

# BSCES NEWS

A MONTHLY PUBLICATION OF THE BOSTON SOCIETY OF CIVIL ENGINEERS SECTION/ASCE

VOL. 42 | NO. 6 | FEBRUARY 2018

EWRI Boston Chapter/Water Infrastructure

## UPCOMING EVENTS

SEI Boston Chapter Lectures March 13 & 20, 2018

2018 Thomas R. Camp Lecture March 20, 2018

BSCES Program Committee Sponsored NHI Training April 23–27, 2018

29th Annual Francis M. Keville Dinner May 1, 2018

BSCES Program Committee Sponsored NHI Training May 7–11, 2018

BSCES Program Committee Sponsored NHI Training May 22–24, 2018

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

Further Details Inside



## Mitigation Saves! (Even more than we previously thought)

by Peter A. Richardson, PE, CFM, LEED AP, ENV SP, Executive Vice President, Green International Affiliates, Inc.

There is an old saying that goes “an ounce of prevention is worth a pound of cure.” This philosophy is one that civil engineers, especially those involved in floodplain management, have been preaching for many years. In 2005, the National Institute of Building Sciences (NIBS) Multi-hazard Mitigation Council released a study, entitled Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities, which determined that for every \$1 of natural hazard mitigation funded by the Federal Emergency Management Agency (FEMA) between 1993 and 2003, the country avoided \$4 in future losses from natural disasters. Civil engineers and floodplain managers have quoted this figure many times when advocating for increased infrastructure investment.

Towards the end of last year, the NIBS released a 2017 Interim Report that shows that investing in mitigation has resulted in an even greater benefit than was previously determined in the 2005 study. The 2017 interim report found that for Federal Mitigation Grants, there is a \$6

benefit or savings for every \$1 spent. The 2017 study also found that where more stringent codes are used, there is a \$4 benefit or savings for every \$1 spent. The 2017 NIBS Interim report looked at number of different types of disasters, including floods, wind, earthquakes and wildfires, and all of them have a positive benefit cost ratio for mitigation investment. In particular though, flood mitigation had the highest benefit cost ratio (7:1). The full 2017 NIBS study [can be found here](#).

Since the 2005 NIBS report was released, the US has experienced a number of devastating disasters, including major hurricanes (i.e., Katrina, Sandy, Harvey, Irma, and Maria) and the extensive wildfires in California. Sadly, funding for mitigation projects has decreased even though the benefits of mitigation have been clearly known for some time. As a result of not being more proactive, we are now looking at some of the highest collective losses from natural disasters in our nation's history.

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## 2017–18 Society Sponsors:



## President's Report

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



On February 13, Massachusetts Governor Charlie Baker visited The Engineering Center and met with leaders of the engineering profession. The meeting was very informative and it included the opportunity to have a one-on-one discussion with the Governor. This meeting took place one day after President Trump unveiled his plan for fixing the infrastructure of the US. ASCE input facilitates more understanding of the strengths and weaknesses of our national infrastructure.

I implore you to be active in the political process on local, state, and national levels. Your opinion, professional expertise, and vote are valuable and important. It is our collective voices and votes that make all difference. Regardless of how complex the appearance of the political arena is, we must remember and act knowing that all politics start at the local level.

We may think we are busy with our daily work, aspirations to improve our technical skills, and personal lives. Our volunteer work with BSCES adds to this work/life balance. Do we still have

the time for more? Do we really have the time to be involved in politics?

Notwithstanding the limited time we have, we engineers are technical and professional persons by nature and when it comes to infrastructure most of us are on the opposite side of the political spectrum. We deal mostly with facts, numbers, reliable data, and probabilities and least with hypothesis, uninformed public opinions, and unsubstantiated trends. Our expertise adds tremendous value to the political

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"Own the workflow, make better decisions."

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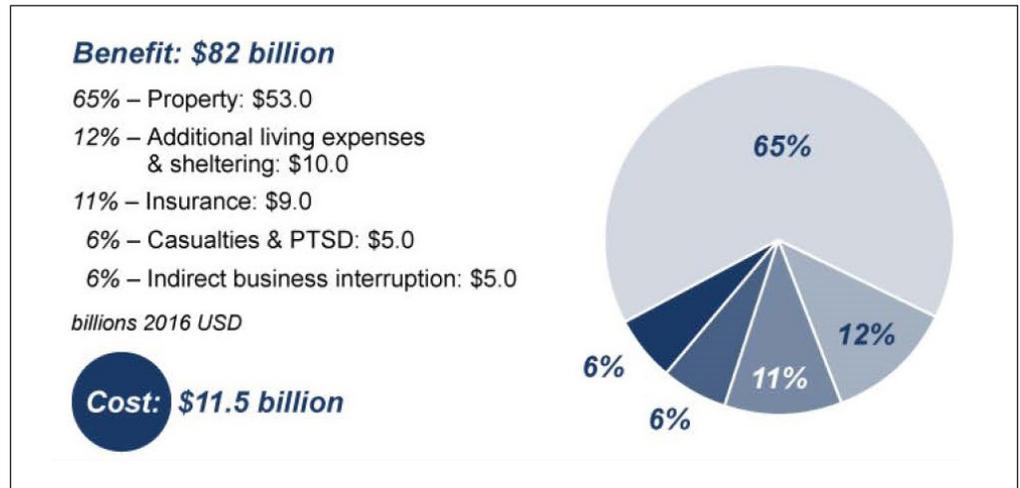


