

Engineering a Community: How Bohler Engineering Creates Opportunity through Empowerment

by Anna Dastgheib-Beheshti, EIT, Design Engineer, Bohler Engineering

Creating a corporate culture of working together to give back can be just as important as elevating a company's financial bottom line. The industry's next generation of leaders are not only driven to rise in their careers, but are also seeking to make a true impact within their communities. At Bohler, we're empowering our employees to do just that. In keeping with our firm's newly-founded purpose statement—we empower the ambitious to become the accomplished—we encourage our teams to follow their passions and engage in volunteer opportunities that matter to them.

Our team recognizes that when we coordinate philanthropic efforts across our far-reaching footprint, immense and lasting good can be achieved. In the wake of Hurricane Harvey's devastation across the Houston and Gulf region, Bohler launched an employee giving program



Participating in the "Skype-a-Scientist" program at Bohler's Boston office

across our 24 offices, which, combined with a 100% corporate match, raised \$50,000 for hurricane relief efforts. Funds were donated to the American Red Cross over a week-long campaign. As a member of Texas' land development industry, Bohler employees were especially

continued on page 2

President's Report

by Malek A. Al-Khatib, PE, Vice President, Louis Berger



Thank you to all of you who participated in the Engineers and Land Surveyors Day at the State House on Tuesday, May 15. More than 90 engineers and land surveyors came to the state house and met with our state senators and representatives. We had very friendly, productive, and informative meetings with our elected officials. They were interested in learning about our issues, and how we can work together to address them. Also, they reaffirmed their strong friendship and relationship with us.

We learned about many issues our legislators are dealing with. We became more familiar with the process, the hurdles our legislators must overcome to pass a bill, and how we can assist them dealing with such issues. Our understanding of the political process and constituency when passing legislation was considerably enhanced by these informative meetings.

Also, it was a wonderful to meet many colleagues and friends that we have not seen for a while and reconnect with them. Some personal and business opportunities materialized from interacting with the friends and colleagues. Building upon our existing relationships is always the most predictable method of strong partnerships.

Thank you to the staff of The Engineering Education Trust (TECET) for organizing another successful event at the state house. Their effective scheduling, coordination, and advocacy created the environment for great dialogue, connections, and progress.

It is not a coincidence that this month is also the BSCES Outreach and Young Members Group month. I consider the Engineers and Land Surveyors Day at the State House event as one important form of outreach activities to our public officials, which happens to be sponsored by our Government Affairs & Professional

UPCOMING EVENTS

T&DI Boston Chapter Summer Social
June 7, 2018

ASCE and BSCES Sponsored Seminar
Thursday – Friday, June 7 – 8, 2018

SEI Boston Chapter/Younger Member Group
Site Visit June 14, 2018

BSCES Program Committee Sponsored NHI
Training December 10 – 21, 2018

Further Details Inside



2017-18 Society Sponsors:



Practice Committee. Our Public Awareness & Outreach Committee (PA&OC) takes the lead on most of our outreach efforts. PA&OC activities include student contests, a monthly TV show, Boston bridge tours, numerous school visits, participating in community-organized events, and helping to coordinate our infrastructure awareness day. PA&OC is educating the public about civil engineering and creating awareness for our profession. It is also informing the public of engineering issues that impact their lives. Engineering professionals have been the builders of all civilizations' infrastructures. Structures that withstand the test of time are testament to the evolution and ingenuity of our professionals. However, our professionals' efforts are taken for granted and not recognized by the public. The public expects a perfect infrastructure while ignoring the cost associated with this expectation.

continued on page 6

2017–18 BSCES Board of Government

President: Malek A. Al-Khatib, PE
 President-Elect: Geoffrey B. Schwartz, PE
 Secretary: Shallan C. Fitzgerald, PE
 Treasurer: Robert L. Leger, PE
 Assistant Treasurer: Gregory L. Miriliss
 Senior Vice Presidents: Richard D. Maher, PE;
 Bruce L. Jacobs, PhD, PE
 Vice Presidents: Christopher “Topher” Smith, PE;
 Charles W. Roberts, PE
 Past President: Brian A. Morgan, Esq.
 Western MA Branch Vice President: Vacant

Institute Chapter & Technical Group Chairs

COPRI Boston Chapter: Ryan M. McCoy, PE
 Construction Institute Boston Chapter: Hans T. Kuebler, EIT
 Engineering Management Group: Jason R. Coy, PE
 EWRI Boston Chapter: Ronald K. Burns, PE
 Geo-Institute Boston Chapter: David W. Finocchio, PE
 SEI Boston Chapter: Shahvir M. Vimalalal, PE
 T&DI Boston Chapter: Bryan Zimolka, PE
 Younger Member Group: Jessica Wala, PE

BSCES Newsletter Editorial Board

Malek A. Al-Khatib, PE, President@BSCES.org
 Bonnie Ashworth, bmcash@aol.com
 Ronald K. Burns, PE, LSP, rburns@arcadia-tec.com
 John C. Cavanaro, PE, JCavanaro@cavanaroconsulting.com
 Byron S. Clemence, PE, bclemence@verison.net
 Michael R. Cunningham, PE, MCunningham@kleinfelder.com
 Annahid Dastgheib-Beheshti, EIT, annahiddb@gmail.com
 Jessica DeBellis, PE, jdebellis@geiconsultants.com
 Shallan C. Fitzgerald, PE, Secretary@BSCES.org
 Christopher P. Hersey, christopher.hersey@skanska.com
 Richard F. Keenan, rkeenana@engineers.org
 David M. Manugian, PE, dmanugian@bedfordma.gov
 Angus J. O’Leary, PE, GOleary@kleinfelder.com
 Matthew I. Shuman, PE, mshuman@watertown-ma.gov



