

# FABRIC IN ARCHITECTURE

2012-2013 ACSA/FSA Student Design Competition

## RESORT HOTEL



# INTRODUCTION

The Association of Collegiate Schools of Architecture (ACSA) is pleased to announce a fabric in architecture student competition for the 2012-2013 academic year. Administered by the Association of Collegiate Schools of Architecture (ACSA) and sponsored by the Fabric Structures Association (FSA), the program is intended to challenge students, working individually or in teams, to explore a variety of design issues related to the use of fabric in design. Fabric should be used as a primary material with special emphasis placed on innovation in design. Fabric offers students great benefits in this project, as it is ideal for use outside, inside, and on exterior surfaces without sacrificing flexibility, aesthetic lightness, and protection from the environment.

## THE CHALLENGE

The 2012-2013 Fabric in Architecture Student Design Competition will offer architecture students the opportunity to compete in a fabric structure design competition. Students are invited to investigate how fabric structures can be integrated in a resort hotel. This unique competition seeks original ideas about scope, scale and use of fabric structures.

## CRITERIA FOR JUDGING

Criteria for the judging of submissions will include: fabric as a primary material, creative and innovative use of fabric in the design solution, successful response of the design to its surrounding context, and successful response to basic architectural concepts such as human activity needs, structural integrity, and coherence of architectural vocabulary.

## COMPETITION ORGANIZERS

### ADMINISTRATIVE ORGANIZATION

The Association of Collegiate Schools of Architecture (ACSA) is a nonprofit, membership association founded in 1912 to advance the quality of architectural education. The school membership in ACSA has grown from 10 charter members to over 250 schools in several membership categories. These include full membership for all accredited programs in the United States and government-sanctioned schools in Canada, candidate membership for schools seeking accreditation, and affiliate membership for schools for two-year and international programs. Through these schools, over 5,000 architecture faculty are represented. In addition, over 500 supporting members composed of architecture firms, product associations and individuals add to the breadth of interest and support of ACSA goals. ACSA provides a major forum for ideas on the leading edge of architectural thought. Issues that will affect the architectural profession in the future are being examined today in ACSA member schools.

### SPONSOR

Fabric Structures Association (FSA) is a division of the Industrial Fabrics Association International (IFAI). Our purpose is to promote the use and growth of fabric structures and to represent the interests and concerns of the fabric structures industry in the Americas. Types of fabric structures include air-inflated, air-supported, cable net, frame-supported fabric, geodesic dome, grid shell, tensegrity (cable-and-strut) and tensile (or tension) structures.

# THE RESORT HOTEL

The challenge is to develop a design for exterior fabric structures at a resort hotel. The project will concentrate on formulating specific thoughtful concepts and carrying these ideas to a detailed design. The project should be developed with an integrative approach to the use of fabric. Participants will develop a selected physical area of the resort in greater detail with consideration given to the potential environmental affects.

Projects should be designed in a socially and environmentally responsible manner. Additionally, the resort hotel should respond to:

- Location (suburban, downtown, desert...)
- Climate (sun, wind, light and water)
- Culture (patterns of interaction rising from human occupation of place)

Through plans, sections, elevations, and rendered perspectives, participants should clearly demonstrate the integration of fabric within the overall resort design. Throughout the project, the use of fabric should take advantage of its unique properties and characteristics.



IMAGE: Kirkwood Community College Hotel. Cedar Rapids, IA. Ruth Fox, OPN Architects

# PROGRAM

The general program is outlined below. The program should guide development of a rich sequence of spaces and uses. The building is not to exceed 5 stories.