Boston Society of Civil Engineers



## Mitigation Saves!

*continued from page 1*



Contribution to benefit from federally funded riverine flood grants (Source: NIBS, *Natural Hazard Mitigation Saves: 2017 Interim Report*)

While Massachusetts evaluates its vulnerability to climate change through the Governor’s Executive Order No. 569—Establishing an Integrated Climate Change Strategy for the Commonwealth, increased investment in flood mitigation would seem to be an obvious cost-effective strategy, especially when considering the new B/C ratio of 7:1 from the NIBS 2017 study. We know that Risk = Probability × Consequences and as the Commonwealth considers its vulnerability (i.e., Risk), new climate change data from the Northeast Climate Science Center at the University of Massachusetts indicates an increase in the probability of more extreme weather events that will cause more flooding. When taking into consideration the continued development that is occurring in flood-prone areas (i.e., increased consequences), we are certainly increasing our

risk if we do not offset these two factors with more proactive mitigation efforts.

Imagine how forward thinking and smart it would be for the Commonwealth to invest in mitigation before the next extreme weather event happens. For example, spending the money now to build a flood barrier in Boston Harbor and/or perform upgrades to the Charles River and Amelia Earhart Dams before the next “Sandy” hits could save us billions of dollars in flood disaster relief.

There is another old saying that comes to mind when considering the critical decisions that need to be made in the Commonwealth now if we are to be truly resilient and sustainable in the future and it goes, “You can pay me now, or you can pay me later.”

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## Bracing for the Storm

by John C. Cavanaro, PE, Managing Principal, Cavanaro Consulting, Inc.

The future is here. For those who still question whether rising tides are real, perhaps last month's record setting event that flooded the streets of Boston left little doubt. The debate will continue to ebb and flow between advocates and adversaries that argue the merit of climate change, but in the meantime, we need to face the fact that rising tides are here to stay and something needs to change.

The *Boston Globe* recently reported that planners and developers are now taking into account the ever-present fact that the time is now to design for elevated ocean waters. Developers are looking for ways to mitigate current and future flooding by elevating land and designing depressions to manage more frequent tidal events and prevent future damage.

The task is a bit more delicate for the multitude of existing infrastructure that currently sits below Flood Elevations, but the time to begin modifications is now. The *Globe* reports, "As older buildings in flood zones are renovated, the city is encouraging their owners to move mechanical systems to upper stories. Occasionally, it's possible to raise ground floors a few feet. But, mainly, the focus is on preventing flooding in the first place, by raising the ground at low-lying spots – places a storm surge could overtop, swamping an entire neighborhood."

Local waterfront communities along both shores of the city, north and south, face the same challenge of planning for the future and mitigating the present. In Cohasset, a centuries old cemetery located on the banks of its Little Harbor, has experienced increasing tidal surges in recent years, which has prompted them to commission a topographic land survey of the property with plans to seek approval to elevate the land with the hopes of keeping their burial sites above the increasing tidal surges. Ed Wadsworth, a longtime resident of the

community and member of the cemetery board, observed during the January 4, 2018 storm event, "The grave stones close to the harbor were completely submerged, covered by water that stretched 100 to 200 ft. back from the coast line. It's worse than I've ever seen."

Further down the coast in Scituate, MA, where Shelby Scott made her bones reporting from a multitude of storm events since the Blizzard of '78, the town continues to implement flood mitigation measures to live with the present and plan for the future sea level rise. Recently, the town completed a study entitled "Elevating Roadway Improvements and Dune/Beach Nourishment along North Humarock for Improved Coastal Resiliency." The purpose of the study is to develop a conceptual plan for elevating a portion of roadway that continues to experience flooding along Humarock Beach and optimizing a dune/beach nourishment design to provide storm damage protection for repetitively damaged public and private infrastructure.