Boston Society of Civil Engineers Section/ASCE

The Engineering Center, One Walnut Street, Boston, MA 02108
 Phone: 617/227-5551, Fax: 617/227-6783
 Email: bsces@engineers.org, Website: www.bsces.org

BSCES’ newsletter, *BSCESNews*, is designed to provide information and opinion in regard to the subject matter covered. BSCES and its Board assume no responsibility for statements made or opinions expressed in this publication. It is published with the understanding that the Board and the authors are not engaged in rendering legal, accounting or other professional services. If assistance is required, the services of a competent professional should be sought. The Newsletter Editorial Board encourages reproduction of *BSCESNews* with appropriate acknowledgment. © 2018 BSCESNews.



Boston Society of Civil Engineers



Engineering a Community

continued from page 1

inspired to help the people and communities significantly impacted by the storm.

On a more regional scale, Bohler urges our teams to step outside the office and interact with their local neighborhoods. We’ve done a great deal of school outreach to inspire students to pursue STEM careers. Bohler’s Raleigh, NC, office mentored high school students throughout the school year on an award-winning land development project. With the guidance of our mentoring team, the students created a site plan, floor plan, building model, cost estimate, and construction schedule for the project, and were recognized for their great work.

I volunteered earlier this year with the “Skype a Scientist” program, which matches working professionals with a classroom for a fun, informational lecture/Q&A session. The program

focuses on areas of the country where students have limited access to science museums and STEM professionals in their everyday life. After being matched with an eighth-grade earth science class in Michigan, I got the chance to chat with the class over Skype about being a civil engineer in Boston, working at Bohler, and why I love what I do.

Bohler also supports various other charities that are driven by the interests of our team, including charitable 5K runs, telethon fundraisers, and office donation drives. One of the Boston office’s next volunteering efforts will be preparing meals at Community Servings in Jamaica Plain, where Bohler is also providing consulting services to assist in their forthcoming building expansion. Our firm recognizes that when you are passionate about what you do and who you do it with, the benefits are visible. Ambition goes beyond the workplace, and Bohler strives to empower our employees in making a difference within our communities.



Design Engineers from Bohler’s Dallas, Texas lead an interactive presentation about civil engineering to a fifth-grade class

The Aldrich Center—where history and technology meet on Beacon Hill...



Two blocks from the State House and overlooking Boston Common, the Aldrich Center is the perfect venue for your next event. This historic building accommodates private functions and business meetings. BSCES members receive a 20% discount off our room rental rates.

Visit www.aldrichcenter.org for more information.

Aldrich Center
 ONE WALNUT STREET
 Beacon Hill Boston, MA

Future City Competition, New England Regionals

by Jessica DeBellis, PE, Project Engineer, GEI Consultants, Inc.

As engineers, we have the privilege and responsibility of shaping the future of our communities. On January 20, 2018, a group of middle school students gathered at the State Transportation Building to participate in the New England Regional Future City Competition, where they got share their vision for our future. The Future City Competition is over 25 years old, and this year there were over 40,000 participants nationwide. The teams are made up of 6th, 7th, and 8th graders from the same school, YMCA, or other organization. Over 50 teams began working on their projects at the start of the school year and continued through the regional competitions in January. The winner of each region then goes on to compete at the national competition in Washington, DC.

Each team is supported by two important people: a teacher, parent, or other educator and a mentor. The mentors volunteer their time to provide guidance, real-life connections, and technical assistance to the students, and are typically engineers, architects, and urban planners. Just like most real-life engineering projects there is a tight budget, multiple deadlines along the way, and clear communication and teamwork are a necessity. Each year the theme and some constraints of the competition change, but the concept is the same. The students develop their best idea of a future city using engineering skills they learn with the guidance of their mentor throughout the year. They then express their ideas through several deliverables—all of which are judged to select the winners of the regional competitions:

- Virtual City Design: create a virtual city using SimCity Software;
- City Essay: write a 1,500-word essay describing unique attributes of their city;
- City Model: build a scale model of their city using recycled materials and at least one moving part, with a budget of less than \$100;
- City Presentation: Give a seven-minute presentation and then answer questions.

This year's theme was "The Age-Friendly City" and the design challenge was to identify a problem that senior citizens face and develop a solution. Some creative solutions included fall-proof flooring that would become soft when triggered by an elderly person falling, crosswalks with automatic handrails rising from the pavement, and using smart watches to monitor health statistics.



1st Place: Albert F. Argenziano School with the trophy for their city "Somerville"

Over a dozen teams competed in the New England Regional Competition with scale models and presentations. The teams from Argenziano Middle School (Somerville, MA), Ellis School (Fremont, NH), and Masconomet Middle School (Boxford, Middleton, and Topsfield, MA) came in 1st, 2nd, and 3rd, respectively. As a BSCES volunteer, it was a fun and exciting day. It's easy to get caught up in the deadlines, clients, and details of our work, but the passion and ingenuity these students showed was a refreshing reminder of what led most of us into engineering in the first place. So inspiring!

Thanks to our final round judges, Nora Moreno Cargie, Jan Mutchler PhD., Sarah Ting, and Emily K Shea, and to the special award sponsors: AECOM, CDM Smith, EarthSoft, GZA, Louis Berger, MassDOT, NCEES, Robinson+Cole, Tufts Health Plan, and BSCES. A big thanks to Reed Brockman and Olivia Richards who coordinated this year's competition, and to all of the teachers, mentors, and the BSCES volunteers who made the competition a success!



