



THORBURN ASSOCIATES

ACOUSTICAL, TECHNOLOGY, AND LIGHTING DESIGN

Qualifications

Acoustical, Technology, and Lighting

Thorburn Associates (TA) specializes in the design and consulting of acoustics, technology, and lighting systems. We are involved with multiple market sectors which help to facilitate cross pollination of solutions between markets. With experience on over 2600 projects, one of TA's strengths is our ability to provide an integrated solution for these technical aspects of the design. TA is a Woman-owned Small Business Enterprise (WSBE) with offices located throughout the U.S. to serve your needs.

ACOUSTICAL



Acoustical design combines art and science to modify noise to achieve a desired auditory environment. TA creates acoustical environments tailored to the occupants of each space. We combine our expertise with extensive laboratory and electronic testing equipment to meet the unique sound sensitivities of each project.

Room Acoustics - Sound Isolation - Mechanical Noise - Vibration Isolation - Environmental Noise

TECHNOLOGY



Technology systems design is an ever-growing industry bolstered by the constant demand for multimedia communications. TA works with our clients to develop the system that will best meet their needs while planning for and understanding maintenance, upgrade, and expansion needs.

Audiovisual Systems - Telepresence - Sound Masking/Paging - Structured Cabling - Security

LIGHTING



We specialize in illumination design, a term that describes aspects much broader than the standard overhead electric lighting system; illumination also includes direct natural light, indirect natural light, indirect artificial light and reflected light, as well as the control of all light sources. As solution providers, TA enhances an environment through innovative yet practical lighting schemes.

Lighting Design - Fixture Layout - Specifications - Control Systems - Daylighting

SAN FRANCISCO

LOS ANGELES

ORLANDO

CHARLOTTE

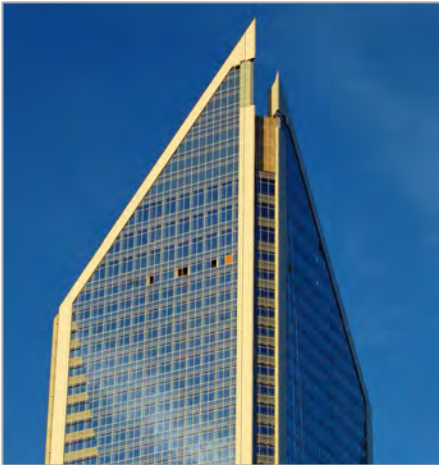
RALEIGH-DURHAM



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**DUKE ENERGY TRYON TOWER
Charlotte, North Carolina**

Acoustical, Sound Masking and Audiovisual Design services for Duke Energy located in Charlotte, North Carolina. Acoustics included an overall review of architectural assumptions made for Room Acoustics, Sound Isolation, and Mechanical Noise and Vibration Control. Sound Masking Design included classifying spaces appropriate for sound masking on typical Floors, one Legal Floor and one Multi-Use Floor only, and providing detailed design and commissioning services for appropriate systems. Audiovisual Design included seventeen Typical Floors, one Legal Floor, one Multi-Use Floor and the Executive Office Floors.



**SAP TECHNOLOGY SOLUTION CTR
Palo Alto, California**

Audiovisual System programming for the SAP Solution Center which is made up of two Video Conferencing Rooms, a Demo Room/Theater and a Lobby / Entrance Room. Each room includes ceiling mounted document cameras for PDA demonstration, easy-to-use technology, electronic room signage, and control systems.

Acoustical consulting included sound isolation for the entire Center and recommendations for absorptive materials to improve overall room acoustics in the Demo Room/Theater.



**SAS EXECUTIVE BRIEFING CENTER
Cary, North Carolina**

Provided Acoustical and Technology Consulting services for the 300,000 square foot SAS Executive Briefing Center in Cary, N.C. The Briefing Center includes two large auditoriums, an Atrium/Briefing area, a gallery, breakout rooms and briefing rooms. TA provided room acoustics, sound isolation and mechanical system noise and vibration control consulting services for the Briefing Center. The technology design includes a digital signage system, videoconferencing capabilities for the briefing and breakout rooms, and a future tele-presence option.

ADDITIONAL PROJECTS

- Bank of America – Ft. Lauderdale, FL
- Biogen Idec Building 26 – RTP, NC
- Cisco Systems Executive Briefing Center – San Francisco, CA
- Deer Creek Briefing Center – Palo Alto, CA
- Department of Health and Human Services – Durham, NC
- Dollar Tree Headquarters – Chesapeake, VA
- Elan Pharmaceuticals – San Francisco, CA
- Green Square – Raleigh, NC
- GSA Federal Building – San Francisco, CA
- Hewlett Packard, Various Projects – Palo Alto, CA
- Lockheed Martin Aeronautics Co. – Palmdale, CA
- Microsoft Westfield Center – San Francisco, CA
- Nissan North America, Corporate HQ – Franklin, TN
- Quintiles Board and Conference Room – Durham, NC
- SUGEN – South San Francisco, CA
- WPP/Y&R Office Remodel – San Francisco, CA



**EVERGREEN VALLEY COLLEGE
San Jose, California**

The goal of the new Learning Resource Center building at Evergreen Valley College was to provide a “state of the art” learning facility to serve as the primary educational training facility for Silicon Valley. TA provided the Audiovisual and Control System Design. Current technology is used to effectively teach the students in a flexible learning environment. Several “levels” of AV solutions were developed based on room usage needs.



**BAYLOR UNIVERSITY
Waco, Texas**

The Southwest Securities Financial Markets Center at Baylor University is equipped with leading edge technology, replicating the equipment found in the nation’s top investment firms and financial institutions. The center provides a space for teaching, videoconferencing and financial data research in an environment that feels like a cross between a Fortune 100 Boardroom and a Financial Trading Center. TA developed the basic design of the space, and then worked with the campus architect to refine and execute the project.



**UNIVERSITY OF NORTH CAROLINA
Chapel Hill, North Carolina**

The University of North Carolina at Chapel Hill (UNCCH) School of Pharmacy renovated Beard and Kerr Halls. One classroom in Beard Hall and two classrooms, an auditorium and a technology control room in Kerr Hall were upgraded to support distance learning with a nearby university. TA designed the audiovisual system with a focus on using UNCCH standard equipment to allow the spaces to perform user requirements with minimal staff and maximum reliability.

ADDITIONAL PROJECTS

- Appalachian State University – Boone, NC
- California State University, Stanislaus – Turlock, CA
- California State University, East Bay – Hayward, CA
- Campbell University – Buies Creek, NC
- Central Texas College – Killeen, TX
- Elizabeth City University – Elizabeth City, NC
- George Washington University – Washington, DC
- Indiana University – Indianapolis, IN
- James Madison University – Harrisonburg, VA
- Miami Dade Community College – Miami, FL
- Montclair State University – Montclair, NJ
- NC A&T State University – Greensboro, NC
- North Carolina State University – Raleigh, NC
- Stanford University – Palo Alto, CA
- University of Cincinnati – Cincinnati, OH
- University of Illinois – Champaign-Urbana, IL
- University of Nevada at Las Vegas – Las Vegas, NV
- University of New Mexico – Albuquerque, NM
- University of North Carolina – Asheville, NC
- University of North Carolina – Charlotte, NC
- University of North Carolina – Pembroke, NC
- University of Oklahoma – Tulsa, OK
- University of South Florida – Tampa, FL
- University of the Ozarks – Clarksville, AR
- University of Wisconsin – Madison, WI
- Wake Forest University – Winston-Salem, NC



**DAVIS HIGH SCHOOL, LIBRARY
Davis, California**

The convex ceiling of the Davis High School Library is the focal point of the design, but not the focal point of the acoustical environment within the space. The ceiling, in combination with the high volume of open space, makes the building high risk for echoes and reverberation. Thorburn Associates was called on to provide acoustical details for this space, the last and only new construction component of the campus's multi-phased renovation.

