



Granite Columns



President's Letter



I hope you all have had a nice summer, with the ability to take some time away from the office. The last time you heard from me, in May, I presented the Board's 2018-2021 Strategic Plan. I previewed it over the past year in this President's Letter and will continue to highlight different aspects of the Plan as we move forward. The Board held our annual summer meeting and are beginning to move on some of the Plan's action items.

The key strategy of the Plan is in fact the last strategy, in hindsight perhaps putting it first would've been more appropriate. Nonetheless, enhancing the effectiveness of SENH's committees is the only way we can, as a group, achieve any appreciable progress. At this time, SENH has two committees, which will be the focus of our effort. Consider this a call for volunteers!

Public Relations (PR) Committee

The Board is looking to re-establish this committee and take the lead on Strategy II – Strengthen Membership. To do this, we are seeking volunteers to tackle the goals and action items of this strategy. Ideally, we believe a mixture of “experienced” engineers, who have an institutional knowledge of the local trends of our industry, and “fresher” engineers, who have a different perspective of our industry. We envision the committee undertaking a membership drive of sorts, to maximize opportunities for and engage our state's structural engineers.

Code Advisory Committee (CAC)

This committee recently received a breath of fresh air and appears to be gaining some steam. What's needed, at this point, are additional volunteers to help spread out the workload. If you've encountered a tough situation, where there has been disagreement about a grey area in the code or lack of enforcement, please offer a little bit of your time to champion a position statement. The idea is to establish a standard, to clarify these ambiguities, which has the support of the majority of practicing structural engineers in our state.

In addition, the Professional Development Committee (PDC) continues in the right direction and our Younger Members Group (YMG) is progressively strengthening. The Board is tasked with supporting the hard work undertaken our members to sustain these initiatives.

Should you feel like you can contribute, even a little bit, to any one of these efforts, you can contact me and I will connect you with the appropriate person. Please reach out at anytime.

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Special Points of Interest/ Reminders:

- *Mark your calendars! The next meeting is September 12th—See inside for details.*
- *Congratulations to our Excellence in Structural Engineering Award Winners!*
- *Looking for a new job? See Employment Opportunities Inside!*

SENH Committee Updates

2018 NCSEA Structural Summit, Chicago, IL

submitted by Robert Durfee, P.E., SENH Delegate

SENH Delegate: Bob Durfee
SENH Alternate Delegate: Jeff Karam
Member: Alex Azodi

The 2018 Summit will be held on Wednesday, October 24th to Saturday, October 27th, 2018 at the Sheraton Grand Hotel in Chicago. Delegate Bob Durfee and Associate Delegate Jeff Karam representing SENH will attend the Summit. Bob will also attend his Communication Committee meeting on Wednesday. Jeff will also attend his International Resident Code Committee (IRC) meeting on Wednesday. Member Alex Azodi will attend his IBC General Engineering Committee meeting on Wednesday.

NCSEA Communications Committee

submitted by Robert Durfee, P.E., SENH Delegate

SENH Delegate: Bob Durfee
SENH Alternate Delegate: Jeff Karam

NCSEA Scholarship

NCSEA announcing their annual Scholarship Program and application procedures for Young Members (under age 35) from any Member Organization (including SENH) to apply for a scholarship to cover costs to attend the 2018 Structural Summit.

The SENH Young Member Group was contacted to poll their members for candidates interested in applying for a scholarship to attend the Summit. Young Member Kayla Hampe submitted an application for a Scholarship.

NESEA Committee

submitted by Robert Durfee, P.E., SENH Representative

SENH Representatives: Bob Durfee & Alex Azodi

Member Organization Meetings

The Northeast Collation of SEA's continues to hold teleconference meetings bi-monthly. Alex Azodi and Bob Durfee represent SENH on this Committee. The Committee coordinates meeting announcements by all North-east Member SEA's for SENH to announce to our members. Recent announcements have included meetings by SEAM (Maine) and SEAMass (Massachusetts) on structural or technical topics.

Representative Vacancy

Alex Azodi has announced his retirement from this Committee. The Board seeks to appoint a replacement for Alex as a representative. If you are interested in serving on this Committee, please contact the President or any Board member.

Ad-Hoc Awards Committee

submitted by Robert Durfee, P.E., Chair

Chair: Bob Durfee
Co-Chair: Bob Champaign
Fred Emanuel
Josif Bicja

The Committee issued the [Call for Entries](#) for the 2018 Excellence in Structural Engineering Awards Program. The Awards program was held at the May 24th SENH meeting in Manchester. Three awards were presented for Buildings, Bridges and Special Structures. All award winners and their projects are highlighted in this newsletter.

