



AQUATIC CENTER

2005–2006 ACSA/AMERICAN INSTITUTE OF STEEL CONSTRUCTION

STUDENT DESIGN COMPETITION

CATEGORY I
COMMUNITY AQUATIC CENTER
CATEGORY II
OPEN



INTRODUCTION

The Association of Collegiate Schools of Architecture (ACSA) is pleased to announce the sixth annual student design competition for the 2005–2006 academic year. Administered by ACSA and sponsored by American Institute of Steel Construction (AISC), the program is intended to challenge students, working individually or in teams, to explore a variety of design issues related to the use of steel in design and construction.

THE CHALLENGE

The ACSA/AISC 2005–2006 Student Design Competition will offer architecture students the opportunity to compete in two separate categories. Category I will challenge architecture students to design a Community Aquatic Center in an urban setting. Category II will be an open competition with restrictions.

Students may not enter both categories of the competition.

CRITERIA FOR JUDGING

Criteria for the judging of submissions will include: creative use of structural steel 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 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 4,000 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

AISC, headquartered in Chicago, is a non profit technical institute and trade association established in 1921 to serve the structural steel design community and construction industry in the United States. AISC's mission is to make structural steel the material of choice by being the leader in structural steel-related technical and market-building activities, including: specification and code development, research, education, technical assistance, quality certification, standardization, and market development. AISC has a long tradition of more than 80 years of service to the steel construction industry providing timely and reliable information.



STRUCTURAL STEEL

STRUCTURAL STEEL

Steel should be used as the primary structural material with special emphasis placed on innovation in steel design. Structural steel offers a number of strengths in building design, including high resiliency and performance under harsh and difficult conditions, (e.g., earthquakes and hurricanes), and offers the ability to span great distances with slenderness and grace. Steel can be shaped to achieve curved forms and can be raised quickly to meet tough construction schedules under almost any weather condition. Steel can be easily modified to satisfy changing requirements.

Virtually all of the U.S. structural steel is a by-product from recycling of cars and other steel products. It is the environmentally sound choice for a building material.



Kingsbury on the Park, National Winner, I.D.E.A.S. Awards sponsored by AISC, Lucien Lagrange Architects

CATEGORY I: A COMMUNITY AQUATIC CENTER

DESIGN GOALS

The primary goal of the Community Aquatic Center design is to provide a year-round family recreation facility in an urban area.

SITE

The site is located in a new mixed-use development in an urban area.

SUMMARY OF PROGRAM REQUIREMENTS

The architectural program elements (in square feet) for the Community Aquatic Center are as follows:

1. Lobby Areas	1,500 sf
2. Natatorium	16,068 sf
3. Spectator Seating	1,800 sf
4. Locker Rooms	1,930 sf
5. Administration	520 sf
6. Life Guard and First Aid Station	480 sf
7. Wet Classroom	450 sf
8. Concession and Eating Areas	2,450 sf
9. Support Spaces	2,800 sf
Net Square Footage	27,998 sf
Toilets, Circulation, Etc. @ 35%	9,799 sf
Gross Square Footage	37,797 sf

PROGRAM OF SPACES

1. Lobby Area: 1,500 sf

The Lobby Area is a place to meet friends, for gathering small groups, having membership checked, or receiving directions to the various facilities and functions at reception desk.

Lobby	1,350 sf
Information Desk	150 sf

2. Natatorium: 16,818 sf

The Natatorium will contain three pools: a swimming pool, a diving pool, and a recreation/therapy pool. Each pool will have a 10-foot-wide minimum pool deck on all sides. The swimming pool will be a 25-meter (82 feet) by 42-foot pool with six lanes for competitive swimming. It will also be used for swimming laps, aquatic fitness, the Red Cross Junior Life Guard program, and the Learn to Swim program.

Swimming Pool	3,444 sf
Deck Area	2,480 sf

The Diving Pool should be 42 feet by 42 feet and contain two 1-meter boards and a 3-meter board.

Diving Pool	1,764 sf
Deck Area	1,680 sf

The Recreation/Therapy Pool should be approximately 4,000 square feet. Since this pool will contain numerous features, its configuration will be at the discretion of the designer. This pool will contain a 20-foot-high water slide, a toddler slide, a zero depth entry as well as stepped entry, and 21 linear feet of therapeutic jet seating.

