Volume 17 Issue 3

May 2022

Structural Engineers SENH of New Hampshire

Granite Columns

President's Letter

Dear Members, Colleagues and Sponsors,

I hope each of you continue to do well and stay busy. I am sure a lot of you have received numerous cold calls the last few months from prospective clients asking if you could fit in another project and to help evaluate a structural issue in a house, building, barn, foundations, etc. It seems the tables have turned and projects just land on our desks with minimal to no pre-sell or those awkward cold calls. In early March SENH joined LinkedIn and we have also been active on Facebook promoting and building awareness of the structural engineering profession and elevating the perceived value of structural engineers and the contributions they make to their communities. Please follow us on LinkedIn and Facebook and like our posts so that your followers can see and appreciate the incredible work we do. These are all great things we are doing but as much as we would like to take credit for these efforts, I do not believe that is the reason why we all are getting these phone calls and new projects. With all federal funding pouring in there are more projects than most of us can handle. Growing businesses and finding help has been challenging on all industries, not just our profession. New graduates receive multiple offers, and they are in great position to request higher salary and pick and choose what's right for them. The economy outlook continues to be strong and inflation is at record levels, but with all this growth there are many experts that predict that this will not be sustained for long periods of time. I hate to be the bearer of bad news but the saying "what goes up must come down" has proven itself correct many times over the years. Continue to make the right decisions and hire the right talent for the job and be cautious with too sudden of a growth.

I enjoyed very much our last March meeting hearing from our own members on their projects and also for Kayla Hampe's volunteer efforts with Bridges to Prosperity where she traveled to Rwanda to assist with construction of a new 207-foot span suspension footbridge. Each year during our March meeting we will dedicate time for our members to present their projects and more importantly their volunteer efforts in their communities.

The website update is progressing well, but it may not be ready before the May meeting as originally hoped. As announced in the past we would love our members to send us photos of their projects so we can showcase them on the new website.

Our annual May meeting will be held in-person at the Puritan Backroom Restaurant. With the Covid19 cases being relatively low and on the decline the Board of Directors is optimistic that we will get a great attendance. There will be no options for attending the meeting virtually, so please come and join us in person and have a beer or two and chat with your colleagues and friends. Excellence in Structural Engineering awards will be presented at this meeting and voting will also take place for two Board of Director terms expiring this year, Jeff Karam and Tim Polson. Both have served 2 two-year terms and have made significant contributions to SENH with their efforts and work the past 4 years.

If you would like to participate on any of our committees, please feel free to reach out to me directly at (603) 460-5147 or President@senh.org. Thank you and see you at the May meeting!

Inside this issue:

President's Letter	1
Committee Updates	2-3
Board of Director Nominees	4
Excellence in Structural Engineering Award Submissions	5-7
May Meeting Announcement & March Meeting Minutes	8-10
June Webinar Announcement	11

Special Points of Interest/ Reminders:

- *Mark your calendars! The next meeting is scheduled for May 18th —See inside for details!*
- *The Excellence in Structural Engineering Award Nominees are in—turn to page 5 to see the projects!*
- *See page 4 for the Board of Director Nominees!*
- *Upcoming FREE Webinar Opportunity—details on page 11!*

2022 NCSEA Structural Summit, Chicago, IL

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

SENH Delegate: Bob Durfee

SENH Alternate Delegate: Tom Lamb

Summit Reports for the 2018 Summit (Chicago, IL), 2019 Summit (Anaheim, CA) and 2021 Summit (New York City, NY). Will be posted on the SENH website when the new website is launched.

The **2022 Summit** is scheduled for Tuesday November 1st to Friday November 4th in Chicago, Illinois.

Delegate Bob Durfee and Alternate Delegate Tom Lamb representing SENH will attend the Summit. Member Kayla M. Hampe will attend the Summit representing the YMG. Kayla was awarded a scholarship by NCSEA for young engineers to attend the Summit.