NECSEA Committee

submitted by Robert Durfee, P.E., Co-Chair

Co-Chairs: Bob Durfee & Sean James

Nominations for Engineer of the Year and Young Engineer of the Year in New Hampshire will be requested by NSPE-NH this fall. The Nomination Committee is seeking a candidate to nominate for Young Engineer of the Year (YEOY) from SENH. Contact a co-chair with your suggestion of a candidate. Remember, candidates must be nominated confidentially and in strict secrecy. A candidate must not be aware her/she is being considered or nominated for an award.

Young Members Group

submitted by Sean Brown, E.I.T.



SENH Younger Member Group Updates:

- The Younger Member Group participated in the NCSEA YMG Trivia Night. The NH team competed in a web-based trivia game against other YMGs from across the country and placed 3rd in the eastern US!
- Upcoming Event: SENH vs ASCE Kickball! Plans are currently being finalized for the 4th annual kickball game against our ASCE counterparts. We expect to hold an after-work game in the week following our joint meeting on September 12th. Exact location, date, and time will follow via announcements and email. Keep your eye out for updates!
- Future Events this Fall: UNH Outreach
The YMG group is excited to announce a UNH outreach event for the fall. The YMG will host a panel discussion with practicing structural engineers, invite students to bring their resume and have it reviewed, and will hold mock interviews to help prepare students for upcoming internships or job interviews. The goal of this event will be to promote our profession to the next generation of engineers and encourage students in making the transition from college to a career in engineering.

SENH Committee Updates *(Continued)*

UNH Information Page *submitted by Raymond Cook, Ph. D., P.E.*

Classes start at the University of New Hampshire on August 27th and the Department of Civil and Environmental Engineering is looking forward to an enrollment of 139 students in Environmental Engineering, which includes 57 seniors, and 273 students in Civil Engineering, which includes 102 seniors. Dr. Charlie Goodspeed has retired, but we have recently hired Drs. Paula Mouser (Bioremediation of Groundwater) and Kyle Kwiatkowski (Systems, Transportation, and Resiliency). Drs. Mouser, Dave, and Ghayoomi have all just been promoted to Associate Professor with tenure. Structural engineering professors include Drs. Cook, Bell, Henry, and Medina.

This fall, we'll be teaching senior-level, structure-related classes in BIM, Green Building Design, Foundations, and Reinforced Concrete Design. In the spring, we'll be teaching Structural Dynamics, Timber Design, Steel Design, and Bridge Design.

UNH has initiated major efforts recently to help students find internships and their first professional positions. Our CEPS Director of Career and Professional Development is Stephanie Whitney (stephanie.whitney@unh.edu). Stephanie can help interested employers to get involved in resume review days, participate in job fairs, and advertise new positions. UNH has just implemented a new software platform called Handshake, to host job and internship postings, on-campus recruitment scheduling, career events registration, and more. Stephanie would be glad to help you get up to speed with the new, user-friendly software.

First SENH Lunch and Learn Announcement

As a member organization of NCSEA, SENH is able to provide an NCSEA recorded webinar to members in a Lunch and Learn type format free of cost. The first webinar will be held at a member company office in the Manchester, NH area on October 24 from 12pm-1:30pm. Please arrive 10 to 15 minutes early for registration. Pizza and soft drinks will be provided. Please contact Kayla Hampe khampe@hoyletanner.com for registration to be sure there is available seating. RSVP no later than October 19th. The final location will be determined based upon number of attendees and will be announced the October 22nd.

Webinar Topic:

Concrete with Little or No Shrinkage, Cracking and Curling

This presentation will cover a great many topics that affect the shrinkage, cracking and curling of concrete. Typical concrete shrinks about 0.06%. In this presentation the emphasis for the concrete mix design will be on reducing the shrinkage to 0.04%, 0.02% or even 0.00% by the use of the proper coarse aggregate size & quantity and by the use of shrinkage reducing & shrinkage compensating admixtures. We will cover how to write a spec to achieve these low shrinkage percentages.

We will also look at what happens after the concrete is placed, including the use of an evaporation retarder, proper curing, joint layout, saw cutting, etc.

There are many tests that are typically run on the concrete at the jobsite and in the weeks following, but none of them tell us right there at the job site in real time if concrete is likely to shrink, crack and curl. We will cover the one job site test method that will provide that critical information immediately.

