing effective interior design elements. Precise the geometrical calculations determined the optimal configuration of walls, ceiling height and related 'fixed' construction elements. Potential reflective sound issues were resolved with the aid of recently developed "invisible" construction elements such as striking, micro-perforated wooden diffusers, and highly effective absorptive plaster. But, traditional treatments were engaged as well. Used in temple construction for centuries, porous Jerusalem Stone continues to serve as a beautiful and effective acoustically sound resource.



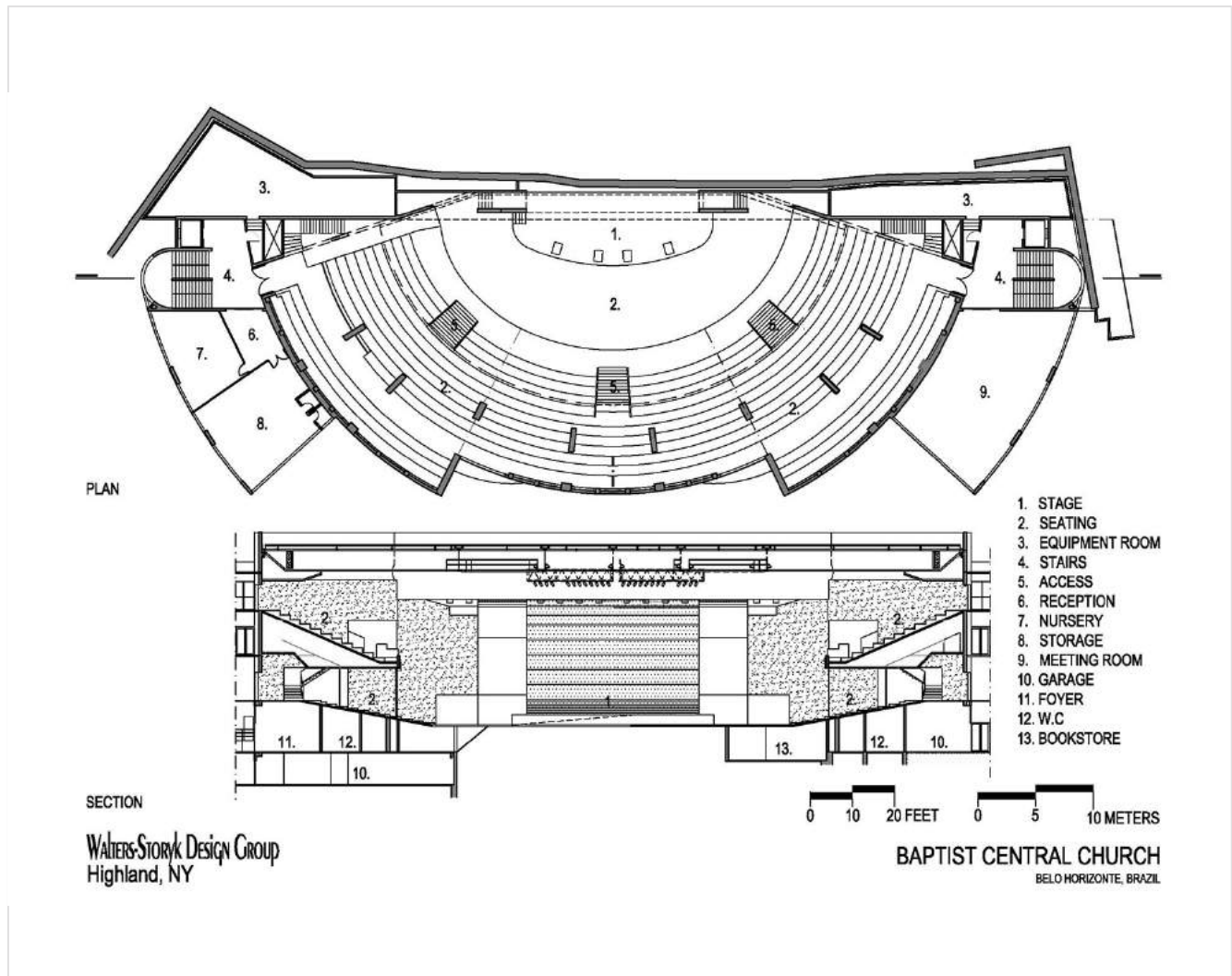
# Young Israel Synagogue - Miami, USA



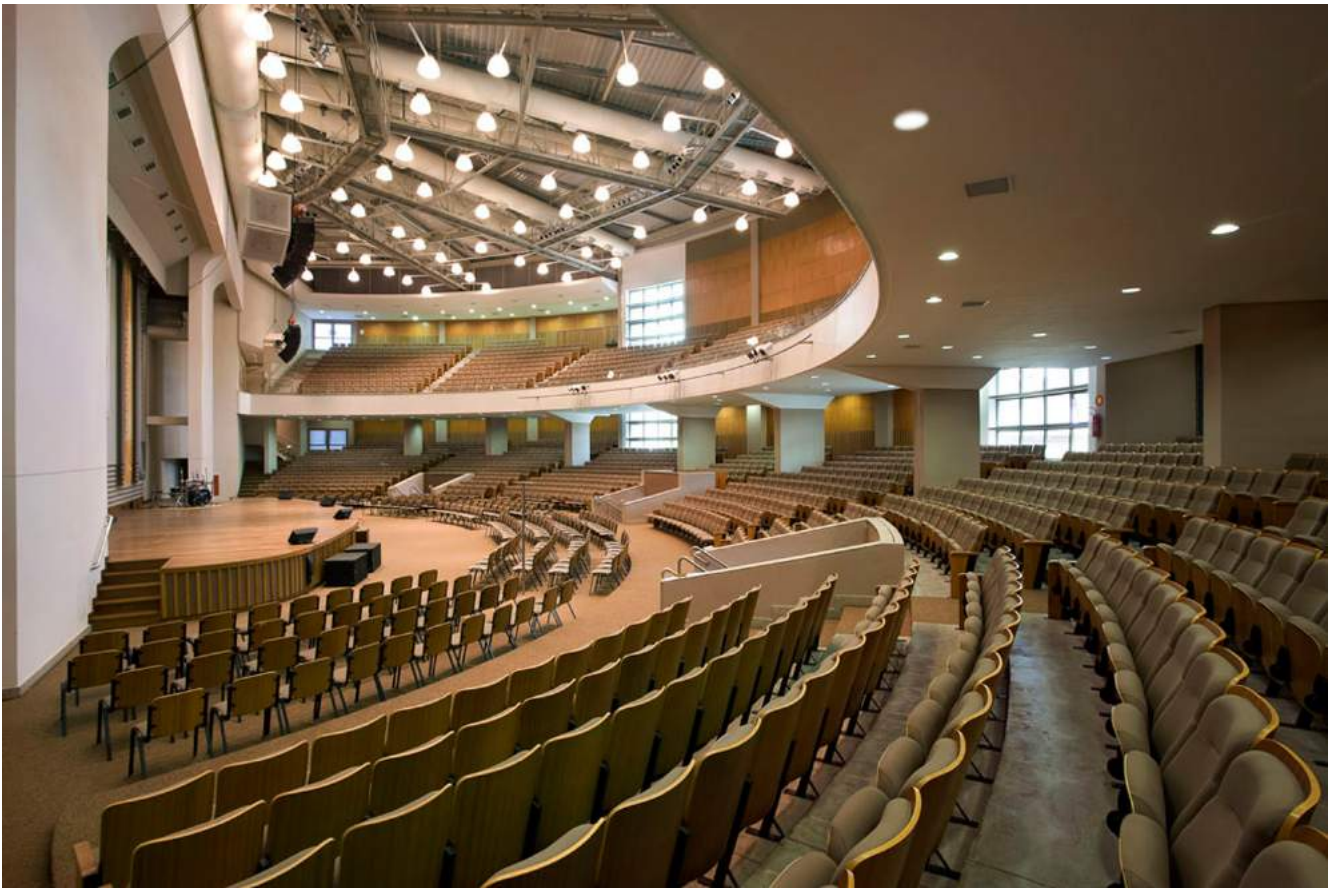
# Igreja Batista Central - IBC - Belo Horizonte, Brazil

Food Network has been creating tastefully prepared, highly entertaining programming since 1993. Originally owned by Providence Journal, and then A.H. Belo Corp, the innovative network was acquired by The E.W. Scripps Company (now Scripps Networks Interactive) in 1997. After establishing such household icons as Emeril Live and Iron Chef America, it has gone on to create such signature programs as Alton Brown's GoBod Eats and Rachael Ray's Thirty-Minute Meals. Food Network currently serves its appetizing 24/7 menu of recorded programming to over 99 million households around the world.

While 5.1 was on the agenda at the outset of the expansion program, audio remained a stereo format throughout the migration to an HD video system. "Our intention was to move to 5.1 when demand reached critical mass," Jarett explains. "The initial game plan for Ninth Avenue was to shoot primarily in SD mode using Grass Valley components including signal routing, cameras and a video switcher, while recording on IMX video recorders and posting in Avid NLE rooms. We shifted to more HD production with each passing year and eventually moved to recording HD iso camera feeds on HD CAM video recorders and posting in our HD NLE rooms via an Avid ISIS storage system. The process worked until 2008 when we rebuilt the Audio, Flex and Production Control Rooms and became fully HD compliant in our studio operation," he adds.



# Igreja Batista Central - IBC - Belo Horizonte, Brazil



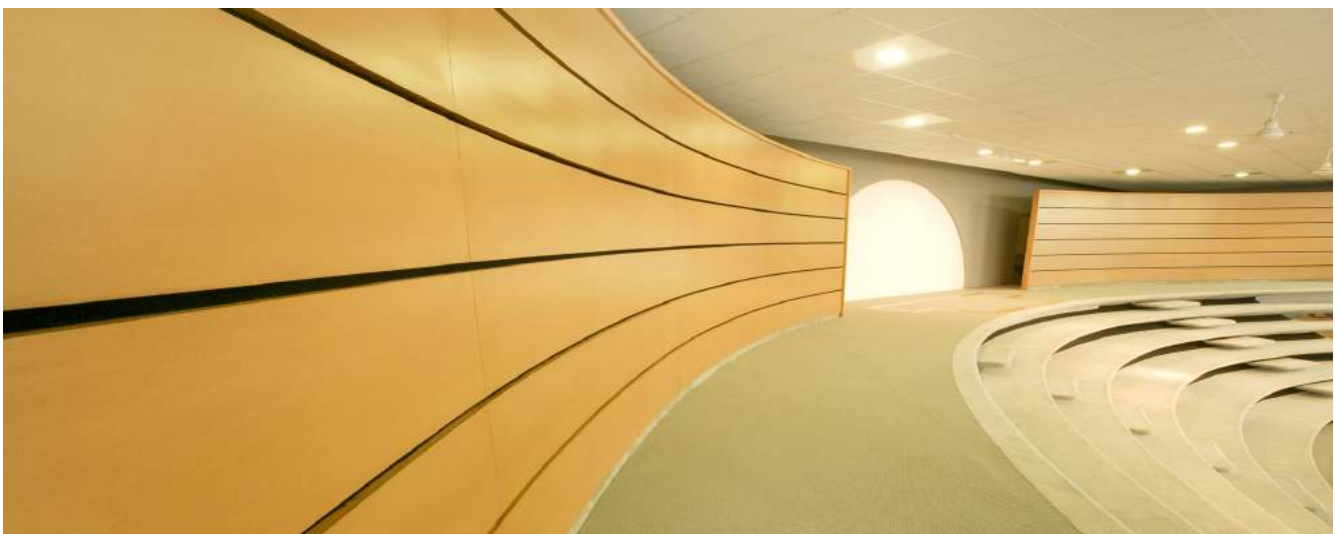


# Iglesia Los Olivos - Buenos Aires, Argentina

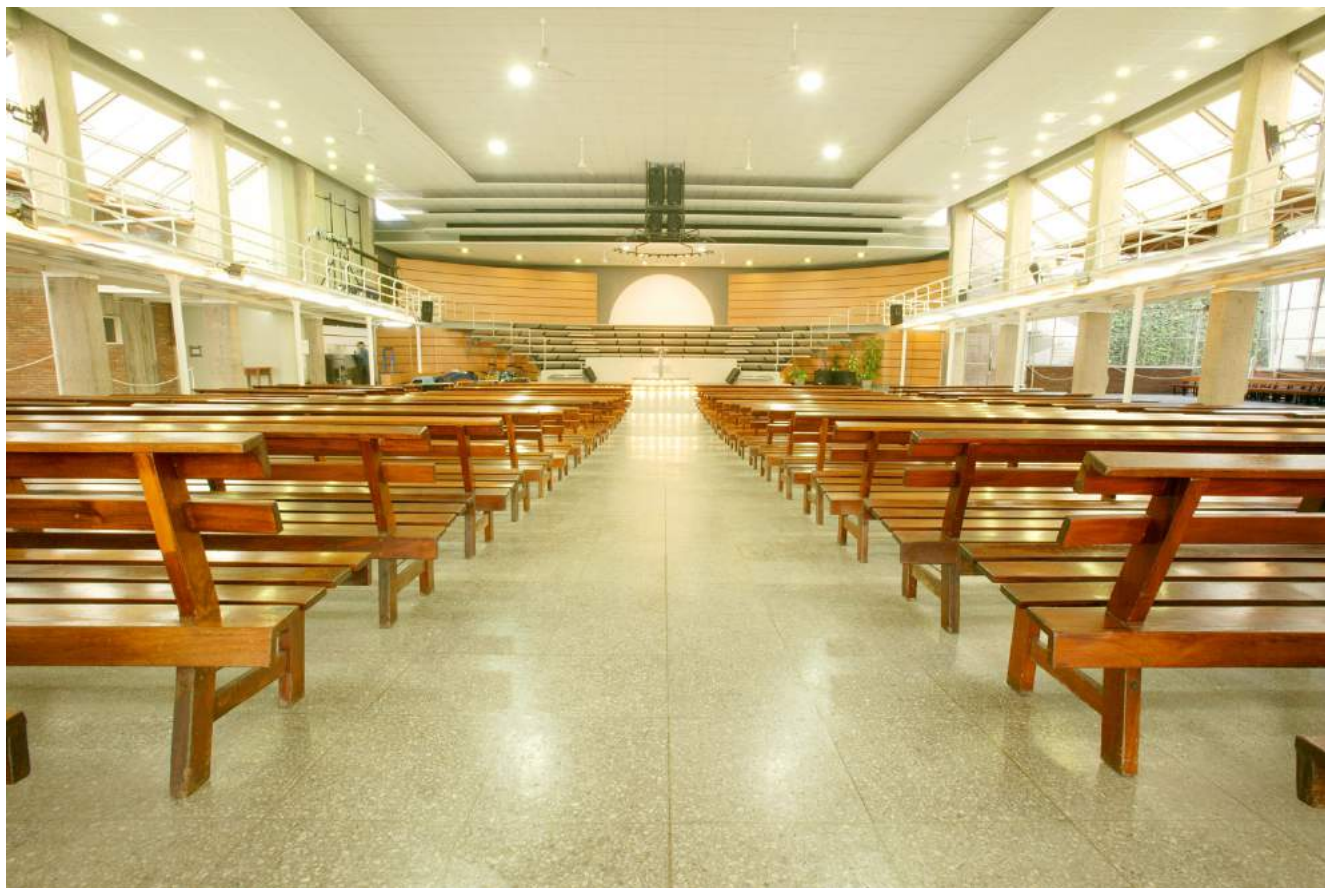
"Los Olivos" church called us to improve the acoustic and electro-acoustic performance of an existing space.