## GUEST ROOMS

100 Guest Rooms @400 sqft each	40,000 sqft
Circulation, Linen, Vending, & Storage	16,000 sqft
<i>Subtotal</i>	<i>56,000 sqft</i>

## PUBLIC FACILITIES

*Participants may consider the possibility to join the following spaces, allowing for a multi-story, grand space to emerge.*

Main Lobby	2,200 sqft
Seating Area	600 sqft
Front Desk	600 sqft
Baggage Storage	200 sqft
Restrooms	400 sqft
Retail Shops	1,000 sqft
<i>Subtotal</i>	<i>5,000 sqft</i>

## DINING / LOUNGE

Restaurant	1,300 sqft
Exterior and/or Interior Dining	1,300 sqft
Cocktail lounge	1,000 sqft
Restrooms	400 sqft
Kitchen, storage and offices	1,400 sqft
<i>Subtotal</i>	<i>5,400 sqft</i>

## GUEST AMENITIES / RECREATION AREAS

Spa and Fitness Facilities (protected from environmental effects)	5,000 sqft
Pool and Deck (protected from environmental effects)	5,000 sqft
<i>Subtotal</i>	<i>10,000 sqft</i>

<b>TOTAL</b>	<b>76,400 sqft</b>
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IMAGE: UCF CITF Pool Complex. Orlando, FL. James Moore, Schenkel Shultz



# SITE

The faculty sponsor and/or student(s) may choose the resort site. The site should be seen as a “destination,” an attractive location for visitors.

## CODE INFORMATION

Refer to the International Building Code and the local zoning ordinance for information on parking requirements, height restrictions, set backs, easements, flood, egress, and fire containment. Accessibility guidelines need to be followed; refer to the Americans with Disabilities Act.

## FABRIC AS ARCHITECTURAL ELEMENT

Fabric should be considered as a primary material with emphasis placed on innovation in fabric design. Fabric offers a number of strengths in building design including: high performance under certain environmental conditions, flexibility to achieve a variety of forms, sustainability, and a sleek aesthetic.

## FABRIC STRUCTURES

Fabric structures are characterized by having a rather small mass relative to the applied load, which is determined through an optimization process. Participants should consider the following type of fabric structures: air-inflated, air-supported, cable net, frame-supported, geodesic dome, grid shell, tensegrity (cable-and-strut) and tensile (or tension) structures.



IMAGE: Sun Valley Pavilion. Sun Valley, Idaho. FTL Design Engineering Studio, RLB Architects

# SCHEDULE

Registration Deadline . . . . . March 6, 2013  
Submission Deadline . . . . . June 5, 2013  
Winners Announced . . . . . July 2013

# AWARDS

Winning students, their faculty sponsors, and schools will receive cash prizes totaling \$5,000. The design jury will meet July 2013 to select winning projects and honorable mentions. Winners and their faculty sponsors will be notified of the competition results directly. A list of winning projects will be posted on the ACSA website ([www.acsa-arch.org](http://www.acsa-arch.org)) and the FSA website ([www.fabricstructuresassociation.org](http://www.fabricstructuresassociation.org)).

First Prize . . . . . Student \$2,250 . . . . . Faculty Sponsor \$750  
Second Prize . . . . . Student \$1,500 . . . . . Faculty Sponsor \$500

Third prize and honorable mentions may be awarded at the jury's discretion, with no prize money.

# ELIGIBILITY

The ACSA/FSA Student Design Competition is open to students from all ACSA member schools in the United States and Canada. Students may work individually or in teams. All entrants are required to work under the direction of a faculty sponsor. Teams must be limited to a maximum of five students.

# REGISTRATION

Faculty who wish to enroll students must complete an online Registration Form (available at [www.acsa-arch.org/competitions](http://www.acsa-arch.org/competitions)) by March 6, 2013. Complete a form for each individual student or team of students participating. Students or teams wishing to enter the competition on their own must have a faculty sponsor, who should complete the form. There is no entry or submission fee required to participate in the competition. Each registered student and faculty sponsor will receive a confirmation email that will include information on how to upload your final submission online.

# FACULTY RESPONSIBILITY

The administration of the competition at each institution is left to the discretion of the faculty within the guidelines set forth in this document. Work on the competition should be structured over the course of one semester during the 2012-2013 academic year.



