November 10, 2001

To: ASCE-SEI TAC Metals

Re: ASCE-SEI Committee on Cold-Formed Members
   Annual Report
   October 1, 2000 – September 20, 2001

The committee’s primary focus over the past year has been on developing a brief article to address issues related to accommodating building deflections in secondary cold-formed steel systems.

Annual Meeting
No official annual meeting was held by the committee this year; however the members of the committee are in regular contact through email, web-based surveys, and a small home page. Further, the committee has applied to run a session at the 2003 Structure Congress. If the application is successful the committee intends to hold annual meetings at the Structures Congress. Additionally, members of the committee who attend the AISI Committee on Specifications (COS) meeting in July of 2001 meet as a group to discuss activities. The AISI-COS meets twice a year, thus a small group in the committee will be able to meet every February and July in the future - currently 5 of the 19 members actively attend AISI meetings.

Membership
The committee consists of 19 members, 13 practitioners and 6 academics. The current roster is attached. Four of the members: Madsen, Miller, Peyton and Walker are serving in their final (6th year). Jim Fisher, Vice President, Computerized Structural Design and Colin Rogers, Asst. Professor, Civil Eng. and Applied Mechanics, McGill University joined the committee in the past year.

Past/Current Activities
Over the past year the following has been accomplished:

- small home page for the committee created, linked at www.ce.jhu.edu/bschafer (May 2001)
- last two years of email exchanges on deflections summarized (June 2001)
- web-based survey of the committee members, used to focus the discussion on deflection in cold-formed steel and determine the direction of the committee’s work on this issue, 12 of the 19 members completed the survey (May/June 2001)
- compilation of survey results and further member email discussion (July 2001)
- discussion of survey by available committee members at AISI Specification meeting (July 2001)
- submitted application for a session at the 2003 Structures Congress (September 2001)
- rough draft of deflections in cold-formed steel article written (September 2001)

The web-based survey of the members proved particularly useful. The stated mission of the work is to "... develop a [brief] document dealing with how cold-formed steel framing systems should be designed to properly accommodate building deflections (vertical deflections and lateral drifts)..." (Email from Rob Madsen to Tom Miller, March 15, 2000). The survey questions that follow were used to (1) define the need for our contribution in this area (2) identify particular problems in this area and (3) summarize current practices in this area. It is not intended to address out-of-plane deflection of the cold-formed steel
system, nor get into a lengthy debate as to the correct L/whatever limit that is appropriate for CFS-Masonry, CFS-EIFS etc. The survey consisted of the following questions:

- Please enter your name
- Please enter your background (metal building designer, academic, principal of a design firm, etc.)
- What specific problems have you faced (or are you aware of) related to accommodating vertical building deflections in cold-formed steel (CFS) systems?
- What specific problems have you faced (or are you aware of) related to accommodating lateral building deflections in cold-formed steel (CFS) systems?
- Is there a need for better guidance on this issue, why?
- What is the best means of getting our collective guidance to practitioners? (web page? CCFSS newsletter? SSMA tech note?.. ideas...)
- How do you currently determine the vertical deflection demands for a CFS system?
- How do you currently determine the lateral deflection demands for a CFS system?
- When do you consider the lateral movement of the building to be a significant design consideration? (i.e., At what demand drift do you consider the implications of the drift instead of just saying the system will "rack" and be o.k.?)
- Do you provide/require special details when drift demands are large?
- Would you be willing to share those details with others?

The answers to this survey were compiled and discussed in order to move the committee towards the next series of relevant questions: What are the implications of current methods on cost, member sizes etc.? What is the suggested guidance from this committee on these issues? What are the unanswered questions and items that will require future research?

The members of the committee continue to participate and lead in other organizations related to cold-formed steel including the American Iron and Steel Institute, the Light Gauge Steel Engineer’s Association, the Steel Stud Manufacturing Association and other organizations. Members also participated in the review of articles for ASCE Journal of Structural Engineering, although this role appears informal at this point.

Future activities
A draft of the article on deflections in cold-formed steel is currently under review by the cold-formed members committee. The intention of the committee is to publish the final version of the article in STRUCTURE magazine. In the past the committee has helped in the review of papers for the bi-annual International Specialty Conference on Cold-Formed Steel Structures organized by the Center for Cold-Formed Steel Structures at the University of Missouri-Rolla. The committee’s help has been offered again for the 2002 conference. The committee intends to host a session at the 2003 Structures Congress.

Chair’s note
I have been a member of the committee since August 1999. In the Spring of 2001 I agreed to be the next chair. In April of 2001 the outgoing chair, Tom Miller, sent me all the files related to the committee. In July of 2001 I received my official appointment letter for the term October 1, 2001 through September 3, 2004. I have been organizing the affairs of the committee since May of 2001, so it seemed appropriate for me to write the annual report in Dr. Miller’s place. Special thanks for aiding the committee’s recent progress go to Rob Madsen who has donated significant time to perform initial reviews of the web-based survey on deflections and the first draft of the committee’s article on deflections.

Sincerely,

Ben Schafer