2nd Place: Ellis School presenting their model city "Sophos City"



3rd Place: Masconomet Middle School with their model city "Ka Mua"

BSCES Model Bridge Competition

by James Velino, Bridge Inspector, AECOM

Steel and concrete are your standard modern bridge building materials, but have you ever considered using boxes of 1'-0" long paint paddles? On February 3, 2018, hundreds of eager grade school students gathered at Wentworth Institute of Technology to put this material to the test. These students were competing in the annual Model Bridge Competition, which is organized by the BSCES Public Awareness & Outreach Committee. The challenge of this competition is for the students to design, construct and submit a structure with the specified materials and within the weight and dimensional limitations. Final designs, which the students build and bring to the competition, are judged for aesthetics, and then the bridges are loaded to failure to determine the most load-efficient bridge.

Each year a group of civil engineers come together to choose a common material that the students will use to build their bridges. Competitions in the past involved building bridges out of pasta, chopsticks, plasticware, and popsicle sticks. This year, the materials were Home Depot paint stirrers and hot glue as an adhesive. Students could cut and modify the paint stirrers in any way they seemed fit, as long as the modification was not listed as illegal in the rulebook. The engineers also write the specifications of the competition which dictate the limitations of the models such as weight, dimensions, and the shape of the model truck that will be carrying the load.

On competition day, 66 teams showed up with bridges in hand to await the destruction of their months of hard work. Beams broke and arches buckled. Amongst the ruins of the bridges two teams stood victorious. The most load efficient



Fig. 1: Load Efficiency Winners (Matthew Maldonado, Yuri Volkov, and Maxim Asipenko) With aesthetics judges in background.

bridge, which supported 158 times the bridge's weight, was from the Swampscott Public Library team consisting of Matthew Maldonado, Yuri Volkov, and Maxim Asipenko (Fig. 1). The bridge supported 195 pounds before no more weight could be placed on the loading device. The award for aesthetics went to Daniel Drabkin, and Andrew Schrader of Marblehead High School with their arch bridge design catching the eyes of everyone at the competition (Fig. 2).

The BSCES Public Awareness & Outreach Committee would like to thank all the volunteers and mentors who helped make this competition an excellent learning experience for the students involved. Next year, a new material and specifications will be selected and the students will find new creative ways to handle the design challenges that the building material presents.



Fig. 2: Aesthetics winners (Daniel Drabkin, and Andrew Schrader) making sure their bridge meets the design specifications.



Simpson Gumpertz & Heger Inc. (SGH) is a national engineering firm that designs, investigates, and rehabilitates structures and building enclosures. We are always looking for talented engineering candidates for all of our offices.

SGH is an equal opportunity employer and values diversity in our work force. We are committed to providing equal opportunities to all job applicants and employees. We consider all qualified applicants, and encourage individuals with disabilities and protected veterans to apply.

www.sgh.com

SIMPSON GUMPERTZ & HEGER

Engineering of Structures and Building Enclosures

Boston | Chicago | Houston | New York | San Francisco | Southern California | Washington, DC

Dream Big: Engineering Our World

by Brian Paula, PE, Project Engineer, BSC Group and BSCES Younger Member Group Vice Chair

All around the world, engineers are pushing the limits of ingenuity and innovation in unexpected, imaginative, and amazing ways. *Dream Big: Engineering Our World*, is a giant-screen film about engineering that takes viewers on a journey of discovery from the world's tallest buildings to a bridge higher than the clouds. This past February, the Younger Member Group (YMG) hosted an event centered around viewing ASCE's Dream Big IMAX film, which included a post-viewing social reception. A group of younger members and students from local schools and universities attended the event and took their curiosity and enthusiasm for engineering to see how the skills engineers use every day have been applied to engineering marvels from the past and how today's engineers are shaping the world of tomorrow.

Dream Big: Engineering Our World is an IMAX film that was made by McGillivray Freeman films in partnership with the American Society of Civil Engineers and presented by Bechtel Corporation. The film celebrates the human ingenuity behind engineering marvels big and small and reveals the heart that drives engineers to create better lives for people around the



world. Some key projects that were highlighted in the film included the Great Wall of China, the Falkirk Wheel in Scotland and the Shanghai Tower.

The social that occurred after the film was held at the CambridgeSide Galleria Mall's Cheesecake Factory, which is just a short walk from the Boston Museum of Science where Dream Big is

being shown. The post-viewing reception gave younger members and students an opportunity to expand their network, meet their peers and socialize over discussions about the film.

We hope to see you at future YMG events! Please email ymsg@bsces.org if you would like to get involved with our group or have any questions.

Boston Society of Civil Engineers YMG Greater Boston Food Bank Volunteer Event

by Jessica Wala, PE, LEED AP ND, ENV SP, Project Engineer, Nitsch Engineering, and BSCES Younger Member Group Chair

On a cold snowy January 17th, members of the Boston Society of Civil Engineers Section/ASCE Young Members Group (YMG) volunteered at the Greater Boston Food Bank helping to sort various donated food items. Greater Boston Food Bank is a nonprofit organization that serves around 600 hunger-relief agencies throughout eastern Massachusetts and provides hunger relief to nearly 500,000 people annually. Twelve members from the Young Members Group joined four other volunteer groups that day to help sort over 23,800 lbs. of donated food items in two hours' time! On the sorting floor, the groups were divided into teams of four people per table. Each team was responsible for opening up boxes of donated items to check the expiration date, seal, and general condition. If the items met the



Photographs of the sorting floor. The food items were kept in banana boxes for easy packaging and transporting.

standards for the quality they were put back into their boxes. This process assures that the food bank distributes food items that are safe for their

customers. After two hours of busy labor, the group sat down with the food bank organizers to review the accomplishments of the day.