"Coastal Resilience" is a term that will continue to ring in the ears of policy makers that face the challenge of implementing effective regulations to protect our natural and man-made resources. However, the challenge itself is multi-faceted, as was evident with an answer to the following question posed in the Humarock Coastal Resiliency Study, "What are the challenges in getting the project built?" The answer, "... funding, public buy-in, and ...public access easements are challenges that are anticipated in moving the project forward."

Additionally, the *Globe* reported, "Climate Change already poses one of the most significant threats to the nation's infrastructure, according to dozens of scientific and engineering studies, including several prepared by the federal government. A 2017 report by the Environmental Protection Agency concluded



*Cohasset's Central Cemetery sits under water during more frequent high tide events.*



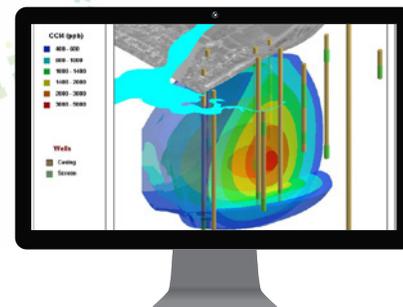
*A Future Home Site in Hull, MA awaits framing for a new home that will be elevated behind an even taller sea wall.*

that, "through the end of the century, up to \$280 billion will be needed to adapt the nation's roads and railways to the effects of a warming climate."

Laura Marett, a landscape architect at Sasaki was quoted in the *Globe* report saying that staving off the sea requires "a combination of things. Not a singular engineering solution, but a way of figuring out how (we) can live with water. It'll be our generation's legacy..."

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Charts • Graphs • Maps

## President's Report

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discourse and it is our civic responsibility to share our knowledge.

Conversely, we recognize that politics impact us, personally, financially, socially, and professionally. Every day, we use our expertise, innovatively applying state-of-the-art practices and technologies to maintain a depleted infrastructure operating with limited funding. Also, we recognize the limitations of continued patching and repairing of our depleted infrastructure and its lack of resiliency. Do we have to wait for natural disasters and the environment to be the wakeup call for the public and the politicians?

BSCES/ASCE advocates meaningful capital investment in infrastructure and promotes the adoption of sustainable practices. Note that ASCE mission includes; “ASCE is the voice of the civil engineering profession in federal and state policymaking. The Society’s federal priority issues include infrastructure improvement and investment, drinking water and wastewater, water resources infrastructure, transportation and related infrastructure, natural hazards mitigation and infrastructure security, sustainable development and sustainable energy use, qualifications-based selection (QBS) for engineering services and STEM education. State priority issues include continuing education, licensing, STEM education, QBS engineering services, sustainability, and transportation infrastructure and related financing.”

As a professional organization, BSCES, in line with ASCE, does not endorse or support any political candidate. However, BSCES strongly encourage our members to be involved in the political process. Our strategic plan for 2015–2019 includes:

### 3. Encourage the active participation of BSCES members in the political process.

#### a. Actions to Achieve Objective:

- i. Promote participation at the ASCE Fly-In and at Engineers and Land Surveyors Day (E&LSD).

- ii. Promote BSCES member activity in the political decision-making process and participation on commissions, advisory councils, and study committees.

- iii. Encourage BSCES members to write editorial letters, serve on local boards and committees or run for political office.

- iv. Encourage that BSCES members have seats on public agency advisory committees, especially committees that are developing new design regulations or requirements.

And

### 4. Advocate for improved comprehensive planning and sustainability for infrastructure. Sustainable development should be seen as an integral component of civil engineering projects in the constructed environment.

BSCES supports a Legislative Fellow at the Massachusetts House of Representatives and State Senate. The Massachusetts Legislature proposes and considers legislation that leads to significant public infrastructure investments. Since 2001, BSCES Legislative Fellows have provided the 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.

I invite you to join the leadership of BSCES. Our Government Affairs & Professional Practice Committee’s mission is to serve as both a catalyst and facilitator in promoting civil engineering professional concerns related to local or national government affairs. By joining the Government Affairs & Professional Practice Committee you become better informed about many issues including the various infrastructure-funding programs that could be more effectively expedited to local government.

Please be more vocal and active in your community and interact personally with your community and your local and state politicians.

Your technical knowledge places you in a unique position to understand and educate the public on the implication of the lack of infrastructure funding and how best to utilize investments in infrastructure. It is our responsibility to convey this knowledge to the public and politicians. We can do it together. Our collective efforts can make a difference.

