



SEAU NEWS

The Newsletter of the Structural Engineers Association of Utah

Volume IV- Issue IV January 2000

This newsletter is a monthly publication of the Structural Engineers Association of Utah.

Articles or advertisements appearing herein may be submitted by anyone interested in expressing a viewpoint on structural engineering.

Articles or advertisements for publication may be submitted to:

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Delta Center Arena Under Construction (Circa 1991). Structural Design by D. George Hansen, Inc.

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JANUARY PROGRAM

Collapse Of The World's Tallest Free-Standing Sign

Sponsored By:
The Utah Steel Fabricators Assoc.
and SEAU

Program Date:
Thursday January 20, 2000

Presented By:
Dr. Finley A. Charney, P.E.

Location:
University of Utah
Engineering and Mines Building
Room 105
Salt Lake City, Utah

MESSAGE FROM THE BOARD

NEW HORIZONS FOR A NEW MILLENNIUM



By Kelly Calder, SEAU Past
President

When the clock had struck 12:00 AM and the giant glass ball had drifted slowly down from its towering perch high above Time Square and the sprawling throngs of delirious revelers, I wondered what significant all-encompassing change may mark this new era, this new millennium. Was it to be the feared Y2K

computer meltdown creating havoc and chaos throughout civilization, or was it to be some horrific catastrophe orchestrated by some terrorist group?

Well, as most had anticipated, none of the dark forebodings so widely discussed and intensely feared came to light; rather, things remained pretty much the same as they were before. While there was nothing really eventful to mark its beginning, there is one thing unmistakable about the new era we are entering. Change, in everything from the way we work to the way we spend our leisure, is coming at an accelerating pace.

Certainly our professional lives are not exempt from these dramatic moves, as the Codes we follow to the ways we communicate are rapidly changing. Look around a conference room table and you see yellow pads for taking meeting notes are being replaced with palm

CONTINUED ON PAGE 3

MEMBER FORUM

FOCUS

Utah Structural Engineers provide a significant contribution to a wide variety of projects for commercial, government, industrial, and residential clients. Each month, SEAU would like to focus attention on the accomplishments, successes, and hard work of our Utah Structural Engineering firms. This month the focus is on:

Dean L. Webb & Associates, P.C.

In 1984 Dean L. Webb founded Dean L. Webb & Associates, P.C., a Professional Corporation, which specializes in Civil - Structural Engineering, and Investigative Forensic Engineering. For the past 16 years Dean L. Webb, P.E., and Arnold W. Coon, P.E., have shared office space and consulted with each other in an effort to provide a service that is based on a standard of excellence and professionalism.

Dean L. Webb & Associates is currently located at 5330 South 900 East, in Murray, Utah. In January of 2000 Dean L. Webb & Associates will be moving to a new office at 580 East 9400 South, in Sandy, Utah. The new office will provide the additional space needed to keep up with the growth that has taken place within the company. Currently, there are four engineers on staff.

As structural engineers, Dean L Webb & Associates has been involved in the design of schools, office buildings, residential projects, shopping malls, stores, banks, warehouses, water treatment projects, water storage reservoirs, airport terminals, and many other projects.

As featured in the November newsletter, Dean L. Webb & Associates provided the structural engineering services for the new Corporate Bank for the State Bank of

Southern Utah, in Cedar City, Utah. The Architect of record for the project was the Gardner Partnership Architects (GPA), located in Cedar City, Utah.



State Bank of Southern Utah

This new facility houses the main banking floor and the bank corporate offices. There is 14,350 sq. ft. on the main floor; 11,975 sq. ft. on the second floor; and 14,350 sq. ft. in the basement; for a total of 40,675 sq. ft. in the building. The construction cost was \$4.2 million dollars.



Interior Mezzanine and Skylight

The bank interior required a large circular opening in the second floor framing system. Unique engineering considerations for both the gravity and the lateral loading systems were required around the opening.



Bank Mezzanine and Entryway

The structural bearing wall system incorporated a "BLUE MAX" foam block, filled with concrete and

reinforced to resist seismic zone 2B earthquake standards.

As Forensic Engineers, Dean L. Webb and Arnold W. Coon, have investigated many interesting problems, failures, and accidents. Some of these cases have included the following:

- A. The Fashion Place Mall roof collapse in Murray, Utah.
- B. An accident involving scaffolding, which failed, killing two workers at the Special Events Center, on the University of Utah campus.
- C. The explosion of the Coal Miner's Daughter Condominium, Alta Utah.
- D. Wind damage to Saltair, caused by a gust of more than 110 miles per hour.
- E. Settlement damage at the Castletons Warehouse, located near the Jordan River, Salt Lake City, Utah.
- F. Structural damage caused by the August 1999 tornado that hit downtown Salt Lake City.