Registration information, hotel accommodations and the agenda/schedule of activities for the Summit will be forthcoming from NCSEA this Summer.

2022 NCSEA Leadership Retreat, Chicago, IL

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

SENH Delegate: Bob Durfee

SENH Alternate Delegate: Tom Lamb

As part of NCSEA's commitment to support the state SEA's the 2022 Leadership Retreat is an event to help equip SEA leaders and NCSEA Delegates with a deeper knowledge of association management as well as tools they can immediately apply at the local SEA level. In addition, this event will connect SEA leaders with NCSEA's committees and will showcase key resources for SEAs to utilize throughout the year.

The 2022 Leadership Retreat is scheduled for Tuesday, June 7th to Wednesday, June 8th at the O'Hara International Airport, Chicago, Illinois.

Delegate Bob Durfee and Alternate Delegate Tom Lamb representing SENH will attend the Retreat. Registration, travel, hotel, and meals for the Delegate is covered by NCSEA. NCSEA is charging $250 for registration, hotel, and meals for the Alternate Delegate. SENH will cover travel costs for the Alternate Delegate.

Structural Engineering (SE) Licensure Committee

submitted by Kayla Hampe, P.E.

Chair: Kayla Hampe
Assistant Chair: Eric Caron

The SE Licensure Committee's kickoff meeting occurred on March 8, 2022, and has met two additional times since then. The first meeting established committee positions, and goals that are to:

- investigate the current licensure process used by the NH PE Board;
- investigate the current SE licensure processes used by other states;
- research the need/desire for NH to adopt new rules for specialty licensure of structural engineers;
- make a recommendation to the SENH Board of Directors and advise the NH PE Board with findings as needed.

During our second meeting, Alan Kirkpatrick, PE, SE and Carl Josephson, PE, SE from the NCSEA SE Licensure Committee presented to us on National Structural Engineering Licensure Models. The presentation reviewed the current licensure models used in the US, what they entail, and which states are using which models.

We discussed take-aways from the presentation and reviewed the current laws, rules, and exams during our third meeting in April. We will be investigating licensure requirements in neighboring states as well as what other national societies positions are regarding SE licensure over the next few weeks.

We also want our members' opinion on this matter, so keep an eye out for your opportunity to give us your feedback!

Structural Engineering Awards Committee

submitted by Robert Durfee, P.E.

Chair: Bob Durfee

Co-Chair: Bob Champagne

Fred Emanuel

Josif Bicja

Several entries for the 2022 Excellence in Structural Engineering Awards Program were received by SENH. The Awards program presentation will be held at the May 18th meeting in Manchester, NH. Awards may be presented in up to three categories: Buildings, Bridges and Special Structures. All award winners and their projects will be highlighted in the August newsletter.

Board of Directors Nominees

There are two Board of Director terms expiring this year, Jeff Karam and Tim Polson. Both have served 2 two -year terms. The SENH Nomination Committee has nominated both Jeff and Tim for an additional two-year term on the Board. No nominations were submitted to the Board of Directors. The nominees will be considered and voting shall be by a hand vote at the annual May meeting.

Jeff Karam 	Jeff Karam is principal of Evergreen Structural Engineering, PLLC in Stratham, NH, and specializes in wood framed construction. Jeff studied structural engineering for his bachelor's degree from Washington University in St. Louis and for his master's degree from the Massachusetts Institute of Technology. Upon graduating from MIT, Jeff worked in Boston designing highway bridges. He then moved to New Hampshire where he expanded his area of expertise to wood framed buildings. Jeff is a licensed engineer in New Hampshire, Maine, and Massachusetts, and is a LEED Accredited Professional. Jeff lives in Stratham with his wife, Michele, and children, Paige and Connor. Jeff loves being outdoors, especially while biking and skiing.
Timothy Polson 	Tim Polson is a Senior Structural Engineer at WSP USA in Merrimack, NH. Tim earned his BS in Civil Engineering from Lafayette College in Easton, PA and is a licensed engineer in New Hampshire and Maine. His professional experience includes the design, analysis and inspection of various highway and railroad bridges throughout New England for state and municipal clients. Tim continues to be active in working with the UNH Senior Capstone – assisting student teams and making presentations to the class. Tim lives in Bow with his wife Ashley where they welcomed their first daughter, Lucy, in the spring of 2020. Tim enjoys working with his wife to renovate their 1830's farmhouse and competing in agility with their two dogs, Ellie and Pilot.