IMAGE: ITE College (West). Choa Chu Kang, Singapore. DP Architects

## EVALUATION CRITERIA

Each faculty sponsor is expected to develop a system to evaluate the students' work using the criteria set forth in this program. The evaluation process should be an integral part of the design process, encouraging students to scrutinize their work in a manner similar to that of the jury. The final result of the design process will be a submission of up to four presentation boards describing the design solution. In addressing the specific issues of the design challenge, submissions must clearly demonstrate the design solution's response to the following requirements:

- Adherence to the specifications of the program
- The appropriate and creative use of fabric
- The successful integration of the fabric structure(s) within the overall design of the resort
- Responsiveness to typical architectural considerations such as site, context, function, circulation, structure, building services, construction, and climatic and environmental issues
- Clarity of thinking and effectiveness of the visual presentation and design essay / abstract

# REQUIRED DRAWINGS

Each presentation must directly address the criteria outlined in the Design Challenge and Criteria for Judging and must include (but are not limited to) the following drawings:

- SITE PLAN showing the surrounding buildings, topography, and circulation patterns
- FLOOR PLANS, ELEVATIONS and BUILDING SECTIONS sufficient to show site context and major program elements
- LARGE SCALE DRAWING, either orthographic or three dimensional, illustrating the use of fabric, methods of support, assembly, and connection details
- THREE DIMENSIONAL REPRESENTATION in the form of either an axonometric, perspective, or model photographs, illustrating the character of the project.

All drawings should be presented at a scale appropriate to the design solution and include a graphic scale and north arrow.

## DESIGN ESSAY / ABSTRACT

A brief essay, 500 words maximum, (in English) is required as part of the submission describing the most important concepts of the design project. Keep in mind that the presentation should graphically convey the design solution and context as much as possible, and not rely on the design essay to convey a basic understanding of the project. The essay must address and describe the site, chosen by the faculty sponsor and/or student(s). Why is the site appropriate for a resort? What makes the site a destination?

The names of student participants, their schools, or faculty sponsors, must NOT appear in the design essay. This abstract is included in the final online submission, completed by the student(s) in a simple copy/paste text box.



IMAGE: Tweed Regional Aquatic Centre. Murwillumbah Northern NSW Australia. David Hood.



# ONLINE PROJECT SUBMISSION

The student is required to submit the final entries that must be uploaded through the ACSA competition website at [www.acsa-arch.org](http://www.acsa-arch.org) by 5:00 pm, Eastern Time, on June 5, 2013. If the submission is from a team of students, all student team members will have the ability to upload the digital files. Once the final submit button is pressed, no additional edits, uploads, or changes can be made. Once submitted, each student will receive a confirmation email notification. You may “save” your submission and return to complete. Please note: the submission is not complete until the “complete this submission” button has been pressed.

A final Submission upload must contain the following:

- Completed online registration including all team members and faculty sponsors
- Up to four 20” x 20” boards, uploaded individually as high resolution Portable Document Format (PDF) or image (JPEG) files
- A design essay or abstract (simple copy/paste text box completed during submission)

Winning projects will be required to submit high-resolution original files/images for use in competition publications and exhibit materials.

## FOR MORE INFORMATION

Program updates, including information on jury members as they are confirmed, may be found on the ACSA web site at [www.acsa-arch.org](http://www.acsa-arch.org). Additional questions on the competition program and submissions should be addressed to:

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# RESOURCES

Students are encouraged to research references that are related to both the topic of the competition and precedent projects that demonstrate innovative uses of fabric in architecture, such as those listed below. An intention of all ACSA competitions is to make students aware that research is a fundamental elementary of any design solution.

- Fabric Structures Association, Featured Projects  
<<http://fabricstructuresassociation.org/featured-projects>>
- *Fabric Architecture*, the official publication of the Fabric Structures Association and the Professional Awning Manufacturers Association of the Industrial Fabrics Association International. *Fabric Architecture* provides timely and accurate industry intelligence about the fabric architecture industry.  
<<http://fabricarchitecturemag.com/>>

