

Connect Historic Boston: Delivered On-Time

by Kayla (Arruda) Sousa, EIT, Transportation Engineer, Howard Stein Hudson
and Bryan Zimolka, PE, Associate, Howard Stein Hudson

The newly constructed Connect Historic Boston Bike Trail has transformed some of downtown Boston's most important streets into safe, multimodal corridors for residents and visitors to enjoy and explore. The trail was designed by Howard Stein Hudson (HSH) and was shovel-ready within a year, delivering Boston's first bike signals and two-way protected bike infrastructure along a mile and a half of family-friendly, low-stress bike trail. This \$24 million TIGER Grant-funded construction project has resulted in a safe, family-friendly, low-stress bicycle loop around downtown Boston, opened a new commute option for residents and a pleasant, historic route for tourists to explore the history and attractions of Boston's Downtown waterfront, North End, and West End.

The Connect Historic Boston Bike Trail extends 1.4 miles from Atlantic Avenue along Commercial Street, Causeway Street, and Staniford Street to Cambridge Street. During Phase One, a grade-separated, two-way protected cycle track was constructed along Staniford Street, Causeway Street, Commercial Street, and



Bicycle lanes along Commercial Street in the North End separate bicycle and auto traffic.

Atlantic Avenue. Wider sidewalks, shorter crossings, and accessibility improvements further enhance the trail, delivering on Boston's reputation as America's Walking City.

The project's design focused on enhancing the existing streetscape while building the new path and integrating leading environmental and stormwater management measures. Along Commercial Street, rain gardens and permeable

continued on page 2

President's Report

by Geoffrey B. Schwartz, PE, Sr. Project Manager, GZA



Dear Members,

I would like to start off the year by thanking Malek A. Al-Khatib, PE, for his leadership and hard work this past year serving as President of BSCES.

Malek laid out a bold agenda and with his vision and the tireless work of the many BSCES volunteers, the Board, and the TECET staff, we were able to take short term and long term steps towards improving the sustainability of our Society, the oldest engineering society in the country (170 years old and counting), while continuing to deliver outstanding programs, events, and technical content for our members. Thanks Malek!

I am honored and humbled to step into the role of President of BSCES this year and am looking forward to working with the Board, the committees, volunteers and any members who would like to get involved in BSCES or have feedback that they wish to provide. As Malek described in his June 2018 President's Report, the BSCES is only as strong as its members, and the scope and quality of the programming we try to put out each year is reliant on the time and effort our volunteers provide. Thanks to the volunteers for your hard work, and thanks to the companies that support and encourage volunteers engaged in the Society. We are always looking for more volunteers and if you are interested in any role, be it serving on a

UPCOMING EVENTS

Techniques for Pavement Rehabilitation Seminar September 19–21, 2018

Fall 2018 Public Private Partnership Workshop September 28, 2018

Volunteer with the Younger Member Group at Crayons to Cradles September 29, 2018

Geo-Institute Boston Chapter and Engineering Management Group Social October 12, 2018

Fracture Critical Inspection for Steel Bridges October 16–19, 2018

Safety Inspection of In-Service Bridges December 10–21, 2018

Further Details Inside



2017–18 Society Sponsors:



Louis Berger



earthsoft

AECOM

CDM Smith

committee, helping out with an Outreach event, planning a program, or anything else, we will find a position for you. Please reach out to me. I would also like to thank our companies and colleges that are annual sponsors! Your financial support allows us to put on great programs throughout the year and we thank you.

Our new year began July 1, 2018, and we have already begun the planning process for our programming for this Fiscal Year 2019. Once again, we plan to hold around 40 events and programs through the year. Of course, if anyone has suggestions on programming, please do not hesitate to reach out to me. Along with programming, here is a summary of objectives

continued on page 6

2018–19 BSCES Board of Government

President: Geoffrey B. Schwartz, PE

President-Elect: Richard D. Maher, PE

Secretary: Christopher P. Hersey

Treasurer: Gregory L. Mirliss, PE

Assistant Treasurer: Anthony M. Richardson, PE

Senior Vice Presidents: Bruce L. Jacobs, PhD, PE;
Shallan C. Fitzgerald, PE

Vice Presidents: Ronald K. Burns, PE; Michael R. Cunningham, PE

Past President: Malek A. Al-Khatib, PE

Western MA Branch Vice President: Vacant

Institute Chapter & Technical Group Chairs

COPRI Boston Chapter: Bryan N. Jones, PE

Construction Institute Boston Chapter: Sean M. Homem, PE, SE

Engineering Management Group: Cody M. Gibb

EWRI Boston Chapter: Kathryn Booras, PE

Geo-Institute Boston Chapter: Lucy C. Jen, PhD, PE

SEI Boston Chapter: Nathan L. Rosencranz, PE, SE

T&D Boston Chapter: Cara N. Pirkey, PE

Younger Member Group: Brian P. Paula, PE

BSCES Newsletter Editorial Board

Chair: Bruce L. Jacobs, PhD, PE, bruce.jacobs@earthsoft.com

Bonnie Ashworth, bmcash@aol.com

Ronald K. Burns, PE, LSP, rburns@arcadia-tec.com

John C. Cavanaro, PE, JCavanaro@cavanaroconsulting.com

Bryon Clemence, PE, bclemence@verizon.net

Michael R. Cunningham, PE, MCunningham@kleinfelder.com

Annahid Dastgheib-Beheshti, EIT, annahiddb@gmail.com

Jessica DeBellis, PE, jdebells@geiconsultants.com

Ana Guedes, anaclaudiaeg2@gmail.com

Christopher P. Hersey, christopher.hersey@skanska.com

Richard F. Keenan, rkeen@engineers.org

Angus J. O'Leary, PE, GOleary@kleinfelder.com

Geoffrey B. Schwartz, PE, Geoffrey.Schwartz@gza.com



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



Connect Historic Boston

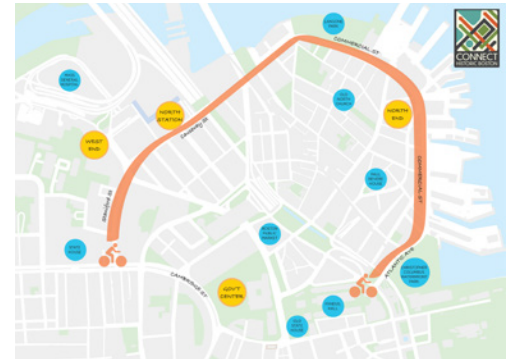
continued from page 1

pavement improve stormwater management and resiliency, in line with the City's Climate Ready Boston goals.

Along Causeway Street, the bike trail runs along the center of the road to reduce conflict with pedestrians on the crowded sidewalks that service the North Station subway and Commuter Rail stops, the TD Garden, and the Hub on Causeway towers now under construction.

The Connect Historic Boston Bike Trail includes the first bicycle signals in the City of Boston, giving cyclists clear direction and right of way and reducing conflicts with vehicles, in a progressive move towards safety and efficiency. To address the City's concern for cyclist and pedestrian safety at intersections, traffic signals at Keaney Square and Lowell Square were redesigned to improve accommodations for both pedestrians and bikers.

To enhance safety and improve the riding experience for cyclists, the level of the path is uninterrupted across driveways and parking lots, slowing vehicles down and making cyclists more visible. Green high-friction surface treatments highlight these crossings and other potential conflict zones, and beveled curbing is installed in areas where cyclists are at risk of pedal-striking the curb.



Completed route of this phase of the Connect Historic Boston Bike Trail.

During construction, HSH employed state-of-the-art temporary traffic control conditions in some of the City's busiest traffic areas, managing and streamlining construction while keeping area businesses open and avoiding user delays.

Funding for the project required that design be complete in one year. Collaborating closely with the City of Boston, Federal Highway Administration, advocacy groups, and abutters, in a very complex urban environment with established utilities, buildings, and abutting uses, HSH delivered the Connect Historic Boston Bike Trail design, shovel-ready, in a year. Construction was completed in mid-2018.

BSCES Seeks 2019–2020 Legislative Fellow

by David Westerling, PhD, PE, PLS, Emeritus Professor, Department of Civil Engineering, Merrimack College and BSCES Legislative Fellow Committee Chair

The Legislative Fellow is a BSCES member who serves as a technical resource at the Massachusetts State House. The Legislative Fellow generally works with the staff of the Joint Committee on Transportation on current issues that can benefit from the input of an engineering professional. Most efforts focus on transportation or environmental initiatives but can vary. A Legislative Fellow has the ability to solve real world problems at the State House that impact the Commonwealth. This highly visible position also provides the participant an opportunity to serve the public while giving back to BSCES and the civil engineering profession. Other benefits include office space at the State House, access to State House News Service, access to state house tours, attendance at legislative conferences, access to the legislative chamber, and the ability to meet and work with our legislators. Legislative Fellows develop a

further appreciation of how rules and regulations are developed and how competing interests are balanced. The Legislative Fellow receives a stipend from BSCES dependent on time of service.