Recreation/Therapy Pool	4,000 sf
Deck Area	2,700 sf

3. Spectator Seating: 1,800 sf

Tiered seating at a raised level will be provided for 300 people. Seating should be situated along the length of the swim course as well as in view of the Diving Pool

Spectator Seating	1,800 sf
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4. Locker Rooms: 1,930 sf

The Men's and Women's Locker Rooms will contain 60 linear feet of lockers and benches, and 10 shower stalls. The women's toilet facility will include eight water closets (including one handicapped stall) and six lavatories. The men's toilet facility will contain three water closets (including one handicapped stall), three urinals, and six lavatories.

Men's Locker Room	950 sf
Women's Locker Room	980 sf

Additional restrooms should be provided for employees and spectators.

5. Administration: 520 sf

An administrative suite will be required for the center's director and secretary.

Director's Office	150 sf
Reception/Secretary	150 sf
Work/Break Room	120 sf
Supply Storage and Copier	100 sf

This suite should be located adjacent to the Lobby Area.



CATEGORY I: A COMMUNITY AQUATIC CENTER

6. Life Guard and First Aid Station: 480 sf

This space will contain an office and space for equipment use by the life guards. It will have at least one wall with a glass partition facing the pool area. This space will be adjacent to a First Aid Station.

Life Guard Room	240 sf
First Aid Station	240 sf

7. Wet Classroom: 450 sf

The Wet Classroom will accommodate 30 people for instruction and coaching and provide added flexibility for groups needing to meet in wet gear near the pool

Wet Classroom	450 sf
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8. Concession and Eating Areas: 2,450 sf

The Concession Area will have food and drink vending machines. This area will be adjacent to an eating/socializing area furnished with tables and chairs. The designer has the option of extending a portion of eating area to the exterior.

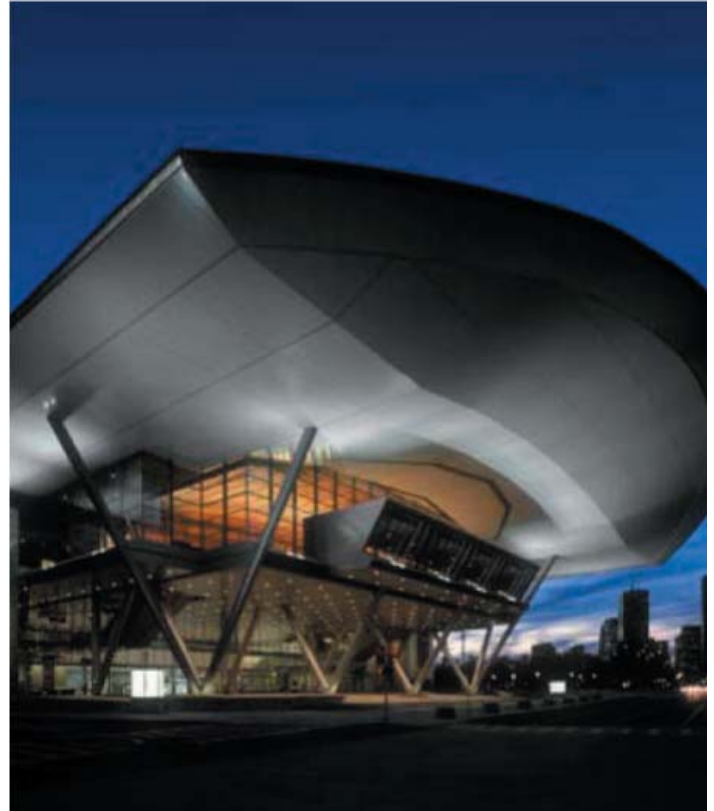
Concession Area	700 sf
Eating/Socializing Area	1,750 sf

9. Support Space: 2,800 sf

Mechanical and Electrical Room	1,200 sf
Pool Storage	800 sf
Filtration/chemical	800 sf

Site Development

The designer should give consideration to developing the site with such features as a sun bathing deck, sand play area, splash pad, volleyball court, or other amenities to complement the Aquatic Center design.