President's Report

continued from page 1

It is our responsibility to educate the public about our profession and the costs associated with maintaining the Commonwealth's infrastructure. All of us need to be proactive and to educate the public about our profession and the public benefits that we provide on daily basis. Our work benefits the present generation and many generations to come. It is incumbent on us to make the public aware of and care about this fact.

Some may think that engineering topics are boring. The public may not be interested in the codes, formulas, or rigorous analysis and design that we are skilled in. However, they are very intrigued by how we start with the basics and produce a very complex outcome and results. You will be surprised how many of your close friends and relatives will appreciate the information you share with them about our profession. Personally, I have yet to encounter one person, who does not find such a dialogue fascinating and informative.

BSCES is an excellent venue to help us enhance our interpersonal skills, by learning how to interact with the public, how to engage with persons we don't know, how to find common grounds with others, and how make engineering topics interesting to non-engineers. Additionally, we make great friendships and professional connections that cannot be measured.

PA&OC is reaching out to our future engineers. These outreach activities are ensuring the continuation of our profession. We are reaching elementary, middle, and high school students and introducing engineering as an exciting and intriguing profession. Examples of PO&AC activities are:

- Organizing the Future City Northeast Regional Competition for almost 20 years with participation from schools and mentors all over New England;
- Organizing and hosting the BSCES Model Bridge Competition for all students in grades 12 and below who participate in the competition and practice their bridge building skills;
- Participating in many children-focused community events such as Cambridge and Boston's West End Children's Festival.

Through this outreach, many children and students become fascinated by engineering and we have seen high school students who became engaged in PA&OC activities continue their college education at engineering schools.

PA&OC activities complement our Young Members Group (YMG) activities. YMG is

doing an outstanding job reaching out to young engineers and university engineering students. YMG is reaching to our next generation engineers and profession leaders. For students and young engineers such activities are:

- Providing them with strong network and bonding opportunities;
- Fostering social and cultural values unique to BSCES;
- Assisting them in their profession and career;
- Providing important role models of women engineers;
- Enhancing their interpersonal skills; and
- Helping them to become leaders in their profession and community.

BSCES is an excellent venue to help us enhance our interpersonal skills with the younger generation. By participating in PA&OC and YMG activities, you can learn how to interact with students of all ages and young engineers, how to engage them and create engineering topics simple but exciting to them, and how help them develop logical progression thinking that starts with the basics and end with a tangible product. This will help you understand the younger generation and the way they think and prepare you to better interact engineering interns.

Volunteering is the spine, heart, and soul of our organization. With all our success and activity, BSCES is totally volunteer-based organization. You may think you can't afford more than one hour a week. Therefore, you can't be active. Not true! If each our members volunteers an average one hour per week for BSCES, we will accumulate 3,800 hours a week. That is equivalent to 95 full time working persons. You will make a big difference for our profession and society by volunteering just one hour a week. Please make a commitment over the next year to volunteer one hour per week and contact me or any committee/group chair to explore what area would satisfy your needs.

Your volunteering in outreach and younger member activities helps ensure that the public is aware of our profession, our benefits to our community and civilization, and the cost associated with these benefits.

- Your volunteering activity would help by making the public your advocate at town halls, the state house, and congress.
- Your volunteering activity would help ensure that there is a future generation of civil engineers.

- You will be an ambassador for the profession with your community and the public.
- Your interpersonal skills will be enhanced and will become a better mentor to young engineers.
- You will widen and enhance your professional network.
- It's personally satisfying to meet like-minded professionals with shared expertise.
- It's personally satisfying to see that you are making the difference in your community and your profession.

The core members of PA&OC need you as they are recruiting literally hundreds of BSCES members every year to visit schools and festivals, judge the Future City Competition, and mentor students who participate in the Model Bridge Competition. Please join the leaders of BSCES and the profession and participate in these outreach activities.

The Younger Member Group Chair Jessica Wala of Nitsch Engineering and her members did an excellent job in programming and activities this year this year and I extend my sincere thanks and appreciations to her for her leadership and to the whole committee for their efforts. Please be sure to read Jessica's report on the YMG activities.

The Public Awareness & Outreach Committee is chaired by Olivia Richards of Gill Engineering Associates. Olivia and her committee members have done an outstanding job this year with their many undertakings some of which were described above. I extend my sincere thanks and appreciations to their efforts and the important results they achieve.

Our programs and activities require considerable financial support. I'd like to once again thank our Society Sponsors and Program Sponsors for their commitment to our programing. Their support allows us to communicate our achievements, the importance of our work, and recruit new participation.

If you too want to donate, please use the [Donate to BSCES](#) on our website where you can donate any amount. Your individual donation is appreciated and, on behalf of the BSCE, I thank you for your support. Your donation is fully tax deductible.

This is your organization, if you have any feedback or suggestion on how we can improve, please contact me directly at president@bsces.org.

Featured Group

BSCES Younger Member Group

by Jessica Wala, PE, LEED AP ND, ENV SP, Project Engineer, Nitsch Engineering, and BSCES Younger Member Group Chair

The mission of the Younger Member Group (YMG) is to foster professional growth, ethical awareness, and technical competence of the Section’s younger members. The group organizes and encourages community outreach, support of local engineering colleges and universities, and membership and participation in ASCE and BSCES committees, institute chapters, technical groups, and other activities.