The application deadline is October 31, 2018 for the Fellowship year beginning in January 2019 and ending on July 31, 2020, the probable end of the legislature's formal session in 2020. In some cases the end date may be extended up to two months if the Commonwealth's budget has not been approved or if legislation is pending on issues which the Legislative Fellow has participated. For more information, visit the [BSCES Legislative Fellow page on the BSCES website](#) and see the application process. You may also contact Rich Keenan with further questions at 617/305-4110 or rkeen@engineers.org.

MBTA Looks to the Future in Focus40 Investment Plan

by Bruce Jacobs, PE, Product Manager, EarthSoft

Never mind today's news, the MBTA is planning for the future. The draft long-term plan for the MBTA, *Focus40: The 2040 Investment Plan for the MBTA*, lays out an array of investment priorities with the goal of creating a system that is "reliable, robust, and reliant" in which the regional transportation system serves the interest of creating a community that is "sustainable, livable, equitable, and economically competitive." Its contents serve as a "playbook" to guide capital expenditures at the agency through the year 2040. The MBTA is seeking comments from the public through September 21. The plan contents are available at www.mbtafocus40.com/focus40theplan.

The *Focus40* planning process started with the development of a series of the "State of the System" reports that described existing conditions within the MBTA's bus, rapid transit, paratransit, commuter rail, and ferry systems. A team of subject experts was engaged to understand trends in population, technology and other expanding mobility options. Events and direct outreach to customers were used to solicit the current needs and aspirations of MBTA riders and other stakeholders. Through this process, the MBTA *Focus40* planning team arrived at a set of goals for the community that would be supported by future changes within the MBTA system. These included reduction of greenhouse gas emissions, improving the quality of life, creating a more equitable society, and creating conditions that foster economic growth.

Engaging in an effort to plan a complex system that serves a dynamic urban area over a period of 20 years is a difficult task. The future, needless to say, is highly uncertain. Both social and technological changes make it difficult to know

where best to spend money within the system to provide the most benefit towards attaining the stated goals. To address this uncertainty, the MBTA engaged in scenario planning and considered its recommendations in light of a suite of potential future conditions.

The *Focus40* document identifies a set of Priority Places for focused expansion of services. Priority Places were identified areas with higher than average anticipated returns resulting from transit investment in terms of overall benefits to the region. Three categories of priority places were identified: major employment districts including Kendall Square, Longwood Medical Area, South Boston Waterfront, and Logan Airport; inner core communities with inadequate rapid transit, such as Everett, Chelsea, Revere, Roxbury, Mattapan, Dorchester, South Boston, and Roslindale; and urban gateways such as Salem, Lynn, and Waltham.

The *Focus40* planning process resulted in the identification of recommendations serving twelve program areas: Paratransit, Customer Experience, Resiliency, Blue Line 2040, Green Line 2040, Red Line 2040, Orange Line 2040, Silver Line 2040, Bus 2040, Commuter Rail 2040, Water Transportation 2040, and place-based service additions. The recommended measures for each of these program areas fall into one of three tiers. Those in the We're Doing tier are already baked into the current five-year Capital Investment Plan and will occur between now and the year 2023. Those in the We're Planning tier are to be phased in through the existing process of five-year capital planning between now and the year 2040. The third tier of programs fall into the We're Imagining tier.

These include identified Big Ideas with the potential to create "transformative" changes to the system. Items within the We're Imagining tier are slated for additional study to determine the potential benefits.

A complete description of the program recommendations is impossible within the limited space. The following is a highly abbreviated list from the We're Planning and We're Imagining program tiers. Readers are advised to consult the *Focus40* Plan document for a complete list of recommended system improvements. The We're Planning program ideas (likely to occur between now and 2040) include a pedestrian connection between the Red and Blue Lines, improvements to the Mattapan High-Speed Line, expansion of South Coast Rail, and implementation of recommendations from the climate change vulnerability assessments. A short list of highlights from the We're Imagining tier include a Blue Line connection to the Red Line at Charles MGH, extension of the Blue Line to Longwood with a connection at Park Street, creation of a downtown superstation with pedestrian walkways connecting Downtown Crossing and State Street, extension of the Blue Line to Lynn, extension of the Green Line to Hyde Square in Jamaica Plain, and extension of the Orange Line to Everett and Roslindale.

On paper, the future looks good for Boston's MBTA. Implementation of the plan will of course rely on a disciplined management strategy on the part of the MBTA and levels of funding that are commensurate with the need of the community for a modernized regional transit system.

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 November 2018 issue of the newsletter for example, will highlight the Structural Engineering Institute Boston Chapter and feature one or more articles on the theme of Structures.

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 Newsletter Editorial Board Chair Bruce Jacobs at sr.vp1@bsces.org or BSCES Association Manager Rich Keenan at rkeen@engineers.org or at 617/305-4110.

Workshop Planned to Discuss Innovative Methods for Financing Large Infrastructure Projects

by David Westerling, PhD, PE, PLS, Emeritus Professor, Merrimack College

The BSCES Government Affairs & Professional Practice (GA&PP) Committee will co-sponsor a workshop on Innovative Infrastructure Financing Methods for Large Projects in Massachusetts on Friday morning, September 28th at the Federal Reserve Bank, Boston. Co-sponsors include the Boston Chapters of the Transportation and Development Institute, the Construction Institute and the Geotechnical Institute. This will be the third workshop in a series that began in April 2017. These workshops focus on methods ranging from traditional Design-Bid-Build to Design-Build-Finance-Operate and Maintain (DBFOM) concessions.

This workshop is intended both for veteran engineers and recent engineering graduates who are arriving with some background in new procurement methods. Financial facilitators, banking professionals and attorneys in the fields of construction bond finance, construction loans and long-term municipal financing may also find the work to be relevant to their day-to-day activities.

The September workshop will feature Tim McManus, vice president in McKinsey and

Company's Global Capital Projects & Infrastructure Practice. His recent post, "[Managing big projects: The lessons of experience](#)" will provide the bases of his talk about organizing the project team, creating a project legacy and five key points for successful projects.

Also, on the program is John Pranckevicius, the Chief Financial Officer at Massachusetts Port Authority. He will be presenting information on the renovation for the Port of Boston and on plans for the construction of a terminal transit system to connect airport terminals, the economy parking lot and the rental car facility to the MBTA BlueLine station.

The third speaker on the program is the returning Stephen Fitzroy, Executive Vice President of EDR Group, specializing in Long Term Benefit analysis of large projects. Mr. Fitzroy will be presenting information of the long-term benefits of replacing the notorious highway interchange between I-84 and I-91 in downtown Hartford CT. This interchange was designed as part of the National Highway Defense System in the 1950s and 1960s and is long past its design traffic loads. There are

several highway interchanges in Massachusetts that were designed and constructed during the mid-20th century that also need this type of renovation (expansion).

Mr. Fitzroy has also been asked to present some information on the dovetailing nature of long range economic analysis and the process of completing an Environmental Impact Statement. These two processes should be interwoven as the development of a large project takes form.

The workshop will address the proposed North-South Rail Link connecting North Station and South station as a case study. A second below ground level at both stations would provide increase capacity along with station improvements and ease of access through underground access below city streets and winter storms. The improved North Station would include direct access to the BlueLine and Logan Airport for commuter rail and Amtrak passengers. The rail link has recently received a \$10M authorization to complete a Draft Environmental Impact Statement (DEIS) and Mr. Fitzroy will discuss some of the economic parameters for local and regional benefits.

[Click here](#) to register for the workshop.

Outreach Group Reaches Out for Volunteers

by Maria Cadena, PE, Project Engineer, Mott MacDonald, LLC

Join us in inspiring Future Problem Solvers (kids in K-12th grade) by sharing your passion for Science, Technology, Engineering and Mathematics (STEM)!

The Boston Society of Civil Engineers Section/ASCE (BSCES) Public Awareness & Outreach Committee is a group of volunteers who share a passion for engineering and education. Members of our group are STEM professionals/college students/educators from all over New England.

Our goal is to introduce kids to STEM professions including Civil Engineering and encourage kids to appreciate the built and natural environments in which they live.

We work with kids of all ages and backgrounds, inspire them through hands-on fun activities designed to open their minds.

Our volunteers organize a variety of student competitions (Future City, Model Bridge, and Online Bridge), Bridge Tours, a TV show, participate in STEM events and visit schools all around New England (join our meetup group for details).