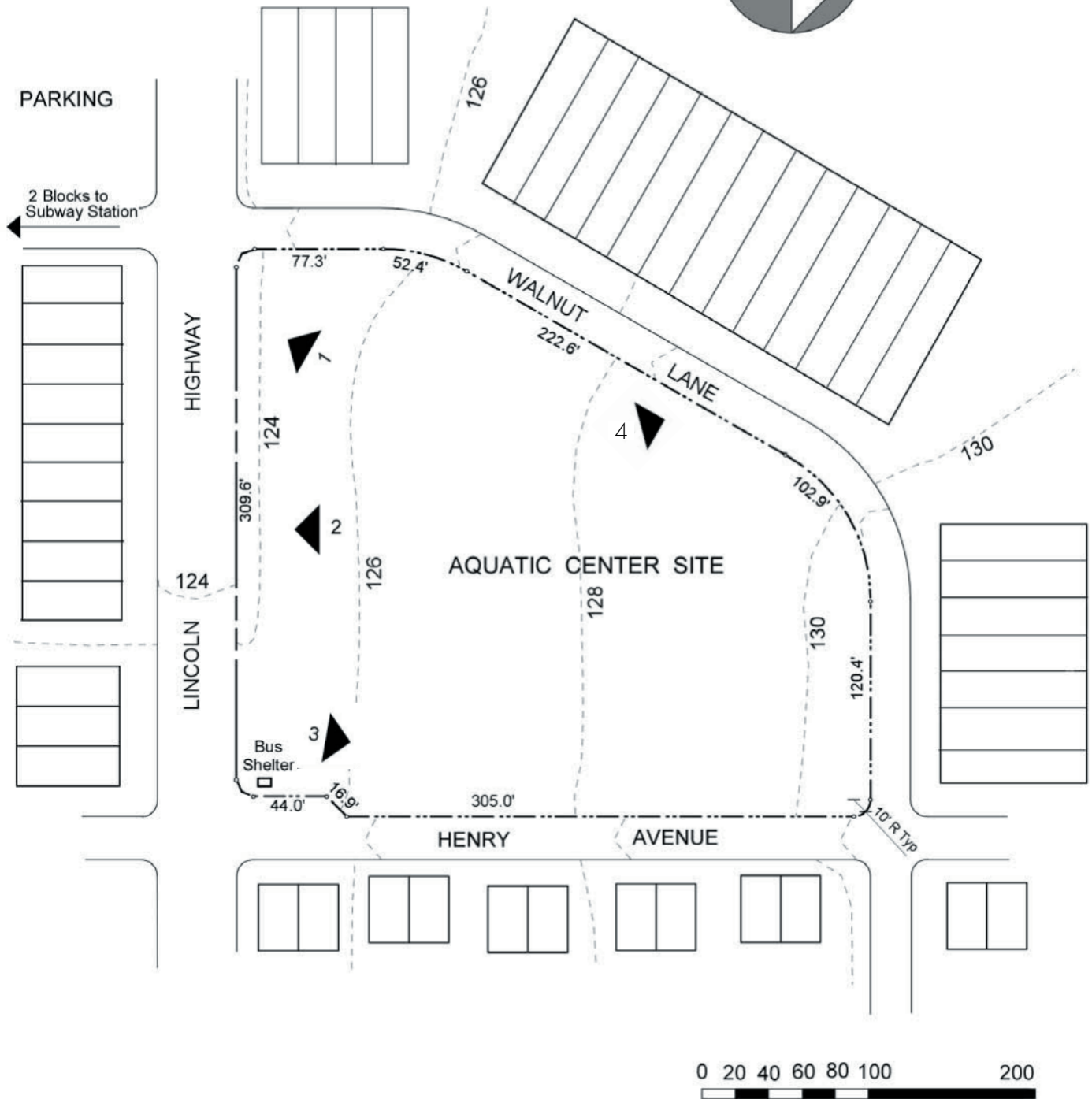
Boston Convention Center, Merit Award, I.D.E.A.S. Awards sponsored by AISC, HNTB Architecture and Rafael Viñoly, Architect



CATEGORY I: A COMMUNITY AQUATIC CENTER

SITE DATA: SITE PLAN

NOTE: For the purpose of site analysis assume the site is at 40 degrees North Latitude and 85 degrees West Longitude.