After having done acoustic measurements, we had to manage with modifications on the sound system, adjustments on the general equalization, and a modification in the altar and the performing area of the orchestra.

Together with the Minister and his collaborators, we had to relocate the altar, the orchestra, the stands for the choir and we placed a semi-circular panel, acoustically absorbent on the back area, and acoustically reflecting on the front area, to allow the sound coming from the altar go directly to the audience.



## Iglesia Los Olivos - Buenos Aires, Argentina

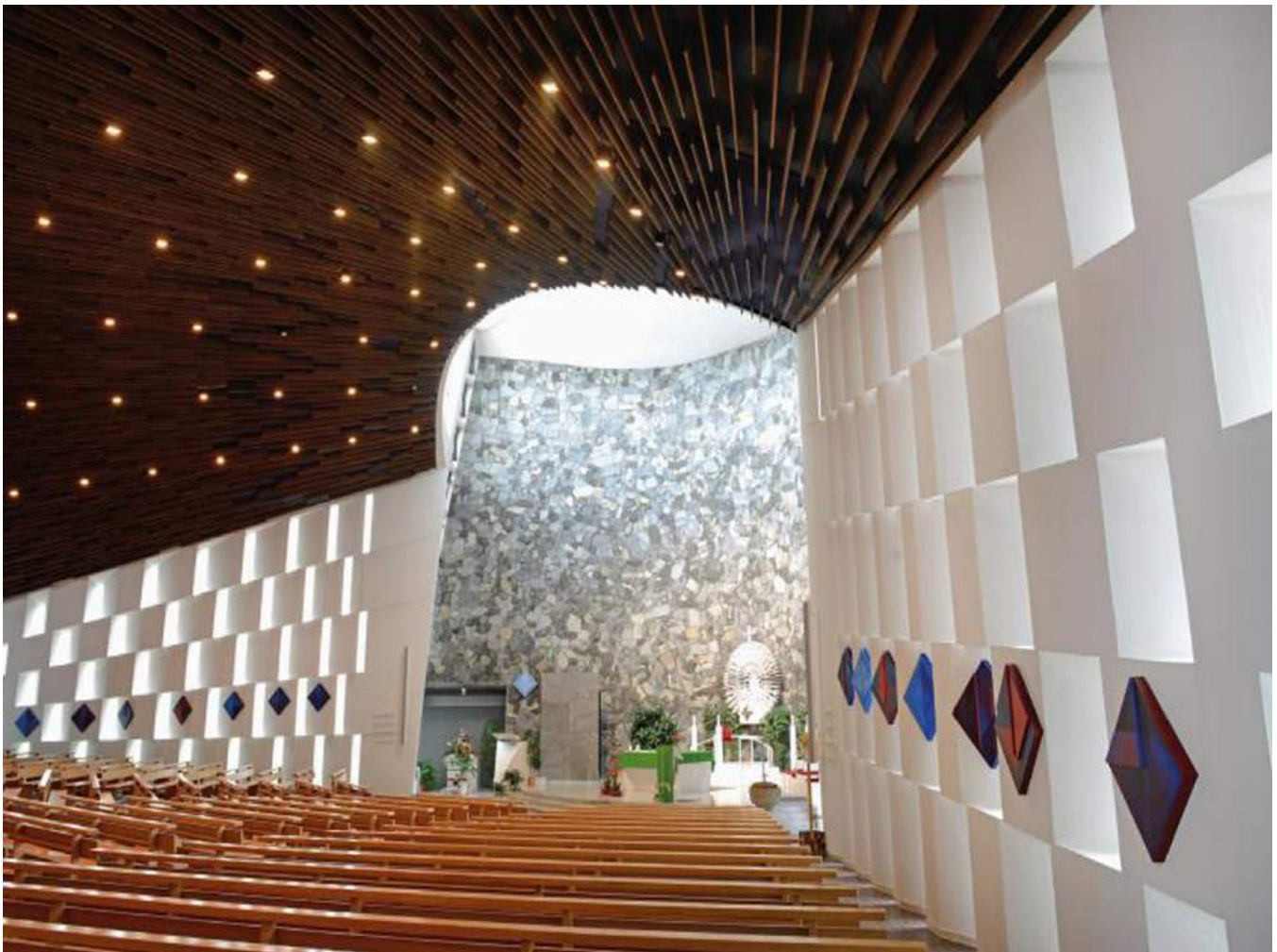


## Church Le Noirmont - Noirmont, Switzerland

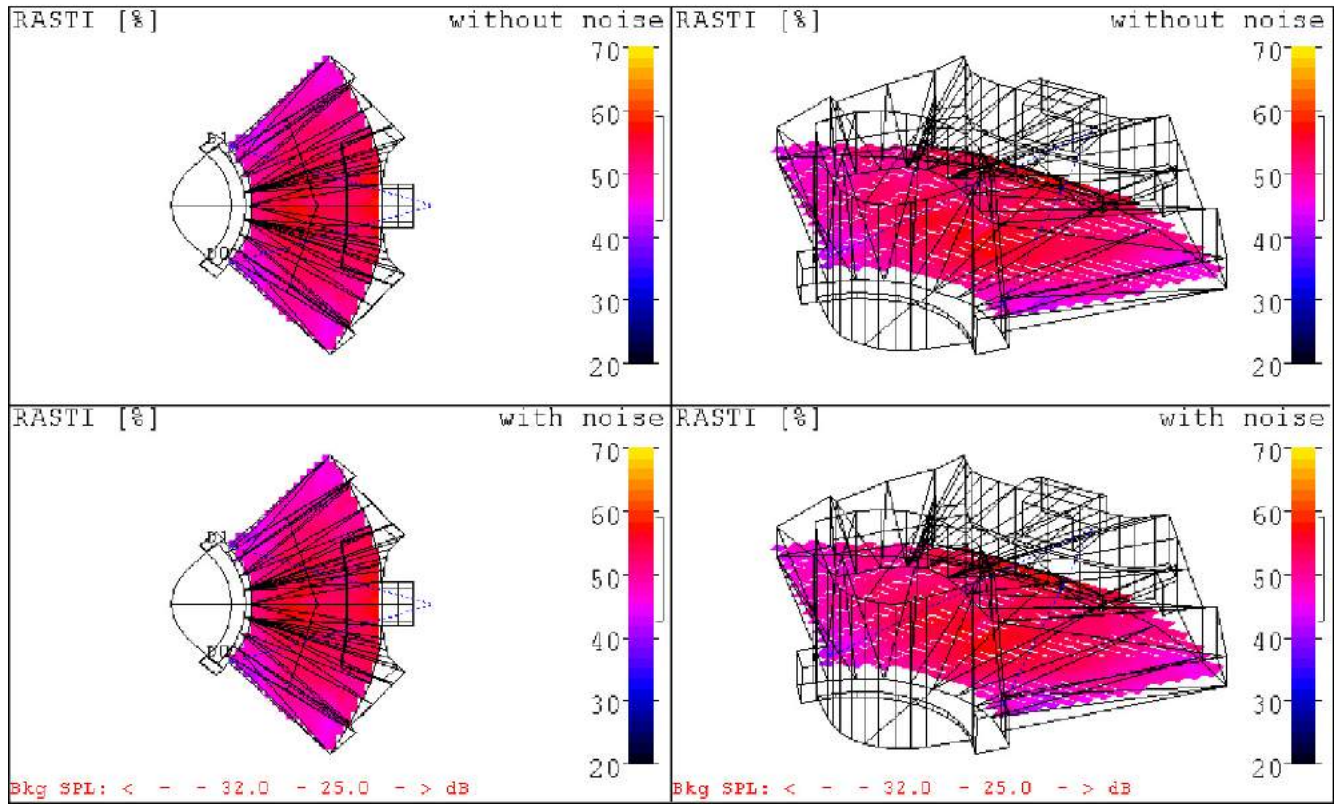
The Catholic Church in Le Noirmont – a beautiful, large fan-shaped concrete building – has suffered from low speech intelligibility since its initial construction in 1969. The problems caused by highly excessive reverberation have finally been addressed by a fully integrated architectural and electro-acoustic solution that is almost invisible to the eye, which results in a dramatic optimization of the room's acoustical characteristics.

The fan-shaped floor-plan, with an impressive natural-stone tower and the ingenious window pattern at the side walls, offers wonderful viewing angles towards the front and back of the church that become even more fascinating when direct sunlight hits the building. A balcony level carries the organ and additional seating / choir space. Vertically mounted wood paneling at the ceiling and the total church layout direct the attention towards the up-and-forward direction to represent the religious character of the space.

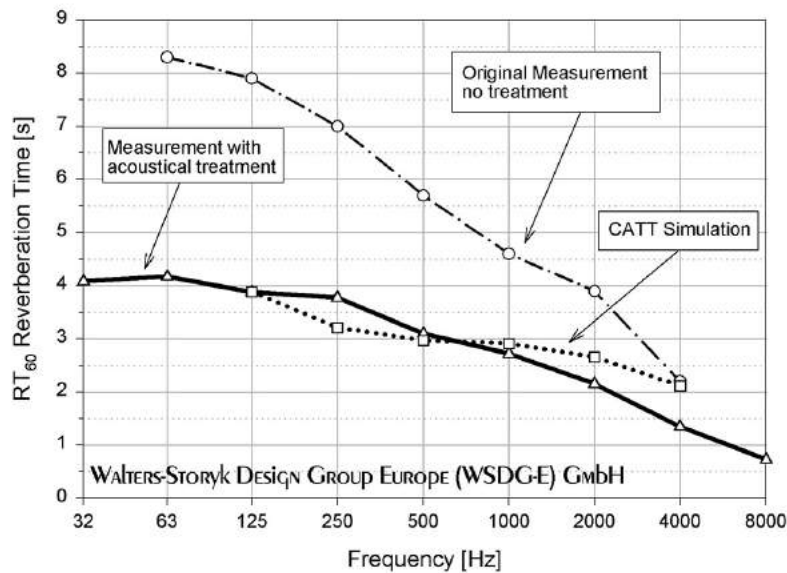
The main goal of the church remodeling was to improve the room acoustics (i.e. speech intelligibility). Acoustical measurements were performed to obtain an understanding of the acoustic and intelligibility characteristics of the existing worship space. Results were shocking. Reverberation Times of over 8 seconds were present at low frequencies! Slightly lower (but still excessive) values were measured at mid and high frequencies



# Church Le Noirmont - Noirmont, Switzerland



Church Le Noirmont  
 $RT_{60}$  Reverberation Times  
 Final Measurement with Treatment



## Crossroads Tabernacle – Boden Center - Bronx, USA

WSDG completed a major renovation project for Crossroads Tabernacle and Boden Center for The Performing Arts, a prominent inner-city church located in The Bronx, NY. The facility includes a state-of-the-art audio and video production studio (Studio On The Hill), and a completely refurbished 800 seat theater for worship, concerts, dramas, and outreach events. The restoration, which also includes new administrative facilities and a children's educational wing, was completed in 2002.

The control room and studio area of the facility can operate completely independent of the theater, or tie into performances as needed to capture live recordings. The seating area within the theater area is completely flexible and seating can be modularly removed for different events as needed by the church. Since the facility lies in the middle of the Bronx, special consideration was given to isolation for the facility to eliminate noise from the outside, but also to isolate the auditorium environment from the control room/studio environment that is adjacent to it.

The 1,000+ square-foot studio houses three isolation booths, and a control room equipped with a Sony R100 digital console. "We installed variable acoustic panels (solid wood on the outside and 2-inch-thick, fabric-covered insulation on the inside) on the back wall of the studio to facilitate changes in the room's reverberation time with minimal effort," explains WSDG principal architect John Storyk.



