

## AISC Announces New Seminar Series: "Designing Steel for Serviceability"

The advent of powerful computer software allows engineers to readily review a myriad of alternative design schemes to obtain optimum strength designs. Today's successful designer must look beyond just strength, however, and consider a building's function and maintenance requirements. In short, serviceability issues are becoming increasingly important.

AISC's new 49-city Seminar Series, "Designing Steel for Serviceability", covers five important topics: frame layout options & strength design; roof ponding; floor elevation & levelness; control of lateral drift; and control of floor vibrations.

**Frame Layout Options & Strength Design:** This portion of the seminar will include information on selection of a steel system, frame layout options and trade-offs, structural analysis, member selection for strength, and serviceability design concerns.

**Roof Ponding:** Most commercial buildings are designed and constructed with near-flat roofs. Too often, this is not well coordinated with roof drain location, which can create an unforeseen ponding load on the roof structure. If not considered in design, this ponding effect can cause leakage, damage or even partial roof collapse. This presentation provides an explanation of the ponding mechanism and through design examples shows how to minimize structural complications.

**Floor Elevation & Levelness:** The placing of fresh concrete on flexible floor systems to achieve a level floor requires an understanding of the interactive effect of construction floor deflections and the additional loading that may be created in the leveling process. For the unwary, this can result in: non-level floor surfaces; interference with ceiling plenum elements; additional concrete to compensate for the sagged supporting systems; failure to attain specific floor elevations; and potential construction collapse. This portion of the seminar will discuss these issues and through

1997-98 Seminar Series Schedule	
<b>1997</b>	<b>1998</b>
Sept. 17 .....Dallas	Jan. 14 .....Los Angeles
Sept. 18.....Oklahoma City	Jan. 15 .....Los Angeles-East
Sept. 24.....Sacramento	Jan. 21 .....Columbus, OH
Sept. 25 .....San Francisco	Jan. 22 .....Cleveland
Oct. 8 .....Chicago	Jan. 27 .....Jacksonville
Oct. 15 .....Philadelphia	Jan. 29.....Tampa
Oct. 16.....Edison, NJ	Feb. 4 .....Boston
Oct. 21 .....Detroit	Feb. 5.....Portland, ME
Oct. 23.....Indianapolis	Feb. 11 .....Albuquerque
Oct. 28 .....Raleigh	Feb. 12 .....Phoenix
Oct. 30.....Birmingham	Feb. 18 .....Pittsburgh
Nov. 5 .....Portland, OR	March 3 .....Kansas City
Nov. 6 .....Seattle	March 5 .....Denver
Nov. 12 .....New Orleans	
Nov. 13 .....Houston	
Nov. 18 .....Meriden, CT	
Nov. 19 .....New York City	
Nov. 25 .....Atlanta	
Dec. 2.....Memphis	
Dec. 4.....Nashville	
Dec. 11 .....Salt Lake City	

*Please note that all MSC subscribers will automatically receive a registration form six weeks prior to the seminar scheduled in their area.*

design examples provide alternative solutions to this troublesome problem.

**Control of Lateral Drift:** Lateral drift of a building has always been an index of structural performance under service loads. And as structural materials have become stronger while non-structural materials have become lighter and less rigid, its importance has only increased. This portion of the seminar provides new information by correlating the racking effect of lateral deformations with damage to various non-structural components. A design example will be presented.

**Control of Floor Vibrations:** Excessive vertical motion of floors can cause significant occupant discomfort and sometimes alarm. Modern construction materials and methods, where both structural and non-structural systems are lighter, have only exacerbated the problem. Serviceability guidelines in the past

emphasized stiffness limits that have been inefficient in neutralizing potential vibration in floors: Only when both mass and damping are included in the total design can effective control be expected. This portion of the seminar will provide guidelines for controlling this problem.

The seminar series has a CEU value of 0.55 (5.5 PDH). Registration is \$120 (\$90 for AISC members). The registration fee includes a wide range of handouts.

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For more information, call 630/369-3772, fax 630/369-3773 or point your favorite web browser to: <http://www.aisc.org>

## Marketing Workshop For AISC Fabricators

As the fight for market share toughens, it is imperative that individual fabricators increase their marketing efforts. AISC Marketing, Inc., in cooperation with the AISC Chairman's Advisory Council has created a new workshop to help fabricators enhance their marketing efforts.

The hard-hitting, no-nonsense workshop was developed by a special task committee of fabricators and AISC Marketing staff in conjunction with Jim Pancero, an outside consultant who has worked with more than 80 different industries, including other segments of the construction industry. The 1½-day seminar, which will be conducted by Pancero, will focus on successful steel fabrication marketing efforts and on helping fabricators adopt successful practices from other industries. Attendance is open to AISC active members and members of recognized regional fabricator groups.

Among the topics to be covered are:

- Specific steps your firm can implement for success and growth
- How to gain a competitive advantage and how to set yourself apart with a message of uniqueness
- How to understand today's core values for purchasing decisions
- How to move your company to a position of greater influence and control in today's construction world
- How to sell against concrete and other competitive materials
- How to make use of the selling tools already at your disposal
- How to move towards negotiated partnerships and capitalize on the trend toward design-build project delivery

The fee for attending is \$200 and includes meals.