We have a busy calendar ahead of us filled with a variety of Outreach events and need your help! We have volunteering opportunities that vary in level of commitment. You could tell kids about STEM at a Saturday morning event, judge for the Future City Completion, or even take a leadership position! This is how you can get involved:

Join our Meetup Group!

This will show you upcoming events, allow you to sign up, participate in forums and share your ideas. See the insert included at the end of this newsletter for instructions.

Don't hesitate to reach out if you have any questions about participating:

Outreach Chair: Reed Brookman
reed.brookman@aecom.com

Outreach Events: Maria Cadena
maria.cadena@mottmac.com

Future City Competition: Alyson Stuer
astuer@benesch.com

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

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



The formal legislative session for 2017–2018 ended in July. My appointment as Legislative Fellows ended in August. Interested members of BSCES can apply to become the next

Legislative Fellow, covering the 2019–2020 session. If you have an interest in the policy and planning side of our profession, this is a rewarding and eye-opening experience. For instructions on applying, please see the related article in this issue of the newsletter.

As the Legislative Fellow, I worked on pending legislation, reviewed the Supplemental Environmental Impact Report for the South Coastal Rail Project, and attended meetings of the North-South Rail Link Working Group, the Autonomous Vehicle Working Group, and Fast Forward 2017, a seminar on autonomous vehicles (AVs). The AV field advances so rapidly that reports and proposed legislation are often outdated before they are completed. The Legislature considered eight AV-related bills, none of which passed. The US Congress also considered, but did not pass, two bills to establish nationwide requirements for AVs. The effects of AVs on transportation infrastructure should be of interest to our profession.

I worked on several water-related bills, most notably those pertaining to state delegation of the EPA National Pollutant Discharge Elimination System (NPDES) permit program—neither of which passed. One of these was a bill proposed by Governor Charles Baker (H. 2777) that would have allowed Massachusetts to administer the federal NPDES permit program. The NPDES program applies to surface water discharges from municipal and industrial wastewater treatment plants, municipal stormwater systems (separate and combined),

and certain industrial stormwater systems, federal facilities, and large construction sites. There were concerns about the cost of such a state program and how it would be funded.

The other water-related bill that came up was H. 2139, which would have required the state Water Resources Commission to evaluate state and federal water quality and pollution control programs and provide recommendations for meeting the goals of the federal Clean Water Act. This evaluation would have included the state administration of the NPDES program (as described above). Some people had viewed this as an alternative to H. 2777; they felt it would give state delegation of the NPDES program the comprehensive review that it deserved.

Here is a brief update on legislation enacted and of interest to the civil engineering community.

From the Acts of 2017, authorization for Somerville to borrow up to \$50 million for the Green Line Extension project (Chapter 21/S. 1139) and a bill pertaining to shadows cast by new structures in Boston (Chapter 57/H. 3749).

From the Acts of 2018:

- In April the Governor signed the bond authorization 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/ H. 4449).
- In June the Governor signed another infrastructure bond authorization bill, for \$3.9 billion (Chapter 113/H. 4549). It includes planning, design, and construction of facilities, a grant program for municipalities, and energy and climate resiliency for state facilities. Facilities covered under this bond authorization include state and local government infra-

structure, offices, schools, hospitals, universities, rinks, and public safety centers. It would also authorize \$10 million to produce a final EIR/EIS for the North-South Rail Link tunnel.

- In July the Governor signed the environmental bond bill (Chapter 209/H. 4835). This promotes “climate change adaptation, environmental and natural resource protection, and investments in recreational assets and opportunity.” It includes water and wastewater infrastructure and water quality improvements.
- In August the Governor signed an “Economic Development” bill (Chapter 228/H. 4732). Of interest to civil engineers are \$65.5 million for dredging projects and \$50 million to stimulate economic development in the maritime economy sector and protect coastal assets, consistent with the integrated state hazard mitigation and climate change adaptation plan. (This was originally the Governor’s “Opportunities for All” bill, H. 4297.)

Bills of interest to the civil engineering community that the Legislature considered but did not pass include:

- Access to Dig Safe data for surveyors and engineers (H. 4420, formerly H. 1813).
- Regulation of water and wastewater infrastructure for 40B housing projects (S.748).
- The “Clean Energy Future” bill pertaining to climate mitigation strategies (S. 2545/2564).
- Zoning reform bills from both the Legislature and the Governor (H. 4397 and H. 4075, respectively).

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.



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

President's Report

continued from page 1

that I have for this year that I shared with the Executive Committee back in July:

- Foster open communications and promote institutional knowledge with everyone throughout the year such that each individual knows how they fit in to the BSCES family, that they understand what each committee does and that they are valued at BSCES. To the volunteers out there – we recognize the hard that you put into this Society, and I want to make sure you have a great sense of accomplishment and to have fun. So first and foremost—thank you for your help and support!
- Solicit feedback from BSCES members on how we can improve. Feedback is always welcome, and even if we cannot address a good suggestion this year, we can certainly evaluate it. As an example, a member recently suggested changing the format of our monthly newsletter from a standard pdf to a more e-friendly publication where readers could essentially click on links to articles that would be available on our web page. This is a suggestion that our Newsletter Committee will evaluate this year and see what the implications are (level of volunteer effort and webpage costs) to transition to this format, however we will continue with our standard pdfs in the meantime. We have also discussed with our Membership Committee sending out an electronic survey with similar questions to members. WE WANT TO KNOW HOW WE CAN BEST SERVE YOU, and your feedback will help shape our actions.
- Identify volunteers who can help support and play key roles in our BSCES committees. For anyone who wants to help contribute to BSCES in a volunteer capacity, we have a roll for you. The ability to put on programs, run committees and other activities is only as strong as our volunteers. If you would like to get involved, we have some immediate needs with our Programs Committee and our Fundraising Committee as well as serving as a volunteer for our Outreach Committee.
- We are in the 5th year of our 5-year BSCES Strategic Plan (2015-2019), and so this year we will be reviewing the document and preparing our 2020–2024 BSCES Strategic Plan. This is a terrific opportunity to assess our needs and think about our values, goals, and priorities in the past and how they may shift moving forward.

- Pass a positive BSCES budget, and execute throughout the year to meet (or exceed) the budget. To this end, I have identified a few areas of focus that can help us with our revenue efforts;
 - Ask volunteers to take on a larger role in our events planning, including tech groups and executive committee members. We put on approximately 40-50 events a year, and need more volunteer support to achieve financial sustainability. This includes creating and updating our volunteer company/college/other space list, seek volunteer help from these spaces, and utilize executive committee liaisons to assist in the coordination of the events. This also includes preparation at the beginning of the year for the initial planning of events.
 - Supporting the Program Committee with additional volunteers and volunteer effort in both planning for and executing events. (Volunteers wanted!)
 - Supporting the Fundraising Committee efforts in Year 2 of its re-activation to continue to explore new and existing potential revenue generating streams and execute these initiatives. (Volunteers wanted!)
 - Continue to work hand in hand with TECET to best utilize TECET's services and resources while meeting our financial objectives. That includes exploring ways to 'optimize' event planning, registrations, and other many task that we perform behind the scenes throughout the year to support the Society.
- Supporting, as one of three founding organizations, the creation of the Massachusetts Architects and Engineers Emergency Response Task Force. This has been perhaps 10 years in the making, as one of our members (Mehrdad Sasani, professor at Northeastern) has been championing this cause for a long time. Mehrdad will continue to play a key role for BSCES, and we welcome the collaboration with Massachusetts Chapter of the American Institute of Architects and the Structural Engineers Association of Massachusetts. We are just beginning this exciting collaboration.
- Supporting ASCE's Dream Big initiative. BSCES has pledged financial support to purchase half of the approximately 1,300

DVDs (ACEC of Massachusetts Education Corporation has graciously pledged to support purchasing the other half) that will reach each public grade and elementary school in Massachusetts, and the challenging part will be to support our BSCES outreach by providing volunteer support to visit the schools as requested and help introduce engineering to these young students (Volunteers wanted!)

- Supporting the initiatives that we began last year and will continue to work on, including;
 - Revisiting our special funds policies and setting foundation of principals and guidelines for administration of such funds, including identification of roles and responsibilities and yearly review of fund activities,
 - Establishing copyright policies for our lectures and seminars to protect our members,
 - Establishing a BSCES Advisory Board to strengthen and support the leadership,
 - Establishing master agreements with NU and WIT for more collaboration and joint functions for mutual benefit, prestige, and opportunities, and
 - Establishing partnerships with Boston WTS for collaboration and joint functions for mutual benefit in programing, networking, and technical events.