## Crossroads Tabernacle – Boden Center - Bronx, USA



## Diante Do Trono - Belo Horizonte, Brazil

Diante do Trono is the most successful Brazilian gospel band of the church Batista da Lagoinha. The group's career started in 1997 and has performed not only around Brazil but also in various other countries around the world. The monastery is formed by 50 musicians and has already released over 25 albums, and sold over 3 million copies.

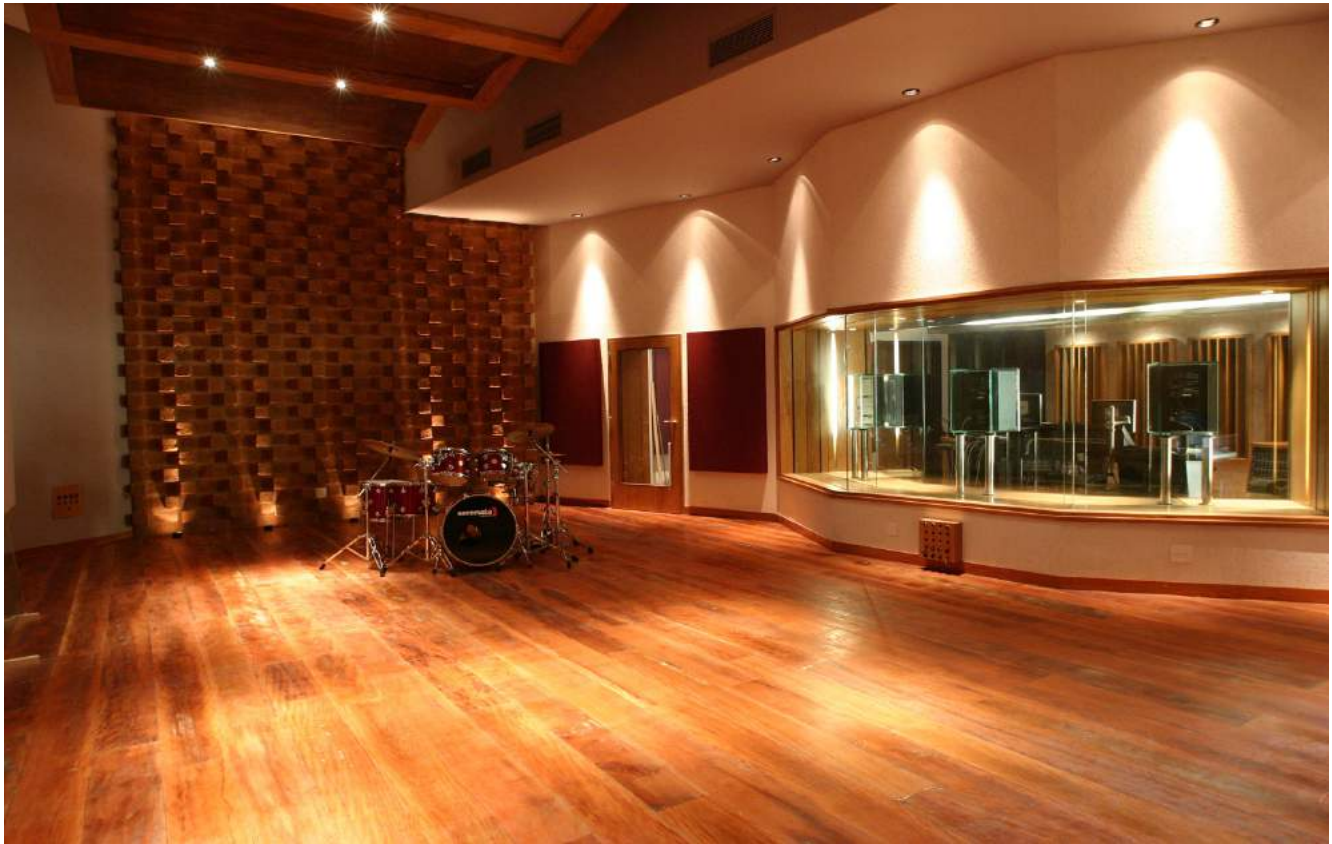
The facility is divided in three distinct areas: the main studio is 600 square feet with a 350 square foot 5.1-capable control room with two isolation booths and an equipment room. On the first floor is another recording room attached to a control room and an edit room, all-adding up to 600 square feet. Outside the studio areas there is a lounge with a barbecue space, along with an office space and a lounge.

In order to provide a flexible space for different recording applications, the studio was equipped with numerous types of variable acoustic panels, including motorized units installed at the ceiling that can be remotely controlled inside the control room. This way, after setting up the microphones for a recording session, the engineer can adjust the room acoustics to the desired time response according the musical needs. The room also received a large diffusion surface created with special bricks from recycled materials.

Another unique feature is the installation of all three front speakers inside the glass of the control room. This innovative idea presented a great acoustical challenge, but resulted in a perfect sight of the entire studio live room, while still maintaining the ideal positioning of the front speakers, at ear level, in accordance with the most current professional audio standards.



## Diante Do Trono - Belo Horizonte, Brazil





# St. Ursen Cathedral - Solothurn, Switzerland

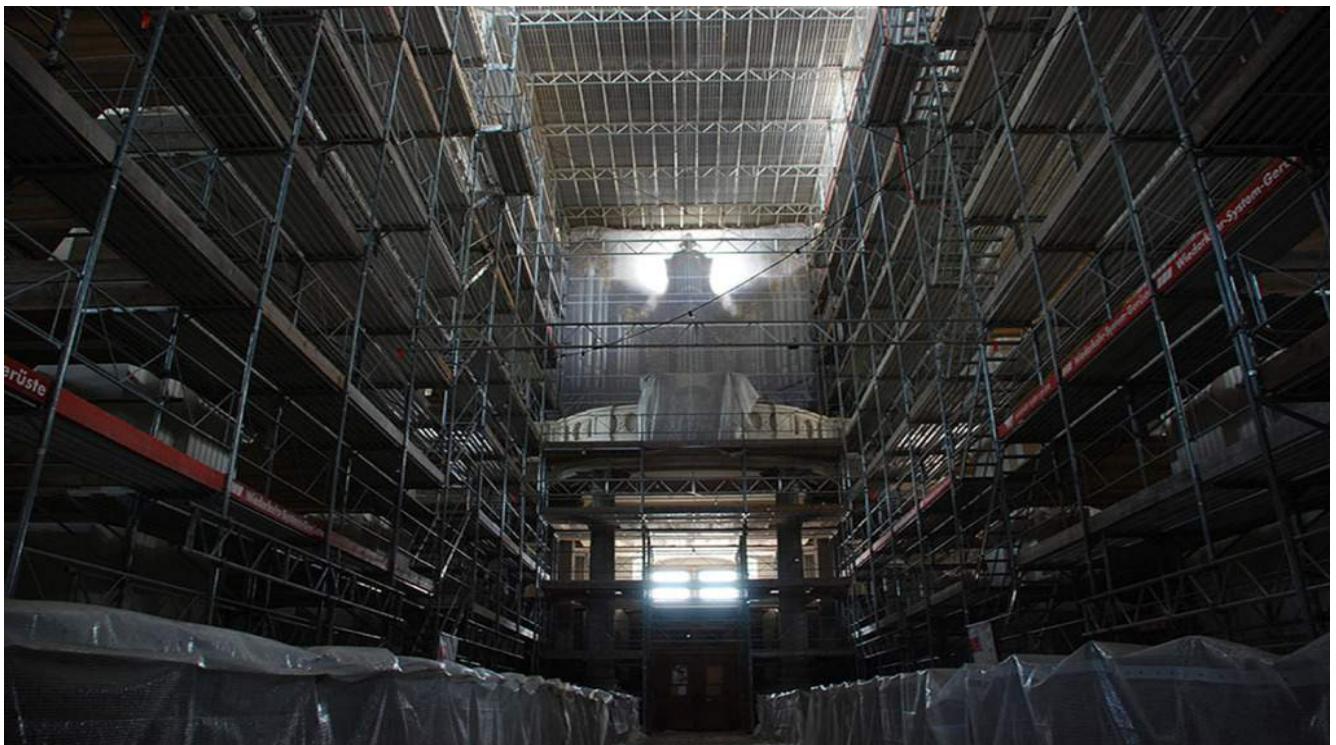
Solothurn is recognized as Switzerland's most significant baroque town. Its major hallmark and tourist attraction is the St. Ursen-Cathedral. In January 2011, a fire set by a mentally disturbed person massively damaged the Cathedral's 60m x 30m/200 x 100 sq. ft. center congregation area and side aisles. A careful assessment determined that a full cleaning and repair of all surfaces could restore the damaged room to its former glory. The restoration was coordinated by Pius Flury and Iwan Affolter of Flury und Rudolf Architekten AG. The project included all aspects of the building: surfaces, art, lighting, heating, electrical, and electro-acoustics infrastructure. WSDG was engaged to design and supervise installation of the electro-acoustics system.

Early on in the planning process, extensive acoustical measurements were conducted, to both obtain a "status quo" documentation and to serve as a base for the predictive simulation software employed. Although RT60 Reverberation Times exceed 6 seconds at 500Hz – and a reduction would have been helpful to achieve improved speech intelligibility, changing the materialization of the building was not an option. Moreover, new measurements completed following the restoration revealed that the RT60 Reverberation Times were even higher after the accumulated dirt and gray burn residue were removed.

To resolve these issues, a number of CVS Clearvoice Systems Evolutone 3000, Evolutone 2000 and Evolutone 1000 steerable array loudspeakers were specified based on their inherent long-range throw, highly sophisticated steering algorithms and high speech intelligibility characteristics. The loudspeakers are driven by a networked BSS Soundweb DSP backbone, controlled by a Crestron touch panel. Gateways to other building management components (lights, heating, church bells etc.) were also incorporated to facilitate total building control from a centralized panel. WSDG engineered a number of custom solutions including auxiliary in and outputs for broadcast trucks, exterior courtyard locations and a time-critical audio and video monitoring and communication system for two organ players positioned 1/5 seconds (60m/200 ft.) apart during their duet performances.



# St. Ursen Cathedral - Solothurn, Switzerland

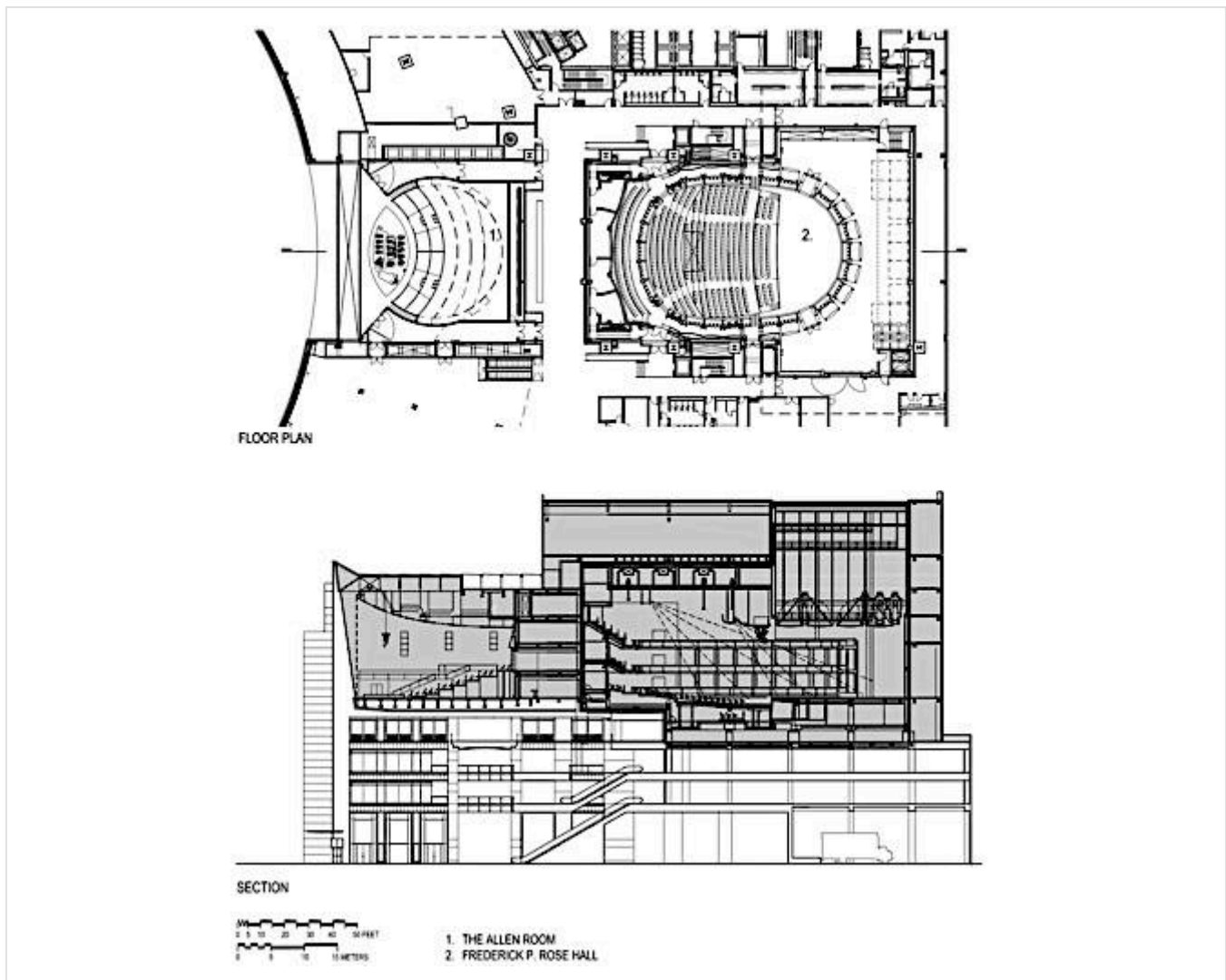


# Jazz at Lincoln Center - New York, USA

Jazz at Lincoln Center opened in the fall of 2004. This 100,000-square-foot facility houses performance venues, an educational wing and recording/post production facilities.