Dean L. Webb is a founding member of SEAU, and has served on several SEAU committees. We appreciate the efforts of all engineers, as they strive to maintain the high standards of professionalism, especially those exhibited by the Structural Engineers in Utah. We are proud of our association with SEAU.

MESSAGE FROM THE BOARD (continued from page 1)

calculators. It is really quite amazing.

And SEAU has found itself in the middle of many major developments that are quickly affecting our profession. The recent development of the IBC 2000, the upcoming debate over whether to adopt or not adopt that code, legislation affecting Code prescribed plan checks, a web page for the organization, and even tornado damage relief efforts are just a few of the things SEAU is involved in.

One of the more significant developments currently underway is a joint action by several organizations including SEAU, USSC, and the UBC Commission, to establish guidelines for upgrading existing structures. The majority of the effort has been shouldered by SEAU and has involved the Seismic committee, the Codes committee, the UBC Structural Advisory committee (who's members are mostly SEAU), and several individuals including Eric Kankainen (UBC Commission), and James Bailey (USSC delegate).

The Seismic committee has spent a great deal of time considering various alternatives for the guidelines. The Uniform Code for Building Conservation, the UCBC, and its IBC version called the Uniform Code for Existing Buildings, has now been selected as the document to be used. The Seismic committee and the Structural Advisory committee are currently reviewing the documents and preparing suggested modifications. The final document is scheduled for submission to the UBC Commission for Adoption some time this year.

The appendices of this code, which provide design guidelines, are drawing the most attention at this time. But of equal concern are the implementation requirements outlined in the first 6 chapters of the document. Questions that bring about the most confusion and probably the most disagreement relative to existing structures are, under what conditions is structural upgrading required, and what level of UBC compliance is then

mandated. These are loaded issues, and ones we all need definitive answers to. Several municipal building departments have established some guidelines, but there is definite need to further refine and unify the requirements out there.

At this time, it appears for political reasons and timing that we will submit a document that will present guidelines for existing buildings without all the requirements for implementation as well defined as some of us would like. However, the process has started in earnest and will set the stage for the development of a clear definitive document to guide us in the treatment of existing structures.

About 15 months ago in an article I wrote for the newsletter, I lamented that it appeared that several of SEAU's committees were inactive. My observation today is that SEAU committees are all busy, and some extremely so, dealing with the ongoing changes and critical issues that affect our profession. What a difference a new millennium makes.

JANUARY PROGRAM

“Collapse Of The World’s Tallest Free-Standing Sign”

▼
Sponsored By:

Utah Steel Fabricators Association in connection with
SEAU

▼
Program Date:

Thursday January 20, 2000

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Presented By:

Dr. Finley A. Charney, P.E. of Schnabel Engineering Associates, Inc. and Advanced Structural Concepts, Inc.

▼
Location:

University of Utah
Engineering and Mines Building
Room 105
Salt Lake City, Utah

On July 18, 1994, the world's tallest freestanding sign (361 feet tall) collapsed during a summer thunderstorm in Las Vegas, Nevada. Wind speeds at the time of the collapse were significantly less than required for the structural design. Why did the sign fail? Dr. Charney, who was involved in the investigation and the ensuing litigation for the past four years, will provide some of the answers to this question which can be found in every aspect of the design-build process including concept, management, design, review, fabrication, erection, and inspection.

Dr. Charney is a principal with Schnabel Engineering Associates. His is also president of Advanced Structural Concepts, Inc. He has 22 years of experience in the analysis and design of a variety of structures including arenas, bridges, dams, guyed towers, tall buildings, and vibration sensitive systems. Dr. Charney has been active in research in the behavior of steel and concrete structures, structural optimization, drift and damage control, nonlinear dynamic analysis, and supplemental damping systems.

BULLETIN BOARD**NEWSLETTER FEATURE**

The newsletter has begun featuring a unique photographic expose. The object is to present unique or interesting construction photos that highlight one of the following:

1. Unique construction photos of Utah landmarks.
2. Photographs of unique construction methods employed by creative contractors.

Please submit all photos to the newsletter editor by the appropriate monthly deadline. Electronic submittals are preferred. The following is this month's feature photo:



Photo courtesy of Dorian Adams of Reaveley Engineers & Associates. When a truck backed up into this masonry wall, the resulting damage exposed the vertical steel reinforcement. Obviously, the engineer intended the masonry wall to be grouted. Apparently, the contractor had other ideas.

