

Structural Engineers of NH

March 2004



Serving New Hampshire

SENH PRESIDENT'S LETTER...



Welcome to spring SENH members. The chirp of the birds, the longer days and the warm sun making it enjoyable to take a walk at lunchtime can only mean one thing - roof snow loads will not be in the news again for about 10 months! The SENH March meeting is set and the May Annual meeting is in the works. Read on for other news.....

Congratulations to New Members.....

Over the past few months, SENH has been fortunate to welcome many new Members and Associate Members to our organization. They are as follows:

- | | |
|---------------------------------|---------------------------------|
| Michael Brannelly, P.E., Member | Earl Sandford, P.E., Member |
| William Capone, P.E., Member | Josif Bicja, Associate Member |
| Mark Colgan, P.E., Member | Derek Gilbert, Associate Member |
| Steve Hodgdon, P.E., Member | Ryan Lawler, Associate Member |
| Vicki May, P.E., Member | Ross Wood, Associate Member |

Board of Directors Elections.....

At the May 2004 Annual Meeting, the membership will vote on two (2) Board of Directors positions for the expiring terms of James Karmozyn, P.E. and Matthew L. Low, P.E.. The membership is encouraged to provide nominees for these positions to the Board of Directors by April 15, 2004 to be included in the ballot for the May meeting. The Board is nominating James Karmozyn, P.E. and Linda McNair-Perry, P.E. for election to these two (2) year terms.

March Meeting.....

The announcement for the March 24, 2004 meeting is included in this newsletter. It will be a panel discussion relative to the team relationship between the geotechnical engineer and structural engineer. Three (3) esteemed local geotechnical engineers have accepted our invitation to be a part of this discussion, they are: Eric Teale, P.E.—HTE Northeast, Inc. Craig Ward, P.E., - GEI, and John DiGenova, P.E.—Haley & Aldrich.



Member of

Next Meeting:
 Wednesday
 March 24, 2004
Panel Discussion
 Cat n' Fiddle Restaurant
 Concord, NH
 Collaboration between
 Structural & Geotechnical
 Engineers

Happy St. Patrick's Day



Inside this issue:	
Presidents Letter	1-2
January 27, 2004 Meeting Minutes	3 - 4
March Meeting Announcement	5

Continuing Education.....

If you are looking for Continuing Education Opportunities, you have come to the right place. Check out this list of upcoming seminars:

- *PCI Accelerated Bridge Construction Workshop, April 13, 2004, Massachusetts Highway Department, Boston MA; May 5, 2004, NHDOT, Concord, NH; May 6th, VTrans, Montpelier, VT:* SENH will be a cosponsor of this event at the NHDOT. See www.pcline.org to register.
- *23rd Annual SSFNE Structural Steel Program, May 13, 2004, WPI, Worcester, MA:* More information will be provided as it becomes available.
- *IBC 2003 Overview, May 18, 2004, Highlander Inn, Manchester NH:* SENH is cosponsoring this seminar with S.K. Ghosh Associates. SENH members will be offered a discount on the seminar fee and publication. Check out www.skghoshassociates.com/springseminars2004/may2004-nh-seminars.pdf for registration information.
- *SSFNE Steel Bridge Forum, November 9, 2004, Holiday Inn, Boxborough, MA*

Steel Prices on the Rise.....DRAMATICALLY!

AISC has issued a general press release recently regarding the sharp escalation in the price of raw materials and the subsequent "raw material surcharges" being imposed by steel mills. Emile Troup, P.E., SSFNE has issued the following comments:

1. Have orders placed for steel as early as possible in the project;
2. Stay in close touch with SSFNE members, including fabricators and service centers, about the current status of pricing and availability of structural shapes and HSS. Visit www.ssfne.org for a list of members;
3. If possible, to have a chance at beating future price increases, get a fabricator on board early in the project to order material from SSFNE member service centers.

Plan ahead to anticipate, to the best of your ability, the costs which your clients may expect. For more information, contact Emile Troup, P.E., at steelstruk@aol.com

In Memoriam.....

In closing, SENH is saddened to learn of the loss of one of our members. Dave Memmert, P.E. was a member of SENH since May of 1995 until his death on January 30, 2004. Dave was a sole practitioner in Ossipee NH. We at SENH offer our condolences to his family and friends.

We look forward to seeing you all on March 24th!

