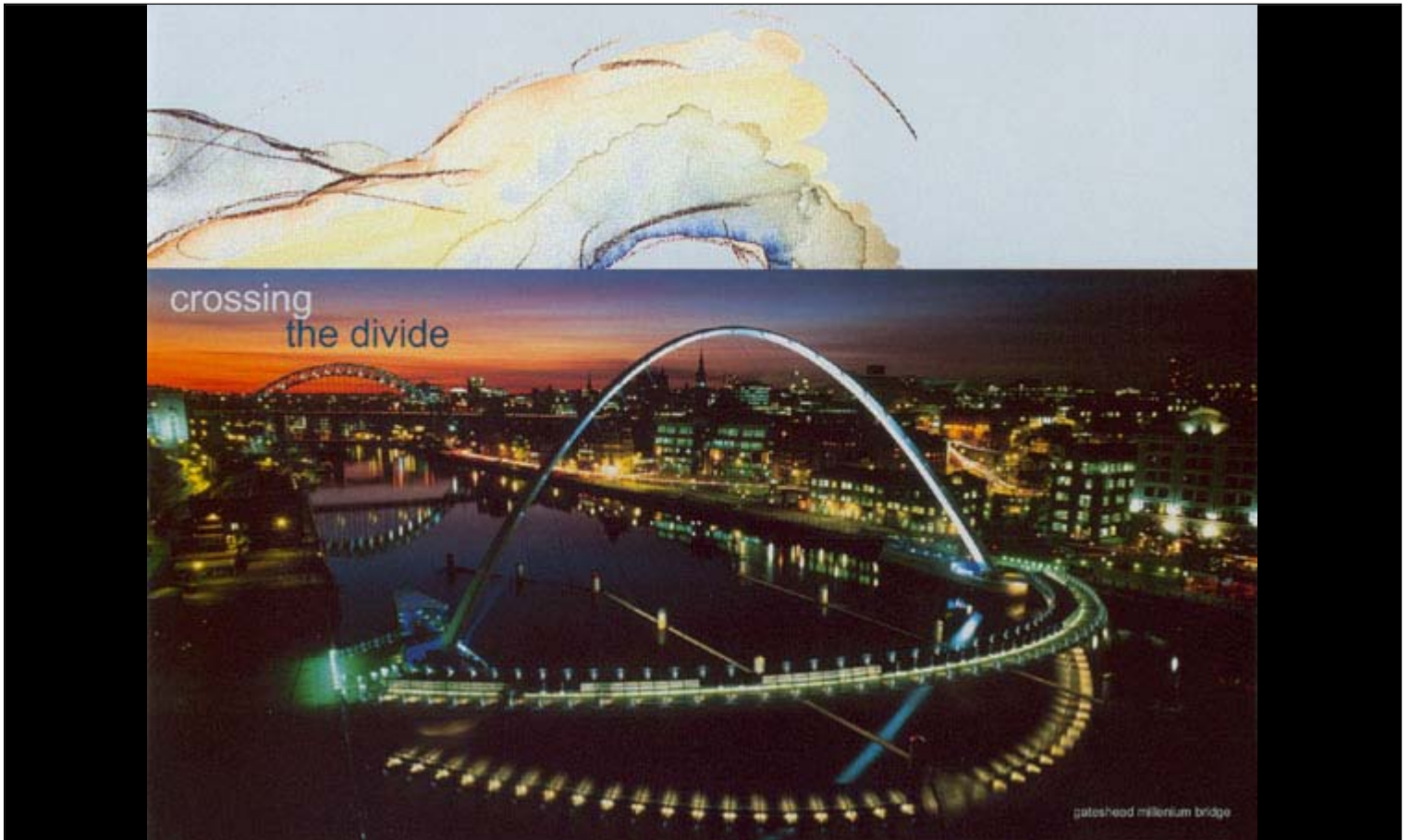


"crossing the divide "