The Frederick P. Rose Hall project consists of a 1,200-seat concert hall with movable seating towers. The hall can be set up for dance and opera and can also be reconfigured to provide an intimate jazz setting by surrounding the musicians with the audience seated on three levels. The Allen Room is a 300-600 seat performance space with tiered platforms ascending from the stage level to a dance floor with movable tables and chairs. The Irene Diamond Education Center is 3,500 square feet and contains two state-of-the-art education/rehearsal studios.

WSDG, as partners in the Sound of Jazz Consulting Group, worked closely with the architects and Wynton Marsalis to acoustically design the education, rehearsal and recording spaces. The systems integration design for all performance, educational and listening spaces within this facility are linked together for recording and playback. This facility is the world's first performing arts center designed specially for the performance and recording of jazz.



# Jazz at Lincoln Center - New York, New York



## KKL Concert Hall - Luzern, Switzerland

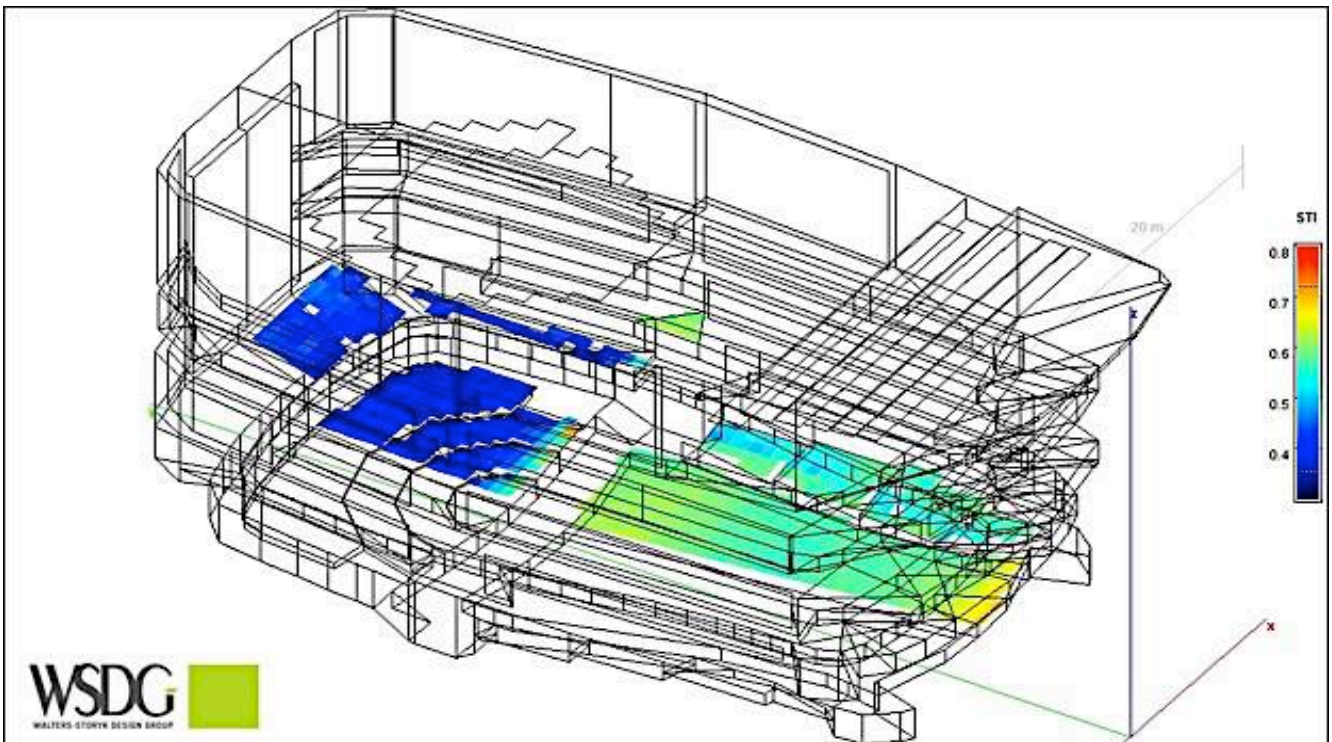
From its opening performance by the Berlin Philharmonic in August 1998, the KKL Luzern Concert Hall was recognized as one of the world's great performance centers. An international landmark, both architecturally and culturally, the complex attracts music fans from around the world to its picturesque lakeside setting. A dozen years of constant use – with an impressive yearly booking rate of more than 90% – coupled with significant technological advances prompted the KKL Luzern management group to upgrade its retractable electro acoustical system. WSDG, an international team of acoustics experts, was brought in to accomplish this essential project.

A major issue of this hall is the wide distribution of seats on five vertical levels surrounding three of the four walls, and consequently, the coverage requirements of the electro acoustical sound system. The core of the solution was the realization that the Hall is mainly designed for acoustical sources placed directly on stage. Consequently, the new main loudspeaker system was installed significantly lower and closer to the stage than the original system. The main system is supplemented by elements, which are permanently installed but retractable by motors. The project was divided into three phases: 1) Identification of the requirements, system planning and preparation of specifications; 2) On-site evaluation of a three loudspeaker system candidates; 3) The execution phase of installation planning, supervision and commissioning.

The new sound reinforcement system consists of the Left Right main system with two line arrays of eight d&b V12 units each, suspended above the stage front edge, two additional line arrays for covering each of the balconies with five d&b V12 units, a stage edge in-fill system consisting of two d&b V-Sub and two d&b V12 units each on the right and left and a stage mounted front-fill provided by six d&b E6 units. For events requiring a 360-degree speech reproduction a retractable center cluster was provided with a front section (consisting of eleven d&b T10 units) and a rear section (consisting of three RCF VSA 2050 digitally controlled column loudspeakers).



# KKL Concert Hall - Luzern, Switzerland



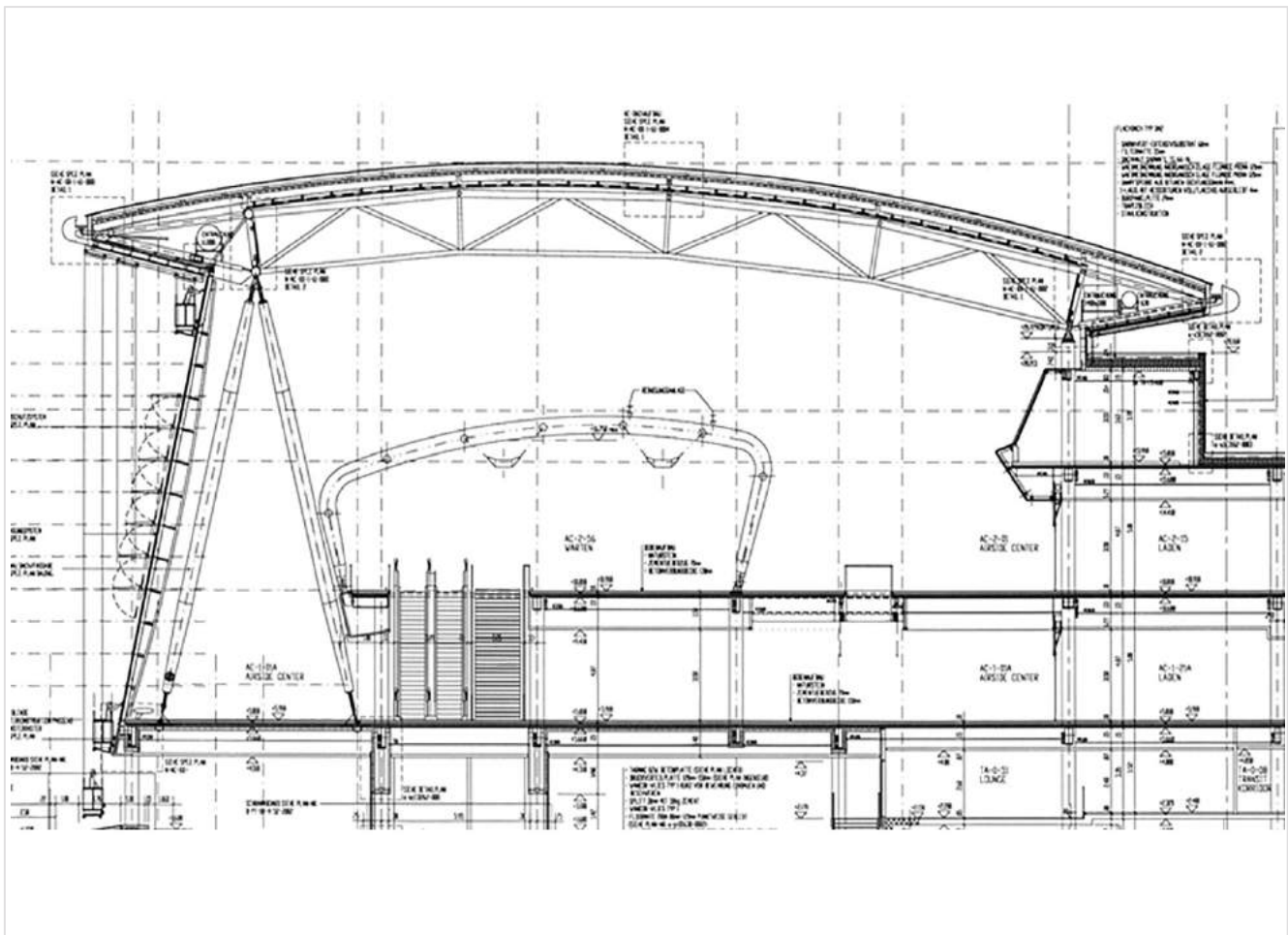
STI Speech Transmission Index

# Flughagenkopf – Zurich Airport - Zurich, Switzerland

The Airside Center (A500), located between the existing fingerdocks A and B, acts as a focal point for travellers at the airport. Many new shops and restaurants are opened. The Airside Center project comprises of the new Airside Center, the Underground Skymetro Station which connects the Airside Center to the Dock Midfield, the Arrival Hall just above the Skymetro station, and various renovations within the A and B terminals. The previously existing buildings are all connected and the Airside Center, with its prominent shape, reflects the new identity of the airport.

WSDG was awarded the full electroacoustical design of both these new facilities by the responsible electrical engineering firm, Ernst Basler + Partner AG. WSDG's project scope comprised Definition of electroacoustical project requirements (e.g. Speech Intelligibility, Sound Pressure Levels, Frequency Responses, Coverage etc.) in line with the appropriate national and international standards, including IEC 60849; Electroacoustical design and optimization with assistance of computer simulations and other means of calculation; Specification of electroacoustical components, supervision of driver electronics to the electroacoustical system.

The specified system for the large open spaces with high ceilings is based on Duran Audio's Intellivox loudspeakers (a total of 16 units). These line array loudspeakers offer full digital beam steering control and due to their narrow form factor can be installed close to invisible. Ancillary specified loudspeakers for support spaces and adjacent areas are highly directional units from Frazier and HK.