Sincerely
Structural Engineers of New Hampshire



Matthew J. Low, P.E.
President



Structural Engineers of New Hampshire Meeting Attendance

DATE: January 27, 2004

PLACE: A Fireside Inn & Suites West Lebanon, NH

RE: Chesterfield-Brattleboro Steel Arch Bridge
(2.0 PDH Assigned)

NAME	ORGANIZATION	NAME	ORGANIZATION
Alex Azodi, P.E.	Emanuel Engineering, Inc.	Paul Kirby, P.E.	TFMoran, Inc.
H. Edmond Bergeron, P.E.	HE Bergeron Engineers	Jeffrey T. Klein	Vanasse Hangen Brustlin, Inc.
George Bogue	Dufresne Henry	Dennis R. LaBombard, P.E.	LaBombard Engineering, LLC
Robert L. Brungraber, PhD., P.E.	Benson Woodworking Co., Inc.	Jean LoCicero	Engineering Ventures
Tim Bryant	Vanasse Hangen Brustlin, Inc.	Robert D. Madore	WR Grace & Co.
Scott Burbank	Dufresne Henry	Bruce Masse	Vanasse Hangen Brustlin, Inc.
Robert S. Busby, P.E.	Kalwall Corporation	Donald F. Mayo, P.E.	Donald F. Mayo, P.E., Inc.
Scott Carter	Haley & Aldrich	Daniel W. McCarthy, Jr.	Consultant
Mike Chenette	Dufresne Henry	Kenneth W. Milender	University of NH
Todd M. Clark	Hoyle, Tanner & Assoc., Inc.	Matt Miller	Engineering Ventures
Fred Emanuel, P.E.	Emanuel Engineering, Inc.	Raymond G. Morin, P.E.	Raymond G. Morin, P.E.
Sherward Farnsworth	Vtrans	Micah Morrison	GV Engineering, LLC
Joseph Foley, P.E.	Cianbro Corporation	Wallace M. Mosher, P.E.	Vanasse Hangen Brustlin, Inc.
Jason L. Gallant, P.E.	Jesseman, Gallant & Associates	Bob Neeld	Engineering Ventures
Roger W. Gayer, P.E.	Structures Unlimited, Inc.	Ken Pidgeon	Engineers Construction
Derek J. Gilbert	TFMoran, Inc.	Mark Richardson	NHDOT
Carl L. Goldknopf, P.E.	GV Engineering, LLC	Richard M. Rooney, P.E.	CLD, Inc.
Robert S. Hartford, P.E.	Kalwall Corporation	Bill Saffin	
John Higgins	Artesen Engineering	Timothy L. Schaal, P.E.	Schaal Engineering, P.C.
Steve Hodgson	Vanasse Hangen Brustlin, Inc.	Bruce D. Stewart, P.E.	Stewart Structural Engineering
Sean James, P.E.	Hoyle, Tanner & Assoc., Inc.	John G. Stockton, P.E.	URS Corporation
Mark Johnson	Engineering Ventures	Veronica E. Thibodeau, P.E.	Weston & Sampson Engineers
Steve W. Johnson, P.E.	Vanasse Hangen Brustlin, Inc.	Roger M. Thibodeau, P.E.	Twin State Engineering
John Kamb	US Forest Services	Andrew Walters	GV Engineering, LLC
James Karmozyn, P.E.	H.E. Bergeron Engineering	Bryson T. Welch	CLD Consulting Engineers, Inc.
Thomas T. Kendrick, P.E.	Parsons Transportation Group	Andrew D. White	Tirey & Associates, P.C.

SENH January 27th Meeting Minutes

I. BUSINESS MEETING

The meeting was called to order by Roger Gayer, Vice President, at 7:00 pm, after the social time and dinner. He noted that this was a joint meeting with SEAVT.

1. Roger asked SENH members to send in their dues if they had not already done so.
2. Treasurer, Jim Karmozyn, reported that the SENH account had a balance of \$5588.
3. Roger Gayer announced that SENH approved applications for three new members: Mark Colgan; Earl Sandford; and Vicki May and four new associate members: Derek Gilbert; Ross Wood; Ryan Lawler; and Josif Bicja.
4. The National Engineer's week banquet is February 19th. More information can be found on the website NHSPE.com.
5. AISC will be holding a seminar on Field Fixes in Portland, ME (2/17), Concord, NH (2/18), and Boston, MA, (2/24).
6. It was announced that SSFNE Annual Meeting will be held at WPI – Thursday, May 13, 2004.
7. The membership was asked to let the Board know if they had a subject that should be considered for a seminar. Alex Azodi indicated that SENH had been asked to cosponsor a Steel Joist Institute Seminar with SEAVT. He asked for a show of hands of those interested in attending a one day SJI Seminar in Lebanon that counted as 0.75 CEUs. Approximately 12 people expressed an interest. He then asked if they would still be interested if the cost was \$295. 4 to 6 people expressed an interest.
8. The March meeting will include a panel discussion with geotechnical engineers. The meeting date will be announced later.
9. Bob Neeld, the President of SEAVT, noted that Vermont is working on a Snow Load study with CRREL and will be obtaining a proposal from CRREL shortly. He noted that the next step will be to obtain funding for the work. It was noted that Vermont has still not decided whether to institute the International Building Code or the NFPA 5000 code. SEAVT voted against NCSEA continuing with their certification program.