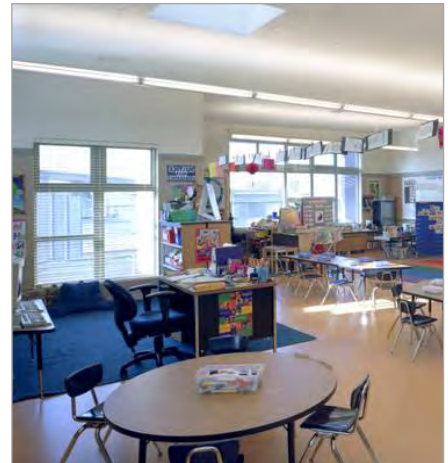
By addressing the finish materials, text book storage and student locations, acoustical challenges were avoided.



**DAVIS HIGH SCHOOL, CLASSROOM
Davis, California**

In addition to the library space, Thorburn Associates provided acoustical details for the classroom wing of the new building.

The required amount of sound isolation for the rooms was provided by specific wall and ceiling constructions, along with window, door, and duct/conduit penetration details. High levels of sound isolation were included in the design to help ensure that noise from the classrooms will not affect the adjacent spaces.



**CESAR CHAVEZ EDUCATION CTR.
Oakland, California**

The Cesar Chavez Education Center represents more than a new school in an overcrowded school district. The design is a model CHPS (Collaborative for High Performance Schools) school.

Acoustically, the facility faced steep challenges, with Bay Area Rapid Transit (BART) tracks less than 400 feet from the nearest classroom on one side and the very busy International Boulevard flanking the school on the other side. To reduce sound from outside sources, additional layers of gypsum board on the walls and ceiling provided a higher level of noise attenuation.

ADDITIONAL PROJECTS

- Andrews Elementary School – Andrews, SC
- Apex Middle School Auditorium – Apex, NC
- Archbishop Mitty High School – San Jose, CA
- Atkins High School – Winston-Salem, NC
- Bertie High School Renovation – Windsor, NC
- CHPS Compliance Model Classroom – Richmond, CA
- Christopher High School – Gilroy, CA
- Cumberland County High School – Fayetteville, NC
- Daniels Middle School – Raleigh, NC
- Diamond High School – Anchorage, AK
- East Forsyth High School – Forsyth, NC
- Franklin Academy – Wake Forest, NC
- Glenn High School Auditorium – Kernersville, NC
- Guilford Northern High School – Greensboro, NC
- Harnett County High School – Fayetteville, NC
- Hobbton Elementary School – Newton Grove, NC
- Kern High School – Lake Isabella, CA
- Leroy Martin Middle School – Raleigh, NC
- Lynbrook High School – San Jose, CA
- Mercy High School – San Francisco, CA
- Mission San Jose High School – San Jose, CA
- Mt. Tabor High School – Winston-Salem, NC
- Raleigh Charter High School – Raleigh, NC
- Reagan High School – Winston Salem, NC



**Oakland Fire Station #20
Oakland, California**

Located at 1401 98th Avenue, the City of Oakland Fire Station #20 is one of 25 stations supported by 500 uniformed personnel. With extensive equipment and resources to respond to any emergency the Oakland Fire Department responds to over 60,000 calls annually.

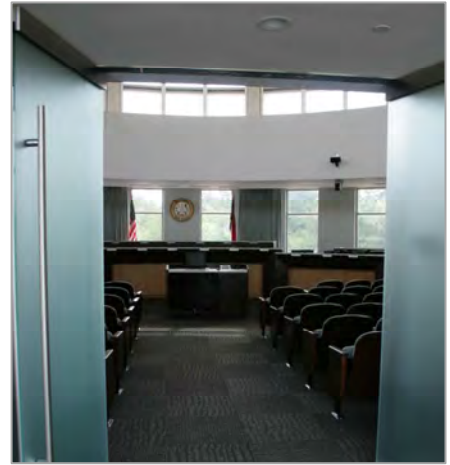
TA worked on Fire Stations # 3 and #20 providing acoustical recommendations for interior to exterior sound isolation, room acoustics, and mechanical noise and vibration control.

**COUNTY OF KERN EOC
Bakersfield, California**

Working with BFGC Architects Planners Inc., TA provided audiovisual consulting services for the new County of Kern Emergency Operations Center (EOC) located in Bakersfield, CA. This standalone facility, nearly 7,000 square feet in size, is designed to be the command center for County operations during a disaster/emergency situation, and when not operating under an emergency situation, it is utilized by the Kern County Fire Department for training, video teleconferencing, meetings and presentations. The three principal areas are the Emergency Operations Center (EOC), the Media Room/Joint Information Center, and the Conference Room.

ADDITIONAL PROJECTS

- Alta Bates Emergency Operations/ Medical Conference Center – Berkeley, CA
- City of Galt Police Department – Galt, CA
- City of Palo Alto Public Safety Bldg. – Palo Alto, CA
- Daly City Police Station – Daly City, CA
- East Bay Municipal Utilities District Emergency Operations Center – Oakland, CA
- Fire Station #3 – Oakland, CA
- Fire Station #5 – Chico, CA
- Fire Station #31 Sound Wall – San Ramon, CA
- Fire Station #72 – El Cerrito, CA
- Forsyth County Detention Center – Forsyth, NC
- Metrocomm and Radio 911 – Las Vegas, NV
- NC National Guard Joint Headquarters Building – Raleigh, NC
- Palm Beach County Emergency Operations Center – Palm Beach, FL
- US Bureau of Reclamation Emergency Operations Center – Sacramento, CA



**GSA FEDERAL BUILDING
San Francisco, California**

One of the driving elements of the design of the new San Francisco GSA Building is providing natural ventilation to the tower section. This design creates many acoustical challenges for the intended open plan offices areas, as well as other areas. TA provided designs and solutions for room acoustics, speech privacy, mechanical noise, and sound isolation in a LEED certified building.

**OFFICE OF CHIEF JUSTICE OF THE
SUPREME COURT**

San Francisco, California

Conducted acoustical measurements in the Chief Justice's office and the office directly below to determine the appropriate window glazing system to reduce the street / traffic noise to an acceptable level. We also developed a design build specifications for the custom installation of the window system.

TOWN HALL

Wake Forest, North Carolina

This newly constructed 2,200 square foot board room seats 100 with 11 people at the commissioner's dias. TA provided a onetime acoustical review with specific focus on achieving appropriate criteria for the board room. TA also provided full technology system design services for the board room, conference rooms and public lobby area.