# Flughagenkopf – Zurich Airport - Zurich, Switzerland

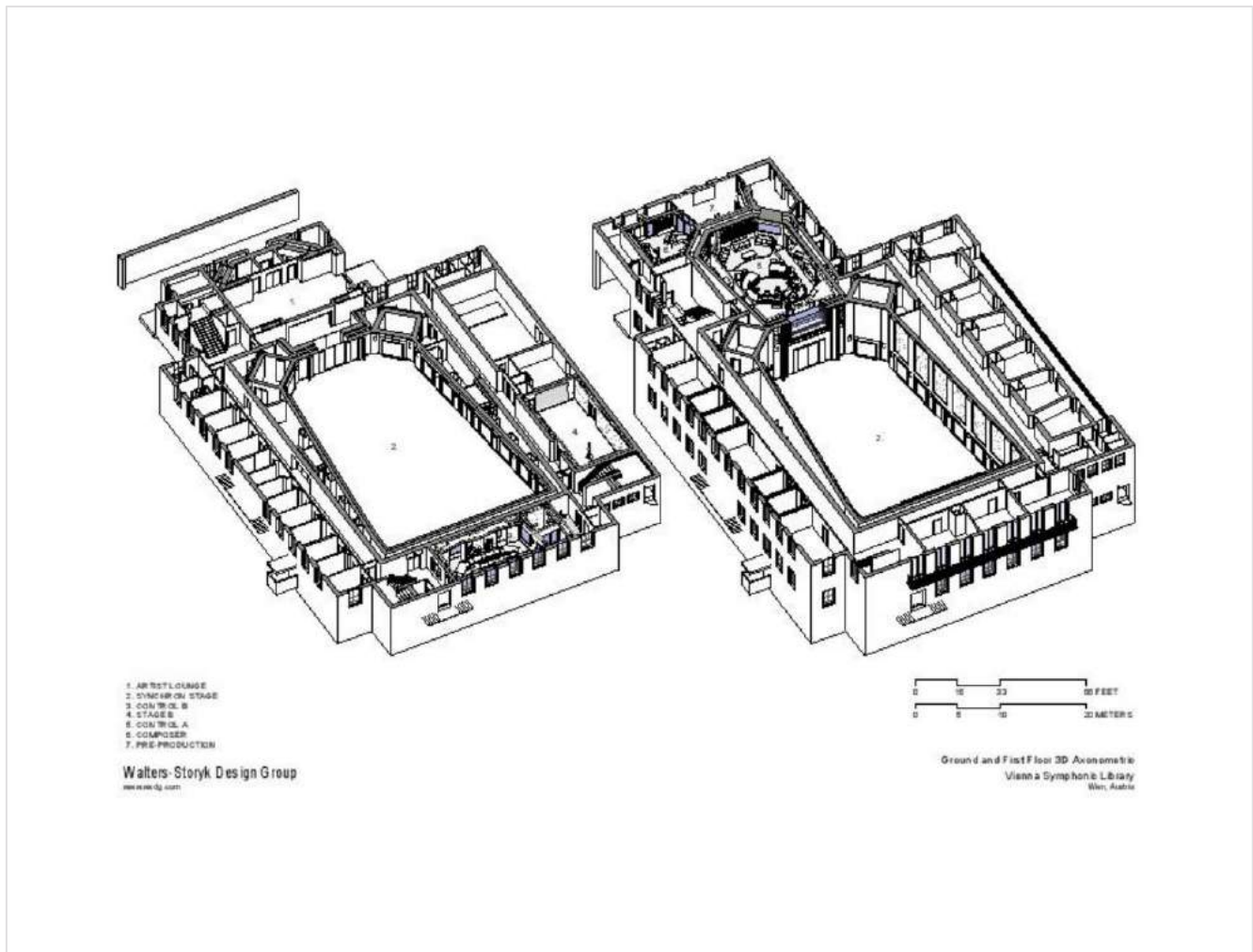




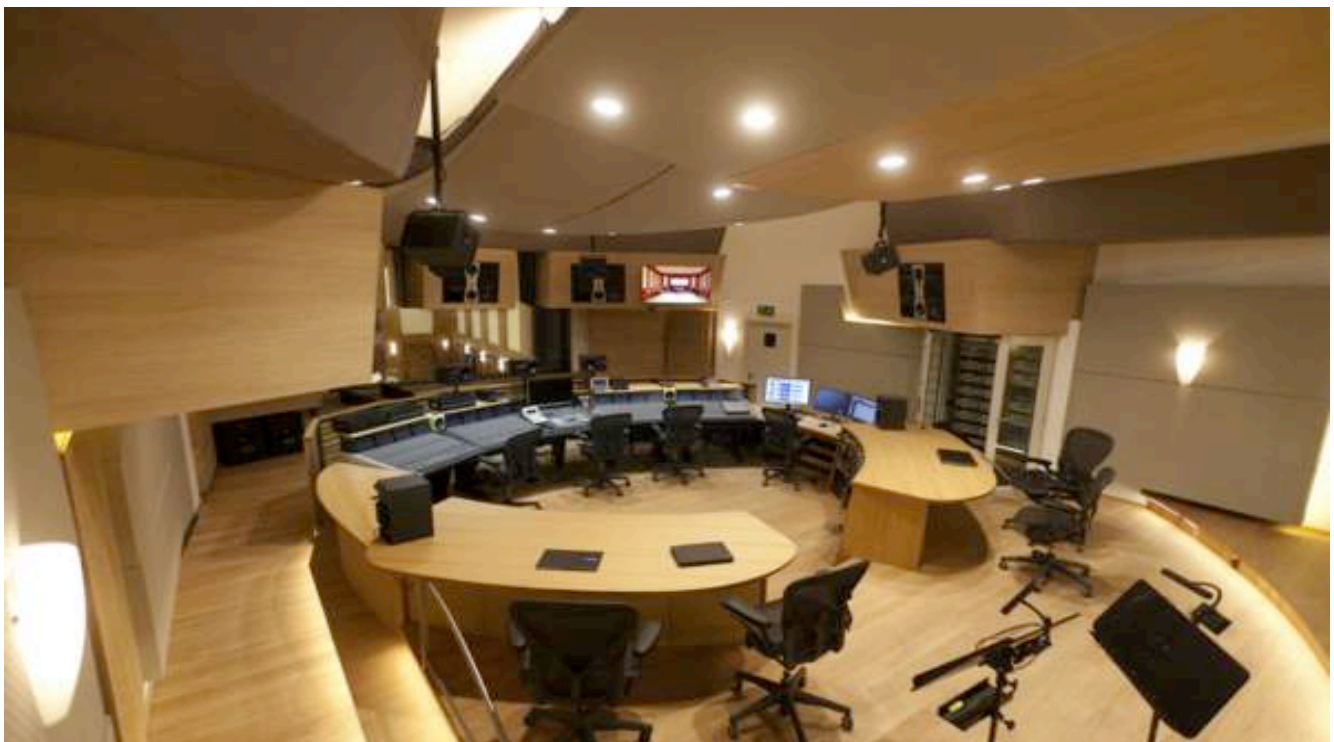
# VSL Synchron Stage - Vienna, Austria

A leading developer of orchestral sample libraries and music production software, the VSL Synchron Stage enlisted WSDG, to upgrade its historical (circa 1940) scoring stage into a cutting-edge recording facility. The reconfigured complex now provides enhanced acoustics and cutting edge technology for recording film music and, the full spectrum of orchestral and choral works. The 2,000 sq. m. / 21,000 sq. ft.), VSL complex represents the worlds only scoring stage capable of merging proprietary software innovations with traditional technologies and procedures

Initiated in 2012, the scope of the two-year+ assignment required WSDG's wide-ranging facility planning services. Beginning with documentation of the overall state of the property, we also covered room and structural acoustical measurements and schematic conceptual planning. The Design Development Planning stage included interior design by U.S.-based company co-founder, Beth Walters. Construction Documentation was completed in collaboration with local architect, Schneider-Schumacher. The scope of work comprised: The VSL Synchron Stage A Control Room and large Recording Hall; VSL Synchron Stage B CR and Live Room; and the Studio C Edit Room, and Preproduction Suite. WSDG also performed the electro acoustical system calibration for the audio monitoring system. The VSL Synchron State is distinguished by uniquely future-proof technology, making it a superb recording facility for film music and other orchestral and choral works. A large scale Dante Network with input and output interface connection points at all relevant locations, serves as the facility's network backbone.



## VSL Synchron Stage - Vienna, Austria



## Rio 2016 – Barra Olympic Park - Rio de Janeiro, Brazil

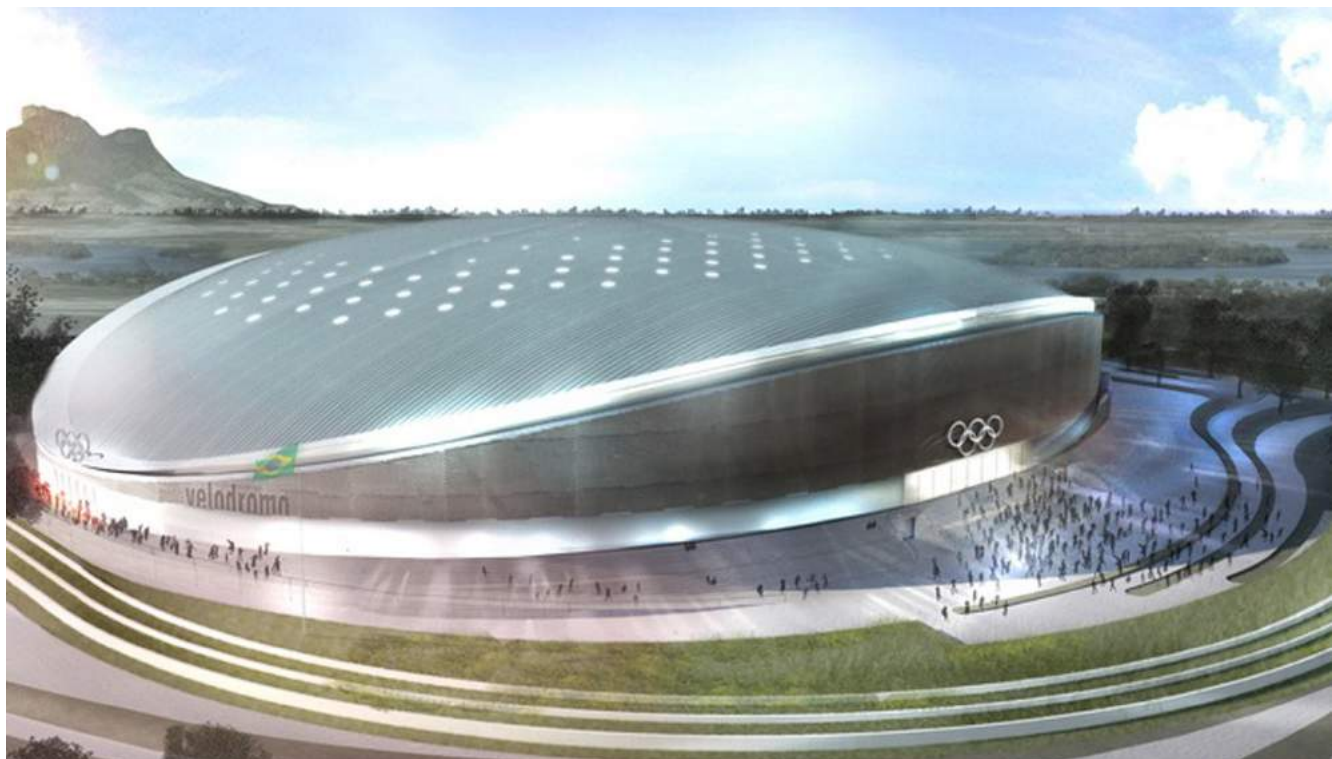
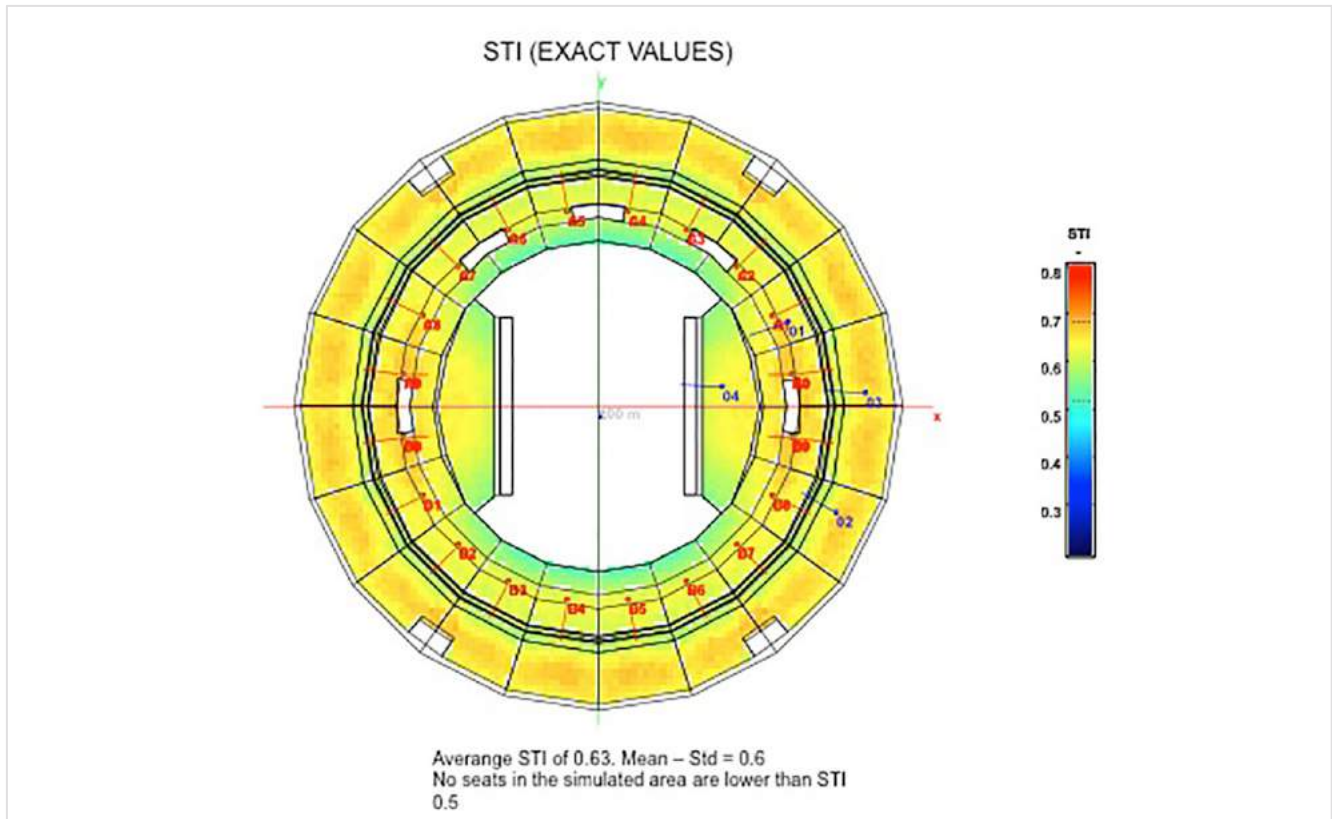
Barra Olympic Park is being developed as Rio's primary 2016 Olympic and Paralympic Games competition centre. It will also serve as the city's largest sporting legacy when the competitions end. With an area of 1.18 million square meters, Olympic Park will include nine sports venues. The Olympic Arena and Maria Lenk Aquatic Centre were built for the Rio 2007 Pan American Games. The seven new stadiums/sports venues are: The Olympic Tennis Centre, Aquatics Stadium and Rio Olympic Velodrome; plus: Olympic Hall 1 (basketball, wheelchair basketball and wheelchair rugby), Olympic Hall 2 (Olympic and Paralympic judo, plus wrestling and boccia), Olympic Hall 3 (taekwondo, fencing, sitting volleyball) and, Olympic Hall 4 (handball and goalball). Work on Olympic Halls 1, 2 and 3, plus the Tennis Centre, has already begun. Construction of the remaining venues will commence in 2015.