5th Annual SSEF Architectural Student Design Competition 2006



The Challenge

Both iconic and fundamental in the worlds of design and construction, bridges bring together engineering and architecture in a unique conjunction: they provide the very essential example of form existing for function. The simple footbridge is one of the earliest known structures, accomplishing the primary function of any horizontal structure: spanning. Their design, both structural and architectural, explicitly and implicitly, complies with this simple requirement. Originally constructed, perhaps, from fallen logs or branches, the development of the bridge has, more directly than any other structure, followed the development of materials themselves. Simply moving from one side to the other of a stream, river, ravine, or street, has, in modern times, been elevated to an art form in itself. Bridge design is one of the most pure areas for testing architectural ideas. Reduced to one programmatic requirement, the bridge cannot hide its structural requirement; it must, instead, be celebrated and exploited, both architecturally and structurally.

Students are challenged to design a single span pedestrian bridge, on a site of the designers' choosing. The structure must be primarily steel, but otherwise, the material palette is open.

Competition Statement

The intention of this design competition is primarily to provide students of architecture in Canada with a unique opportunity: to enter into a design process which brings together, of necessity, concept and reality. It is important for students of architecture to grasp the fact that structural design lies not just in the realm of the engineer, but can be a means for architects of arriving at a meaningful realization of architectural ideas. It is when theory meets physical necessity that architecture can become really interesting.

To that end, this competition calls upon students to conceptualize, and realize in detail, a small, single span structure of simple program. The exploration will, of course, include issues related to program and site, but the emphasis in this competition is upon the architectural exploration through form and material, on the essential relationship between architecture and structure.

The reality of this competition comes in two forms: through the requirement for buildable details, primarily utilizing structural steel; and through the collaboration with the steel fabrication industry on those details. This collaboration is an important component of this competition, as a secondary objective is to expose students to both the opportunities and restraints inherent in realizing conceptual design.

The conceptual component of this competition will come through the recommendation that this competition be run through either a studio, or a lecture based course, most probably within a structures course. Under the guidance of faculty sponsors, students will conduct the design process as an academic exercise, within the guidelines set out in this brief. As an academic project, the design process will adhere to the standards set forth by the students' school of architecture.

Eligibility

This competition is open to all full-time students registered in an accredited program of architecture in Canada. Students may work individually or in teams. Entries which include students in Engineering are encouraged. Each entry must have at least one faculty sponsor from the architecture program.

Schedule

September 2005 - Competition announced

January 31, 2006 - Deadline for registration

May 2, 2006 - Deadline for receipt of entries

May, 2006 - Adjudication and announcement of winners

June, 2006 - Awards presented at SSEF Annual General Meeting

Exhibition of winning entries

October 2006 - Publication of winning entries

Technical Requirements

The ultimate goal for a team's submission should combine good architectural design with sound structural considerations and material choices. The presentation of the design should provide easy access to all components of the project clearly and creatively.

Entries in this competition should predominantly use structural steel in the design. By specifying structural

steel as both architectural and structural elements, the designers demonstrate an understanding of the building properties of the material, and the architectural possibilities. Entries that include specifications of steel sizes, shapes and/or product specifications will be given stronger consideration by the jury.

Teams should also consider the practical application of their design. The potential for buildability will be given strong consideration, as the potential exists to build the winning entry. While theoretical studio projects are strongly encouraged, submissions should reflect a clear vision of the project's place and purpose.

Collaborative Process

Collaboration between designer(s) and fabricator is encouraged as a means of obtaining architectural excellence combined with practical potential. This collaboration reflects the reality of architectural practice, and will enhance the students' ability to realize conceptual design within the framework of real construction.

Students and faculty sponsors are encouraged to draw upon the experience and expertise of their local steel fabricators as part of the design process. The Steel Structures Education Foundation will forward a list of local fabricators interested in participating once an entrant's registration form is received.