The September *BSCESNews* theme is Transportation. Please read the article by the chair of the BSCES Chapter of T&DI, Cara Pirkey.

If you too want to donate, please use the Donate to BSCES link 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.

I look forward to working with everyone as we tackle the challenges that this year brings and hope to meet the needs of our 3,200+ members of this valued society. Please do not hesitate to reach out to me at any time, and though I may not get back to you by the next business day, I will respond and appreciate your feedback.

Respectfully submitted,

Geoffrey
president@bsces.org

Featured Group

Covering all the Bases: Technical Sessions, Networking & Site Tours with T&DI

by Cara Pirkey, PE, PTOE HNTB Corporation and Chair, Transportation and Development Institute Boston Chapter

As we move into the 2018–2019 year, the Boston Chapter of the Transportation and Land Development Institute (T&DI Boston Chapter) is building on last year's success and planning more social, technical, and networking events. As the summer season ends, the chapter's executive committee is putting the finishing touches on the year-long effort to plan this year's approach to events, meetings, communications, and operations. We will continue to collaborate with other technical committees to provide networking opportunities and to encourage new membership, while enhancing T&DI's presence in the engineering community.

T&DI Boston Chapter hosted the annual Bertram Berger Seminar at Maggiano's Little Italy in Back Bay on April 12, 2018. Local BSCES members gathered to hear from a total of nine speakers who each addressed the seminar's theme of *Marketing Massachusetts: Paving the Way to Economic Development*. Similar to years past, the event was broken out into two separate panel discussions followed by a lunchtime program, which was capped with a presentation from our distinguished keynote speaker, Andrew Grace, The City of Boston's Director of Economic and Strategic Planning.

The first panel provided insight from the public agency's perspective. Leaders from the City of Boston, MBTA, MassPort and FHWA discussed the transportation assets that Massachusetts currently boasts to attract new business, as well as plans to build on this base in the future.

The second panel, which included representatives from the Massachusetts Competitive Partner-

ship, South Shore Chamber of Commerce and MassDevelopment elaborated on developers and company's prerequisites when considering an investment in Massachusetts. They also discussed specific challenges and opportunities in the area.

The Bertram Berger Seminar is known to be the signature event of T&DI Boston Chapter, however it is one of numerous events hosted by the group. In September of last year, members also organized an evening legislative update discussing the stall of the Federal Infrastructure Plan and where that leaves Massachusetts. A joint construction site tour of the Casey Arborway Project with the BSCES Construction Institute was held in November, followed with a social/networking opportunity at a local watering hole. A webinar on *Drone Technology in the Transportation Industry* was hosted in March.

On August 23rd, we held our first meeting of the new fiscal year for all interested committee members to discuss T&DI Boston Chapter action items for the upcoming year. During this meeting the executive committee welcomed some new faces and provided more information about this year's planned T&DI Boston Chapter events, set meeting schedules, and discussed members' personal goals and how they would like to enhance their presence within the engineering community.

As we engage more members and place a high value on everyone's time, we continue to recognize the need for flexibility. Therefore, our approach is:

1. Out of necessity, our event planning meeting times and dates are based on active participants' availability and will be set by each event chair after event-planning groups are formed.
2. We plan to host bimonthly evening meetings open to all active T&DI Boston Chapter members. The meetings will be social in atmosphere and the dates and times will be set on September 13th.

In order to become successful in achieving our goals, we are looking to engage innovators, leaders, and motivated individuals in the transportation and development profession. It is through new ideas and an extensive knowledge base in engineering practices, social interactions, and event management that the T&DI Boston Chapter will contribute to enhancing the engineering community at large. This is your opportunity to stand out and show what you can do outside the day-to-day practices within your private company or public agency to advocate for and improve the development throughout the commonwealth. If you are a transportation or land development professional and an ASCE T&DI member looking for a group where you can discuss current happenings, exchange ideas, and strive to make a difference—you are invited to join the Boston Chapter of T&DI.

To learn more, contact me at TDI@BSCES.org or visit our LinkedIn and Twitter pages. Be sure to review our biweekly newsletter for current news on events and meetings for the T&DI Boston Chapter sent to all chapter members.

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

BSCES Member Profile: Paul Tyrell, PE, PLS

by Bonnie Ashworth, Quincy, MA

Congratulations to Paul Tyrell, the 2017 BSCES Ralph Horne Award recipient. The award is presented in recognition of unpaid public service in a municipal, state, or federal elected or appointed post for philanthropic activities in the public interest. Paul's years of service as a member of the Massachusetts Board of Registration of Professional Engineers and Land Surveyors, which he currently chairs, make him a worthy recipient. Mark Pelletier, VP at STV, nominated Paul and stated: "He has worked diligently in support of the Board's intended purpose of insuring professional competency and protecting the public interest."

Paul observed that his work with the MA registration board and on the Board of Directors of the National Council of Examiners for Engineers and Surveyors (NCEES) emphasizes the important role engineers play in the public's well-being. Attention to engineering decisions made everyday, that impact the public, should be held paramount. He credits STV for appreciating the importance of engineering licensure and allowing him to serve on the MA and NCEES boards.

Paul has 30+ years of experience in project management, design, and construction management in both the public and private sectors. He earned his Bachelor of Science in Civil Engineering Technology degree from Wentworth Institute. He's the chairman of the Massachusetts Board of Registration of Professional Engineers and Land Surveyors, and he serves on the Board of Directors of the NCEES as NE zone vice president. He holds PE licenses in the six New England states and New York; he's a Professional Land Surveyor in Massachusetts and is LEED AP certified. Paul worked for several area companies before returning to STV in 2011. He was promoted to vice president in March 2018, and currently serves as deputy project manager for the MBTA Green Line Extension.

Paul has a broad range of experience, reflected in the projects he's been involved with, both in the field and office, over the years. Be it an academic institution, public utility, municipality, state or federal agency, or transit authority, he's worked with them. Paul has worked on projects that affect the fabric of Greater Boston. We're all aware of the Freedom Trail, Dudley Square (Boston), South Station, the Longfellow Bridge, Greenbush Commuter Rail, MBTA Green Line Expansion, the former Naval Air Station redevelopment in South Weymouth, and the many colleges and universities. The list of projects is extensive, but a brief sampling is illuminating. In the aviation field, he designed complex and specialized utility relocations for Terminal C rehabilitation at Logan Airport and provided civil engineering services for relocation of a United Airlines general service equipment facility at Logan, as required by the Central Artery/Tunnel construction. In the health sector, Paul was project manager for civil site design and property



Paul Tyrell, recipient of the 2017 Ralph Horne Award

line and topographic surveys for the new 80,000 square foot, state of the art Whittier Street Health Center on a BRA parcel in Boston.

Paul served as project manager or chief engineer on numerous athletic facility improvements for academic institutions throughout New England. For example, he managed the civil site design for Curry College's student center; oversaw the design, permitting, and construction administration for athletic facilities at Newton South High School; and provided the same services for Needham's "Field of Dreams," a public-private funded project, which included an 8-lane running track, synthetic and natural turf fields, lighting, bleachers, dugouts, pedestrian paths, and drainage improvements. He oversaw design of a series of improvements to athletic facilities at Tufts University that addressed existing code violations, allowing the school to host NCAA events.

He currently oversees construction of the Connect Historic Boston improvements to the iconic Freedom Trail to make it a safer experience, including roadway and infrastructure repairs as well as street lighting, traffic signals, pavement markings, utilities, and a cycle track. To name just three other road projects, he currently serves as MassDOT's owner representative on the widening and improvement of Route 18 in Weymouth and Abington; oversaw design of Quincy Street, for Boston DPW, as part of the Choice Neighborhoods Program; and was on-site owner's rep for the East-West Parkway through SouthField, the former naval air station in South Weymouth and adjacent towns. This project was recognized as Infrastructure Project of the Year under \$40 million by the New England Chapter of the Construction Management Association of America.

Some of the rail projects that Paul has been involved with in various capacities include overseeing design of rail modifications and development of construction plans at Boston's South Station for construction of a commercial air rights tower over commuter rail platforms. He finalized civil design and provided construction phase support for the

recently completed New Balance Station, which features a center island platform with handicapped-accessible pedestrian overpass. Paul was senior civil engineer on the MBTA Greenbush Line design-build project, designing many aspects of the project including track, drainage, utilities, and a rail trail, for the 18-mile-long commuter rail restoration.

Projects that Paul considers key among the numerous in his resume are the Longfellow Bridge, the Greenbush commuter rail restoration, and the Green Line Extension. He noted that although all three are design-build projects, design schedules are always challenging, many problems need to be solved on a daily basis, and "you get to work with many dedicated and talented people, including the owners, operators, contractors, and the people in the communities these projects serve."