ADDITIONAL PROJECTS

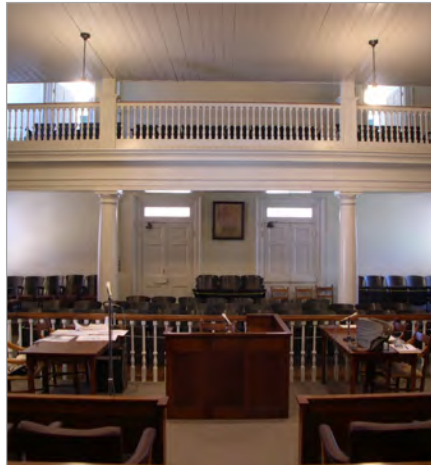
- Camp Lejeune Littoral Warfare Training Center - Jacksonville, NC
- Edwards Air Force Base - Mojave, CA
- El Cerrito City Hall - El Cerrito, CA
- Emeryville City Hall - Emeryville, CA
- GSA Hearing Room Alameda - Hayward, CA
- IRS Oakland Conference Room - Oakland, CA
- Lockheed Martin Conferencing - Palo Alto, CA
- Los Altos Hills Town Hall - Los Altos Hills, CA
- Los Angeles VA Hospital - Los Angeles, CA
- Menlo Park VA Hospital - Menlo Park, CA
- Naval Air Station Joint Reserve Base, Calibration Building - New Orleans, LA
- NC National Guard Joint Forces Headquarters Building - Raleigh, NC
- San Leandro City Hall - Rebid - San Leandro, CA
- Travis Air Force Base, Global Support Squadron Command and Operations Facility - Fairfield, CA
- U.S. Coast Guard Integrated Support Command - New Orleans, LA
- US Bureau of Reclamation Regional Conference Room - Sacramento, CA
- USGS/GSA Bldg. 3 - Menlo Park, CA
- VA Administration Building, Jones Hall Army Reserve Center - Mountain View, CA



**EL CAPITAN THEATRE'
Hollywood, California**

El Capitan Theatre was a historical restoration of the original theatre built in 1926. The theatre went through several attempts of restoration and preservation. However 1991, it was time for the beauty of the theatre to be rediscovered. In multiple phases, Gallegos Lighting created lighting design for the façade, entry lobby, auditorium, and overture. The design played with colors and included accent lighting, theatrical lighting, and historical reproductions of decorative pendants, and chandeliers.

*Personal Experience



**MADISON COUNTY COURTHOUSE
Madison, Virginia**

The Madison County Courthouse was a restoration of a historical courthouse built in 1830. TA provided an overview of room acoustics, mechanical noise/vibration control and sound isolation for the overall building. Audiovisual efforts were concentrated on the three courtrooms. This included providing the system's functional requirements, developing a preliminary opinion of probable cost, preparing the contract construction document drawings, overseeing the bidding and negotiation for the audiovisual contractor, and providing construction administration.



**BAKERY LOFTS 4
Emeryville, California**

Bakery Lofts is a condo conversion of the historic Remar Bakery. It consists of a two-story wood-framed building housing 12 apartment units and a future café and community room. TA provided acoustics and sound mitigation studies and designed a sound masking system for this project.

ADDITIONAL PROJECTS

- Office of Chief Justice of the Supreme Court - San Francisco, CA
- Harris Inc. - Richmond, VA
- Forsyth County Government Center - Winston-Salem, NC
- Long View Center - Raleigh, NC
- Madison County Courthouse - Madison, VA
- Old Courthouse Museum - Sioux Falls, SD
- Children's Hospital Research Institute - Oakland, CA
- Asian Art Museum - San Francisco, CA
- N.C. A&T State University, Frazier and Dudley Hall - Greensboro, NC
- USS Lexington-Mega screen Theatre - Corpus Christi, TX
- Charles Green Library - Oakland, CA
- Riverside County Courthouse - Riverside, CA
- Historic Alameda High School - Alameda, CA
- On Lok Larkin Senior Living - San Francisco, CA
- Embarcadero Lofts - San Francisco, CA
- Hannah Block Historic USO Building - Wilmington, NC
- The Highland Center - Monterey, VA
- PG&E Headquarters - San Francisco, CA



HOTEL RAY
Venice, California

Provided acoustical consulting services and an environmental noise study for the design of a new luxury boutique hotel in Venice, CA known as Hotel Ray. The hotel is a 55,000 square feet, five story, 57-room hotel, which will sit above two levels of subterranean parking. The hotel amenities include: roof top pool and deck, spa and fitness center, restaurant and retail outlets.



ANA Hotel
San Francisco, CA

ANA Hotel had a complete renovation which included audiovisual system design and construction administration for the ballroom and conference center upgrade. TA designed the system which includes multiple head table locations, signal delay, microphones, background music, auxiliary inputs and ADA hearing assistance system. The hotel ballroom system requirements included speech and audio reproduction with slide, video, and computer display.

ADDITIONAL PROJECTS

- Aladdin Hotel & Casino – Las Vegas, NV
- Comfort Suites – Castro Valley, CA
- Harvey’s Kanesville, Queen Riverboat Casino - Council Bluffs, Iowa
- Harvey’s Casino, “Party Zone” Renovation – South Lake Tahoe, NV
- High Roller Suite – Las Vegas, NV
- Holiday Inn Express – San Francisco, CA
- International Hotel – San Francisco, CA
- Lafayette Park Hotel – Walnut Creek, CA
- Mark Hopkins Hotel – San Francisco, NV
- Marriott Residence Inn – Sacramento, CA
- Napa Valley Sheraton Inn – Napa, CA
- Ritz Plaza Hotel – Miami Beach, FL
- Rose Hotel – Pleasanton Inn – Pleasanton, CA
- The Chateau of Mandalay Bay – Las Vegas, NV
- Villages Golf & Country Club – San Jose, CA



**FORSYTH MEDICAL CENTER
Winston-Salem, North Carolina**

Acoustical design services for the new construction of a 2-story conference center infilling a space between the recently completed parking deck and a 10-story hospital addition. Services included room acoustics, sound isolation, and mechanical noise and vibration control for the 23,000 square feet of the first floor, which consists of one video conference room and six smaller divisible conference rooms with the ability to flex up and down in size, and three large rooms that can be combined into one.



**ON LOK LARKIN
San Francisco, California**

Located on a sloping hillside at the intersection of busy downtown streets, this senior care facility required acoustical consulting for the interior spaces as well as an exterior noise study (known as a Title 24, Part 2 review). These sound measurements documented the existing traffic noise levels within the building. Our engineers then analyzed the data to determine mitigation measures which would prevent the residents from being disturbed by the noise.



**KAISER SANTA CLARA
Santa Clara, California**

The Kaiser Santa Clara replacement hospital project moved and expanded the existing facility. The move maintained the hospital, medical office building, and helipad, but also provided a central parking area and expanded outpatient services. TA provided acoustical design to help control reverberation and improve the overall acoustical environment within the space. Sound Isolation and recommendations on methods to mitigate the vibration transfer of an elevator were also provided.