Product Information

The Steel Structures Education Foundation is interested in assisting Canadian architecture students in understanding the aesthetic and design possibilities of structural steel. Issues concerning fabrication, detailing, connecting techniques construction, are critical to a useful ability to design with steel, and therefore are included in this competition brief.

SSEF will forward a complete information package once an entrant's registration form is received.

Evaluation Criteria

Projects will be evaluated primarily in terms of architectural excellence, which, in the context of this competition, includes integration of architectural and structural solutions. In addition to this, the following criteria will be given particular weighting:

- a creative use of steel
- a creative approach to the design challenge as program
- siting of design
- completeness and buildability of detailing
- quality of presentation

Evaluation Process

The administration of the competition at each school is left to the discretion of the faculty sponsor(s), within the guidelines set out in this brief. Work on the competition may be structured over the course of one or two terms during the 2005/2006 academic year.

Each faculty sponsor is expected to develop a system to evaluate the work of the students entering the competition, using the criteria set out in this brief. The evaluation process could be an integral part of the

design process, encouraging students to examine their work in a manner similar to that of the jury.

The jury will include an architectural practitioner recognized for design in steel, an architectural educator specializing in the integration of structures and design, a representative of the steel fabrication industry, and a Board member of the SSEF. The jury will meet in Toronto in May, 2006 for adjudication. Winners may be invited to attend the SSEF Annual General Meeting in June 2006 for presentation of their awards.

Awards

Award of Excellence student team \$3,000
faculty sponsor \$1,500

Award(s) of Merit student team \$2,000
faculty sponsor \$1,000
(Up to two Awards of Merit will be awarded)

Presentation Format

Drawings must be firmly mounted or drawn directly on no more than four A1 size illustration, foamcore, or other stiff lightweight mounting boards. Any other type of presentation will be disqualified.

The names of student participants, their schools, and faculty sponsors must not appear on the front of any board. An unsealed envelope holding a copy of the completed project submission form must be fixed to the back of each board. All boards should be numbered on the back in the order in which they should be viewed.

All presentations must be suitable for black-and-white reproduction. Students may use colour if desired, but must ensure that distinct colours will be readily distinguishable tones when photographed in black-and-white. Entries may be either originals or high-quality reproductions.

Participants should make adequate photographic and/or digital (300 dpi) reproductions of their presentation drawings prior to submission. Winning entries will be required to submit photographic and/or digital reproductions for use in competition and exhibit materials.

Submission boards become the property of the SSEF, and will not be returned.

Required Presentation Elements

All drawings, photographs, or computer-generated images should be at a scale appropriate to the design solution, and include a graphic scale and compass direction. Each presentation must directly address the specific criteria outlined in the Design Challenge.

Presentations must include at least the following:

- ground floor/site plan
- elevations & sections showing major elements and site context
- one three-dimensional image

- details, drawn at a larger scale (sufficient to explain the use of structural steel)

Summary Publication & Exhibit

All entrants will be recognized through a listing in a summary publication to be produced by the SSEF following the adjudication process. All winners and other selected projects will be illustrated in detail in the publication, which will be available in the Fall of 2006.

Technical Resource Packages

The Steel Structures Education Foundation will send a package of relevant educational resource material to each registered faculty sponsor. A brief description of structural steel and elements will be included. Faculty sponsors are encouraged to register their students prior to the January 31st deadline in order to obtain this product information package necessary for students to begin their entries.

Shipping Instructions

All entries must be received by the SSEF by 5:00 p.m., EST, May 2, 2006. Please note that SSEF cannot be responsible for COD, or related shipping fees.

Entries must be shipped in lightweight, cardboard boxes or sturdy wrapping. Wood crates and other excessive packaging materials are not permitted. Do not tape trace paper or any other type of protective materials to individual boards. Do not use excessive bubble wrap or shipping materials, such as packing peanuts. Do not use excessive amounts of tape on interior or exterior wrappings. These requirements are designed specifically to reduce waste and energy. Thank you for your adherence to these guidelines.