The YMG typically hosts a minimum of one event a month. These events vary from social events and sports competitions, to technical presentations. The events serve as an opportunity for young engineers and undergraduate students to meet peers, expand their network, learn about other companies and services within the industry, and have fun while developing technical and soft skills to support their careers.

The YMG organizes these events through monthly meetings that are attended by the YMG committee, which is comprised of over 20 volunteers, plus additional YMG members who are interested in getting involved. The group uses these meetings as an opportunity to recap on past events, plan future events, review the annual budget, discuss volunteer opportunities, and open the floor for discussion. Below is a list of the technical and social events that YMG has hosted this year:

- Red Sox Outing & Social at Loretta’s Last Call.
- Civil Engineering Trivia at the Pour House.
- Annual Bocce Tournament at the Boston Common.
- NCEES Professional Licensure Presentation with Paul Tyrell.
- A Presentation Skills Workshop at CDM Smith.
- Joint Holiday Party with the T&DI at Market Lounge.
- Annual Billiards Tournament at Scholars.
- A Dream Big Viewing at the Museum of Science, followed by a social.
- Networking socials at local bars.

The YMG has also taken a strong focus on outreach and community involvement this past year through the events below. YMG is so thankful for all of the time that the group members have volunteered!

- The YMG hosted another Holiday Meal Drive through the Greater Boston Food Bank (GBFB), raising over \$1,000 for local families in need of nutritious meals.
- The YMG also volunteered at the GBFB, where 10 YMG volunteers helped sort through 23,000 pounds of donated food.
- Three YMG volunteers attended the Friday Night Supper Program at Arlington Church to serve meals to those in need.
- The YMG will be volunteering to help clean up the Charles River for Earth Day on April 28th!

Additionally, the YMG includes the Student Chapter Committee, which has a chair and 10 student chapter liaisons who serve to engage members of the 10 Massachusetts ASCE student chapters with BSCES. This student chapter committee chair and the liaisons provide the schools with information about upcoming events, scholarships, and grant opportunities and provide volunteer support for the school’s events. This year, the YMG presented panels at a few schools, engaged the students to submit for scholarships and awards, and hosted the annual ASCE Fall Leadership Student Caucus at Louis Berger. The Student Caucus included a dinner and networking event, a presidential address, a note from the ASCE Region 1 governor, and an interactive activity focusing on challenges and solutions for student leaders. The YMG also helped SGH organize the annual Student Night at WPI, which included a keynote presentation on modular construction. During this event, student chapter members were awarded annual awards and scholarships by BSCES and SGH.

The YMG is excited about our summer events, which include a tour of the USS Constitution followed by a Social at Ironside Grill on May 22nd, a Red Sox outing on May 29th, and an end of the year party in June.

We hope to see you at future events! Please email YMG@BSCES.ORG if you would like to get involved or have any questions.

Follow the YMG on social media to stay up to date on upcoming events: [Facebook](#), [Twitter](#), [LinkedIn](#)



YMG at Friday Night Supper Volunteer Event



Greater Boston Food Bank Sorting Volunteer Event



Annual billiards tournament

BSCES Legislative Fellow Update from Beacon Hill—190th Massachusetts Legislative Session

by Bryon S. Clemence, PE, 2017–2018 BSCES Legislative Fellow



It's not too early for members to consider becoming the next Legislative Fellow for BSCES. If you have an interest in the policy and planning side of our profession, this is a rewarding and eye-opening experience. Applications

are solicited and submitted in the fall for this BSCES-funded position.

Here are some brief updates on bills of interest to civil engineers that have passed or appear to be progressing in the Legislature.

On April 27, the Governor signed the bond bill, "Financing Improvements to Municipal Roads and Bridges." This authorizes the Commonwealth to borrow \$200 million for the MassDOT Highway Division to fund improvements to municipally-owned roads and bridges through Chapter 90 grants. (Chapter 77 of the Acts of 2018, H. 4449, formerly H. 4367 and 4237).

The State House News Service reported that the eight bills pertaining to autonomous vehicles (AVs) had been "sent to study," which usually signals the end for a bill. Following the pedestrian fatality in Arizona involving an AV test vehicle in March, however, the Transportation Committee requested that the six House bills be returned to the committee for further consideration (study orders H. 4319, S. 2358).

The AV field is evolving rapidly. One speaker at the meeting of the state's AV Working Group in May described it as evolving too quickly to prepare meaningful, up-to-date policy reports.

In March, I was told that the Governor's NPDES delegation bill, H. 2777, had been sent to study and was effectively "dead." DEP, a proponent of the bill, acknowledged this at a meeting on stormwater permitting hosted by the Merrimack Valley Planning Commission in April. No further updates were available on H. 2139, which some see as an alternative to H. 2777. It

would require a study of the state's water pollution programs, including the NPDES permit program. It had been reported favorably and referred to the House Committee on Ways and Means in March.

The following bills were redrafted and reported favorably by committee:

The "Dig Safe" bill was reported favorably to the House Committee on Ways and Means (H. 4420, formerly H. 1813). This is the bill that would give professional land surveyors access to underground utility information at the preliminary design phase of projects where excavation is necessary. They have advocated this for years as a way for surveyors and engineers to produce more accurate design plans, thereby reducing problems during construction.

H. 4407, the House parking safety bill—the "bollard bill"—was reported favorably to the House Committee on Ways and Means (formerly H. 3531).

Both the Senate and House bills for a study of Springfield-to-Boston rail service were reported favorably to their respective committees on Ways and Means (S. 2458, formerly S. 1935; H. 4348, formerly H. 3429). As I reported in our February newsletter, an amendment to one of the bond bills would authorize \$2 million for this study (amendment 142 to S. 2279).