ADDITIONAL PROJECTS

- Duke Hospital Surgical Suite – Durham, NC
- Veterans Administration Hospital – Los Angeles, CA
- McDowell Hospital – Marion, NC
- Rehaboth Hospital – Albuquerque, NM
- Santa Rosa Memorial Hospital – Santa Rosa, CA
- Self Regional Healthcare – Greenwood, SC
- Sequoia Hospital – Redwood City, CA
- St. Joseph’s Medical Center – Walnut Creek, CA
- Stanford Hospital – Palo Alto, CA
- Washington Hospital – Fremont, CA
- Kaiser Medical Center – Los Angeles, CA
- Eden Medical Center – Castro Valley, CA
- Kaiser Medical Center – San Francisco, CA
- Alzheimer’s Services of the East Bay – Berkeley, CA
- San Mateo Medical Center – San Mateo, CA
- Kaiser Permanente Santa Teresa – San Jose, CA
- Kaiser Medical Center – Pleasanton, CA
- Palo Alto Medical Foundation – Palo Alto, CA
- Veterans Administration Hospital – Menlo Park, CA
- Children’s Hospital – Oakland, CA
- Sutter Medical Center – Sacramento, CA
- John Muir Medical Center – Walnut Creek, CA
- University of California at San Francisco, Hospital Building – San Francisco, CA
- Transylvania Community Hospital – Brevard, NC
- Cape Fear Valley Medical – Fayetteville, NC
- East Valley Health Complex – San Jose, CA
- Santa Clara Valley Medical Center – Santa Clara, CA



GREENBRIDGE CONDOMINIUMS
Chapel Hill, North Carolina

The Greenbridge Mixed-Use Complex is a sustainable project pursuing LEED Gold Level Certification. TA provided sound isolation and mechanical noise and vibration control services. TA collaborated on the design and testing of an enclosure for the newly designed heat pump system to verify that it will function at acceptable noise levels.

BAKERY LOFTS 4
Emeryville, California

Bakery Lofts is a condo conversion of the historic Remar Bakery. It consists of a two-story wood-framed building housing 12 apartment units and a future café and community room. TA provided acoustics and sound mitigation studies and designed a sound masking system for this project.

MAIN STREET AT ENKA VILLAGE
Asheville, North Carolina

Main Street at Enka Village is a mixed-use project featuring an assembly of retail, office, housing and dining in a village-like atmosphere. TA provided sound isolation consulting services for the seven buildings in the development.

ADDITIONAL PROJECTS

- 2nd and Santa Clara Street - Santa Clara, CA
- 377 Second Street Condo - San Francisco, CA
- Atlantic Times Square - Monterey Park, CA
- Castalia at Meadowmont - Chapel Hill, NC
- Davenport Roadhouse at the Cash Store - Davenport, CA
 - Highland Village - Cary, NC
- Kane Realty Corporation Bowling Alley - Raleigh, NC
 - Market @ 9th & Flower - Los Angeles, CA
 - Patrick Henry Place - Newport News, VA
 - Plaza Apartments - San Francisco, CA
 - RBC Plaza Condominiums - Raleigh, NC
 - The Curve Condominiums - Las Vegas, NV





**ALAMO SQUARE APARTMENTS
San Francisco, California**

This project is a mix of low income apartments and entry-level condo homes. Four stories of wood frame construction were built over a parking garage. TA successfully addressed the acoustical challenges relating to the impact isolation of the buildings' floor/ceiling system and windows. The site was a block wide infill project, the border of which was two busy commuter streets in the "western addition" of San Francisco.



**TURNBERRY PLACE
Las Vegas, Nevada**

As the first high rise condominium building in Las Vegas, the Turnberry Place project set the design criteria for which others were to be judged. TA provided acoustical consulting for the space, including developing party wall, floor/ceiling constructions, and other sound isolation details to help limit the amount of noise transferred between units. In addition, TA also provided mechanical noise and vibration control recommendations to help reduce the noise from the plumbing, trash chutes, elevators and rooftop equipment.



**MARKET HEIGHTS APARTMENTS
San Francisco, California**

Located at the corner of the 101 and 280 interchange in San Francisco, this 46-unit infill low income apartment project not only had to address unit to unit sound and impact isolation, but also exterior to interior noise control. The 101/280 interchange is busy throughout the day creating noise levels that were louder than typically found in this area of town.

ADDITIONAL PROJECTS

- Alma Street – Palo Alto, CA
- Arts & Gurney vs. Monasterio – San Francisco, CA
- Bakery Lofts – Emeryville, CA
- Brittan Heights Condominiums – San Carlos, CA
- Castalia at Meadowmont – Chapel Hill, NC
- Decker vs. Lewis Homes – Vacaville, CA
- Embarcadero Lofts – San Francisco, CA
- Few Gardens Hope – Durham, NC
- Ford's Colony Condos – Williamsburg, VA
- Franke at Seaside Residence – Mt. Pleasant, SC
- Greenbridge Mixed-Use Complex – Chapel Hill, NC
- Hagood Reserve Condominiums – Charlotte, NC
- Highland at Briar Creek – Raleigh, NC
- International Hotel – San Francisco, CA
- Main Street at Enka Village – Asheville, NC
- Mills College, Dormitory – Oakland, CA
- MGM East – Las Vegas, NV
- Old Town Oakland – Oakland, CA
- Oriental Harbor Place – New Bern, NC
- Patrick Henry Place – Newport News, VA
- Plaza Apartments – San Francisco, CA
- RBC Plaza Condominiums – Raleigh, NC
- Stanley Courts – Castro Valley, CA
- Turtle Clay Condominiums – Wilmington, NC
- West Condominiums – Raleigh, NC
- Yerba Buena Commons – San Francisco, CA



ASIAN ART MUSEUM
San Francisco, California

Our work for this 140,000 square foot historical building encompasses the acoustic design (room acoustics, sound isolation, and HVAC noise control), developing audiovisual systems for the Gallery, Educational/Classroom and Conference Rooms, and audio/paging system designs for the guest and retail areas. Due to its historical designation, the museum was built in 1917, acoustical recommendations were coordinated so as not to disturb existing finishes.



ALBUQUERQUE MUSEUM OF ART AND HISTORY
Albuquerque, New Mexico

This project was a major expansion on the existing Albuquerque Museum, including a new event hall and lobby.

Thorburn Associates selected finishes for the new event hall and lobby areas to promote natural acoustics within the space. In addition, TA provided basic acoustical guidelines, noise control for the HVAC system and infrastructure design for the audiovisual system.



GREEN SQUARE COMPLEX
Raleigh, North Carolina

Provided Room Acoustics, Sound Isolation and Mechanical Noise and Vibration Consulting Services for the project. Designed the audiovisual systems, paging systems and sound masking systems as well as the radio and television studios for the facility. Green Square is a facility for the Department of Environment and Natural Resources containing the Museum of Natural Sciences in downtown Raleigh, N.C. The project is on track for LEED Gold certification.

ADDITIONAL PROJECTS

- Indianapolis Children's Museum – Indianapolis, IN
- Old Courthouse Museum – Sioux Falls, SD
- EcoTarium Exhibit Hall – Worcester, MA
- Oakland Zoo, Entrance Pavilion – Oakland, CA
- Smithsonian American History Flag Hall – Washington, DC
- Barrow Cultural Center – Barrow, AK
- University of North Carolina, Chapel Hill, Ackland Art Museum – Chapel Hill, NC
- Kirkpatrick Science & Air Space Museum – Oklahoma City, OK
- Farmington Museum – Farmington, NM
- San Diego Natural History Museum – San Diego, CA
- Bechtler Museum – Charlotte, NC
- Pro Rodeo Hall of Fame – Colorado Springs, CO
- Computer History Museum – Redwood City, CA
- Anchorage Museum, History & Art – Anchorage, AK
- Putnam Natural History Museum – Davenport, IA
- Smithsonian National Museum of Natural History – Washington, DC
- Children's Discovery Museum – San Jose, CA
- San Bernardino County Museum Dome – Redlands, CA



DEANZA PERFORMING ARTS CENTER
Cupertino, California

Thorburn Associates teamed with DES Architects to provide acoustic and audiovisual consulting for this state-of-the-art project featuring a 400-seat theater and adaptable, technologically advanced learning spaces. This building is in the process of achieving LEED-silver certification.

