



ACOUSTICAL SOCIETY OF AMERICA STUDENT DESIGN COMPETITION 2011

PRESENTED BY: THE TECHNICAL COMMITTEE ON ARCHITECTURAL
ACOUSTICS, THE ROBERT BRADFORD NEWMAN STUDENT AWARD
FUND, AND THE NATIONAL COUNCIL OF ACOUSTICAL
CONSULTANTS

ANNOUNCEMENT

The Technical Committee on Architectural Acoustics with support from the Robert Bradford Newman Student Award Fund (<http://www.newmanfund.org/>) and the National Council of Acoustical Consultants (<http://www.ncac.com/>) is sponsoring a student design competition to be displayed and judged at the 161st meeting of the Acoustical Society of America in Seattle, Washington the week of May 23, 2011.

ENTRY REQUIREMENTS

Entries may be submitted by individual students or teams of a maximum of three students. Undergraduate and graduate students are encouraged to participate. Teams comprised of students from different institutions are welcome. Teams comprised of students from different disciplines are encouraged. A faculty sponsor is required. Meeting attendance is not required to participate in the competition.

REGISTRATION

Teams must register by April 1, 2011, by e-mail to Bob Coffeen (coffeen@ku.edu) and Andy Miller (amiller@baiaustin.com). In the e-mail, indicate your name, your school, the name of your teammates (if any) and their school(s) (if different than your school), the name of your faculty advisor and his or her school, and indicate the student participant who will serve as primary contact for the team. Provide e-mail addresses for all participants and advisors. The primary contact will serve as a vital link for receiving information and updates on the competition. This may include answers to frequently asked questions and changes to information presented in this bulletin.

PRESENTATION FORMAT

Entries shall be poster presentations. Entries shall be presented on up to three (3) separate display boards with maximum dimensions of 22 x 28 inches (56 x 71 cm) per board. In addition to the poster submission, a digital version of each entry shall be e-mailed to the competition co-chairs. Digital file format must be .pdf or .jpeg. The competition language is English.

The font size, amount of narrative text, and number of graphs should be appropriate for poster viewing. A thoughtful viewing of the presentation should be possible in 4 to 6 minutes. Additional design details, calculations or other documentation may not be attached to the boards. The judges will not review such information. Presentation boards should be suitable for wall or easel display. Means of attachment to the wall or easel will be provided by the competition (submissions need not include Velcro or pins). Please denote the orientation and arrangement for the presentation boards either on the rear of the boards or on an included sheet.

SUBMISSION PROCEDURE

For entry in the competition, presentation boards must be received no later than **Wednesday, May 18, 2011** at the following address:

Sparling
c/o Michael Yantis
720 Olive Way
Suite 1400
Seattle, Washington 98101-1853

Students attending the meeting may hand-deliver their entries. Entries delivered by students must be available at the meeting hotel no later than **8:30 am on Tuesday, May 24, 2011**. Students opting to deliver entries to the meeting are required to notify the competition co-chairs by Wednesday, May 18, 2011.

Affix an opaque envelope to the back of EACH display board. Within each envelope, enclose a loose sheet with the names, addresses, phone numbers, email addresses, school affiliations, and advisor of all participating team members. Please indicate summer e-mail and mailing addresses for all team members. Team member identifying information (names, addresses, etc.) will not be revealed to the competition judges.

Please package display boards securely to prevent damage during shipping.

TECHNICAL REQUIREMENTS

Design competition entries should emphasize the general building acoustics design (room acoustics, noise control, and acoustic isolation). The salon, outdoor performance pavilion, and green room are of primary importance. Other programmed building spaces must be included in the overall design, and they may be similarly considered at the discretion of each team in the interest of design completeness. Presentations may include plan and section drawings, renderings, acoustical calculations, acoustical criteria, and details of construction relating to acoustics and noise control as necessary to describe and support the design. If computer programs are used in the design, graphics and data from the programs may be displayed.

Electroacoustic system (sound reinforcement system) design is outside of the competition scope and is not required.

While the design of the building mechanical and electrical systems is very important to the acoustical success of a project, it is not necessary to indicate the details of the mechanical and electrical system noise control. However, teams may wish to indicate noise criteria, along with general noise and vibration control procedures relating to air handling, electrical transformers, theatrical lighting dimmers, etc.

REFERENCES

Useful design references include:

Concert Halls and Opera Houses: Music, Acoustics, and Architecture, Leo Beranek, 2nd Edition, 2002, Springer-Verlag

Halls for Music Performance: Two Decades of Experience, 1962-1982, Acoustical Society of America

Halls for Music Performance: Another Two Decades of Experience, 1982-2002, Acoustical Society of America

Performing Arts Spaces, Paul Scarbrough and Robert Campbell, Time-Saver Standards for Building Types

DESIGN SCENARIO

A wealthy patron of the fine arts has decided to build an addition to her home. She has asked for a building to host performers and concerts. She is a fan of several varieties of chamber music, and, as a supporter of Chamber Music America, she intends to invite friends she has made at benefits and in green rooms over the years to temporarily reside and perform in her venue. Discussions with the patron have revealed the following details about the program requirements:

Chamber music performance salon (acoustic design of this space will be weighted heavily)

- A 220 seat audience area on the main level
- A 60-seat mezzanine or balcony level that will serve primarily audience, but may also occasionally serve vocalists and vocal ensembles; all seats must be movable in the mezzanine
- Stage, sized to accommodate two grand pianos with pianists, a grand piano with a string quartet accompaniment, or a big band ensemble of up to 12 members, and visually connected to the outdoors, as the patron wishes for an outdoor view to serve as a backdrop for early evening performances
- Adjustable-height over-stage reflector(s)
- 50 square foot (4.7 square meter) area for recording and lighting control (Recording system and lighting system design will not be judged; showing the location of the area is the intent.)