Two bills pertaining to electronic tolling and data privacy have now been reported favorably: H. 3439 and S. 2299, pertaining to use of automatic license plate readers (formerly S. 1909). Two related bills in the Senate were sent to study and do not appear progressing (S. 1936 and S. 1987, which also included a study of electronic tolling). No update was available on H. 3641, which would authorize electronic tolling in new locations.

House and Senate bills on zoning and housing were referred to the House Committee on Ways and Means (H. 4397, formerly H. 2420/S. 81). There was no update available on the Governor's zoning/housing bill, which had been redrafted and referred to Ways and Means in March (H. 4290, formerly H. 4075).

H. 4438, the bond bill for climate strategy, was referred to the House Committee on Bonding, Capital Expenditures and State Assets, which will hold hearing on May 15. This is in addition to the hearing held by the Joint Committee on Environment, Natural Resources and Agriculture in April on the original bill submitted by the Governor (H. 4318). No updates were available on the climate bill approved by the Senate last year (S. 2196, originally S. 472).

The following bills were reported favorably by committee:

S. 1966, regarding life-cycle costs of different pavement types used on MassDOT projects, was referred to the Senate Committee on Ways and Means.

H. 3442, which would require MassDOT approval to build structures in former railroad right of ways, was referred to the House Committee on Ways and Means.

- The following bill was sent to the House Committee on Rules:

H. 4133, to study the effects of coastal and ocean acidification (formerly H. 472, 2122, and S. 410).

The following bills were ordered to a "third reading":

H. 2135, which would amend MGL Chapter 91 to allow shellfish reefs for water quality improvements.

H. 1683, which would make "Roadrunner" the official rock song of the Commonwealth. With words and music by Jonathan Richman, as recorded by Jonathan Richman and The Modern Lovers, the song is noted for its imagery of transportation infrastructure in Massachusetts.

Further information on specific bills is available on the [Legislature's website](#). There are links to legislators, bills, hearings, and session laws. You may contact me, as well, at bclemence@verizon.net.

Recent News and Updates

Renew Your BSCES Membership for 2018!

If you haven't done so already, please renew your BSCES membership. Thank you!

BSCES Welcomes its New Members

The BSCES Board of Government is pleased to welcome the following new members who joined BSCES in April 2018:

Affiliates

Timothy Blair, Weston & Sampson
Daniel Meegan, VHB

Associates

Benjamin Kapnis, Hayner/Swanson, Inc.
Melinda Kline, Transystems
Scott H. Ward, Haley & Aldrich, Inc.

Members

Eric Ohanian, Tighe & Bond
Manu Sharma, Gradient Corporation

Students

Mohammed A. Albalawi,
Wentworth Institute of Technology
Faisal Alharbi,
Wentworth Institute of Technology
Farhad Ali,
Wentworth Institute of Technology
Mohammed Aljuhami,
Wentworth Institute of Technology
Ryan M. Case,
University of Massachusetts, Amherst
Ariana Cruz-Rivera,
Worcester Polytechnic Institute
Steven K. Harrington,
University of Massachusetts, Lowell
Nicholas Leftin,
University of New Haven
Andrew Peary, Norwich University
Wyatt Ronan,
University of Massachusetts, Amherst
Ajinkya Taware,
Northeastern University
Carel Voltaire,
Northeastern University

Suggest a Seminar Topic

Is there an engineering topic that you would like BSCES to feature in an upcoming seminar? If so, members of the BSCES Program Committee would like to hear from you.

Charged with developing technical training programs that address members' professional development needs, the Program Committee oversees the Society's National Highway Institute training, spring and fall Professional Engineer Refresher Courses and other topical workshops. If you have a technical topic that you would like the Program Committee to consider, send your suggestion to BSCES Program Committee Chair Jeff Lewis at jlewis@garofaloassociates.com or BSCES Association Manager Rich Keenan at rkeenan@engineers.org.

Become a BSCESNews Contributor

Would you like to contribute to the newsletter of the oldest civil engineering society in the country? The BSCES Newsletter Editorial Board is seeking members who are willing to write articles for publication in *BSCESNews* or to join the Editorial Board.

Typically 300 to 700 words, BSCESNews featured articles are about technical topics or professional matters of interest to civil engineers. The June 2018 issue of the newsletter for example, will highlight the ASCE Coasts, Oceans, ports and Rivers Institute Boston Chapter and feature one or more articles on the theme of Emergency Preparedness.

Editorial Board members meet monthly via conference call to plan upcoming issues of the newsletter. They also solicit, write and/or review newsletter articles.

For more information on how you can become a BSCESNews contributor contact BSCES Association Manager Rich Keenan at rkeenan@engineers.org or at 617/305-4110.

2018 ASCE Election Ends June 1

ASCE has released their 2018 election ballot to members at the beginning of March. Online voting opened May 1 and closes June 1. Members at the grade of Associate and above in good standing as of April 1 will be eligible to vote. The online ballot will display the contests members are eligible to vote for, based on the region they live in, and in the case of technical region director if they are members of an ASCE Institute. For more information or to view the online ballot, [click here](#).

Dream Big

ASCE, with support from the United Engineering Foundation (UEF) has set the ambitious goal of putting a copy of the Dream Big movie and toolkit into every public school in the US. They received a grant already to cover costs for every high school in the US, but they are now trying to get the DVD into elementary and middle schools. Individuals can help with this initiative. Give \$5 to the public school of your choice and a toolkit will be sent with the following:

1. A DVD of the full-length feature film in English, French, Spanish and closed captioned, licensed for educational screenings only
2. The complete teacher's guide
3. All companion videos
4. Downloadable files for classroom use

[Click here](#) for more information and to search for your school!