The 20,500 square foot theater was designed to accommodate lectures, dance and music, cinema and drama, and to facilitate rapid changeovers from one use to another.



BARTLETT COMMUNITY THEATRE
Anchorage, Alaska

This new Performing Arts Wing includes rehearsal rooms for band, choir, orchestra, and dance and a 400-seat auditorium with full production capabilities. The rehearsal rooms have audio systems for music recording and playback. The auditorium's sound system includes: capabilities for small presentations with no technical support using a plug and play automatic mixing feature. Larger productions use mixers located either in the control booth or at a mix position in the audience area. The system supports the future addition of front projection video and computer sources.

ADDITIONAL PROJECTS

- N.C. A&T State University, Robeson Theatre – Greensboro, NC
- Aladdin Hotel & Casino, Music Experience Theatre – Las Vegas, NV
- Archbishop Mitty High School, Theatre Renovation – San Jose, CA
- Atkins High School, Performing Arts Stage – Winston-Salem, NC
- Christopher High School, Auditorium – Gilroy, CA
- New Traditions Elementary School, Auditorium – San Francisco, CA
- Mt. Tabor High School, Performing Arts Center – Winston-Salem, NC
- Leroy Martin Middle School– Raleigh, NC
- Western Carolina University, Coulter Recital Hall – Cullowhee, NC
- N.C. A&T State University, Harrison Auditorium – Greensboro, NC
- Diamond High School, Auditorium – Anchorage, AK
- San Manual Band of Mission Indians Community Center – Highland, CA
- Monte Vista High School, Theatre – Danville, CA
- Reagan High School, Performing Arts Center – Winston-Salem, NC
- Crow Landing Middle School, Music/Performing Arts Room – Newman, CA
- Father Ryan High School, Theater – Nashville, TN
- Cumberland County High School, Auditorium – Fayetteville, NC
- Presentation High School, Theatre Building – San Jose, CA
- Bellevue High School, Performing Arts Building – Merced, CA



BLOOMINGDALE'S
Las Vegas, Nevada

Federated Department Stores Audiovisual System Design for Bloomingdale's Home Store in the Fashion Show Mall – Las Vegas, NV. The system includes a full range distributed audio system throughout the entire store. A video system in the Demonstration Kitchen provides image reinforcement and playback of cooking and product demonstrations. The store's music content is delivered by a state-of-the-art Internet based delivery system.

California State University at Hayward, University Bookstore
Hayward, California

David Bartlett Associates Developed acoustical details for a new 36,500 square foot, 3-story building immediately adjacent to the existing library. Focused on isolating noise from the HVAC systems and reviewed sound transmission between the retail and office spaces.

GRACE PARK
Morrisville, North Carolina

J Davis Architects Provided Acoustical Consulting Services for the Grace Park mixed use project. This was a new construction of a combination of concrete and steel construction on the first floor and wood frame construction on the second floor in a mixed use project called Grace Park containing six retail buildings. In the six buildings of the Grace Park complex, TA provided services limited to Sound Isolation recommendations between the condominium units and the retail sections of the project.

ADDITIONAL PROJECTS

- Annapolis Towne Center at Parole - Annapolis, MD
- Asian Art Museum - San Francisco, CA
- Atlantic Times Square - Monterey Park, CA
- Burdines - Aventura, FL
- Burdines - Dadeland Apparel - Miami, FL
- California State University at Fresno, Student Union - Fresno, CA
- Castalia at Meadowmont - Chapel Hill, NC
- Del Amo Mall - Torrance, CA
- Dubai Entertainment Center - Dubai, UAE
- Federated Department Stores - Various Cities, US
- Federated Narrowing - Various Locations, US
- Foothills Mall - Funderland - Tucson, AZ
- Gallo Winery, Atrium Audio - Modesto, CA
- Great Mall of the Bay Area - Milpitas, CA
- Jewelry Mart Lobby - San Francisco, CA
- Macy's East - Manhasset, NY
- Macy's East Garden State Plaza - Paramus, NJ
- Macy's West - Antioch, CA
- Macy's West - Rancho Cucamonga, CA
- Main Street at Enka Village - Asheville, NC
- Microsoft at the Westfield Centre - San Francisco, CA
- North Hills Shopping Center, Target - Raleigh, NC
- Patrick Henry Place - Newport News, VA
- Premier Retail Network - San Francisco, CA
- Quantum - Milpitas, CA
- Safeway Lot Line Noise Review - Del Ray Oaks, CA
- Studio D - San Francisco, CA
- Villages Golf & Country Club - San Jose, CA
- Westside Pavilion - Los Angeles, CA



MALL OF AMERICA, CAMP SNOOPY
Bloomington, Minnesota

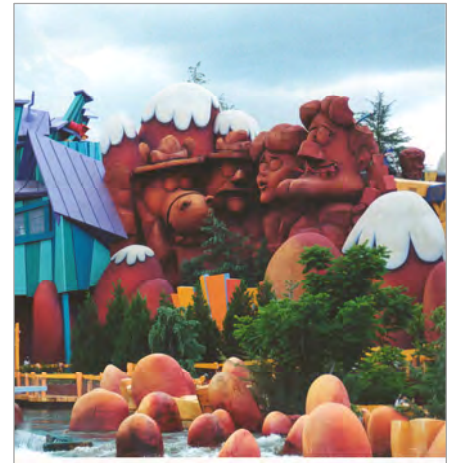
One of the world's largest indoor theme parks, Camp Snoopy is an excellent example of traditional acoustic and audiovisual design requirements being implemented in diverse ways to create a unique but buildable and cost-effective project. For the original design, one of our founding principals was responsible for the complete acoustical and audiovisual systems design. Twelve years after that initial work, the new owners of the park, Cedar Fair Entertainment Company, asked TA to review the spray on acoustical treatment substituted during construction.



GATEWAY ARCH
Saint Louis, Missouri

Located at the Jefferson National Expansion Memorial, the Gateway Arch is a historical tribute to America's westward expansion. Thorburn Associates was contacted about designing a completely new audio system to replace the existing one located inside the Arch. After 30 years of service, its performance was lacking due to obsolete components and overall wear and tear.

The end result of this project was a system which performs exactly the way the client expected and enhances the guests' visit to this popular tourist attraction.



UNIVERSAL'S ISLANDS OF ADVENTURE
Orlando, Florida

Both Toon Lagoon and the Adventures of Spiderman projects required creative acoustical design efforts. For Spiderman, we were tasked to keep the show action noise and sound effects contained from one scene to the next. For Toon Lagoon we worked with Universal Creative to develop the track list and the audio and video infrastructure requirements for the park. These themed attractions are located inside the Universal Studios Islands of Adventure Park, one of the most popular theme parks in America.