The developers of this enormous Olympics complex retained WSDG to design the acoustics, sound and video systems for the 3 Tennis Arenas + practice fields (10,000, 5,000 and 3,000 seats); the 18,000 seat Aquatic Arena + Warm Up Pool; and, Audio and Video Systems for the COT Arenas (16,000 seat Basketball, 10,000 seat Judo and 10,000 Wrestling arenas).

All the systems were designed to meet international security standards and, Olympics Committee requirements. WSDG began the process by performing sophisticated electroacoustic and modeling studies. The findings of these tests and procedures determined multiple solutions for each specific sound system. The primary goal was to insure the highest quality Speech Intelligibility and Sound Pressure levels. WSDG also designed large-scale Video Walls and Score Board screens, as well as Time Clock and Media Displays. Each unit was scaled to provide optimal visibility from every seat in the stands. Every Olympic Park stadium was created with 'future-proofing', for long post-competition service as Brazil's first Olympic Training Centre (OTC) and, South America's premium high performance athletic campus. The campus will include a research lab for nutrition, physiotherapy, sports and clinical medicine.



# Rio 2016 – Barra Olympic Park - Rio de Janeiro, Brazil



## Aura Club Events Hall - Zurich, Switzerland

Built within the historic 21,000 sq. ft. (2,000 sq. meter) former “Alte Boerse” Zurich Stock Exchange Building, AURA encompasses four distinct settings, a 100 seat gourmet restaurant, an intimate bar, a chic, stylish smokers’ lounge and, a 4,800 sq. ft. (450 sq. meter) Events Hall capable of accommodating up to 500 guests. Featuring groundbreaking 360° panoramic video projection and 3D audio systems, the Events Hall is designed to host galas ranging from awards and fashion shows to banquets, weddings and corporate gatherings. AURA’s uniquely flexible, multi-purpose strategy required the amalgamation of state of the art technology, within a highly sophisticated acoustic environment. The video presentation system engages eight, ceiling-mounted, high-performance projectors. Audio distribution employs a total of 80 loudspeakers, (70 of which are skillfully concealed by acoustically transparent, architectural construction). Deploying such a massive arsenal of cutting edge technology within this urbane, 21st Century atmosphere necessitated an extremely flexible and creative systems integration.

Aura’s vision for 3D audio presentation required full integration with the venue’s video imagery and innovative lighting, to establish a combined central focus for the Events Hall. All three elements were tasked with functioning interactively, to achieve a fully immersive environment capable of completely engaging guests within messaging and/or entertainment programs. WSDG’s Basel office was retained to design and coordinate the massive sound isolation planning and construction project to fully adhere to Zurich’s stringent city center legislations and limits. Various preset programs were developed to enable a myriad of speaker combinations (all together, or in an infinite range of individual or cluster groupings), depending on need, e.g. live performance, 3D surround sound, etc. Additionally, the ‘sweet spot’ can be expanded to encompass the entire room, providing a spatial sound experience for all guests.



# Aura Club Events Hall - Zurich, Switzerland



## ESPN Digital Center 2 - Bristol, USA

ESPN, the global leader in comprehensive sports coverage, has completed a five year development and construction project for its new Digital Center 2 studio/media production center. An ambitious addition to ESPN's existing Digital Center 1 campus in Bristol, Connecticut, the 194,000 square foot complex was envisioned as a "format-agnostic/future-proof" creative production facility with unlimited potential for trail-blazing content creation. A comprehensive green and employee comfort-focused environment were primary goals for the new facility.

With six new production control rooms, four audio control rooms and 16 edit suites, ESPN's Digital Center 2 technical capabilities are exemplified by a multi-dimensional monitor wall featuring 56 variably sized individual monitors designed to provide 3D-like graphic images. An arsenal of 40 state-of-the-art cameras is highlighted by a JITA cam capable of swooping up to a height of 22 feet and following a circular track to deliver a sweeping 360° studio overview. The Center 2 routing system can accommodate as many as 60,000 simultaneous signals over 1,100 miles of fiber optic and 247 miles of copper cable deployed throughout the facility.

All these rooms are dedicated to producing flawless audio and video for programs, , interviews, voiceover recording and the full spectrum of broadcast audio for video support. Overall quietness throughout the entire creative plant was an absolute priority. General acoustical specifications and recommendations were developed for all critical services including HVAC, fire protection and electrical systems. ESPN Digital Center 2 represents the apex of broadcast, cable, and Internet streaming production. The complex stands as a major accomplishment in next-generation audio/video production and delivery.



# ESPN Digital Center 2 - Bristol, USA





## Morro do Chapeu Residence - Belo Horizonte, Brazil

The architectural and acoustical design devised by WSDG for the villa's home theater and other living spaces leaned on solution suggested by the firms' professional recording studio expertise. Inhibiting sound from leaking into or out of sensitive listening areas such as recording studio live and control rooms is a WSDG specialty. The enclosed pool and spa area, however presented more troubling waters. Particularly challenging was the need for the acoustical treatments to unobtrusively compliment the custom finishes.

WSDG also designed a spacious (but cozy) home theater, which integrates the highest levels of audio and video technology. Recording studio-level, acoustical wall and ceiling treatments were engaged to provide superb frequency and time response. Bedrooms and a home office also benefitted from acoustical ceiling clouds, designed to control the reverberation time over a broad sound spectrum enabling each room's individual 5.1 surround sound and HD video system to deliver maximum performance quality.

The swimming pool and spa area, however, presented the project's primary acoustic challenge. The large area includes a gym, Jacuzzi and wet bar, surrounded by three walls of double height windows and a movable glass sealing system to maintain interior warmth in the cool, mountain region evenings. Again, professional recording studio design techniques provided solutions. Each window, including an expansive skylight grid of 20 individual panels was fitted with Acoustical Clearsorber Foil. Imported from Germany, the innovative translucent plastic sheets absorb medium and high frequency reverberation to resolve sonic reflection issues. Clearsorber also serves as a full room UV ray filtering system! Full transparency insures unimpeded views and, conversations free of traditional pool house reverberation.



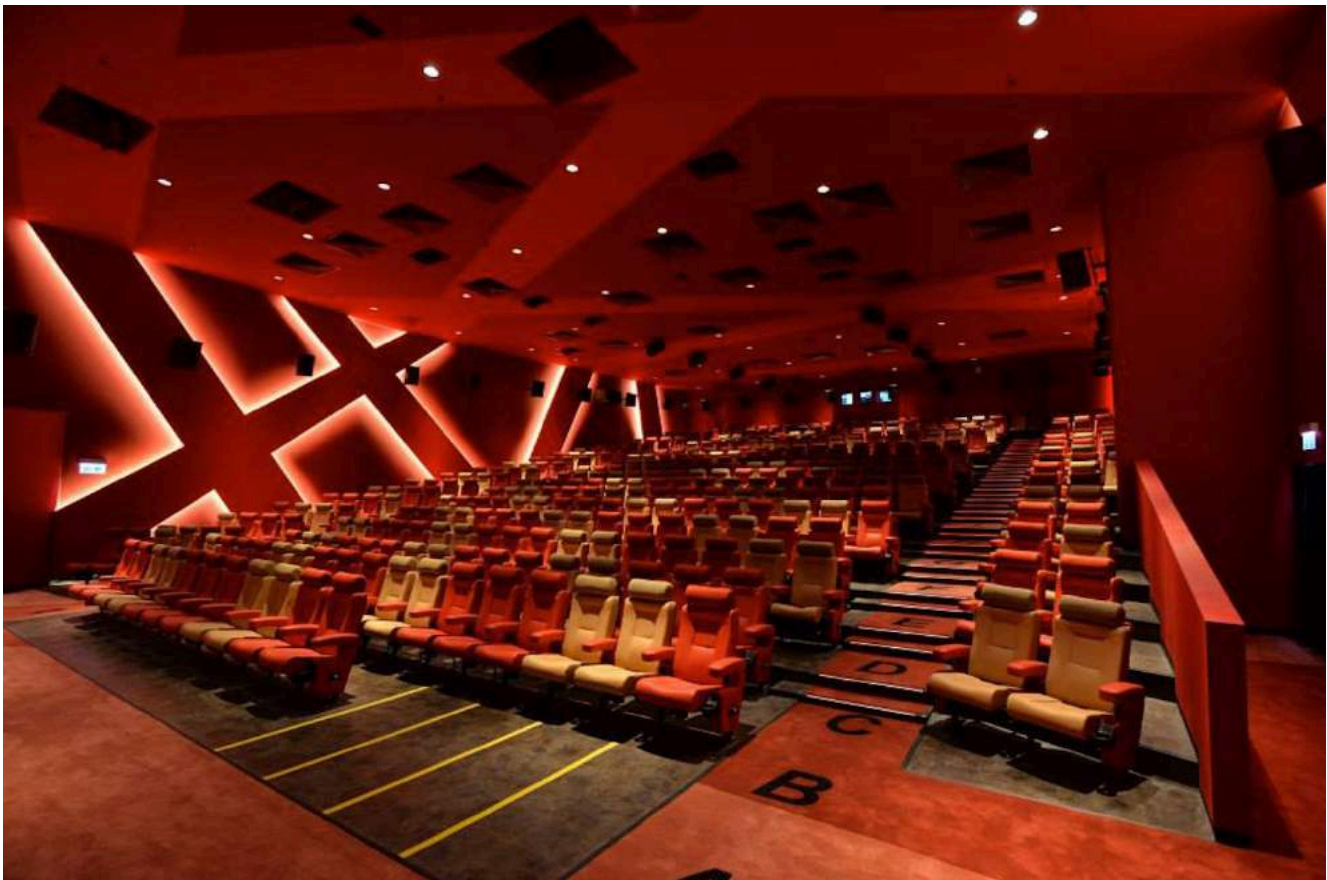
## Morro do Chapéu Residence - Belo Horizonte, Brazil



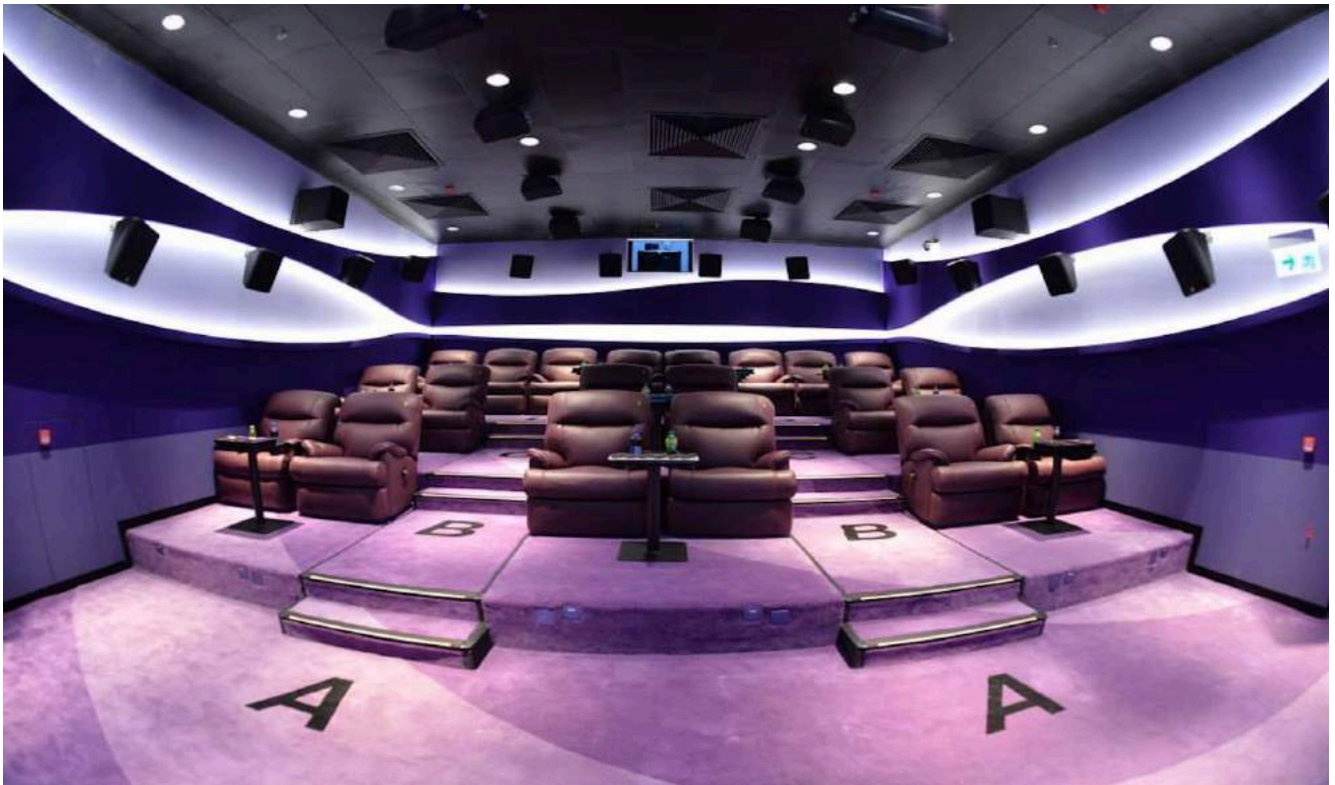
## The Metroplex at KITEC – Hong Kong, China

Early in 2014 the Metroplex, a luxurious 9 screen multiplex cinema, opened in Hong Kong's iconic Kowloon Bay International Trade & Exhibition Centre. Adjacent to the widely popular Star Hall, scene of many major international concerts, The Metroplex is an investment property of Hopewell Holdings Limited. The complex reflects the Group's vast experience in operating large-scale venues, and it establishes a new level of lavish comfort for filmgoers. Their unique concept was to bridge the gap between film and music by creating cross-over events and festivals that would benefit from the venue's diverse dining, socializing, large and small theaters and intimate screening rooms.