ASCE/ SENH Joint September Meeting Announcement

NEXT MEETING: Wednesday, September 12, 2018

PRESENTATION: **Transportation Infrastructure: Fix or Replace? A Silver Bullet for Transportation?**

Our infrastructure is crumbling and fixing it will be costly — and governments lack adequate funding. Just as other countries leapfrogged over copper phone lines to wireless communications, cities in the Philippines, Ghana, and India are looking to leapfrog over roadways and permit privately financed fleets of fully autonomous, solar-powered pods with the cost, capacity, and convenience to replace cars, buses, trains, and trucks. Conventional infrastructure has relied on asphalt, concrete, and steel. Now, advanced composites and continuous manufacturing processes enable a factory-built transportation infrastructure that weighs 99.9% less than roadways. The implications are mind-blowing and it could reshape the way we live and work.

SPEAKER'S BIO: **Mike Stanley** is the founder and CEO of Transit X. Transit X is building a low-cost, fully-autonomous, solar-powered personal mass transit network. Mr. Stanley is the VP of Engineering of cloud-based enterprise project management and collaboration tool. He is a graduate of MIT in Electrical Engineering and Computer Science and from the Sloan School of Management. He built his first autonomous robot in 1980 at the age of 12. His experience spans software, web applications, consumer products, user interface, networks, robotics, and transportation.

PLACE: Murphy's Taproom & Carriage House
393 Route 101
Bedford, NH 03110
(603) 488-5975

AGENDA: 5:30 pm – 6:30 pm Registration/Social Hour
6:30 pm – 7:15 pm Dinner
7:15 pm – 7:30 pm Business Meeting
7:30 pm – 8:30 pm Presentation
8:30 pm – 8:45 pm Closing Remarks

DINNER: Buffet with choice of Chicken Picatta or Sliced Sirloin Steak with a Red Wine sauce. Sides include garden salad with ranch and vinaigrette dressings, mashed potatoes, and seasonal vegetables.

Please include any food allergies or dietary restrictions to be accommodated.

COST: Member/Non-Member: \$55.00 – Government Employee: \$35.00 - Student: \$20.00 “No-shows” will be billed at full amount.

RSVP: **By Friday, August 31, 2018 to avoid any late fees.** There will be a \$15.00 late fee for members and non-members, a \$10.00 late fee for government employees, and a \$5.00 late fee for students wishing to RSVP past this date.

Registration and payments can be completed using one of the following methods:

Pay online at <https://www.ascenh.org> using ASCE's Events calendar under “ASCE/SENH Joint Meeting”

Send a check with list of attendees to:

ASCE
New Hampshire Section
PO Box 4953
Manchester, NH 03108

NOTE: 2.0 PDHs have been assigned for attendance for SENH members. Attendees are responsible for ensuring their check-in on the attendance list upon arrival at the meeting.

Excellence in Structural Engineering Award Winners

2018 Bridge & Transportation Winner: Dubois & King, Inc. — Laconia, NH

Entry: Village Covered Bridge (Friendship Bridge) Adaptive Reuse in Wentworth, NH



2018 Building Structure Winner: Summit Engineering, Inc. — Portsmouth, NH

Entry: F.W. Webb Central Distribution Facility in Londonderry, NH



Excellence in Structural Engineering Award Winners

2018 Special Structure Winner: HEB Engineers — North Conway, NH

Entry: Nansen Ski Jump Renovation in Milan, NH



May Attendance List & Meeting Minutes

Non-Destructive & Geophysical Testing (2.0 PDH's)
The Derryfield Restaurant, 625 N. Mammoth Rd., Manchester, NH May 25, 2018