Excellence in Structural Engineering Award Nominees
Awards Category: **Building Structures**

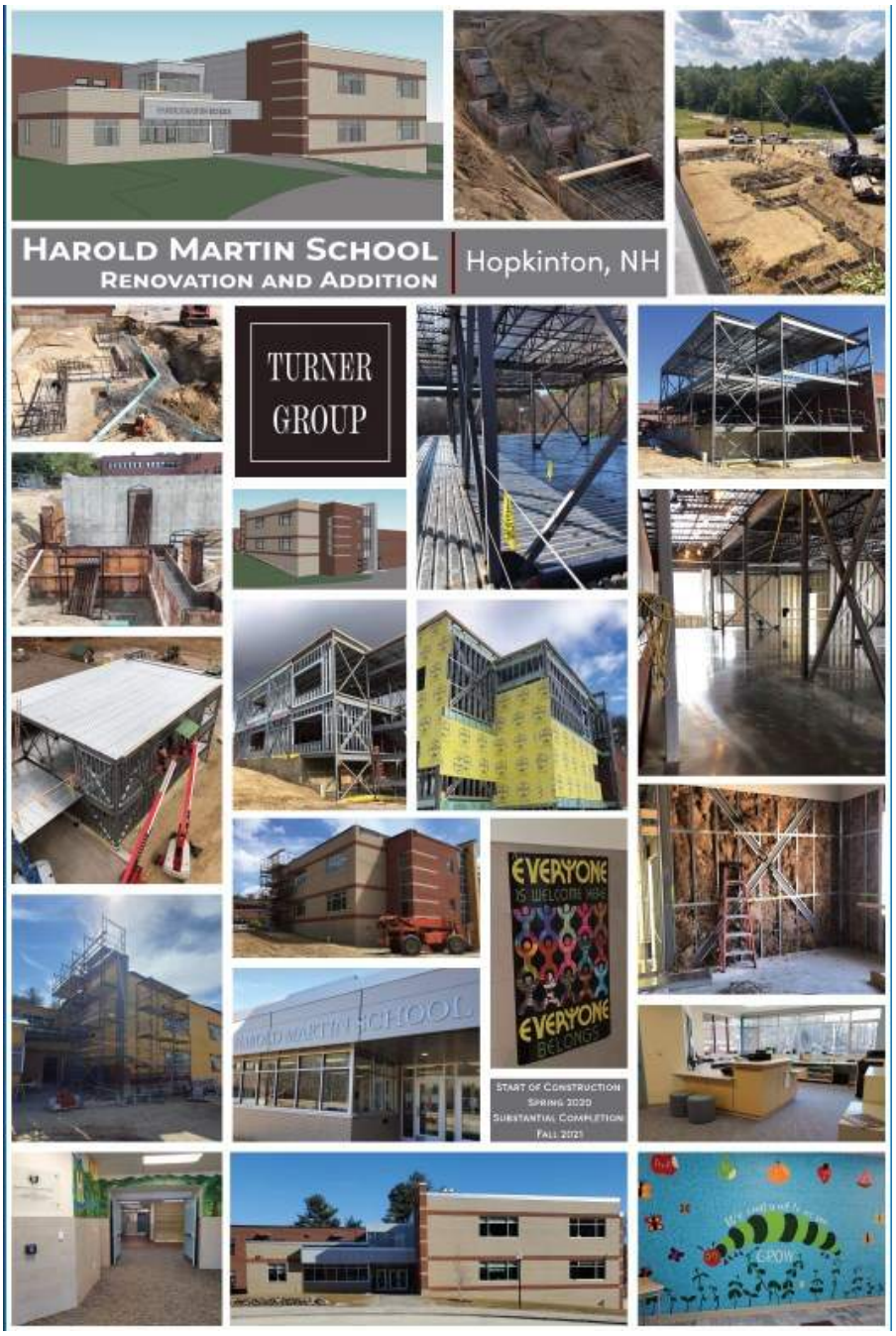
Project Name: Harold Martin School