Volunteer Mentor Needed

The Tufts University chapter of Engineers Without Borders is currently working on a project to drill a well to provide students at primary and secondary schools in Malawi with access to clean drinking water. From August 13–24, 2018, the group is planning to drill a well and install a hand pump. The group, however, needs a professional mentor to advise and help guide the process. They are looking for someone with experience in well drilling and/or construction and working with contractors. Travel and lodging expenses will be covered. If interested, please contact tuftsewb.eastafrica@gmail.com.

SEND US YOUR NEWS! Looking to strengthen the community that is BSCES, the BSCES Executive Committee and Newsletter Editorial Board has decided to expand the content of this *BSCESNews* Recent News and Updates column by including more member news. Have you recently been recognized for a professional accomplishment, passed the Professional Engineer Exam, received a promotion, or changed employers? If so, send your news items to BSCES Association Manager, Rich Keenan, rkeenan@bsces.org.

Upcoming Events

For more information and to register for events, please visit www.bsces.org

To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your BSCES member login information, call 617/227-5551.

Transportation & Development Institute Boston Chapter Summer Social

Thursday, June 7, 2018
Warehouse Bar & Grille, Boston, MA
5:30 – 7:30 PM

Join the Transportation & Development Institute Boston Chapter for its annual Summer Social at Warehouse Bar & Grille on Broad Street in Boston. This is an informal gathering to network and celebrate the arrival of summer.

Please see the Insert at the end of this month's newsletter for further details.

ASCE and BSCES Sponsored Seminar

Thursday – Friday, June 7 – 8, 2018
Embassy Suites by Hilton Boston at Logan Airport, Boston, MA
8:00 AM – 5:00 PM

Construction Administration for Engineers

Wayne D. Reynolds, P.E., M.ASCE

This seminar gives practical guidance on construction project administration, field management, and claims avoidance. In two intensive days, you will follow the construction

process from the preconstruction phase through project closeout, learning procedures, contract provisions, and rules of conduct that will help minimize and resolve claims and disputes. Information technology tools that can be used to assure a smooth flowing project will also be discussed.

Please register for this event [online](#).

Structural Engineering Institute Boston Chapter/Younger Member Group Site Visit

Thursday, June 14, 2018
290 Main Street, Cambridge, MA
3:00 PM – 4:30 PM

Kendall Square Housing Project Construction Tour

Join the Structural Engineering Institute Boston Chapter and the Younger Member Group for a tour of the active construction site of the Kendall Square Housing Project, followed by a social at Cambridge Brewing Company at 4:30 PM. Registration for the tour is limited to 30 people. No registration required to attend the social.

Please register for this event [online](#).

Please see the Insert at the end of this month's newsletter for further details.

BSCES Program Committee Sponsored NHI Training

Monday – Friday, December 10 – 21, 2018
Hilton Garden Inn Worcester
35 Major Taylor Boulevard, Worcester, MA
8:00 AM – 4:30 PM

FHWA-NHI-130055 Safety Inspection of In-Service Bridges

This two-week course is based on the 2012 FHWA "Bridge Inspector's Reference Manual" (BIRM) and provides training on the safety inspection of in-service highway bridges. Satisfactory completion of this course will fulfill the training requirements of the National Bridge Inspection Standards (NBIS) for a comprehensive training course. This course is not geared towards fracture critical, underwater, or complex structures. All participants must show that they passed either of the following prerequisite courses: FHWA-NHI-130101, Introduction to Safety Inspection of In-Service Bridges or FHWA-NHI-130054 Engineering Concepts for Bridge Inspectors.

Please see the Insert at the end of this month's newsletter for further details.

Classifieds

Town of Bedford

The Town of Bedford seeks a full-time **Assistant Director** in the Public Works Department. This position handles a range of projects, provides engineering/technical support, oversees administrative staff, represents DPW to various groups, and performs budgeting

functions. It requires a bachelor's in civil engineering, 5+ years' experience with project design/oversight, or any equivalent education/experience combination. MA motor vehicle operator's license, strong computer skills, and ability to work outside in a variety of conditions

are required. Starting annual salary range is \$72,660.52 to \$85,378.78 depending on experience. For more information visit <http://www.bedfordma.gov/human-resources/pages/employment-opportunities>.

2017–2018 BSCES Program Sponsors

Alfred Benesch & Co. | BSC Group | Childs Engineering Corporation | Cianbro Corporation | GEI Consultants, Inc.
Green International Affiliates, Inc. | Haley & Aldrich, Inc. | Hayward Baker | Helical Drilling | Howard Stein Hudson | Hoyle, Tanner & Associates
Massport | McMillen Jacobs Associates | Nitsch Engineering | Department of Civil and Environmental Engineering, Northeastern University
Skanska Civil | Tufts University | VHB | Weston & Sampson Engineers, Inc.