Name	Organization	Name	Organization
Name	Company		
Bill Horne	NDT Corporation - Speaker	Katelyn Welch, E.I.T.	Hoyle Tanner & Associates
Spencer Roorda	Speaker's Guest	Kathy Dougherty	
Alex Azodi	Omega Structural Engineers	Kayla Hampe, E.I.T.	Hoyle Tanner & Associates
Bob Durfee, P.E.	Dubois & King	Lily Beyer	Summit Engineering
Chris Fournier, P.E.	HEB Engineers	Lou Cote	TFMoran Inc.
Daniel Martel	Team Engineering	Nevin Gomez	WSP USA
Derek Gilbert, P.E.	Design Group Facility Solutions	Nicholas Caron, P.E.	CMA Engineers
Eric Caron	University of NH	Normand Cote, P.E.	NGC Structural, LLC
Eric Ohanian, P.E.	Tighe & Bond	Paul Sbacchi, P.E.	TFMoran Inc.
Ethan Carrier	CLD Engineers	Robert Busby, P.E.	KalWall Corporation
Fred Emanuel, P.E.	Emanuel Engineering	Roger Keilig, P.E.	NHDOT
Greg Clauson	Klienfelder	Ross Wood, P.E.	Hoyle Tanner & Associates
Jeff Trexler, P.E.	Trexler Engineering	Ryan McMullen	Hoyle Tanner & Associates
Jeffrey Karam, P.E.	Evergreen Structural Engineering	Sam White, P.E.	McFarland Johnson
Jeffrey Tirey, P.E.	Tirey & Associates, Inc.	Sean Brown NBIS	Klienfelder
Jillian Semprini	Hoyle Tanner & Associates	Steve Hodgdon	Hoyle Tanner & Associates
John Byatt	CLD Engineers	Timothy Grant	
Jonathan Nadeau, E.I.T.	TFMoran Inc.	Timothy Polson, P.E.	WSP USA
Josif Bicja, P.E.	Hoyle Tanner & Associates	Tom Lamb, P.E.	TFMoran Inc.
		Zachary Zavalianos	Dubois & King

Business Portion of the Meeting

Chris Fournier made an announcement:

- Younger Members are encouraged to apply for the NCSEA scholarship to attend the Summit in Chicago.

Josif Bicja provided a budget update:

- 133 Members have paid their membership dues
- UNH Scholarships were awarded

Sean Brown provided a Younger Members Group update:

- The group is about 20 members
- The group meets 4 to 5 times a year
- Younger members met with UNH students for a resume review in March
- Younger members participated in a habitat for humanity volunteer day

Bob Durfee provided an update on NCSEA:

- Bob thanked Alex Azodi for representing SENH with him at the summit the last 8 years
- Bob and Jeff Karam plan to attend the summit October 24-27 in Chicago
- Early bird registration for the summit ends June 1st
- The North East Coalition of Structural Engineering Associations (NECSEA) is compiling a list of adopted building codes for the North East. Look for this on the website soon.
- NECSEA member SEAMass is planning a seminar on petrographic analysis in September. Details are forthcoming.

Chris Fournier Presented Nominees for the two vacant Board Positions:

- Nominees Tim Polson and Jeff Karam were both accepted by the membership

Chris Fournier Presented the newly drafted Strategic Plan for SENH

- Input on the strategic plan is encouraged as the strategic plan is intended to be a "living document"
- The plan will be posted on the SENH website
- Volunteers to help with action items noted in the strategic plan are welcomed

May Attendance List & Meeting Minutes

Continued from page 6

Presentations

(Business Portion continued from page 6)

Adam Stockin Presented the SENH award winners

- Judges this year were Norm Cote, Tim Polson and Tom Lamb
- Entries were due in March and 6 entries were submitted
- Award winners were HEB Engineers, Inc.-Special Structures Category, DuBois and King, Inc.-Bridge Category and Summit Engineering PLLC-Buildings Category.
- See the SENH website for all entries and more information

Technical Presentation:

Bill Horne of NDT Corporation presented on non-destructive testing techniques. Imaging for structural measurements and condition assessments can be made on wood, steel, concrete, soil and rock. Techniques for testing include impact echo, pulse velocity, ultrasonic, seismic refraction and ground penetrating radar. These tests use the measurement of the frequency and velocity of waves through the material to determine thickness, condition and strength of materials.

Sonic/ultrasonic testing typically involves firing ball bearings at the material. Wave velocity can be measured in a 2 to 3-foot-wide area. This can be used to determine material strengths.

Ground Penetrating Radar (GPR) uses continuous pulse energy. This test can determine rebar locations, delamination of concrete, voids below slabs, and cross sections of roads. This cannot determine concrete reinforcing bar sizes but can determine cover depth, location and corrosion of the bars. This test can also be useful in determining voids and cracking in concrete including voids in post tensioning grouting. Testing can verify grouting and epoxy repairs during construction and repair operations. Tomographic modeling can be used for more accurate results including strength determination and condition assessments of concrete slabs, pipes and tanks.

Microphone technologies can be used to test strengths in concrete railroad ties. Four to five miles per day can be tested. Equipment can identify and mark damaged ties before damage is visible.

Impact echo testing can determine the length and depth of piles of various materials. Results can often be determined on site. Types of unknown foundations can also be determined. Testing by using a bore hole next to the foundation can be used on sites with difficult access.

Seismic Refraction testing can be used to develop nearly a continuous soil profile in conjunction with soil borings. This method can also be used in testing for water seepage/clay layers in dams and soil types for tunneling. The equipment for this testing is very portable.