For more information on this important workshop, call:

**A.B. Johnson, VP Marketing, at 312/670-5447 or email johnson@aiscmail.com**

## SCHEDULE

### 1997

Aug. 18-19 .....Atlanta  
 Sept. 22-23 .....Chicago  
 Oct. 6-7 .....Baltimore  
 Oct. 20-21 .....Dallas  
 Nov. 3-4 .....Las Vegas  
 Nov. 10-11 .....Portland, OR  
 Dec. 1-2 .....Boston

### 1998

Jan. 12-13 .....Denver

## New Canadian Standard Steel Grade

Algoma Steel, Inc., Canada's sole producer of wide flange shapes, has announced that its new standard grade for structural wide flange and H-pile sections will be CSA G40.21-M 350W. This new grade represents an increase in yield strength of approximately 17% over the previous standard 300W grade and will be available at no increase in cost, according to Mark L. Mittleman, Sr. Market Development Engineer, Construction Products, with Algoma. The steel chemistry used also will meet the requirements of ASTM A572-Gr. 50.

The advantage of the new standard grade is a reduced cost for steel construction. As with the move from A36 to A572, designers can realize a considerable reduction in material costs. Mittleman sites potential material savings of between 5% and 15%.

More information on the new steel grade is available in "CSA G40.21-M Grade 350W Beams and Columns—Selection Tables" from the Canadian Institute of Steel Construction (201 Consumers Road, Suite 300, Willowdale, ON M2J 4G8 CANADA; ph: 416/491-4552).

## Comparison of US & Canadian Grades

	G40.21-M350W	A572-50
$F_y$	350 MPa min.	345 MPa min.
$F_u$	450-650 MPa	450 MPa
$\epsilon=8"$	19%	18%
$\epsilon=2"$	--	21%

## Engineering Awards of Excellence

The best steel-framed buildings will be honored in the 1998 AISC Engineering Awards of Excellence competition. This annual awards program is designed to give national recognition to structural engineering excellence and innovation in steel-framed building projects.

Buildings in the U.S., Canada and Mexico completed between January 1, 1994 and December 31, 1997 are eligible. Also, projects may be either new buildings or significant renovations. This year, there are three categories: projects up to \$10 million in constructed value; projects greater than \$10 million but less than \$25 million; and projects over \$25 million. One National Award and up to two Merit Awards will be presented in each category, with the National Award winning firms receiving a \$2,000 cash award.

The awards will be presented at the National Steel Construction Conference, April 1-3, 1998 in New Orleans. National and Merit Award winners also will be featured in the April 1998 issue of *MSC*. Last year's National Award winners were the Niles West Field House in Skokie, IL, and the Rock & Roll Hall of Fame in Cleveland.

The projects will be judged on their entire structural design, with added emphasis on:

- creativity in response to the owner's and architect's program;
- Application of new or innovative technology in areas such as connections, gravity systems, lateral load resisting systems and fire protection;
- Structural efficiency; and
- Significance of engineering achievement.

The entire entry should be contained within one three-ring binder and include the following:

- **Entry cover letter:** Include name and location of project; name of structural engineering firm, address, phone number, fax number and contact person; name and location of architectural firm, general contractor, project owner, steel fabricator and steel detailer; and size and construction cost of project.

- **Project Description:** Include a description of the owner's/architect's building program, an explanation of how the structure satisfies the program and distinguishing/ unique aspects of the structural system.

- **Photographs:** A minimum of six photographs (plus 35mm slides) of both construction and the completed project must be included. Pictures should show both the interior and exterior of the building. Rights to photos, slides and plans must be cleared for publication by the entrant. Any fees or royalties connected with such releases are the responsibility of the entrant. AISC reserves the right to free use of all photos and materials submitted for promotional purposes.

- **Drawings:** Provide a site plan, principal elevations and typical floor plan. In addition, show typical and innovative details. All drawings should be reduced to a maximum of 8½" x 11".

**Deadline for submission is December 15, 1997.**

Mail completed entries to:  
American Institute of Steel  
Construction, Inc., One East Wacker  
Dr., Suite 3100, Chicago, IL 60601-  
2001, Attn: A.B. Johnson.

## **AISC Staff Openings**

AISC is looking to hire a Software Manager. The individual should be an experience structural engineer with a background in the use of computers for the design of steel structures. Responsibilities will include managing and promoting all software and electronic development at AISC.

Interested individuals should apply to: President, AISC, One East Wacker Dr., Suite 3100, Chicago, IL 60601-2001.

Also, AISCM is now seeking to fill regional engineer positions in New England, the NY/NJ metro area, and the West Coast. Individuals in these high profile positions must be qualified engineers with good marketing and communication skills.

For more information, contact: A.B. Johnson, AISC, Inc., One East Wacker Dr., Suite 3100, Chicago, IL 60601-2001.