ADDITIONAL PROJECTS

- Butterfly Kingdom IMAX – Hilton Head Island, SC
- Chicago Navy Pier Theater – Chicago, IL
- Chiryu Street Scene – Chiryu, Japan
- Coca-Cola Freedom Pavilion – Tokyo, Japan
- Coca-Cola Olympic City – Atlanta, GA
- COSI on the Riverfront – Columbus, OH
- Fernbank Science Center – Vantaa, Finland
- Hard Rock Nights in White Satin – Myrtle Beach, SC
- Harvey's Kanesville Queen Riverboat Casino – Council Bluffs, IA
- Harvey's Casino – South Lake Tahoe, NV
- Hearst Castle – San Simeon, CA
- Kowloon Club – Hong Kong, China
- Liberty ShowMax Theater – New York, NY
- Lotte Sky Park Plaza – Pusan, Korea
- Lotte World – Pusan, Korea
- Mystic Marine Aquarium – Mystic, CT
- National Museum of Natural Sciences 3D Theater – Taichung, Taiwan
- O2b Kids! – Gainesville, FL
- Universal Studios, The Adventures of Spiderman – Orlando, FL



**CONCORD/MARTINEZ BART
Concord, California**

TA evaluated the Bay Area Rapid Transit station of North Concord / Martinez, CA for base design, reviewed the installation and suggested methods of improving the existing public address system to determine ways to make the audio more intelligible.

**MULTIMODAL TRANSPORTATION
CENTER**

Normal, Illinois

TA provided audiovisual consulting services for the Town of Normal's new Multimodal Transportation Center. The Center will be comprised of a transit area for trains, buses and taxis. The Multimodal Center is a "green" project and is being designed for LEED Certification.

**MILBRAE BART
Milbrae, California**

TA provided acoustical site measurements and modeling of the public announcement system. We created a computer model of loudspeaker placement and characteristics, coverage mapping for the platform and concourse and frequency response mapping for these two areas.

ADDITIONAL PROJECTS

- Colma BART Station - Colma, CA
- Edwards Air Force Base - Mojave, CA
- Few Gardens Hope VI Site 2 - Durham, NC
- HP San Jose Airport Hanger - San Jose, CA
- RDU Airport Operation Center - Raleigh-Durham, NC
- RDU General Aviation Terminal - Raleigh-Durham, NC
- Richmond International Airport Terminal Expansion - Richmond, VA
- San Jose International Airport Gate C-12 - San Jose, CA
- Santa Rosa Memorial Hospital Helipad - Santa Rosa, CA
- Space Shuttle Blast Berms - Cape Canaveral, FL
- SFO BART Terminals - San Francisco, CA



**NEW LONDON PRESBYTERIAN
New London, Pennsylvania**

Provided audiovisual system design, acoustical analysis/recommendations, and developed criteria for a lighting design scheme. New London is one of the country's oldest congregations, dating back to 1726.

**UNITED METHODIST CHURCH
Charlotte, North Carolina**

Design of speech/music reinforcement and recording/distribution systems augmented with large format visual display for a new 1200-seat sanctuary.

**ST. JOHN'S EPISCOPAL
Johnson City, Tennessee**

Recommendations for acoustical finish materials to control reverberation and echoes while still providing the desired reverberation times for the sanctuary in keeping with the traditions of a 600-seat liturgical church with a pipe organ.

ADDITIONAL PROJECTS

- University Community Presbyterian Church – Fairbanks, AK
- O’Gorman High School, Chapel – Sioux Falls, SD
- Faith Lutheran Church – Pleasant Hill, CA
- Fellowship Hall – Wilmington, NC
- Calvary Baptist Church – Wilkesboro, NC
- Christ Lutheran Church – Santa Clara, CA
- First Nazareth Baptist Church – Columbia, SC
- Paw Creek Presbyterian Church – Charlotte, NC
- Long View Center – Raleigh, NC
- First Baptist Church – Mt. Pleasant, SC
- Temple Sinai – Oakland, CA
- St. Patrick’s Church – Anchorage, AK
- Hinshaw Street Baptist Church – Wilkesboro, NC
- First Unitarian Church – San Jose, CA
- Woodmont United Methodist – Reidsville, NC
- Hillsborough United Methodist – Charlotte, NC
- Starmount Presbyterian Church – Greensboro, NC
- Campbell Univ, Butler Chapel – Buies Creek, NC
- Divine Savior Catholic Church – Orangevale, CA
- First Baptist Family Life Center – Raleigh, NC
- Shades Mountain Church – Jefferson County, AL
- Sacramento SDA Church – Sacramento, CA
- Community Chapel – Williamsburg, VA
- Christ Community Church of Milpitas, Nurturing Life Center – Milpitas, CA
- Holy Trinity Lutheran Church – Chapel Hill, NC
- First United Methodist Church – Santa Rosa, CA
- St. Anne’s Church – Memphis, TN
- First Christian Church – Princeton, WV
- First Assembly of God, University Parkway – Winston-Salem, NC
- Real Life Church – Los Angeles, CA
- University Community Presbyterian Church – Fairbanks, AK
- St. Dominic Covenant – San Rafael, CA
- St. Andrew’s by the Sea Episcopal Church – Nags Head, NC
- Cathedral of the Immaculate Conception – Memphis
- Lake Forest Community Church – Huntersville, NC
- St. Francis of Assisi – San Jose, CA
- Bay Leaf Baptist Church – Wake County, NC
- St. Mary’s Catholic Center – San Francisco, CA

THE COMPANY

Thorburn Associates (TA) is a full service Acoustical, Technology, and Lighting Design and Engineering firm.

TA was founded in 1992 by principals who have consulted on and managed more than 2000 projects.

We provide a full range of services which allow the client, architect, or end-user a single point of contact during design and construction.

Our staff is comfortable providing traditional design or design/build services and is experienced with the partnering process.

AWARDS

TA principals have received four awards from the International Communications Industries Association:

- Professional Education and Training Committee Award, 1996-97
- First Place - Systems and Facilities Design, 1991, project: CSA Audiovisual Presentation Studio
- Award for Systems and Facilities Design, 1990, project: City of Fremont's Council Chambers Audiovisual Upgrade
- Educator of the Year, 2011

Themed Entertainment Association THEA Outstanding Achievement Award:

- Paramount's King's Island "Tomb Raider: The Ride" 2002
- Universal Studios "Amazing Adventures of Spiderman," 2000
- Universal Studios "Islands of Adventure," 2000
- Columbus Center of Science and Technology (COSI), audio, video and control system engineering services and acoustical design 2000

Building of America Award, 2007, Mountain View Senior Center

Northern California Region's Most Important New Construction/ Renovation, 2007, San Francisco GSA Federal Office Building

AIA Winner of Architecture and Excellence Award, 2007, Plaza Apartments

PHILOSOPHY

At TA we are both sensologists and technologists: Acoustic and lighting designs affect the senses and how someone feels within a space; Audiovisual, structured cabling, and security designs are technology-oriented and require attention to detail as well as current knowledge of the industry and where it is headed.

We are dedicated to doing whatever it takes to help make your project a success.

- Our consultants stay up-to-date on the latest technologies and develop in-house procedures to insure the quality of our work, such as custom computer programs to improve efficiency and provide quality control for redundant calculations.
- Extensive laboratory and electronic test equipment allows us to efficiently document all aspects of design.
- Simulations allow you to "hear" or "see" how your facility will look and sound before it is built.
- Our design packages are complete and require minimal clarification during the construction phase.
- Experience with the construction process provides the practical background experience necessary to recommend solutions that are both innovative and effective.
- Our level of project detail allows for true competitive bidding from installation contractors.
- Our principals take an active role throughout a project so you, our clients, get the level of quality you deserve and require.

From design through construction, TA has the experience, knowledge and technology to make your project a success.