Project Location: Hopkinton, New Hampshire

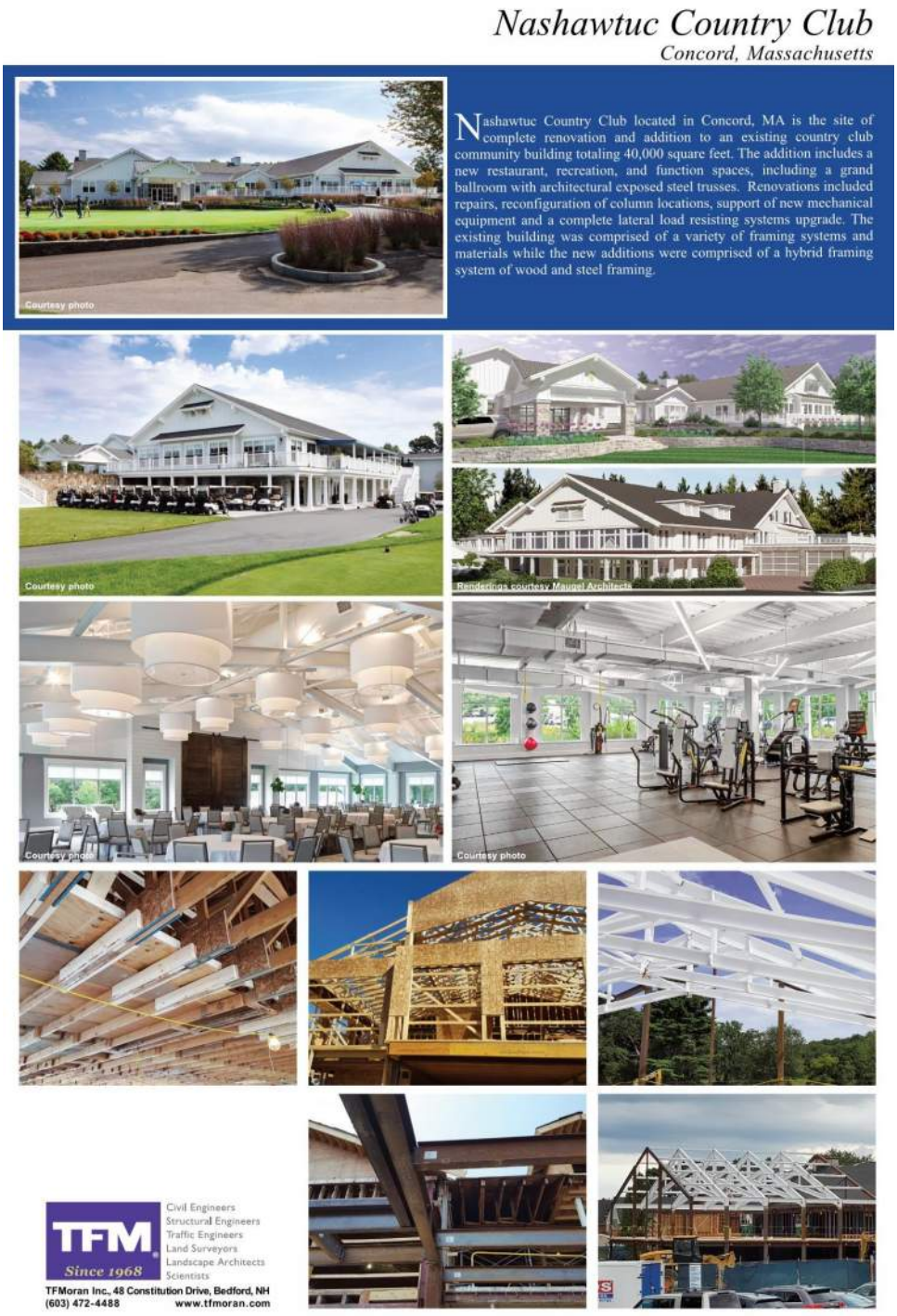
Structural Design Firm: The HL Turner Group, Inc. – Concord, New Hampshire