The Longfellow Bridge, a 110-year-old treasure, may have been one of his most technically challenging projects. It involved seismically retrofitting the salt and pepper shaker towers, replacing more than 2,000 columns, restoring the steel arches, roadway approaches, utilities, and drainage system. Open on a limited basis during construction, the public welcomed its reopening on May 31, 2018.

Paul served as project engineer and worked on the Greenbush project almost exclusively for five years, and he mentioned two unique aspects: a rail trail and development of wildlife crossings. The latter were necessary because animal migration patterns, particularly those of the spotted turtle, had been established over the 50 years the line was dormant. To address this, five different wildlife crossings were developed, and were proven to work. Paul recalls: "Working with the MBTA's Environmental department on these crossings was one of the most rewarding aspects of my Greenbush work."

The Green Line Extension (GLX) project, the largest design-build project in Massachusetts history, is in its first year. It includes two new branches to extend service north to Somerville and Medford, relocation of Lechmere Station in Cambridge, seven new stations, and a new vehicle and storage facility. Paul serves as deputy project manager, and he enjoys working with the diverse talented team who are developing the solutions to the many challenges that arise with a project of this scope. He reflected that: "a project like GLX may only come along once in a lifetime and you need to enjoy every moment of it. I'm fortunate to have three design-builds that I'm incredibly proud to have been part of."

Paul's work as a member and now chair of the Massachusetts Board of Registration of Professional Engineers and Land Surveyors and his advocacy on behalf of that organization and NCEES are invaluable in insuring that those working in these professions are competent practitioners and are not endangering the public's life, health, safety, and welfare. The BSCES is pleased to recognize Paul's contributions with the Ralph Horne Award. Well done!

Recent News and Updates

BSCES Thanks 2018–2019 Society Sponsors

The BSCES Board of Government would like to thank the following firms for their support as 2018–2019 Society Sponsors:

AECOM
CDM Smith
EarthSoft
GZA
Louis Berger

BSCES Thanks 2018–2019 Program Sponsors

The BSCES Board of Government would like to thank the following firms for their support as 2018–2019 Program Sponsors:

Alfred Benesch & Co.
CIANBRO
Dewberry
Eastern Topographics
GEI Consultants, Inc.
Green International Affiliates, Inc.
Haley & Aldrich, Inc.
Hayward Baker, Inc.
Helical Drilling
HNTB
Horsley Witten Group
Howard Stein Hudson
Hoyle, Tanner & Associates
Jacobs
Kleinfelder
McMillen Jacobs Associates
Nitsch Engineering
Department of Civil and Environmental Engineering, Northeastern University
Patrick Engineering Inc.
Perry Associates
PMA Consultants
Skanska
Stantec
Tighe & Bond
TranSystems
Tufts University
VHB
Wentworth Institute of Technology
B.S. and M. Eng. in Civil Engineering Programs
Weston & Sampson
WSP

BSCES Welcomes its New Members

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

Affiliates

Andrew Barr, *Russo Barr Associates, Inc.*
Brandon Gale, *Somerville, MA*

Samuel Forgue, *Harriman*
Steven J. Nieuweboer, *TranSystems Associates*
Eric Braun, *Burohappold*
John R. Deskavich, *Fuss & O'Neill*
Robert E. Evans, III, *Simpson, Gumpertz, & Heger, Inc.*
Paul Gwiazda, *Shrewsbury, MA*
Michael Logar, *HDR Engineering, Inc.*
Ryan Schnepfer, *GreenbergFarrow*
Kevin J. Widzinski, *Reading, MA*

Members

Matthew M. Copeland, *Copeland Building Envelope Consulting*
Natasha Deschene, *National Grid*
Meeok Kim, *Thornton Tomasetti*
Erica J. Molloy, *AECOM*
Pooya Roohi, *Boston, MA*
Hugh C. Scott, IV, *Shea Concrete Products*
Akram Youssef, *Simpson, Gumpertz, & Heger, Inc.*

Students

Rinkesh R. Gajera, *Northeastern University*
Morgan Marlow, *Norwich University*

BSCES Seeks 2019–2020 Legislative Fellow

The Legislative Fellow is a professional engineer and BSCES member who serves as a technical resource at the Massachusetts State House. The Legislative Fellow generally works with the staff of the Joint Committee on Transportation on current issues that can benefit from the input of an engineering professional. Most efforts focus on transportation or environmental initiatives can vary. BSCES is currently seeking applicants for the 2019–2020 Legislative Fellowship. The application deadline is October 31, 2018 for the Fellowship year beginning in January 2019 and ending July 31, 2020. For more information visit the [BSCES Legislative Fellow page](#) on the BSCES website and see the application process. You may also contact Rich Keenan with further questions at 617/305-4110 or rkeenan@engineers.org.

ASCE Board Approves Four New Policy Statements

During the July 2018 meeting, the ASCE Board of Direction voted to approve four new public policy statements designed to promote and strengthen the professional and educational civil engineering communities. New policies on engineering research, visas and national security, state support for higher education, and owners' commitment to sustainability, were all passed. In addition, a total of 55 other policy statements were revised or reaffirmed. The engineering research and visa policy statements replaced two resolutions that were

rescinded. A proposal to rescind the policy statement Defining the Civil Engineering Team was defeated. ASCE has a total of 172 policy statements that are designed to help further the goals of ASCE and to advance of the engineering industry. More information can be found about them [here](#).

Update Your ASCE Profile

Have you moved lately, changed jobs, or do you have a new email address? It is very important that we receive your updated contact information. Please make sure you update your profile at ASCE National. Every month BSCES receives updated member information from ASCE that we utilize for all BSCES correspondence. You have a personal profile that you can access and update your contact information. Simply go to the ASCE "Membership & Communities" page and click on the "Log in..." bullet under the Already a Member section. Once you've logged in, you can edit your contact information. Members can also always call 800/548-2723 and have someone in Customer Service make updates for them over the phone.

Beals and Thomas, Inc. Opens New Boston Location

Beals and Thomas, Inc., a multi-disciplinary land use planning, design, and permitting consulting firm based in Southborough, MA, has opened a Boston office to help facilitate its projects in the Greater Boston Area. These include the 161-acre Suffolk Downs redevelopment, Cambridge Crossing and the Harvard Square Theatre in Cambridge.

GEI Announces New Wisconsin Office

GEI Consultants, Inc., one of the nation's leading geotechnical, environmental, water resources, and ecological science and engineering firms, announced that it has opened a new office in Milwaukee, Wisconsin to expand its services throughout the Midwest. The new location will provide services for Hydrology and Hydraulics Modeling and Design, Storm Water Management Master Planning, Dams, and more.

Milone & MacBroom, Inc. Announces Acquisition of HTE Northeast, Inc.

Based out of Bedford, New Hampshire, HTE's expertise will enhance Milone & MacBroom's growing geotechnical and environmental engineering departments, in addition to supporting their highly established civil and transportation engineering; environmental science; landscape architecture; planning; and survey practices.

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.

Techniques for Pavement Rehabilitation

ASCE and BSCES Sponsored Seminar

Wed. – Fri., September 19–21, 2018

Hyatt Place Braintree, Braintree, MA

8:30 AM – 4:30 PM

Presenters:

Newton C. Jackson, PE

James M. Signore, PhD, PE

This seminar provides detailed information on the quality standards for pavement rehabilitation. It includes the concepts that assist pavement engineers in developing the most reliable and cost-effective rehabilitation alternatives for existing flexible and rigid pavements. The reference material provided contains information useful in identifying potential problems and providing specific solutions, while understanding the effects on the final rehabilitated pavement. The seminar combines lectures and workshop sessions to provide participants with hands-on experience with the techniques for pavement rehabilitation.

[Click here to find additional information and register for this event online.](#)

Fall 2018 Public Private Partnership (P3) Workshop: Innovative Financing Methods for Large Projects in Massachusetts

Sponsored by GA&PP Committee, and CI, GI, & T&DI Boston Chapters

Friday, September 28, 2018

Federal Reserve Bank, Boston, MA

7:30 AM – 12:30 PM

Presenters:

Tim McManus, Vice President, Capital Projects and Infrastructure Practice, McKinsey & Company

Prabal Chakrabarti (invited), Senior Vice President and Community Affairs Officer, Federal Reserve Bank

John Prankevicus, Chief Financial Officer, Massachusetts Port Authority

Stephen Fitzroy, Executive Vice President, EDR Group

The workshop will focus managing large projects including market and organizational problems. How the project is organized and procured is a significant factor in possible delays and cost overruns. The “Legacy Benefit” will be discussed including owner capabilities. Also, a discussion of public-private partnerships (P3) that dovetail with Environmental Impact Statement preparations and panel discussions using the North-South Rail Link as a sample large project, will follow.