II. TECHNICAL PRESENTATION

Joseph Foley, PE, from Cianbro Corporation, gave a presentation on the Chesterfield/Brattleboro Steel Arch Bridge. Cianbro Corporation was the construction contractor for the project and Mr. Foley designed many of the temporary works and erection procedures for the project.

The new bridge is a 436-foot single span tied steel arch. It is located just upstream from a similar structure which it will replace. Mr. Foley presented a thorough walk-through of the construction sequence of the project via a series of slides showing the different phases of construction offering commentary on the more interesting phases of the project. Some of his observations included:

- Due to a concern about settlement of the existing structure, the plans called for predrilling the piles to certain depth, then driving the pile. Cianbro proposed an alternate construction method that included vibrating the pipe piles in the first 40' then driving. By vibrating the piles, a plug did not form in the open end of the tip of the pile until the driving started.
- The project included massive foundation pours including a 950 cubic yard footing pour that was placed in a single day.
- Crane work from the water was performed on a 60'x120' lashed together barge.
- The arch was erected from each shore using a tower and guy system to support the partially completed arch on each side. The towers were reused from a previous project and the backstays were anchored to a 2' thick buried anchorage slab on the NH side and rock anchors on the VT side. A safety factor of 3 was used for the wire rope.
- The erection detailing included the lifting points for each piece and calculated the stretch in the forestay and backstay cables. The tower deflected forward as each piece was erected due to the stretch in the cables. An adjustment system using Dywidag rods was included between the backstay anchorage and the anchorage slab or rock anchors. Prior to last infill piece in the arch, the towers were supporting 320 tons cantilevered from each shore.
- To assist in aligning the structure as it was erected, the hinge bearings were not grouted until the two pieces of the truss were in and aligned.
- The last infill piece for the main arches were pre-drilled on both sides (fitted in the shop) and fit into place without any substantially reaming required.
- The heaviest crane pick on the project was lifting the erection towers (approximately 50 tons).
- The deck structure was built from each shore to meet in the middle using a 35' long rolling platform.

Mr. Foley answered questions from the audience and gave NHDOT the ultimate contractor's compliment by stating looking back on the project, given the chance, he wouldn't have changed any of the detailing on the arch.

Respectfully submitted,
Steve W. Johnson, P.E., Secretary, SENH

MARCH MEETING ANNOUNCEMENT

NEXT MEETING: Wednesday, March 24, 2004

SUBJECT: Our business practice meeting will be a panel discussion with 3 Geotechnical Engineers on the topic "Collaboration between Structural and Geotechnical Engineers – Working Together to achieve the Best Solutions".

The panel will include:

- John G DiGenova, a senior engineer with Haley and Aldrich
- Eric Teale, a Principal Officer of HTE Northeast, Inc.
- Craig F Ward, manager of GEI's New Hampshire office.

If you have questions that you would like presented to the panel, please email them to swjohnson@vhb.com by March 10, 2004.

PLACE: The Cat n' Fiddle Restaurant, Concord, NH

DIRECTIONS: From Rte. 93, take Exit 13. At end of ramp, take Rt. 3 South for approx 1-mile. The Cat n' Fiddle Restaurant will be on your right.

AGENDA: 5:30 Social Hour
6:30 Dinner
7:15 Business Meeting
7:30 Presentation and Discussion
9:00 Adjourn

DINNER: Buffet to include: Baked Ham, Baked Stuffed Chicken, Swedish Meatballs, Potato or Rice, Mixed Vegetables, Salads, Relishes, and Desserts.

COST: Member: \$25.00 Non-Member: \$30.00 Full Time Student: \$15.00

RSVP: March 17, 2004
Please send check payable to "Structural Engineers of New Hampshire" with list of attendees to:

SENH
P.O. Box 226
Manchester, NH 03105-0226
Contact: Deb Coon, Administrative Assistant- (603) 669-5555

NOTE: 2.0 PDH's have been assigned for attendance to this program. Attendees are responsible for ensuring their check-in on the attendance list upon arrival at the meeting.