GSA CONTRACTS

- Schedule 58: Professional Audiovisual, Telecommunications and Security Solutions
- Schedule 66: Scientific Equipment and Services

FACILITY TYPES

- Commercial and Retail Buildings
- Conference Rooms
- Educational Facilities
- Hospitals and Medical Facilities
- Hotels and Casinos
- Large Format Theatres
- Libraries and Community Centers
- Office Buildings, Research Facilities
- Places of Worship
- Presentation Facilities
- Recording, Broadcast and Post-Production Studios
- Single and Multi-Family Housing
- Training and Board Rooms
- Theme Parks and Destination Resorts

CONSULTING SERVICES

- Acoustical Engineering (Room Acoustics, Sound Isolation, Mechanical Noise / Vibration Control, Environmental Noise)
- Technology System Design (Audiovisual, Structured Cabling, Security)
- Lighting Design (Commercial, Leisure, Day-lighting, Energy Analysis)
- Expert Testimony

WBE/SBE/HUB

- Certified as a Small Business (SBE) with the State of California and the San Francisco Redevelopment Agency
- Registered as a Historically Underutilized Business with the State of North Carolina (HUB)
- Certified as a Women Owned Business (WBE) with the California Public Utilities Commission

WEB ADDRESS

www.TA-Inc.com

email to: JustAsk@TA-Inc.com



The following acoustical, technology (audiovisual, structured cabling, security), and lighting design issues are typically found or required in our work:

Architectural Room Acoustics

- Conceptual and Detailed Architectural Acoustic Design
- Acoustic Analysis of Existing Facilities
- Speech Intelligibility
- Reverberation and Clarity of Sound
- Reflection, Diffusion, and Absorption of Sound
- Aspect Ratios to Promote Excellent Room Acoustics
- Room Finishes and Furnishings
- Room Modeling
- LEED Analysis and Support

Sound Isolation

- Speech Privacy within Rooms
- Floor/Ceiling and Wall Details to Prevent Noise Transmission
- Window, Door Selections to meet Sound Isolation Criteria
- Mitigation of Interior and Exterior Noise to Reduce Transmission to Sensitive Spaces

Mechanical Noise and Vibration

- Vibration Isolation
- Industrial Noise Control
- Mechanical Systems, Plumbing Systems
- Ventilation Systems - Duct Rumble, Diffuser Hiss, Rooftop Units
- Control of Central Plant, Co-Generation, and Emergency Generator Noise
- Monitoring of Construction Related Noise and Vibration

Environmental Noise Abatement

- Traffic Noise Studies
- Highway, Aircraft, and Railroad Noise
- Interior and Exterior Noise Surveys, Data Analysis, and Reporting
- Community Noise Monitoring and Report

Audiovisual System Engineering

- Sound System Design
- Video System Design, Video Information Systems
- Foreground and Background Music Systems
- Video and Film Projection Systems
- Facility Master Plans for Growth and Expansion
- Equipment Evaluation, System Adjustment
- Control System Design and Programming
- Distance Learning Systems
- Room Environment Control
- Design of ADA Technology
- Digital Signage and Video Walls

Lighting System Design

- Concept Development
- Luminaire Layouts and Specifications
- Standard and Specialty Control System Design and Programming
- Budgeting and Cost Tracking
- Bidding and Negotiation
- Mock-Ups
- 3-D Renderings and Detail Sketches
- Energy Optimization
- Sustainable Design
- LEED and ASHRAE Support
- Daylighting and Daylight Harvesting
- Installation Administration
- Theatre Systems Evaluation and Design

Security System Design

- Vulnerability Assessments
- Feasibility Studies
- Master Planning
- Standards Review, Development
- Design and Engineering
- Construction Administration

Structured Cabling Design/Information Technology

- Initial structured cabling system design
- Telecommunications Room Space Allocations
- Power requirements/Conduit and Junction Boxes
- Structured Cabling Systems Sections and Elevations
- Equipment Mounting Requirements
- Equipment Space Coordination
- Wired and Wireless IT systems
- Building Integration Technology
- Web-enabled Control Systems

Construction Administration

- Sound and Vibration Testing
- Bid Management/Contractor Selection
- Cost/Change Control
- On-site Observation/Quality Control
- Schedule Management
- Submittal Reviews/Requests for Information
- Performance Testing/Training

Expert Testimony

- Construction Defects
- Sound Isolation
- Traffic Noise



EDUCATION

Michigan Technological University
B.S. Scientific and Technical
Communications

Major: Computer Science and Business
Administration

Board Room Design Course, National
Systems Contractors Association, 1994

A/V Systems and Equipment course,
International Communications Industries
Association (ICIA), 1998

Essentials of the A/V Industry course,
International Communications Industries
Association (ICIA), 1998

INDUSTRY CERTIFICATIONS

USGBC: LEED AP
InfoComm: CTS

PROFESSIONAL SOCIETIES

- American Institute of Architects,
Affiliate Member
- Themed Entertainment Association
- Society for Marketing Professional
Services
- InfoComm International
- Vistage International

AREAS OF EXPERTISE

Ms. Thorburn practices Acoustical and
Technology System consulting in the
following areas:

- project management
- specification preparation
- technology needs analysis
- architectural acoustics and sound
isolation
- mechanical noise and vibration control

Ms. Thorburn has served as a project
manager and consultant on numerous
projects. Her background covers Multimedia
Presentation Requirements, Video and
Teleconferencing, Computer Programming,
Technical Communications, and Project and
Business Management.

Ms. Thorburn's communication skills allow
her to translate technical data into a format
that is both usable and understandable by
the client and the rest of the design team.

During the course of a project, she typically
manages the overall coordination of the
design process and all related procedural
information. It is her responsibility to make
sure that all project milestones are achieved
on time. She is also responsible for ensuring
that the architect and client are kept up to
date on the project schedule and facilitates
communication between the members of
the design team.

Her experience with Computer Programming
allows her to develop both efficient and cost
effective technology systems and multimedia
facilities.

PUBLICATIONS and LECTURES

Ms. Thorburn frequently writes technical
articles on both acoustical design and
technology system design issues.

Published articles include: "China 2020: How
China's Growth and Future Will Impact
Business Development in the A/E/C Industry"
for the *SMPS Foundation* and *The Marketer*;
"Front versus Rear Projection Issues" in
Sound and Communications magazine,
"Acoustical Terminology" in *Health Facilities
Management*, and "Winning the Olympic
City Acoustical Event" in *Teleconferencing
Business*.