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

Volunteer with the YMG at Crayons to Cradles

Younger Member Group Community Service Event

Saturday, September 29, 2018

The Giving Factory

155 N. Beacon Street, Brighton, MA

1:30 PM – 3:30 PM

Please join the YMG at the Cradles to Crayons Giving Factory in Brighton! Cradles to Crayons collects new and gently used children's items. The donations are collected and processed at the group warehouse in Brighton, MA. A volunteer shift in The Giving Factory Warehouse involves hands-on processing of the children's items. Each station in the warehouse includes inspecting, sorting and packaging donations so that they are ready for distribution.

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

[continued on page 11](#)

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.

ASCE Webinars

ASCE WEBINARS

SUPPORT OUR SECTION

Use WEBBOSSEC to have
20% of your purchase
donated to our Section.

ASCE | CONTINUING EDUCATION

Are you planning to take an ASCE webinar? Sign up with the code WEBBOSSEC and 20% of your registration fee will be donated to the Boston Society of Civil Engineers Section/ASCE.

For a full listing of ASCE Webinars, [click here](#).

2018–2019 BSCES Program Sponsors

Alfred Benesch & Co. | CIANBRO | Dewberry | Eastern Topographics | GEI Consultants, Inc. | Green International Affiliates, Inc.
Haley & Aldrich, Inc. | Hayward Baker, Inc. | HNTB | Helical Drilling | Horsley Witten Group | Howard Stein Hudson | Hoyle, Tanner & Associates
Jacobs | Kleinfelder | McMillen Jacobs Associates | Nitsch Engineering | Department of Civil and Environmental Engineering, Northeastern University
Patrick Engineering Inc. | Perry Associates | PMA Consultants | Skanska | Stantec | Tighe & Bond | TranSystems | Tufts University | VHB
Wentworth Institute of Technology B.S. and M. Eng. in Civil Engineering Programs | Weston & Sampson | WSP

Upcoming Events *(continued from page 10)*

Geo-Institute Boston Chapter and Engineering Management Group Social at Slumbrew

Friday, October 12, 2018

Somerville Brewing Company
15 Ward Street, Somerville, MA

6:00 PM – 9:00 PM

Come join the Geo-Institute Boston Chapter and the Engineering Management Group to kick off 2018-2019 at our start of year social hosted at Somerville Brewing Company (Slumbrew). Enjoy appetizers and refreshments in a reserved space with colleagues from the geotechnical and engineering management industries. This event is open to anyone who is interested in learning about the Geo-Institute, the Engineering Management Group or who just wants to socialize with fellow professionals.

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

FHWA-NHI-130078 Fracture Critical Inspection for Steel Bridges

BSCES Program Committee Sponsored NHI Training

Tuesday – Friday, October 16-19, 2018

Mott MacDonald
101 Station Drive, Norwood, MA

8:00 AM – 4:30 PM

This course curriculum examines current practices, while addressing new and emerging technologies available to bridge inspectors. In addition, the course features classroom training; hands-on workshops for popular types of nondestructive evaluation (NDE) equipment; and a case study detailing the preparation of an inspection plan of a fracture critical bridge.

Online registration for this course is on hold pending the release of seats being held for FHWA employees. Please email BSCESReg@engineers.org if you wish to be added to the waitlist for these potential seats. See the Insert at the end of this month's newsletter for further details.

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

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

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 pre-requisite 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

Waterfield Design Group

Civil PE & EIT Wanted—Engineer-in-training (civil) and registered professional civil engineer wanted for growing site design company based in Winchester. Ideal candidate is someone with accredited degree in civil engineering. Experience with site design including grading and drainage design, site layout, and the preparation of stormwater reports is needed. Position requires a minimum of 3 years of professional experience. Salary is commensurate with experience and qualifications. Waterfield Design Group is a full service site design company.

Besides our extensive US portfolio, join our team and contribute to the life changing work we do in emerging and developing nations—make a difference in the world using your civil engineering skills and abilities.

Send inquiries to Craig at cmiller@wdgrp.com.

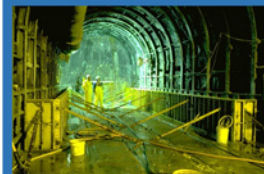
WHAT DOES IT TAKE TO DELIVER CLEAN WATER? IT COULD BE YOU!

The Massachusetts Water Resources Authority (MWRA) is looking to fill several full-time positions to support the Metropolitan Tunnel Redundancy Program. The program consists of planning, design and construction of approximately 14 miles of deep rock tunnel at an estimated cost of \$1.4 billion. Current openings include the **Director of Design and Construction, Design Manager, and Geotechnical and Tunneling Manager**. As a member of the Tunnel Redundancy Department, you will serve in a leadership position on this exciting new megaproject.

Please visit: <https://mwra.applicantpro.com/jobs> for details, requirements on open positions, and to apply. Be sure to check back for future, exciting opportunities. Also, check out our comprehensive benefits plan.

MWRA provides wholesale water and wastewater services to 3 million customers in 61 communities in eastern and central Massachusetts.

MWRA is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, national or ethnic origin, age, disability, sex or gender, sexual orientation, gender identity or expression, or veteran status.



Massachusetts Water Resources Authority
100 First Avenue
Boston, MA 02129
(617) 242-6000
www.mwra.com





BSCES strives to **introduce engineering to kids** in its true form. Through its various **outreach programs**, BSCES emphasizes the creative, hands-on, real life aspects of engineering. BSCES hosts contests and provides mentors to expose kids to the actual world of engineering. These programs are designed to show kids how engineers impact the world every day and how their ideas, even at a young age, have the potential to change the world. **Volunteers** are STEM professionals/college students/educators from all over New England.



Visit the website to learn more about the BSCES:

www.bscs.org/outreach-advocay/outreach

Want to Volunteer?

Join our Meetup Group!

To learn about our events and sign up to volunteer follow the steps below:

1. Go to Meetup.com
2. Sign up by creating an account.
3. Search for "BSCES" or "Outreach" to join the New England K-12 STEM Outreach Volunteers group.
4. Once you have been accepted to the group go to the group page and view upcoming Meetups that you can want to volunteer for.
5. To volunteer click attend to register for an event. The event coordinator will provide additional information at that time.



2018-2019
Society Sponsors

AECOM

EarthSoft

GZA

Louis Berger

2018-2019
Program Sponsors

Alfred Benesch & Co.

CIANBRO

Dewberry

Eastern Topographics

GEI Consultants, Inc.

Green International
Affiliates, Inc.

Haley & Aldrich, Inc.

Hayward Baker, Inc.

HNTB

Horsley Witten Group

Howard Stein Hudson

Hoyle, Tanner &
Associates

Kleinfelder

McMillen Jacobs
Associates

Nitsch Engineering
Department of Civil
and Environmental
Engineering,
Northeastern
University

Patrick Engineering Inc.

Perry Associates

PMA Consultants

Skanska

Stantec

Tighe & Bond

TranSystems

Tufts University

VHB

Wentworth Institute of
Technology B.S. and
M. Eng. in Civil
Engineering Programs
Weston & Sampson
WSP

Fall 2018 Public Private Partnership Workshop: Innovative Financing Methods for Large Projects in Massachusetts

Featuring:

Tim McManus

Vice President, Capital Projects and Infrastructure Practice, McKinsey & Company

Prabal Chakrabarti (invited)

Senior Vice President and Community Affairs Officer, Federal Reserve Bank

John Pranckevicius

Chief Financial Officer, Massachusetts Port Authority

Stephen Fitzroy

Executive Vice President, EDR Group

William Lyons Jr., PE

President & CEO, Fort Hill Companies, LLC

Friday, September 28, 2018

Harborside 4th Floor; Connolly Center, Federal Reserve Bank, 600 Atlantic Avenue, Boston, MA

7:30 AM – 12:30 PM

Event program on the following page.

The Workshop will focus managing large projects including market and organizational problems. How the project is organized and procured is a significant factor in possible delays and cost overruns. The “Legacy Benefit” will be discussed including owner capabilities. Also, a discussion of public-private partnerships (P3) that dovetail with Environmental Impact Statement preparations and panel discussions using the North-South Rail Link as a sample large project, will follow.

Registration Deadline: Tuesday, September 25, 2018

\$45 Members, \$55 Non-Members

\$20 Public Sector Members, \$30 Public Sector Non-Members

\$20 Senior and Student Members

***Continental Breakfast and refreshments included in registration fee.**

Registration Information:

Register to attend this meeting and pay by credit card online at <https://bit.ly/2Q7Ix7X>. 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. 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 received after Friday, September 21, 2018 and no-shows will be billed.