Project Highlight: In 2021, The H.L. Turner Group Inc. completed the renovation of three schools comprising the Hopkinton School District. With a budget of $9.7 million, the Maple Street School and Hopkinton Middle/High School underwent needed renovations, while the Harold Martin Elementary School received renovations, a sprinkler system and a four classroom addition. Half of the project budget was dedicated for the renovation and addition to the Harold Martin School. The addition was a multi-level structure comprised of a new secure main entrance, front office, special education spaces, classrooms, a health suite, and connection to the lower-level gymnasium. As part of the budget management, alternate structural designs were developed for the school addition to include a second-floor team space and a fire pump-based sprinkler system for the building and addition.

Our goal was to manage and maximize the budget to achieve as many of the design goals as possible for the three schools and the town of Hopkinton. The project was successful and able to achieve the original design goals, added alternates, with over $400K being returned to the district at the end of the project.



Excellence in Structural Engineering Award Nominees
Awards Category: **Building Structures**



Project Name: Nashawtuc Country Club

Project Location: Concord, Massachusetts

Structural Design Firm: TFMoran, Inc. – Bedford, New Hampshire

Project Highlight: Nashawtuc Country Club located in Concord, MA is the site of complete renovation and addition to an existing country club community building totaling 40,000 square feet. The addition includes a new restaurant, recreation, and function spaces, including a grand ballroom with architectural exposed steel trusses. Renovations included repairs, reconfiguration of column locations, support of new mechanical equipment and a complete lateral load resisting systems upgrade. The existing building was comprised of a variety of framing systems and materials while the new additions were comprised of a hybrid framing system of wood and steel framing.

Excellence in Structural Engineering Award Nominees
Awards Category: **Bridge Structures**

Project Name: Bement Covered Bridge Rehabilitation

Project Location: Bradford, New Hampshire

Structural Design Firm: Hoyle, Tanner & Associates, Inc. – Manchester, New Hampshire

Project Highlight: This bridge is one of the four surviving Long Trusses in NH and one of 25 remaining in the US. It was built in 1854 based on the design patented by the US Army Colonel Stephen H. Long of Hopkinton, NH. Rehabilitation was completed in accordance with the Secretary of the Interior's Standards by not altering any aspects of the property's historical integrity that make it eligible to continue to remain in the National Register.

SENH Meeting Announcement

NEXT MEETING: Wednesday, May 18, 2022

PRESENTATION: **ACI 562 Provisions for External Strengthening of Concrete Structures.** This presentation is designed for Structural Engineers and those engaged in the assessment, repair, and strengthening of reinforced concrete structures. The class will focus on ACI 562 – 21 provisions for evaluating existing structures and its impact on component strengthening with externally-applied fiber-reinforced polymers. The Instructor will discuss ACI 562's interaction with IEBC, unsafe structural conditions, substantial structural damage, basis of design, additional load combinations for structures rehabilitated with external reinforcing systems, and interface bond provisions. Upon completion of this presentation, the attendee will fundamentally understand how to apply pertinent provisions of ACI 562 to the evaluation, repair, and strengthening of concrete structures. The presentation will provide attendees with specific knowledge of how ACI 562 affects the design, evaluation, installation, and quality control of external strengthening of concrete structures with fiber-reinforced polymer systems such as FRP fabric, precured laminates, and fiber-reinforced cementitious systems.