House 1, the Metroplex's largest theater, can accommodate an audience of 430. The five other "public" theaters can seat groups ranging from 151 to 97 guests. Three plush VIP Screening Suites (#'s 7,8, 9) are each designed to host twenty guests. Theaters 1 & 3 and all three VIP Suites offer opulent reclining lounge chairs, state of the art lighting, exquisite interior designs and Dolby® Atmos™+ Dolby Surround 7.1 sound. The four other theaters are outfitted with Dolby Surround 7.1. The futuristic lobby and dining areas provide an unsurpassed ambience for elegant gatherings. WSDG provided a comprehensive review of the architectural master plan layouts and a detailed analysis of the acoustic package recommendations provided by a local consultant. Particular attention was addressed to issues of sound isolation and (RT60) internal room acoustics. The client's primary concern was to assure absolute sound isolation between the movie theaters and the large event hall located on the upper floor specifically with regard to NC and STC parameters.



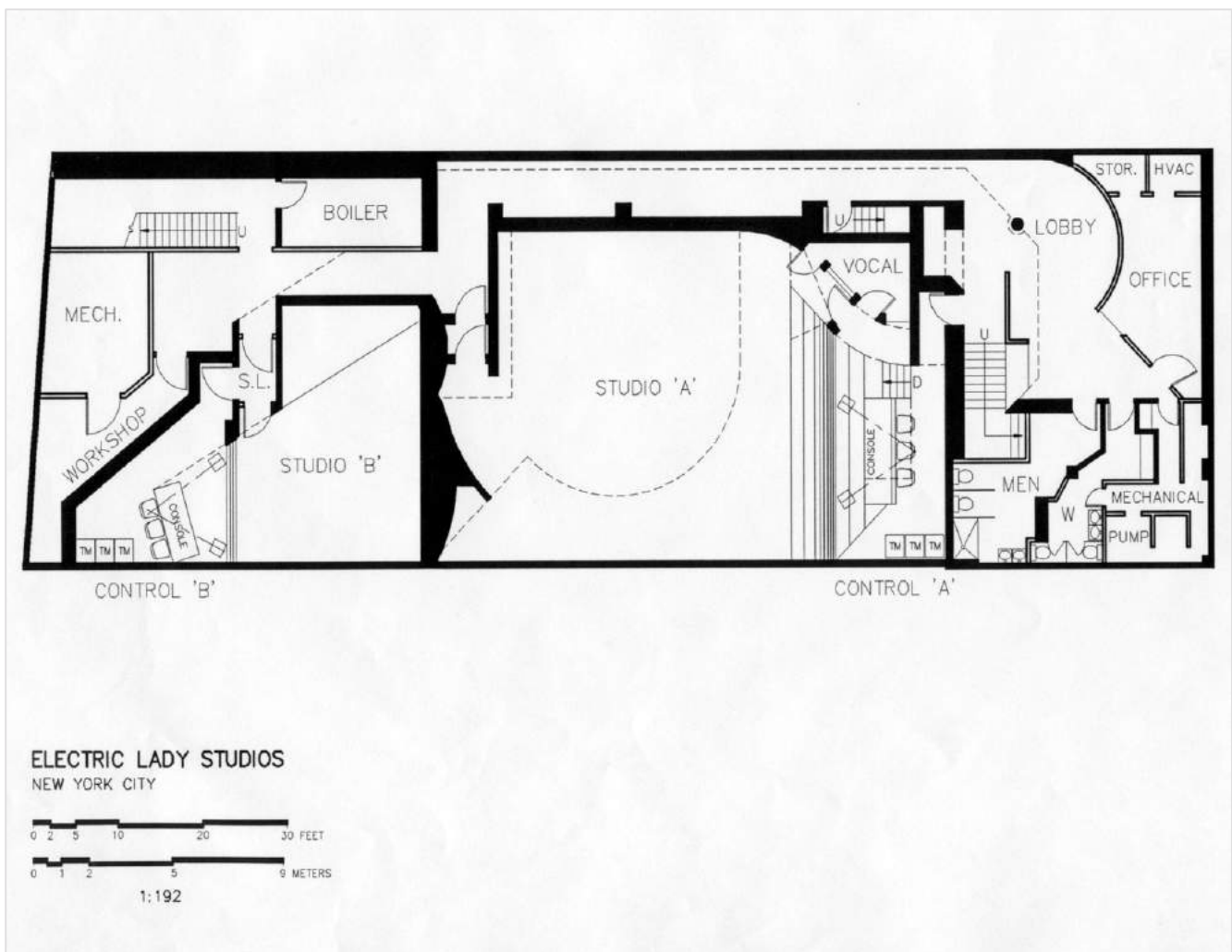
## The Metroplex at KITEC – Hong Kong, China



# Electric Lady Studios - New York, USA

At age 45 and counting, Electric Lady is one of the world's first artist owned recording studios and one of the oldest, most famous and most successful studios ever. WSDG co-founder John Storyk was a 22-year-old fledgling architect fresh out of Princeton University when he was hired to design a studio for Jimi Hendrix. One summer evening in 1968, Storyk was enjoying an ice cream cone and leafing through the Village Voice when a classified ad caught his eye: "Carpenters wanted to work for free on experimental nightclub." Dialing the number from a corner pay phone, he got the gig.

Kramer was adamant about Electric Lady having a tall, bright room similar to NY's legendary A&R Studios where Phil Spector did some of his greatest work. Kramer was also familiar with European studios like London's Olympic and Abbey Road. He believed drums required a big room. Storyk accommodated Kramer's need for high ceilings by excavating the basement, digging down to raise the height of the underground rooms. For the studios interior, Jimi specified theatrical lighting, and his desire to have as many curved surfaces as possible (design elements which Storyk had originally incorporated in Cerebrum). Electric Lady's walls were painted white, so they could easily be turned into whatever color Hendrix was in the mood for with simple adjustments. One day Jimi arrived at the construction site and decided that he didn't like the square look of the expensive acoustic doors, which had just been installed. He asked Storyk if he could round off the tops, and when that proved impractical, he had them replaced by custom units with rounded, porthole-style windows.



# Electric Lady Studios - New York, USA



# Professional References

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# Representative Client List

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Alicia Keys (Oven Studios), Long Island, NY  
Allaire Studios, Woodstock, NY  
Art Institutes United States  
Atlantic Recording New York, NY  
audioEngine New York, NY  
Bearsville Recording Bearsville, NY  
Berklee College of Music Boston, MA  
Berklee College of Music - Valencia Valencia, Spain  
Big Mo Mobile Recording Kensington, MD  
Bob Marley Kingston, Jamaica  
Bruce Springsteen (Thrill Hill Studios) United States  
Camden Yard / Baltimore Orioles Baltimore, MD  
Carter Burwell New York, NY  
Celine Dion United States  
Central Synagogue New York, NY  
Church Le Noirmont Le Noirmont, Jura, Switzerland  
Citicorp Credit Services Huntington, NY  
Credit Suisse Zurich, Switzerland  
Crossroads Tabernacle - Studio on the Hill Bronx, NY  
Cuyahoga Community College - Center for Innovation in the Arts Cleveland, OH  
Diante do Trono Belo Horizonte, Brazil  
Duke Ellington High School Washington, DC  
Eddie Kramer Rhinebeck, NY  
EFE-X Bogota, Columbia  
El Portefo Buenos Aires, Argentina  
Electric Lady Studios New York, NY  
Electronic Arts Vancouver, Canada  
Elektra Entertainment New York, NY  
Equiscosa Mexico City, Mexico  
EUE Screen Gems (Rachel Ray) New York, NY  
ESPN Bristol, CT  
Fito Paez (Circo Beat Studios) Buenos Aires, Argentina  
Flughafenkopf – Expansion of Zurich Airport Zurich, Switzerland  
Food Network New York, NY  
Full Sail Center for the Recording Arts Orlando, FL  
Goesgen Nuclear Plant – Auditorium Däniken, Switzerland  
Green Day – Jingtowntown Recording Oakland, California  
Hard Rock Cafe New York, NY  
Hoffman LaRoche Basel, Switzerland  
Howard Schwartz Recording New York, NY  
Hunter College New York, NY  
IMAX Buenos Aires, Argentina  
IDZI Lab Mexico City, Mexico  
Interlochen Public Radio Interlochen, MI  
Interim Services Ft. Lauderdale, FL  
Isaac Hayes Westchester, NY  
J Records (Clive Davis) New York, NY  
J.A. Castle Recording Utica, NY  
James Earl Jones Theater - Poughkeepsie Day School Poughkeepsie, NY  
Jay-Z (Roc the Mic Studios) New York, NY  
Jazz at Lincoln Center New York, NY  
Jim Cramer's Real Money New York, NY  
Jungle City Studios New York, NY  
Kimmel Center Philadelphia, PA  
La Rioja Theater La Rioja, Argentina  
Le Poisson Rouge New York, NY  
Maracana Stadium Rio de Janeiro  
Manhattan School of Music New York, NY  
Martin Scorsese Media Center Bronx, NY  
Merriweather Pavilion Columbia, MD  
Mineirao Stadium – FIFA Belo Horizonte, Brazil  
Minnesota Public Radio Minneapolis, MN  
MJI Broadcasting / Clear Channel New York, NY  
MonkMusic Studios East Hampton, NY  
Murray Arts Center Marietta, GA  
MTV Latin America Buenos Aires, Argentina  
National Council of Switzerland Bern, Switzerland  
National Museum of the American Indian Washington, DC  
New York University New York, NY  
Northern Lights New York, NY  
Novartis Basel, Switzerland  
NYISO (New York Independent System Operator) Albany, NY  
Peavey Electronics Meridian, MS  
Philippe Moritz Zurich, Switzerland  
Planet Hollywood Screening Room New York, NY



Proctor and Gamble Buenos Aires, Argentina  
Record Plant Los Angeles, CA  
Restaurant T Buenos Aires, Argentina  
Richard Gere New York, NY  
Robert Clivilles (Paradise Garage) Westchester, NY  
SBK / EMI Records New York, NY  
Skank Belo Horizonte, Brazil  
SONY Corporation Teaneck, NJ  
Spank! Music and Sound Design Chicago, IL  
Stanwich Congregational Church Greenwich, CT  
St. Gallen Train Station St. Gallen, Switzerland  
Stevie Wonder (Wonderland) Los Angeles, CA  
Sumitomo Boardroom New York, NY  
Sunshine Mastering Vienna, Austria  
Swiss Parliament Basel, Switzerland  
Telefé Buenos Aires, Argentina  
Teleproductions, Inc. Washington, DC

The Carpenters Church Port Harcourt, Nigeria  
The Cosmopolitan Las Vegas, Nevada  
The Standard Hotel New York, NY  
Thirteen / WNET New York, NY  
Union College Schenectady, NY  
University of Colorado – ATLAS (Alliance for Technology,  
Learning and Society) Boulder, CO  
University of Michigan Ann Arbor, MI  
Vassar Chapel Poughkeepsie, NY  
Video Arts Studios Fargo, ND  
Village Studios Guangzhou, China  
Vocomotion Skokie, IL  
Whitney Houston United States  
WNYC Radio New York, NY  
Woodrow Wilson Center Theater – Smithsonian  
Washington, DC

# Key Personnel

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## **John Storyk, R.A.**

### **Founder Partner / Director of Design**

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John Storyk, registered architect and acoustician, is a founding partner of WSDG. He has provided facility planning, acoustical and systems design services for the professional audio-video production and performance community since the 1969 completion of Jimi Hendrix's Electric Lady Studios in New York City. John received his architectural studies from Princeton and Columbia Universities. As an independent designer, engineer and principal of WSDG, he has been responsible for over 3,000 world-class audio-video production facilities, including studios, radio stations, video suites, entertainment clubs and theaters. He is a member of the American Institute of Architects (AIA), Audio Engineering Society (AES) and Acoustical Society of America (ASA) and is a frequent contributor to AES convention papers and professional industry periodicals. John is a frequent lecturer at schools throughout the nation and has established courses in acoustics at Full Sail (Orlando), Ex'Pression Center for the Media Arts (San Francisco), while maintaining adjunct professor status in Acoustics and Studio Design at Berklee College of Music (Boston) and Stevens Institute (New Jersey).



## **Beth Walters**

### **Founder Partner / Interiors**

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Beth Walters-Storyk is a graduate of the Fashion Institute of Technology (New York) with two degrees, A.A.S. in Textile Design and a B.F.A. in Product Design. Her construction experience comes with having been a senior installation designer for the Gallery's exhibition and installation staff at the Fashion Institute for over 10 years. From 1982-1988, Beth also was the display and merchandising director for such noted home furnishing fabric firms as Boris Kroll Fabrics, Greff Fabrics and Design Tex Fabrics. Beth is a founding partner and principal of Walters-Storyk Design Group and leads the interior design services division.