NEW SEAU MEMBERSHIP APPLICANTS

The following individuals have submitted applications for approval by the SEAU membership committee:

Joseph Barlow, *Professional*
Bruce Christley Christiansen, *Associate*
Wesly Frampton, *Associate*
Michael Gill, *Associate*
Trent Hendrickson, *Professional*
Scott May, *Professional*
Mark Miller, *Professional*
Julie Ott, *Professional*
Carl Perkins, *Associate*
Frank P. Potter, *Professional*
Scott M. Uyernatsu, *Associate*
Andrea Wargula, *Professional*
Craig Wilkinson, *Professional*

**NORTH AMERICAN STEEL
CONSTRUCTION
CONFERENCE 2000**

Register today for NASCC 2000, your source for technological advancements and valuable networking opportunities. NASCC 2000 is your once-a-year chance to get the inside look into the rapidly changing and advancing world of steel construction. Learn from more than 30 sessions that explore today's most important engineering fabricating, detailing and erection trends.

The conference will be held on February 23-26, 2000 at the Las Vegas Convention Center, Las Vegas Nevada. For more information on the 2000 NASCC call (312) 670-5421 or consult AISC's website at:

www.aisc.org

NEWSLETTER SUBMITTALS

This SEAU Newsletter is designed to keep you informed of events and activities that affect our association and your involvement with SEAU. In addition, the newsletter can be a forum for you to share your views with your fellow engineers, post advertisements, or target a very select group of professionals.

Please have articles delivered to Scott Adan, c/o Reaveley Engineers & Associates, Inc., 1515 East 1100 East, SLC, UT 84105, Phone 486-3883, Fax 485-0911, Email: sadan@reaveley.com.

Please have advertisements delivered to Mike Buehner, c/o Reaveley Engineers & Associates, Inc., 1515 South 1100 East, SLC, UT 84105, Phone 486-3883, Fax 485-0911, Email: mbuehner@reaveley.com.

February Deadline: Jan.. 31, 2000
 March Deadline: Feb. 28, 2000
 April Deadline: March 27, 2000
 May Deadline: April 27, 2000

UPCOMING EVENTS

FEBRUARY ONE DAY SEMINAR

Title: "The Abatement of Dangerous Building & The Uniform Code for Building Conservation"

Presented By:

The State of Utah Department of Commerce, Division of Occupational & Professional Licensing and the Structural Engineers Association of Utah

Program Date:

Thursday February 10, 2000 or Friday February 11, 2000
8:30 a.m. Registration/Sign In
9:00 a.m.- 4:00 p.m. Seminar
Lunch and Deli Sandwich Provided

Instructor:

Melvin Green, Structural Engineer

One of the experts in seismic rehabilitation and abatement of dangerous building codes.

Location:

Cavanaugh's Olympus Hotel
161 West 600 South
Salt Lake City, Utah
Room: Wasatch 1 & 2

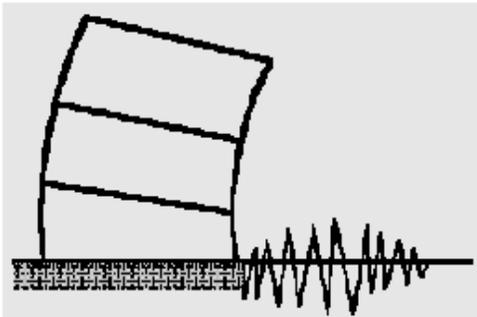
Registration Fee:

\$25 per day. The same seminar will be repeated both days.

Look for upcoming registration materials.. For more information call: Karen Tris (801) 530-6391, Ethel Henderson (801) 530-6076 or Alicia Timm (801) 530-6457

ADVERTISING SECTION

New Release
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THIS SPACE FOR RENT

The newsletter can be an excellent forum to advertise and target a very select group of professionals. To find out more contact:

Mike Buehner, c/o Reaveley Engineers & Associates, Inc., 1515 South 1100 East, SLC, UT 84105, Phone 486-3883, Fax 485-0911, Email: mbuehner@reaveley.com.

**The Utah Steel Fabricators Association in connection with
SEAU Present:**

***Collaspe of The World's
Tallest Freestanding Sign***



**Program Date:
Thursday January 20, 2000**



Presented By:
Dr. Finley A. Charney, P.E., of Schnabel Engineering Assoc. and Advanced Structural Concepts
Inc.



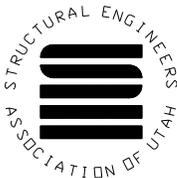
Location:
University of Utah
Engineering and Mines Building
Room 105
Salt Lake City, Utah



**For additional questions call:
Newland Malmquist (801) 972-2634**

STRUCTURAL ENGINEERS ASSOCIATION OF UTAH

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