SPEAKER: **Mark Jarvinen** has been practicing structural engineering, concrete repair and strengthening, and exterior building envelope consulting for 33 years. His structural engineering experience ranges from adaptive reuse of historic structures to new building designs of structural steel, reinforced masonry, reinforced concrete, and wood. His exterior building envelope experience includes work involving above and below grade waterproofing, roofing, exterior cladding, masonry and building stone, windows, and doors. Mark's past project responsibilities include, structural investigation, report writing, structural design, specification writing, construction cost estimating, construction administration, and field testing and inspection.

Mark has been a member of the Simpson Strong-Tie Company's Field Engineering Team since 2007. As an employee of Simpson Strong-Tie, Mark's primary responsibilities include educating and supporting design professionals and specifiers relating to Code-compliant specification, design, installation, field inspection and testing of post-installed anchors, repair products for concrete and masonry, strengthening concrete and masonry structures with fiber-reinforced polymers, and cold-formed steel connector products.

Mark has been professionally registered as a Structural Engineer in the Commonwealth of Massachusetts since March 9, 1995, an active member of the International Concrete Repair Institute (ICRI), and in the past, held certification as an ACI/CRSI Adhesive Anchor Installer.

PLACE: Puritan Conference & Event Center
245 Hooksett Road
Manchester, NH 03104
(603) 666-9893

AGENDA:

5:30 pm – 6:30 pm	Registration/ Social Hour/ Review Posters
6:30 pm—7:15 pm	Dinner
7:15 pm—7:30 pm	Business Meeting
7:30 pm—8:00 pm	Awards Program
8:00 pm – 9:00 pm	Presentation

DINNER: Buffet with choice of fried chicken tenders or beef tenderloin kabobs. Served with Greek salad, spinach salad, homemade mashed potatoes, seasonal vegetable medley, warm rolls, and assorted desserts.

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

SENH Meeting Announcement *(Continued)*

COST: Member: $50.00
Non-Members: $75.00
Government Employee: $20.00
Student: $20.00
"No-shows" will be billed at full amount. Refunds will not be issued.

RSVP: By Wednesday, May 4, 2022. There will be a $5.00 late fee for anyone wishing to RSVP past this date.

Pay on line using PayPal at http://www.senh.org/meeting-calendar or send check payable to "Structural Engineers of New Hampshire" with list of attendees to:

TFMoran, Inc.
Attn. Cassi Beroney
48 Constitution Drive
Bedford, NH 03110
cberoney@tfmoran.com

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

March Meeting Attendance List & Meeting Minutes

Various Structural Design Presentations (2.0 PDH's)
Online via Zoom
March 23, 2022