2018-2019
Society Sponsors

AECOM
EarthSoft
GZA
Louis Berger

2018-2019
Program Sponsors
Alfred Benesch & Co.
CIANBRO
Dewberry
Eastern Topographics
GEI Consultants, Inc.
Green International
Affiliates, Inc.
Haley & Aldrich, Inc.
Hayward Baker, Inc.
HNTB
Horsley Witten Group
Howard Stein Hudson
Hoyle, Tanner &
Associates
Kleinfelder
McMillen Jacobs
Associates
Nitsch Engineering
Department of Civil
and Environmental
Engineering,
Northeastern
University
Patrick Engineering Inc.
Perry Associates
PMA Consultants
Skanska
Stantec
Tighe & Bond
TranSystems
Tufts University
VHB
Wentworth Institute of
Technology B.S. and
M. Eng. in Civil
Engineering Programs
Weston & Sampson
WSP

Fall 2018 Public Private Partnership Workshop: Innovative Financing Methods for Large Projects in Massachusetts

Program:

7:30 AM – 8:15 AM Registration & Continental Breakfast

8:15 AM – 8:30 AM Welcome Remarks

Prabal Chakrabarti, Senior Vice President and Community Affairs Officer, Federal Reserve Bank

8:30 AM – 9:30:00 AM Speaker Presentation

Moderator: *William F. Lyons Jr., PE, Fort Hill Companies, LLC*

Tim McManus, McKinsey and Company

Managing Large Projects, A review of global infrastructure projects with focus on infrastructure demands in growing metropolitan areas. A look at P3 activities nationwide. In his paper Managing Big Projects, Mr. McManus outlines five essential elements for successful projects. The lack of a few (if not all) of these elements which the audience may relate to while recollecting some recent large projects here in Boston.

<https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/managing-big-projects-the-lessons-of-experience>

9:30 AM – 10:30:00 AM Speaker Presentation

John Prankevicius, Massachusetts Port Authority

Mr. Prankevicius will provide information on capital planning and financing possibilities for large projects such as major improvements to the Port of Boston facilities and transit links to from the Blue Line station to terminals at Logan Airport.

<https://www.bostonglobe.com/business/2018/04/25/logan-airport-study-transit-link-terminals-and-mbta-station/FBbrtsOUxiRYzi0h0ZUuJ/story.html>

10:00 AM – 10:15 AM Break with coffee and refreshments

10:15AM – 10:45 AM Speaker Presentation

Stephen S. Fitzroy, PhD, PE, Economic Development Research Group, Inc.

Long-Term Economic Analysis of Large-Scale Projects. Discussions of large-scale projects often focus on their costs, but seldom address what we might do instead to accommodate future growth and development. Defining the base case for an EIS and understanding the implications of a “no-build” assessment are important for framing discussions. Mr. Fitzroy will provide some examples of large-scale projects currently being evaluated in the New England region and discuss the implications of framing discussions of future large-scale projects.

10:45 AM – 12:00 PM Workshop Panel

Q&A from the audience and selected honored guests.

12:00 PM – 12:15 PM Closing Remarks

Volunteer with the Younger Member Group!

Cradles to Crayons

Saturday September 29, 2018



**Cradles
to Crayons
BOSTON**

Please join the YMG on September 29 at the Cradles to Crayons Giving Factory in Brighton! Cradles to Crayons collects new and gently used donated children's items through community drives and corporate donations. The donations are collected at their warehouse in Brighton, MA (The Giving Factory) and volunteers help process and package these donations to be distributed to local disadvantaged children.

A volunteer shift in The Giving Factory Warehouse involves hands-on processing of the children's items that are donated on a regular basis. Each station in the warehouse includes inspecting, sorting and packaging donations so that they are ready for distribution!

September 29, 2018

1:30 PM – 3:30 PM

The Giving Factory

155 N Beacon St, Brighton, MA

**On-Street parking is available on North Beacon, Etna and Life Street. THE MBTA Harvard Ave Green Line Station is an approximately 20 minute walk*

To Register - Email:

ymg@bsces.org

Registration Deadline: Wednesday, September 26, 2018

2018-2019 Society Sponsors: AECOM | EarthSoft | GZA | Louis Berger

2018-2019 Program Sponsors: Alfred Benesch & Co. | CIANBRO | Dewberry | Eastern Topographics | GEI Consultants, Inc. | Green International Affiliates, Inc. | Haley & Aldrich, Inc. | Hayward Baker, Inc. | HNTB | Horsley Witten Group | Howard Stein Hudson | Hoyle, Tanner & Associates, Inc. | Kleinfelder | McMillen Jacobs Associates | Nitsch Engineering | Department of Civil and Environmental Engineering, Northeastern University | Patrick Engineering | Perry Associates | PMA Consultants, LLC | Skanska | Stantec | Tighe & Bond, Inc. | TranSystems Corporation | Tufts University | VHB | Wentworth Institute of Technology B.S. and M. Eng. in Civil Engineering Programs | Weston & Sampson Engineers, Inc | WSP



Boston Society of Civil Engineers Section
American Society of Civil Engineers



**GEO-
INSTITUTE**
Boston Chapter



2018-2019
Society Sponsors

AECOM
CDM Smith
EarthSoft
GZA
Louis Berger

2018-2019
Program Sponsors
Alfred Benesch & Co.
CIANBRO
Dewberry
Eastern Topographics
GEI Consultants, Inc.
Green International
Affiliates, Inc.
Haley & Aldrich, Inc.
Hayward Baker, Inc.
Helical Drilling
HNTB
Horsley Witten Group
Howard Stein Hudson
Hoyle, Tanner &
Associates
Kleinfelder
McMillen Jacobs
Associates
Nitsch Engineering
Department of Civil
and Environmental
Engineering,
Northeastern University
Patrick Engineering Inc.
Perry Associates
PMA Consultants
Skanska
Stantec
Tighe & Bond
TranSystems
Tufts University
VHB
Wentworth Institute of
Technology B.S. and
M. Eng. in Civil
Engineering Programs
Weston & Sampson
WSP

Geo-Institute and Engineering Management Group Social at Slumbrew

Friday, October 12, 2018

Somerville Brewing Company (Slumbrew)
15 Ward Street Somerville MA 02143
6:00 to 9:00 PM

Come join the Geo-Institute and the Engineering Management Group of BSCES to kick off 2018-2019 at our start of year social hosted at Somerville Brewing Company (Slumbrew). Enjoy appetizers and refreshments in a reserved space with colleagues from the geotechnical and engineering management industries. Registration to this event includes appetizers and a drink token.

This event is open to anyone and everyone who is interested in learning about the Geo-Institute, the Engineering Management Group, how to become more involved in these technical groups, or who just wants to socialize with fellow professionals.

Registration Deadline: (Monday, October 8, 2018)

\$20 Members, \$25 Non-Members, \$15 Students and Public Sector

Information/Registration:

Register to attend this meeting and pay by credit card online at <https://bit.ly/2POGRzA>. 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. 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 received after (Registration Deadline October 8, 2018) and no-shows will be billed.



Supported by the staff of The Engineering Center Education Trust

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

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

FHWA - NHI - 130078:

Fracture Critical Inspection Techniques for Steel Bridges Tuesday, October 16, 2018 – Friday, October 19, 2018

Mott MacDonald, 101 Station Drive, Westwood, MA
Tuesday through Thursday, 8:00AM – 4:30PM
Friday, 8:00 AM – 2:00 PM

This training examines current practices, while addressing new and emerging technologies available to bridge inspectors. In addition, the course features classroom training; hands-on workshops for popular types of nondestructive evaluation (NDE) equipment; and a case study.

The first day of the training focuses on the concept of fracture critical members (FCMs), FCM identification, failure mechanics, fatigue in metal, and an overview of NDE methods. Day two includes demonstration sessions and hands-on applications of NDE techniques for dye penetrant, magnetic particle testing, Eddy current testing, and ultrasonic testing. Days three and four emphasize inspection procedures and reporting for common FCMs, including problematic details, I-girders, floor beams, trusses, box girders, pin and hanger assemblies, arch ties, eyebars, and cross girders/pier caps. The course will conclude with a case study detailing the preparation of an inspection plan of a fracture critical bridge.

Please note: Prior to taking this course, participants should have completed NHI course 130055, Safety Inspection of In-Service Bridges, or possess equivalent field experience relative to bridges. Participants also should have a thorough understanding of bridge mechanics and bridge safety inspection procedures as required by the National Bridge Inspection Standards. Please visit the NHI website at www.nhi.fhwa.dot.gov or contact them at 703/235-0500 for additional information on the prerequisite course requirements.