Boston Society of Civil Engineers Section
American Society of Civil Engineers



TRANSPORTATION
& DEVELOPMENT
INSTITUTE
Boston Chapter

2017-2018
Society Sponsors

AECOM
CDM Smith
EarthSoft
GZA
Louis Berger
Robinson + Cole LLP

T&DI Summer Social

Thursday, June 7, 2018

Warehouse Bar & Grille, 40 Broad Street, Boston, MA
5:30 PM – 7:30 PM

2017-2018
Program Sponsors

Alfred Benesch & Co.
BSC Group
Cianbro Corporation
Childs Engineering Corporation
GEI Consultants, Inc.
Green International Affiliates, Inc.
Haley & Aldrich, Inc.
Hayward Baker
Helical Drilling
Howard Stein Hudson
Hoyle, Tanner & Associates, Inc.
Massport
McMillen Jacobs Associates
Nitsch Engineering
Department of Civil and Environmental Engineering, Northeastern University
Skanska Civil
Tufts University
VHB
Weston & Sampson

Join BSCES Transportation & Development Institute for the annual Summer (End of the Year) Social at Warehouse Bar & Grille on Broad Street in Boston. This is an informal gathering to network and celebrate the arrival of summer.

This is a no-cost event and is open to anyone and everyone who is interested in learning about T&DI, how to become more involved, or just want to network with fellow Transportation advocates. Light appetizers will be provided for those who attend.

Registration

No Cost to Attend

Please RSVP to TDI@BSCES.org by Tuesday, June 5, 2018



Join the Younger Member Group (YMG) & the Structural Engineering Institute (SEI)

Kendall Square Housing Project Construction Tour

290 Main Street Cambridge, MA
June 14, 2018

Meet at Turner Construction Field Office
238 Main Street Cambridge MA
Tour Begins Promptly at 3:00 PM

Join the Structural Engineering Institute Boston Chapter and BSCES Younger Members Group for a tour of the Kendall Square Housing Project – an active construction site. The new 28-story building will consist of graduate student housing, a child-care facility, academic space, and retail space on the ground floor. Two existing buildings will be linked, preserving a 100-year-old historic façade and an existing reinforced concrete building, which will form the base of the new 28-story tower. The new tower's structural system will consist of 6 levels of concrete-encased steel plus 22 levels of framed slabs above that cantilever over the footprints of the existing buildings.

Followed by a Social at 4:30 PM at Cambridge Brewing Company

Register online for this event at <http://bit.ly/2GEQhbD>.

Free to all with RSVP! Registration is limited to first 30 participants for the tour! Bring your own PPE if possible, limited PPE will be available on site. No registration needed for the social.

Registration Deadline: June 7, 2018

2017-2018 Society Sponsors: AECOM | CDM Smith | EarthSoft | GZA | Louis Berger | Robinson + Cole LLP
2017-2018 Program Sponsors: Alfred Benesch & Co. | BSC Group | Cianbro Corporation | Childs Engineering Corporation | GEI Consultants, Inc. | Green International Affiliates, Inc. | Haley & Aldrich, Inc. | Hayward Baker, Inc. | Helical Drilling | Howard Stein Hudson | Hoyle, Tanner & Associates | Massport | McMillen Jacobs Associates | Nitsch Engineering | Department of Civil and Environmental Engineering, Northeastern University | Skanska Civil | Tufts University | VHB | Weston & Sampson Engineers, Inc.

2017-2018
Society Sponsors

AECOM
CDM Smith
EarthSoft
GZA
Louis Berger
Robinson + Cole LLP



FHWA-NHI-130055

Safety Inspection of In-Service Bridges

Monday, December 10, 2018 – Friday, December 21, 2018

Hilton Garden Inn Worcester, 35 Major Taylor Boulevard, Worcester, MA
Monday through Friday, 8:00AM – 4:30PM

2017-2018
Program Sponsors
Alfred Benesch & Co.
BSC Group
Cianbro Corporation
Childs Engineering Corporation
GEI Consultants, Inc.
Green International Affiliates, Inc.

This 10-day course is based on the 2012 FHWA “Bridge Inspector’s Reference Manual” (BIRM) and provides training on the safety inspection of in-service highway bridges. Satisfactory completion of this course will fulfill the training requirements of the National Bridge Inspection Standards (NBIS) for a comprehensive training course. This course is not geared towards fracture critical, underwater, or complex structures. Mid-term and final examinations based on course content will be administered to participants.

Haley & Aldrich, Inc.
Hayward Baker
Helical Drilling
Howard Stein Hudson
Hoyle, Tanner & Associates, Inc.
Massport
McMillen Jacobs Associates

Please note: To take this course participants must show that they have passed one of the following pre-requisite courses: FHWA-NHI-130054 *Engineering Concepts for Bridge Inspectors*; FHWA-NHI-130101, *Introduction to Safety Inspection of In-Service Bridges*; or FHWA-NHI-130101a *Prerequisite Assessment for Safety Inspection of In-Service Bridges*. A FHWA/NHI certification of completion with the participant name on it will be required to be presented to BSCES preferably at time of registration or no later than Friday, May 25, 2018. Please forward your prerequisite certificate in the form of a PDF document to bsces@engineers.org.

Nitsch Engineering
Department of Civil and Environmental Engineering, Northeastern University
Skanska Civil
Tufts University
VHB
Weston & Sampson

Registration Deadline: Friday, May 25, 2018

Registration Fees: \$2,900 Members, \$3,100 Non-Members

Registration fee includes course materials, continental breakfast, breaks, and lunch

Information/Registration:

Attendance for this program is limited to 30 participants. Individuals who attempt to register after the course is closed will be added to a waiting list.

Reservations will be accepted on a first-come first-serve paid reservation basis. Payment must be received with registration to secure a slot. Register to attend this course and pay by credit card online at <http://bit.ly/SafetyInspection2018>. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your login information call 617/227-5551. You can also register for this event by mail or email. To do so, download and complete a [BSCES Event Registration Form](#) and follow the submission instructions. Cancellations or no shows after May 25, 2018 will be billed.