Name	Company	Name	Company
Aaron Lachance, P.E.	Hoyle, Tanner & Assocs.	* **Nevin Gomez, P.E.**	**WSP USA**
* **Adam Stockin, P.E.**	**WSP USA**	Nicholas Prescott	UNH Student Presenter
Alissa Reitter	UNH Student Presenter	Nick LaBrecque	UNH Student Presenter
Bruce D. Stewart, P.E.	Stewart Structural Engineering	* *Prof. Raymond Cook, P.E.*	*University of New Hampshire*
* **Cameron Bellisle, EIT**	**Dubois & King**	Rebecca Lubrano, P.E.	Simpson, Gumpertz & Heger
Ed Weingartner, P.E.	Hoyle, Tanner & Assocs.	Rita Masouras	UNH Student Presenter
Eric Caron, P.E.	WSP USA	Robert Durfee, P.E.	Dubois & King
Grant Erickson	WSP USA	Sean Brown, P.E.	Hardesty & Hanover
Jacob Pouliot, P.E.	TFMoran, Inc.	Sean James, P.E.	Hoyle, Tanner & Assocs.
Jay Brown, P.E.	Structural Systems, Inc.	Tim Polson, P.E.	WSP USA
Jeff Karam, P.E.	Evergreen Structural Engineering	Timothy LaPorte	UNH Student Presenter
Josif Bicja, P.E.	Hoyle, Tanner & Assocs.	Tom Lamb, P.E.	TFMoran, Inc.
Karie James, P.E.	WSP USA	Torey Brooks	Oak Point Associates
Katelyn Welch, EIT	Hoyle, Tanner & Assocs.	Will Conley	UNH Student Presenter
* **Kayla Hampe, P.E.**	**Hoyle, Tanner & Assocs.**	* *Zachary Chabot*	*Simpson, Gumpertz & Heger*
Matthew Miloro	UNH Student Presenter	* **Speaker**	
Maya Norris	UNH Student Presenter	* *Student Sponsor*	
Michael Richard, P.E.	Simpson, Gumpertz & Heger		

Business Portion of the Meeting

- Josif provided Website Update
- Requested member firms send in project photos that they would like to have featured on the website.
- Sean Brown provided budget update.
  - 2 - $1000 scholarships were awarded:
  - Mr. Dustin Wells (UNH) was named the winner of the Arthur W. Rose Jr. Memorial Scholarship
  - Mr. Nicholas Wong (UNH) was named the winner of the SENH Younger Member's Group Scholarship
  - Renewal reminder.
- Eric Caron provided YMG update
  - Resume review held at UNH in February. First outside organization to visit campus for career services since Covid.
  - In-person get-togethers hopeful to resume – something being scheduled for near future (target in April).
- Josif indicated that the May meeting will be held in-person. Time and location to be announced in April.
- Brand Ambassador Program – Tom
  - SENH Facebook page and Linkedin are now up and running and regularly posting – take a look and follow
  - Sustainability Committee – soliciting interest
  - SE3 committee – soliciting interest
  -

<u>Presentations</u>:

UNH Capstone Presentations:

Two groups of students from the UNH Senior Capstone presented the progress they have made so far on their senior projects.

Innovation, Teamwork, and a 4 Day Closure – Bunker Creek Bridge

Adam Stockin and Nevin Gomez of WSP presented the Bunker Creek bridge replacement project in Durham, NH. The project utilized innovative features such as Foamed Glass Aggregate, Ultra-High Performance Concrete (UHPC), Prefabricated Bridge Units (PBUs), integral micropile abutments, and strategic tidal construction methods to deliver a complete bridge replacement in a complex tidal zone along NH Route 4 in only a four-day bridge closure window.

Design and Construction of the Lilac Pedestrian Bridge

Cameron Bellisle of Dubois & King presented on the Lilac Pedestrian bridge over the Merrimack River replacement project in Hooksett, NH. The project replaced an existing Pratt through truss vehicular bridge constructed in 1909 with a new prefabricated steel truss superstructure to serve pedestrian uses. The new truss superstructure was designed to aesthetically mimic the existing historic bridge viewscape, but scaled down as a smaller and lighter pedestrian bridge.

Bridges to Prosperity: 2022 Munini I Pedestrian Bridge Construction, Rwanda

Kayla Hampe of Hoyle, Tanner & Associates, Inc. presented on her recent trip to Rwanda as part of a team from Bridges to Prosperity to successfully complete the construction of a 63 meter long suspension trail bridge in the rural Karongi District in the Western Province of Rwanda. The bridge spans over the Kaganda river and helps to connect members from four different communities. Kayla shared stories and pictures detailing her experience; from the months of planning before traveling to Rwanda, to the daily construction activities, through final completion of the project.