Outdoor music performance pavilion (acoustic design of this space will be weighted heavily)

- The stage surface must be continuous from inside of the music performance salon to the outdoor music performance pavilion.
- 1200 seat covered audience area; the covered area is green (grass), and all seating is loose (lawn chairs brought by patrons)
- Outdoor stage sized to accommodate chamber music and jazz ensembles

900 square foot (83.6 square meter) multi-purpose green room (acoustic design of this space will be weighted heavily)

- The green room uses include speeches, banquets, pre- and post-performance meet-and-greets, private performances, parties, and rehearsals.
- It is possible that a musical group will warm up in the Green Room while another performance is in progress in the salon.

Piano storage room(s)

- Must be an independent room(s) for climate control (it cannot be a door-less opening between the stage and storage area).
- Must be accessible to the stage
- Size and show the area – it must accommodate two Steinway & Sons grand pianos.

300 square foot (27.9 square meter) instrument storage and repair room

200 square foot (18.6 square meter) dressing and make-up room

Guest house for visiting musicians (acoustic design of this area will be weighted some)

- The guest house must be attached to the patron's home, as indicated in the site image below.
- The guest house must be attached to the green room.
- The guest house must consist of six sleeping rooms.
 - o Each sleeping room will serve as sleeping quarters, practice rooms, and dressing rooms, so plan acoustic separation accordingly. One guest may be sleeping while another is practicing.
 - o Each guest room must have its own bathroom. (Bathroom design will not be judged; acoustic separation of the bathrooms from other noise-sensitive spaces is key.)

Lobby (general acoustical features will be judged)

- Must be designed to serve both the indoor performance salon and the outdoor performance pavilion, so size it accordingly.

Ticket booth

- 90 square feet (8.4 square meters)

Mechanical, electrical, and auxiliary equipment rooms

- 15% of total indoor floor area

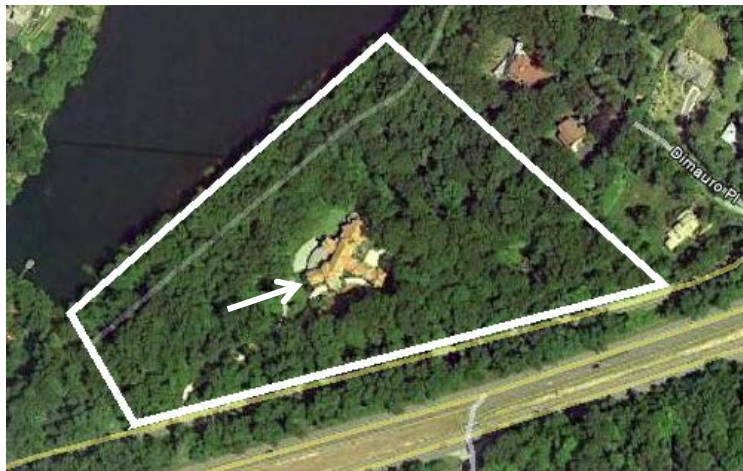
Vestibules and Circulation

- Include as required.

Emergency generator, 60 square foot (5.6 square meter) pad

- It cycles on for 15 minutes every Friday at 2 p.m.
- It may be located anywhere on the site.
- It must be vented to the outdoors to prevent overheating

The site is centered at 41° 6'51.69"N Latitude, 73°50'8.82"W Longitude, in Briarcliff Manor, New York. The outline of the entire site is identified by the bold, white line in the image below. Note the locations of other private homes neighboring the site. The white arrow indicates the side of the home that must be attached to the addition.



JUDGING AND AWARDS

The submitted designs will be judged by a panel of practicing design professionals. The panel will include acoustics consultants and may include architects.

Entries will be evaluated on technical merit, design vision, adherence to the design scenario and program requirements, and effectiveness of presentation.

An award of \$1,250 will be made to the individual or team whose entry is chosen as "First Honors". Commendation awards of \$700 will be made to four other outstanding entries. Awards are made possible through a grant from the Wenger Foundation and by the Newman Student Award Fund.

REQUESTS FOR INFORMATION

Please direct questions to Bob Coffeen and Andy Miller via email. Note that general questions about the design scenario or competition will include a reply to all registered teams.

COMPETITION TIMELINE SUMMARY

A summary of the competition timeline is presented below, for convenience.

December 2010: Release of announcement and design scenario

April 1, 2011: Registration Deadline

Wednesday, May 18, 2011: Entry Receipt Deadline; Notification of Personal Delivery Deadline;

Monday, May 23, 2011: Begin 161st Meeting of the ASA in Seattle, Washington

Tuesday, May 24, 2011, 8:30 a.m.: Personal Delivery Entry Receipt Deadline

STUDENT DESIGN COMPETITION CO-CHAIRS

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