Employment Opportunities

Structural Engineer

Harriman's growing multi-disciplinary practice is seeking a **Structural Engineer** to join our team. With various locations throughout New England, our ideal candidate can select the best location for them: Auburn or Portland, Maine; Boston, Massachusetts; or Portsmouth, New Hampshire. With a holistic, ground-up approach to design, our structural team works closely with the firm's internal practice groups - coordinating with architects and engineers throughout the firm - as well as directly with prime engineering clients, on a diverse group of project types. Our work is challenging and creative, with a focus on thoughtful, environmentally-conscious solutions for the future. If you're a collaborative and detail-oriented engineer who is passionate about the built environment and can tackle technical reports, calcs, and specifications with ease, we want to meet you!

What you'll do here:

- Design and manage structural engineering projects for all aspects of building structures and components on a variety of project types including schools, municipal facilities, retail and mixed-use developments, and more
- Work collaboratively on projects with Harriman's internal staff and consultant partners, as well as clients, code officials, and contractors
- Prepare technical reports and existing building assessments
- Produce engineering bid documents and structural specifications
- Provide project management oversight to meet schedule and budget requirements
- Conduct comprehensive quality assurance peer reviews within the structural engineering discipline and coordinate with engineering and architectural team members.
- Participate in business development and outreach opportunities to solicit and acquire new work.

Position Requirements:

- Bachelor's degree in Civil/Structural Engineering from an ABET-accredited program
- Professional licensure in Maine, Massachusetts or New Hampshire
- Minimum 5 years of related structural engineering experience in the design and construction of new and existing buildings
- Knowledge of both current and historic building materials, along with field investigation methods as it relates to the evaluation and design of existing and new structures
- Ability to design steel, wood, concrete and masonry structures
- Proficient with structural design software such as Ram, Risa, Woodworks, etc. and knowledge of producing bid documents in Revit.
- Experience managing multiple projects with minimal supervision
- Familiar with all governing State and National building codes and standards
- Active in professional engineering organizations such as SEAM, BASE, SENH, ASCE, ACEC, etc.
- Excellent interpersonal and communications skills and the ability to establish and maintain relationships with clients, coworkers, and consultant teams

Employment Opportunities *Continued*

ABOUT US

At Fuss & O'Neill, our mission is to provide our clients with innovative and practical engineering, scientific, and planning solutions to meet their needs. We act together as one company, collaborating to achieve our priorities; we believe constructive discourse that welcomes diverse viewpoints makes for a stronger team; and we support our employees' professional growth through training and opportunities for increased responsibility.

ABOUT THE POSITION

We are seeking a **Senior Bridge Engineer** to work as a member of our bridge services team in our **Manchester, New Hampshire** office.

The successful candidate will act as the lead bridge engineer on multi-discipline projects throughout northern New England. Technical responsibilities include: bridge design, preparing plans, reports, and construction documents, and performing periodic site visits during design and construction phases.

The successful candidate will work under the leadership of a Project Manager and will have the opportunity to coach and mentor junior engineers.

This position offers great growth potential for advancement and expanding the firm's structural services throughout northern New England.

Position Requirements

- Bachelor's degree in Civil Engineering with a concentration in Structural Engineering
- Ideal candidate will have 8+ years of experience in bridge engineering and design
- Professional Engineer (PE) license required
- Previous experience with NHDOT, MaineDOT, MassDOT and VTrans preferred
- AutoCAD and Microstation capabilities desirable

Certified Bridge Inspector desirable

TO APPLY

Visit our website at http://www.fando.com/careers/current_openings/ to upload your resume and apply for the position.

Fuss & O'Neill, Inc. is proud to be an Affirmative Action/Equal Opportunity Employer. All offers are contingent upon a successful criminal background check. Fuss & O'Neill participates in the Federal e-Verify program.

Employment Opportunities *Continued*

BRIDGE / STRUCTURAL ENGINEER (Concord, NH)

Quantum Construction Consultants, LLC (QCC) is seeking a highly motivated, Bridge/Structural Engineer to join our progressive team in Concord, NH.

Responsibilities will include project management, structural design calculations, bridge design reports, plans and specifications, hydrologic and hydraulic analyses, drainage design, civil support services, construction support services, and assist project team as required for quality assurance. Requirements include EIT with ability to obtain NH Professional Engineer License and 2 to 5 years' experience in bridge design.

Please see our full classified advertisement at www.quantum-cc.com in the company section or forward qualifications to hnadeau@quantum-cc.com.

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