PROFESSIONAL EXPERIENCE

Selected project experience includes:

- Adeline Training Facility – Oakland, CA
- Alta Bates Medical Center Conference
and Education Center – Oakland, CA
- Archbishop Mitty High School – San
Jose, CA
- Calaveras County Courthouse –
Calaveras, CA
- Cesar Chavez Education Center –
Oakland, CA
- Contra Costa County Fire Protection –
Contra Costa, CA
- Convent Gathering Space – San Rafael,
CA
- Guilford N. High School – Richmond, CA
- HP Facilities Services – Palo Alto, CA
- HP Executive Briefing Center –
Cupertino, CA
- Discovery Bay Homeowners Association
– Discovery Bay, CA
- iWERKS Cinetropolis – Chiryu, Japan
- Maricopa County Community College,
Open Ended Acoustics Agreement –
Maricopa, CA
- North Carolina State University, Open
Ended AV Agreement – Raleigh, NC
- On Lok Larkin Senior Living – San
Francisco, CA
- Prospect Hills, Mills College – Oakland,
CA
- SAP Technology Inc., Cafeteria – Palo
Alto, CA
- SAP Technology Inc., Executive Briefing
Center – Palo Alto, CA
- Splinter Residence – Granite Bay, CA
- The Learning Company Headquarters –
Fremont, CA
- Regional Director's Conference Room –
Sacramento, CA
- University of North Carolina at Chapel
Hill, School of Pharmacy – Chapel Hill,
NC





EDUCATION

Michigan Technological University

B.S. Electrical Engineering
Major: Electroacoustics

B.S. Liberal Arts
Major: Theatre and Lighting Design

PROFESSIONAL LICENSES

Mr. Thorburn is a registered Engineer in the following states:

AL:	P.E. 32355-E	MN:	P.E. 21338
AZ:	P.E. 34990	NC:	P.E. 25217
CA:	E.E. 13159	NM:	P.E. 20904
DC:	P.E. 906609	NV:	E.E. 021780
FL:	P.E. 73362	OH:	E.E. 65890
GA:	P.E. 036527	OR:	P.E. 669501
IL:	062-054816	SC:	P.E. 21186
IN:	P.E. 11200082	TX:	P.E. 110805
KY:	P.E. 28054	VA:	P.E. 0402050271
MO:	P.E. 2012000059	WA:	P.E. 37191
MI:	P.E. 46612	WV:	P.E. 19443

INDUSTRY CERTIFICATIONS

ICIA: Certified Technology Specialist,
Design and Installation
USGBC: LEED AP

PROFESSIONAL SOCIETIES

- Acoustical Society of America
- American Institute of Architects
- Audio Engineering Society
- InfoCOMM
- Institute of Electrical and Electronic Engineers
- National Council Acoustical Consultants
- National Society of Professional Engineers

AREAS OF EXPERTISE

Mr. Thorburn practices acoustical consulting and audiovisual system design in the following areas:

- Architectural acoustics
- Mechanical noise control
- Audiovisual, sound and control systems
- Video and teleconference systems
- Security

Mr. Thorburn, as a founder of Thorburn Associates, has served as project manager and consultant on over 2900 different projects.

He is active in projects that require both acoustical engineering and technology system design services. His dual degrees from Michigan Technological University in theatre design and electrical engineering enable him to coordinate technical requirements involved in the construction bid process with practical issues required by the end-users.

His projects have included performing arts centers, recording facilities, entertainment facilities, presentation and conference facilities, government and university buildings, film and video studios, luxury hotels, libraries, churches, and medical facilities.

Mr. Thorburn was responsible for developing the International Communications Industries Association's Design Consultant's Council.

He regularly attends conferences, trade shows, and product exhibitions that allow him to recommend the most cost-effective yet functional products to meet his client's needs. Manufacturers often ask for his input on the 'next generation' of system components.

PUBLICATIONS and LECTURES

Mr. Thorburn frequently teaches seminars and lectures on both acoustical consulting and audiovisual system design. Recent topics include:

- Planning for Classroom Technology
- Presentation Facilities Design
- Surviving the Construction Process
- Acoustics in Architecture

He is also a regular contributor to industry publication, *Systems Contractor News*.

PROFESSIONAL EXPERIENCE

Projects he has managed and consulted on include:

- Arizona Mills IMAX Theatre – Tucson, AZ
- Cisco Systems Executive Briefing Center, Santa Clara, CA
- Cold Canyon Landfill/Sort Facility, San Luis Obispo, CA
- Dempsey E. Benton & E.M. Johnson Water Treatment Plant – Wake County, NC
- Durham County Justice Building – Durham, NC
- Federated Department Stores – Multiple Locations
- Harvey's Resort Hotel/Casino, South Lake Tahoe, NV
- Hewlett Packard Sound Masking – Cupertino, CA
- Kaiser - Geary Campus Medical Office Building, San Francisco, CA
- Knott's Camp Snoopy Amusement Park, Bloomington, MN
- Lockheed Martin Aeronautics Company – Palmdale, CA
- Lotte World – Seoul, Korea
- Minnesota Zoo 3-D Theatre, Minneapolis, MN
- New London Presbyterian Church – New London, PA
- Nissan North America, Corporate Headquarters – Franklin, TN
- UNC, Chapel Hill, Dental Science Building – Chapel Hill, NC
- Sioux Falls Historic Courthouse and Law Library, Sioux Falls, S.D.
- Stanford University - Graduate School of Business, Stanford, CA
- Sutter Medical Center, Sacramento – Sacramento, CA
- Wachovia Bank – Charlotte, NC
- Wilmington Convention Center – Wilmington, NC
- University of Illinois, Various Projects – Urbana, IL





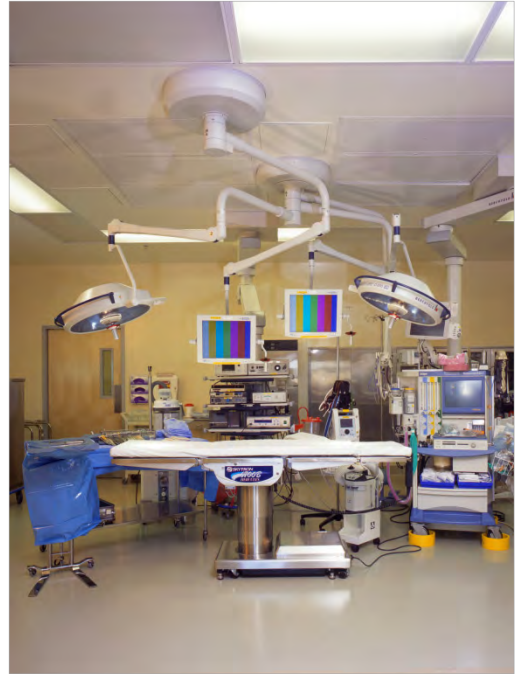
GREENBRIDGE

MIXED USE



CAMP SNOOPY

LEISURE



KAISER HOSPITAL

HEALTHCARE



BARTLETT

MUNICIPAL



BAYLOR SCHOOL OF BUSINESS

EDUCATION



ST. JOHN'S CHURCH

WORSHIP



HOTEL RAY

HOSPITALITY



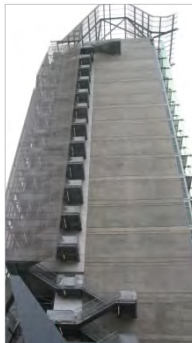
MACY'S

RETAIL



TURNBERRY

HOUSING



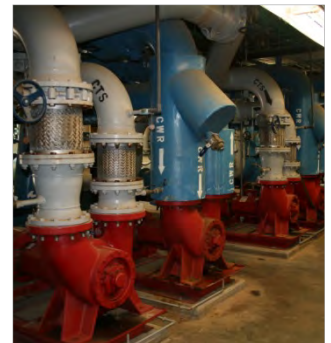
SF GSA BUILDING

GOVERNMENT



DUKE ENERGY TOWER

CORPORATE



NCSU CATES STEAM PLANT

INDUSTRIAL

SAN FRANCISCO

LOS ANGELES

ORLANDO

CHARLOTTE

RALEIGH-DURHAM



THORBURN ASSOCIATES
ACOUSTICAL, TECHNOLOGY, AND LIGHTING DESIGN

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