CATEGORY I: A COMMUNITY AQUATIC CENTER

SITE DATA: PHOTO LOCATIONS



1) View of the corner of Lincoln Highway and Walnut Lane



3) View of homes on Henry Avenue



2) View looking South at the Townhouses on Lincoln Highway



4) View of Townhouses on Walnut Lane

CATEGORY II: OPEN COMPETITION

THE CHALLENGE

The ACSA/AISC 2005–2006 Student Design Competition offers architecture students the opportunity to participate in an open competition with limited restrictions. This category will allow the students (with the approval of the sponsoring faculty member) to select a site and building program.

The Category II program should be of equal complexity as the Category I program.

Faculty sponsoring students entering Category II must submit a written building program along with the Submission Form.

RESTRICTIONS

To enter the open competition students may select any building occupancy other than residential or Aquatic Center. The structure must have at least one space requiring long span steel structure.



Colorado Convention Center Expansion, National Winner, I.D.E.A.S. Awards sponsored by AISC, Fentress Brandburn Architects

RESOURCES

MODERN STEEL CONSTRUCTION

This authoritative monthly magazine is made available for free of charge to architectural students taking steel design courses. Fifteen (15) copies of seven (7) issues of *Modern Steel Construction* are sent to all schools of architecture. This magazine covers the use of fabricated structural steel in the variety of structural types. It presents information on the newest and most advanced applications of structural steel in a wide range of structures.

Issues of *Modern Steel Construction* (1996–Present) are available online. Visit www.aisc.org/MSCTemplate.cfm



Como Park Visitor and Education Resource Center, Merit Award, I.D.E.A.S. Awards sponsored by AISC, Hammel, Green and Abrahamson, Architects and Engineers



Como Park Visitor and Education Resource Center, Merit Award, I.D.E.A.S. Awards sponsored by AISC, Hammel, Green and Abrahamson, Architects and Engineers

ADDITIONAL RESOURCES

In addition to researching *Modern Steel Construction*, entrants are encouraged to research other projects that demonstrate innovative use of structural steel such as those listed below. An intention of all ACSA competitions is to make entrants aware that background research is a fundamental element of any design solution.

David L Lawrence Convention Center, Pittsburgh, PA
Rafael Viñoly Architects, PC, New York, NY
Architectural Record, 2004 May, pg. 154–159
Modern Steel Construction, 2004, July, pg. 30–35

Seattle Public Library, Seattle, Washington
Office for Metropolitan Architecture/LMN Architects
Architecture, 2004, July, pg. 39–47
Civil Engineering, 2003, March, pg. 64–67.
Modern Steel Construction, May 2005. pp 48–49

Boston Convention and Exhibition Center
HNTB Architecture, New York, NY
Rafael Viñoly Architects, New York, NY
Primary Group, Boston, MA
Modern Steel Construction, 2005, pg. 24–26

COMPETITION GUIDELINES

SCHEDULE

December 2005	Registration begins <i>There is no fee for registration</i>
February 8, 2006	Registration Deadline
May 24, 2006	Submission Deadline
June 2006	Winners Announced
Fall 2006	Publication of competition summary catalog

AWARDS

The design jury will meet in June, 2006, 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 at www.acsa-arch.org and the AISC website at www.aisc.org.

Winning students and their faculty sponsors will receive cash prizes totaling \$14,000 with distribution as follows:

Category I & II

First Prize

Student	\$2,500
Faculty sponsor	\$1,000

Second Prize

Student	\$1,500
Faculty sponsor	\$750

Third Prize

Student	\$750
Faculty sponsor	\$500

A limited number of honorable mentions may also be awarded at the jury's discretion.

Prize-winning submissions will be exhibited at the ACSA Annual Meeting, the North American Steel Construction Conference, and the AIA National Convention and will be published in a competition summary catalog.