Information/Registration:

Registration for this event is now closed. Additional seats may become available in coming weeks. To be added to the wait list please email BSCESReg@engineers.org. Please note that cancellations or no shows received after September 14, 2018 will be billed.

2018-2019
Society Sponsors

AECOM

EarthSoft

GZA

Louis Berger



2018-2019
Program Sponsors

Alfred Benesch & Co.

CIANBRO

Dewberry

Eastern Topographics

GEI Consultants, Inc.

Green International
Affiliates, Inc.

Haley & Aldrich, Inc.

Hayward Baker, Inc.

HNTB

Horsley Witten Group

Howard Stein Hudson

Hoyle, Tanner &
Associates

Kleinfelder

McMillen Jacobs
Associates

Nitsch Engineering

Department of Civil
and Environmental

Engineering,
Northeastern University

Patrick Engineering Inc.

Perry Associates

PMA Consultants

Skanska

Stantec

Tighe & Bond

TranSystems

Tufts University

VHB

Wentworth Institute of
Technology B.S. and

M. Eng. in Civil
Engineering Programs

Weston & Sampson

WSP

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, 8:00 AM – 4:30 PM

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.

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, September 28, 2018. Please forward your prerequisite certificate in the form of a PDF document to bsces@engineers.org.

Registration Deadline: Friday, September 28, 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 September 28, 2018 will be billed.



2019-2020 BSCES Legislative Fellow Program Application

Through Wednesday, October 31, 2018, The BSCES Legislative Fellow Committee is accepting applications for the 2019-2020 Legislative Fellowship. The BSCES member who is selected as the next Legislative Fellow will serve from January 2019 until July 31, 2020, unless other arrangements are approved by the BSCES Legislative Fellows Committee. To apply for this position, you must review, complete and return this application along with the required supporting documents on or before the October 31st to:

Richard F. Keenan
Boston Society of Civil Engineers Section/ASCE
The Engineering Center
One Walnut Street
Boston, MA 02108-3616
617/305-4110,
rkeenan@engineers.org

Position Overview

Since 2001, a BSCES Legislative Fellow has served as a technical resource at the Massachusetts State House. The Legislative Fellow generally works with the staff of the Joint Committee on Transportation on current issues that can benefit from the input of an engineering professional. Most efforts focus on transportation or environmental initiatives but can vary. A Legislative Fellow provides legislators and their staffs with technical expertise as they develop programs to improve the Commonwealth's infrastructure and enhance the quality of life for all Massachusetts residents. This highly visible position is an excellent opportunity for a BSCES member to expand their horizons, get involved and make a difference in the Commonwealth of Massachusetts. Other benefits include office space at the State House, access to State House News Service, access to State House tours, attendance at legislative conferences, access to the legislative chamber, and the ability to meet and work with our legislators.

Position Requirements

For the formal session of the Massachusetts Legislature, which will run from January 2019 through July 2020, the BSCES Legislative Fellow is expected to spend two days a week working at the State House. Some commitments, such as intermittent night meetings, committee meetings on an alternate day, or a critical time schedule, are beyond those two days. Applicants should assume working approximately 20 hours per week in this role.

For the duration of their tenure, BSCES Legislative Fellows are expected to prepare a monthly Legislative Fellow Report for inclusion in the BSCES member newsletter, *BSCESNews*, and/or for posting as a news item on the BSCES website. This report should discuss pending and adopted infrastructure-related legislation and, to the extent permitted by confidentiality restrictions, describe your experiences in this role. Legislative Fellows are expected to make verbal presentations at BSCES meetings as requested. These written and verbal reports enable BSCES members to understand the value of the position and the interesting work Legislative Fellows are doing as a representative of BSCES and the civil engineering profession. After the completion of his/her term, the Legislative Fellow is expected to remain an active BSCES member, especially in Government Relations activities, for a three-year period.

Financial Support

The Legislative Fellow is responsible for all out-of-pocket expenses once they begin working at the State House. BSCES will provide a stipend of \$15,000 to the Legislative Fellow for 18-months of service. BSCES is unable to provide any benefits and encourages BSCES Legislative Fellows to make arrangements with their employers. It is common for a Legislative Fellow to perform their duties and work, provided they avoid even the appearance of a conflict. The Fellowship does not create an employer-employee relationship with either the Commonwealth of Massachusetts government or BSCES.

Application Requirements

To be eligible for consideration by the BSCES Legislative Fellow Committee, an applicant for the 2019-2020 BSCES Legislative Fellowship must:

- be a current BSCES member residing and registered to vote in Massachusetts;
- have a Bachelor of Science or MS in civil engineering or a related discipline;
- have significant experience in civil engineering or a related discipline;
- be a US citizen. Current Government employees are eligible;
- complete and return this application and the following support materials by Wednesday, October 31, 2018:
 - a 500 to 1,000-word statement;
 - a current resume or curriculum vitae;
 - a statement from his/her employer expressing support for the application; and
 - three *confidential* letters of reference.

Additionally, a successful applicant should be cognizant of many matters in nonscientific areas, demonstrate sensitivity in political, economic and social issues and have a strong interest in the solution of societal problems. Other characteristics considered during selection are self-starting ability, awareness of one's own biases, and clear oral and written expression.

Committee Review Process

The BSCES Legislative Fellow Committee is charged with selecting which applicant will become the Legislative Fellow. The Committee will evaluate candidates on factors such as advanced degrees, registration as a Professional Engineer, involvement in BSCES and ASCE, public policy experience and professional experience. Additionally, applicants and the Legislative Fellow Committee must also be sensitive to possible conflicts of interest. Gender, creed, race, ethnic background and political affiliation are expressly excluded as selection criteria for Legislative Fellows.

Additional Guidelines

Applicants for the 2019-2020 BSCES Legislative Fellowship should also be aware of the following guidelines:

1. In the role, the Legislative Fellow, has available all the resources of BSCES/ASCE.
2. Should technical guidance be required in areas beyond the Legislative Fellow's expertise, the Legislative Fellow will seek advice through the Legislative Fellow Committee Chair of BSCES.
3. The Fellow is subject to Legislative Standards of Conduct and must not engage in any partisan political activities during the term of appointment.
4. In the event of malfeasance on the part of the Legislative Fellow, as determined by the Legislative Fellows Committee, the Fellowship may be suspended immediately.



2019-2020 BSCES Legislative Fellow Program Application

**Completed applications must be received by October 31, 2018.
Applicants must be US Citizens and registered to vote in Massachusetts.**

Name: _____

Home Address: _____

Work Address: _____

Telephone: (Cell) _____ (Work) _____

Email: _____ Fax: _____

ACEC Membership Number: _____ Membership Grade: _____

BSCES Member Since: _____ ASCE Member Since: _____

PE License (List states and year granted in each state): _____

Education (Bachelor's Degree and Above):

Institution: _____

Dates Attended: _____ Degree: _____

Institution: _____

Dates Attended: _____ Degree: _____

Institution: _____

Dates Attended: _____ Degree: _____

Institution: _____

Dates Attended: _____ Degree: _____

Employer (List most recent affiliation and attach resume or CV):

Employer: _____

Dates Employed: _____ Title: _____

BSCES/ASCE Activities (Current and Past): _____

Other Professional Activities (*Including memberships in other professional organizations*): _____

Community Service and Government Activities: _____

Honors and Awards Received: _____

Statement of Accuracy and Permission to Release Information:

By signing this application, I hereby state that the above and accompanying information is correct to the best of my knowledge. I authorize BSCES to confirm and/or release any information included on this application

Signature: _____ Date: _____

Required Attachments and References:

1. A statement of 500 to 1,000 words describing why you are applying for the BSCES Legislative Fellowship; how your experience, abilities and knowledge qualify you for a Fellowship; your expectations of the program; and any other information you believe would be of interest to the selection committee.
2. A current resume or curriculum vitae.
3. A statement from your employer, if appropriate, indicating support for your application and agreeing to grant you a one-year leave of absence, if you are selected.
4. **References:** The selection committee must also receive **three confidential letters** of reference regarding your professional abilities. Each letter should evaluate the following: your professional abilities; written and verbal communication skills; leadership skills and ability to work with others. The letters should be sent directly to the attention of Richard Keenan at the address listed below. Please emphasize the importance of mailing the letters by October 31, 2018 to make your application complete.

Completed applications must be received by Wednesday, October 31, 2018

Direct questions, completed application, attachments and letters of reference can be sent to:

Richard F. Keenan
Boston Society of Civil Engineers Section/ASCE
The Engineering Center
One Walnut Street
Boston, MA 02108-3616
617/305-4110
rkeenan@engineers.org