## Silvia Campos Ulloa Molho

**Partner / Art Director**

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Silvia Campos Molho has been involved in the video industry since 1987 as an independent filmmaker in Lima. Her degree in Fine Arts comes from the University of Peru in Lima and has continued with a degree in Anthropology from the University of Buenos Aires. As a producer, Silvia has developed several cinematographic projects, documentaries, commercials and corporate marketing worldwide. Her areas of expertise include the development of corporate images with the wide use of digital technological combined with traditional film and video. In 1998, together with AVH Inc. in Argentina, she was responsible for the making of the first DVD format in South America. She is an integral part of the design, communication and marketing divisions for WSDG, while acting as co-founder and partner of WSDG-Latin.



## Renato Cipriano

**Partner / Director of Design**

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Renato Cipriano graduated as a Civil Engineer from the University of FUMEC in Belo Horizonte, Brazil in 1994 and is also a graduate from both The Recording Workshop, Ohio (1992) and Full Sail Center for the Recording Arts, Orlando, USA (1999—also one of John's students). In early 2000, Renato opened the WSDG Brazil office in Belo Horizonte, Brazil and is responsible for the acoustical and architectural supervision on all projects in Brazil. Additionally, Renato has led the design efforts of many of our international projects contributing to creative acoustic interiors and integrated lighting design. As an audio engineer he has worked on various projects including the most recent album of the most popular rock band in Brazil – Skank. Renato also teaches Basic Acoustics in the top audio school in the country, IAV in São Paulo. In 2004 Renato received two Grammy nominations and won the Latin Grammy for “Best Brazilian Rock Album”.



## Sergio Molho

**Partner / Director of International Development**

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Sergio Molho is a founding partner of WSDG Latin America. He provides the technical, acoustical and architectural supervision as well as project management for all WSDG Latin America projects. Sergio has worked in the audio and video industry since 1982, beginning as an engineer, composer and producer for international productions for recording labels such as Sony and Warner. As an accomplished keyboard player and vocalist, he was the leader of CASH, a successful funk band that had its fame in Argentina in the 1980's. He is a member of the Argentinean Acoustic Chamber (AAC) and Audio Engineering Society (AES) as well as other professional organizations. He is a frequent contributor to technical workshops expanding the knowledge and education of acoustics and electro-acoustics in their relationship to architecture. In 2005, Sergio became the CEO and principal of WSDG Latin America. In 2007 he opened the WSDG Mexico Office, and in 2009 the WSDG Miami office. As the Director of WSDG's International Relations, he contributes to the promotion and acquisition of new business relations worldwide.



## Dirk Noy

**Partner / Director of Applied Science and Engineering**

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Dirk Noy, M.Sc. Physics, has a Diploma in Experimental Solid State Physics from the University of Basel, Switzerland and graduated from Full Sail Center for the Recording Arts, Orlando, USA, where he was one of John Storyk's students. After joining WSDG in early 1997 Dirk now heads the WSDG Europe office in Basel, Switzerland. Dirk has extensive experience in applied mathematics, acoustical measurement and calculation techniques, audio engineering, systems design and all facets of Information Technologies. His language abilities include German, Dutch, French and English. As a publishing member of the Audio Engineering Society (AES) and the Swiss Acoustical Society (SGA) he is a frequent lecturer at trade conventions, recording colleges, as well as architectural education institutions.



## Nancy Flannery

### Partner / Chief Financial Officer

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The first and last person to call with any production, billing or scheduling issue, CFO Nancy Flannery has spent the past twenty-five years honing her skills as the consummate WSDG client liaison. A multi-task whiz, Nancy assists clients in virtually every phase of their projects. From negotiating favorable contracts with suppliers to procuring special materials, or resolving complex issues in a timely manner, she is the ultimate client advocate and problem solver. In Nancy's dictionary the definition of CFO is "headache relief."



## Gabriel Hauser

### Partner / Director of Acoustics

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Gabriel Hauser graduated with a degree in electrical engineering from the Swiss Federal Institute of Technology, Zurich, in 2000. Analog and digital signal processing and acoustics were his primary focus. His Thesis was titled "Reduction of Nonlinear Distortion of Loudspeakers employing Volterra Filters" (at Studer Professional AG, Switzerland). After joining the WSDG New York office, Gabriel returned to Switzerland to become a founding partner at WSDG Europe. His specialties include Acoustical Simulation and Measurement, complex Acoustical Analysis and Methodology as well as Architectural Acoustics. During his studies Gabriel was a founding member of Abbaxx Soundsystems Ltd., whose principal field of work is sound reinforcement and loudspeaker technology. While with Abbaxx, he designed and developed sound systems for concert use, churches and installations. He writes articles for audio magazines and continues to be a performing musician.



## Joshua Morris

### Partner / Director of Design

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Joshua Morris graduated from the University of North Carolina in Charlotte with two Degrees, a Bachelor of Arts in Architecture and a Bachelor of Architecture. A love of music has led him to seek a combination of architecture and acoustics, beginning with his thesis on acoustics. Additionally, Josh has been educated in the Suzuki method for violin since age three, making acoustic design a natural choice for a career path. Joshua joined the WSDG team in January of 2005, moving from North Carolina to New York, and quickly settled into a key role as a project manager, designer and now partner. Since then he has managed dozens of projects from China to the United States to Germany, and continues to add more skills to his design vocabulary each day, while refining his already well developed practice as a luthier.



## Matthew Ballos

### Partner / Director of Architectural Technology

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Mid Hudson Valley, New York native Matt Ballos earned dual degrees in Architecture and Construction Management. A background in civil engineering and a lifelong love of construction and design has enabled Matt to quickly become a valuable member of WSDG's design and production team, currently as a project designer and manager.

Matt's love of design extends from his drawing skills to his personal workshop where he spends his free time building furniture and fabricating functional pieces of art. He believes his experiences at WSDG coupled with having grown up on construction sites provides him with a functional knowledge of what can and can't be built, and enables him to apply his design talents in creating uniquely useful, beautiful and acoustically accurate spaces. WSDG is proud of Matt's continued affiliation with the US Air Force Reserve as an engineering specialist.



## Romina Larregina

### Partner / Director of Production

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Romina Larregina graduated from the University of Palermo, Buenos Aires, with a degree in Architecture. Upon graduating, Romina took her skills to an engineering office, while teaching English and helping with the set up of trade shows. She apprenticed at WSDG – Latin for several years before moving to the United States in 1999, to become an integral member and now partner at WSDG (New York). Her multi-lingual skills in English, Spanish and Portuguese have been instrumental in leading numerous international projects. Romina is the Latin liaison, as well as project management and production coordinator for the New York office. She loves to travel and enjoys the day-to-day client interaction.



## Federico Petrone

### Senior Systems Designer

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Federico obtained a Contemporary Music Degree and an Audiovisual Communications Degree in Argentina. He started his career as the music director for Indie Musical Theater groups and the FOH sound engineer for a major theater in Buenos Aires. Federico then went on to get a lead audio position at Disney Cruise Lines, in charge of all audio systems and responsible for the FOH operation in the main theater of one of their cruise ships. In 2007 he joined WSDG in Latin America in his current position as Audiovisual Systems Designer and Chief Installer. He has worked on numerous projects worldwide integrating sound, video, lighting and automation for different applications, from small project studios to large live venues. He also leads the systems install team for all types of audiovisual installations. Federico is an accomplished video game music composer having worked in more than 100 titles for different game platforms.



## Kevin Peterson

### Project Engineer

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Kevin has always been a music lover and musician. While in high school, he performed in several bands, and developed a 'gear head' aptitude for setting up recording equipment, microphones, and speakers. That early experience inspired him to study audio in college. After graduating as Class Valedictorian from Full Sail University with a B.S. in Show Production, Kevin's interest in audio and acoustic measurement lead him to a career with WSDG. He welcomes the opportunity to collaborate with WSDG's international team and enjoys hands-on involvement with unique, creative projects. An avid year-round camper / outdoorsman / and Eagle Scout, Kevin claims to enjoy the cold and snow of the Hudson Valley winters much more than his co-workers.



## Breno Magalhães

### Architect / Project Manager

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Breno Magalhães graduated as an Architect and Urban Planner from Federal University of Minas Gerais (UFMG) in 2010 and as a Product Designer from State University of Minas Gerais (UEMG) in 2006, both in Belo Horizonte. His interest in music and acoustics was shown in his work during graduation. Breno enjoys playing the guitar and he turned this hobby into his Product Design final graduation project, by developing an electric guitar with an innovative pickup swapping system. The same thing happened in his Architect and Urban Planner graduation project when he designed a new music Arena for Belo Horizonte. At this point, he was already a WSDG member. During his graduation in Product Design, Breno took part in several research groups related to furniture design focused on manufacture optimization, ergonomics and sustainability. He was also a partner in a design office with the same approach. Earlier, Breno was a professional volleyball player till the age of 22. Breno works as a Project Manager and Designer at WSDG Brasil office.



## Marc Viadiu

### Project Engineer

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Marc studied Technical Engineering in Sound and Image and Higher Engineering in Electronics at the University Ramon Llull in Barcelona, Spain. After graduation, Marc worked in an industrial acoustics company in Barcelona. Later he started his own company of acoustic engineering and distribution of acoustic and audio products. At the beginning of 2009, Marc undertook a six months internship at the WSDG New York office preparing drawings, taking acoustical measurements and performing room acoustical calculations. Upon returning to Spain in 2010, he started a new company of designing acoustical products and opening the new WSDG office in Spain.



## Jesús Cardoso

### Representative

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Cardoso met John Storyk, during one of his guest lectures at Berklee College of Music. Storyk's designs had been an important influence in Cardoso's consulting choices that led to a number of successful collaborations. In 2015, Audio Gate International's influential position in Mexico's pro audio market and the Walter Storyk Design Group's program for expanding their client base in that country coalesced. By naming Jesus Cardoso as representative, WSDG can now provide a fully integrated, world-class studio design and equipment sales/integration service to Mexico's creative music production and recording community.



## Victor Cañellas (Weike)

### Representative

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Víctor Cañellas (Weike) - Acousmatic Sinologist has been a successful acoustician/sound researcher in China since 2003. His expertise in developing acoustic interfaces for visual arts in performance venues has contributed to such demanding assignments as the Park19 and LOFT345 clubs in Guangzhou and for the popular 2007 La Fura dels Baus 'Imperium' premiere in Beijing. His expertise in acoustic treatments was enriched by serving as a representative for Jocavi Acoustic Panels and Soundbox Acoustic Tech fixed architectural acoustic systems. Victor studied Social Science at Universitat de Barcelona, Asian Studies at Universitat Autònoma de Barcelona Center of International and Intercultural Studies, and attended Chinese Language Studies in Sun Yat Sen University in Guangzhou. His wide-knowledge of 'Eastern thought and logics' provide a solid foundation for him in his new role as a WSDG representative.



## Javier Vyero Villaroel

### Representative

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Born in Santiago, Chile, "Vyero" is a successful record producer and songwriter. After graduating from Universidad Mayor, (Chile) with a degree in Social Communications and Advertising and a specialization in A/V media, Vyero moved to Mexico in 2001 to kick off his music career. Signed to Universal Music Mexico in 2004, he recorded a compilation album entitled "Autores del Nuevo Milenio". Vyero's subsequent album releases include: "Lievame" (2007), "Electro" (2012), and "Cover Sessions" (2013). He is currently preparing a new EP of original compositions entitled "Acustico", for release in late 2015. He has also served as a producer for a number of film and album recording sessions by various artists. In 2015 Vyero joined Audio Gate International, a leading Mexico City-based equipment sales and consulting firm. Javier Villarroel has now been named exclusive WSDG representative in Mexico, and will focus his energies on developing client projects in the high-end recording, video production, performance venue, corporate and educational sectors.





## Leandro Kirjner

### Project Manager

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Leandro Kirjner is a young professional, student of Architecture at the University of Buenos Aires (UBA). At 18, he already knew what he wanted to devote his life and in 2012 was given the opportunity to join WSDG, this gave him the opportunity to progress at a professional level and at the same time continue to perform his studies. The acoustics were a branch that was unknown to him and he was attracted by the opportunity to learn new things in the field he loves. Since that moment he has been involved in documenting several projects around the world, allowing him to experience new cultures and see how architecture adapts to each one of them.



## Su Weilie

### Representative

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Su Weilie – Architect/Interior Designer/Representative is a Guangzhou native who studied Construction Engineering at Hunan Institute of Technology and Architecture, and City Planning at Wuhan University of Technology. In 1990 he joined the Panyu Bridge Group Company and participated in the design of Nansha Port and Nansha Tian Hou Temple restoration project .In 1994 he founded Guangzhou Red Leaves Decoration Project Co. Ltd., and participated in assignments for the Guangzhou Olympic Garden. In 2004 he moved to the Conghua Mountains for self-cultivation and a contemplative education, and to research Agrarianism and the ancient practice of Daoism. Returning to Guangzhou, he participated in the Guangzhou Natural Park development as well construction projects focused on Luxury Hotels, Office Buildings and Refurbishing Historical Buildings.



## Aditya Modi

### Representative

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Born in a recording studio in a quaint studio apartment in Chennai, Aditya has flair and passion for anything audio. After school, he used to sit in on recordings conducted by his father, Vijay Modi, for artists such as AR Rahman. Graduating Full Sail University with a Recording Arts Degree, Aditya moved to LA as a practicing DJ. India calling, Aditya moved to Mumbai where he assisted Sound Engineering legend Daman Sood as well as Avinash Oak, Jagjit Singh, Lata Mangeshkar, Asha Bhosale, Pandit Jasraj, Pankaj Uddhas, Naushaad Ali, Abida Parveen and almost every great in the Indian music industry. Aditya has designed, constructed, consulted or installed technology for over 250 facilities across India. Aditya formed Modi Digital to offer premium recording studio design and undertake complete audio install projects, pro audio equipment distribution, technical designing, acoustic designing and after sales support to the audio industry.

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