ELIGIBILITY

Because the support of AISC is largely derived from steel organizations in the United States, the competition is open to students from ACSA member schools, with good standing, in the United States, Canada, and Mexico. The competition is open to upper-level students (third year or above, including graduate students). All student entrants are required to work under the direction of a faculty sponsor. Entries will be accepted for individual as well as team solutions. Teams must be limited to a maximum of five students. Submissions should be principally the product of work in a design studio or related class.

REGISTRATION

The administration of the competition at each institution is left to the discretion of the faculty sponsor(s) within the guidelines set forth in this document. Work on the competition should be structured over the course of one semester during the 2005–06 academic year. *The competition cannot be executed as a thesis or other multi-term project.*

REQUIRED DRAWINGS (Category I & II)

Each presentation must directly address the specific criteria outlined in the Design Challenge and Criteria for Judging and must include (but are not limited to) the following required 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(s), either orthographic or three-dimensional, illustrating the use of structural steel;
- a three-dimensional representation in the form of either an axonometric, perspective, or model photographs, one of which should illustrate the character of the project.

Incomplete or undocumented entries will be disqualified. All drawings should be presented at a scale appropriate to the design solution and include a graphic scale and north arrow.



COMPETITION GUIDELINES

PRESENTATION FORMAT

Drawings must be firmly mounted or drawn directly on no more than four 20" x 20" (50 cm x 50 cm) illustration, foamcore, or other stiff lightweight mounting boards. Any other type of presentation (unmounted, three-dimensional, or mounted on wood, metal, or glass) will be disqualified.

The names of student participants, their schools, or faculty sponsors, must not appear on the front of any board. An unsealed envelope holding a copy of the completed submission form and design essay (and building program, for Category II) must be affixed to the back of each board. Identification should not appear on the design essay.

1	2
3	4

All boards should be numbered on the back in the order in which they should be viewed (i.e., 1 of 4, 2 of 4, etc.). *Note that winning boards will be displayed in the arrangement shown on the left.*

Participants should keep in mind that, due to the large number of entries, preliminary review does not allow for the hanging or end-to-end display of presentation boards. Accordingly, participants should not use text or graphics that cross over from board to board.

All presentations must be suitable for black-and-white reproduction. Students may use color if desired, but must ensure that distinct colors will convert to 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 entrants will be required to submit digital reproductions for use in competition publications and exhibit materials. Please note that submission boards cannot be returned under any circumstances.

DESIGN ESSAY

A brief essay (in English) should appear as part of the submission boards 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.

SUBMISSION FORM

Each project must be accompanied by a completed submission form. The submission form is available on ACSA's website, www.acsa-arch.org. A printed copy of the completed form must be enclosed in an unsealed envelope firmly affixed to the back of each board. A copy of the design essay must also be included with the submission form. If any significant modifications to the given design challenge were made, entrants should explain the rationale for the modification on a separate sheet of paper. Include a copy of this explanation in the envelope on the back of each submission board. If entering Category II a copy of the building program must also be included in the envelope on the back of each submission board.

SHIPPING INSTRUCTIONS

Entries should be shipped in 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 must be followed.

All entries must be received at ACSA's National Office in Washington, DC, by 5:00 pm, Eastern time, on May 24, 2006. *Please note that due to the number of entries, ACSA cannot send acknowledgements of receipt. ACSA cannot be responsible for customs processing or related fees. C.O.D. shipments will not be accepted.*

Ship to:

Association of Collegiate Schools of Architecture
Attn: AISC Student Design Competition
(Please specify category I or II)
1735 New York Avenue NW
Washington, DC 20006 USA



COMPETITION GUIDELINES

FOR MORE INFORMATION

Program updates, including information on jury members as they are confirmed, may be found on the ACSA website at www.acsa-arch.org.

Additional questions on the competition program and submissions should be addressed to:

Eric W. Ellis / AISC Competition

Association of Collegiate Schools of Architecture

1735 New York Avenue, NW

Washington, DC 20006

tel: 202.785.2324 ext 8

fax: 202.628.0448

competitions@acsa-arch.org



The Financial Center, Milford, PA Merit Award, I.D.E.A.S. Awards Program sponsored by AISC, Bohlin Cywinski Jackson, Architects