SENH Webinar Announcement

As a member organization of the National Council of Structural Engineers Associations (NCSEA), SENH is able to provide NCSEA recorded webinars to members free of cost. The next webinar will be held via Zoom teleconference on Tuesday, June 21st, from 12:00pm-1:30pm. Only those members who attend the entire webinar will receive access to the post webinar quiz. **Please sign into the Zoom meeting with your full first and last name for attendance purposes, prior registration is not required. The quiz and subsequent PDH certificates will not be sent to those we cannot track attendance for.** Zoom teleconference link and information is below. This is a FREE webinar, and you can earn 1.5 PDH credits.

DATE: Tuesday, June 21st, 2022

TIME: 12:00 pm – 1:30 pm

PRESENTATION: **Inspectability Design: Bridge Life Cycle Cost Savings**

Standard practice during bridge design and construction is to consider the biddability of the construction documents, the constructability of the design, and the operability of the asset. Designers may not consider the inspectability of the bridge over its life cycle. The link between bridge design and inspectability can have a significant impact on the life cycle cost of the structure. Attention to inspectability in the design phase can also facilitate inspection practice and improve safety over the life of the bridge.

· Course will award 1.5 hours of continuing education

· This course is Diamond Review approved in 49 states. New York does not accept hours from recordings.

LOCATION: Virtual!

COST: FREE!

ZOOM INFO: **Zoom link and login information will be sent out to all members via email announcement closer to the event.**

Questions can be directed to Jonathan Sproul (jsproul@proconinc.com)

NOTE: 1.5 PDHs will be awarded for attendance and completion of quiz. The quiz link and attendance code will be sent out within a few days of webinar completion. Certificates are issued by NCSEA upon successful completion of the quiz.

2022 NECSEA
VIRTUAL CONFERENCE

May 12, 19, & 26, 2022
11:00 a.m. – 1:30 p.m. ET

5.0 NCSEA Diamond-Certified PDHs Available

Presented by: SEAConn, SEAMASS, SEAM, SENH, SEAoNY, SEAoPA, SEARI, SEAVT

LIVE WEBINAR SERIES of FIVE 1-HOUR TOPICS:

MAY 12: 11:00 a.m.– Noon:
Tornado Loads in ASCE 7-22
Presenter: John O'Brien, PE, SE
Sr. Engineer – Structural, Haskell

MAY 12, 12:30 p.m.–1:30 p.m.:
Surfside, Dangerous Conditions & Understanding IEBC Structural Provisions
Presenter: Michael Fillion, PE, SECB
President, Fillion Group Inc.

MAY 19, 11:00 a.m. – Noon:
Snow Loads in ASCE 7-22, What's New
Presenter: Michael O'Rourke, PH.D, PE, F.SEI
Professor Emeritus, Civil & Env. Engineering, RPI

MAY 19, 12:30 p.m.– 1:30 p.m.:
Frequently Asked Wind Questions
Presenter: Emily M. Guglielmo, SE, PE, F.SEI
Principal, Martin/Martin Consulting Engineers

May 26, NOON – 1:00 p.m.:
Performance-Based Structural Fire Design of Buildings
Presenter: Ali Ashrafi, Ph.D, PE
Principal, Thornton Tomasetti

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for full conference
or individual days

https://conta.cc/3jUvCGy
OR seamass.org Events Calendar

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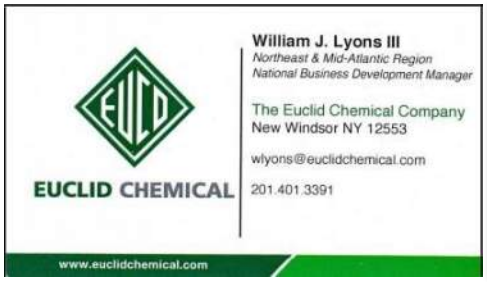

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Want to see your Company's Business Card listed here?

Contact Cassi at CBeroney@TFMoran.com to find out how!

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