I noted in January issue of *BSCESNews* that the Awards Committee is soliciting nominations for the following awards; The Citizen Engineer Award; Lester Gaynor Award; Government Civil Engineer Award; Clemens Herschel Award; Ralph Horne Award; BSCES Journalism Award; BSCES Pre-College Educator Award; Technical Group Awards; BSCES Younger Member Award; BSCES 2018 Employer Recognition Awards. Please consider nominating your company or fellow engineer, co-worker, friend, or someone who you think deserves special recognition for these awards. The nominations deadline is Monday, March 15, 2018. Nomination forms are included as inserts at the end of this newsletter. For additional information, please contact me at [President@bsces.org](mailto:President@bsces.org).

The featured group for the newsletter is the ASCE Environmental & Water Resources Institute Boston Chapter. This group is chaired by Ron Burns from Arcadia Technology, Inc. Please be sure to read Ron’s report on the group’s activities, which can be found on page 6.

Donations and sponsorship are lifelines for our organization. Our programs and activities remain viable with this important financial support. I’d like to once again thank our Society Sponsors and program sponsors for their commitment to our programming. In particular, I would like to thank EarthSoft, Inc. which is a Society Sponsor and the sponsor of this issue of *BSCESNews*. To simplify the donation process, we added a link in our website where you can donate any amount. Your individual donation is appreciated and I thank you for your support.

## Brustlin and Westerling Named 2017 BSCES Honorary Members

by Katya Gonzalez-Willette, Membership Associate, BSCES

At the 169th BSCES Annual Awards Dinner on December 12, 2017, the BSCES Board of Government was pleased to present the Section's highest award, BSCES Honorary Membership, to Robert S. Brustlin, PE, LEED AP, ENV SP and David L. Westerling, PE, PhD, PLS. Brief biographies of these two exceptional individuals who have made significant contributions to the civil engineering profession as well as the public good are presented below.

### Robert S. Brustlin, PE, LEED AP, ENV SP Founder & Chairman of the Board, VHB

Bob Brustlin was awarded BSCES Honorary Membership because of his distinguished career as a civil engineer and visionary industry leader.

A founder of VHB, Bob joined the firm in 1979. His site/civil engineering expertise rounded out his co-founders strengths in traffic and transportation. This combination of skills set the stage for VHB to become the go-to firm for moving both private and public sector clients' most complex projects forward. Over the years, VHB has continued to build that reputation, bringing together collective knowledge and services to help clients solve a wide range of transportation, land development, environmental, and planning challenges, and to help shape our communities in a meaningful way.

Bob served VHB as president and CEO for 15 years. He transitioned the reins to new leadership in 2015, while remaining chairman of the board of directors and active in companywide initiatives. Under Bob's tenure, VHB's focus on strengthening core services within its east coast footprint led to dramatic growth to more than 1,100 employees across 12 states and \$180M in revenues. In addition, and most important to Bob, has been fostering the firm's generational company philosophy which focuses on leaving the company in a better condition than it was received; this philosophy balances firm growth with its people – their careers, volunteerism, and giving back to communities. Bob currently leads the firm's quality program and is deeply involved in advancing the Center for Education.

Bob has a keen ability to keep the big picture of economic growth of the Commonwealth in mind as he lends his voice to important policy discussions. He has truly led by example, serving as a volunteer in leadership roles that promote stewardship of the industry, the local economy, and notable charities. Bob brought the LIFT2 program to VHB; has been a staunch



Robert S. Brustlin



David L. Westerling

supporter of LEED and Envision (both of which he is accredited in), advancing sustainable growth in the A/E/C industry. Bob serves on the boards of MassEcon and the Institute for Sustainable Infrastructure (ISI). Bob has served on the board of the Boston Harbor Island Alliance as well as Perkins School for the Blind, VHB's neighbor where employees regularly donate time and talents.

### David L. Westerling, PE, PhD, PLS, Emeritus Professor, Department of Civil and Mechanical Engineering, Merrimack College

Dave Westerling was awarded BSCES Honorary Membership for his distinguished career as a civil engineer, educator and member of BSCES and ASCE.

Since 1985, Dave has had a notable academic career at Merrimack College where he taught courses in Soil Mechanics, Fluid Mechanics, Geology and Groundwater Flow, Environmental Engineering, Site Design and Sustainable Infrastructure. He served in the Massachusetts Office of the Inspector General as chief engineer from 1992 to 1999. From 2008 to 2010, he worked for the City of New Orleans Office of the Inspector General as supervisory forensic engineer and served as interim inspector general during a transition. He has worked as a construction field engineer in the private sector, was an engineering specialist for the US Soil Conservation Service, was state engineer with the USDA Farmers Home

Administration in Massachusetts, Connecticut, and Rhode Island, and was a staff advisor/hydraulic engineer for the US Fish and Wildlife Service, working from Maine to Virginia.

Dave is a Fellow and Life Member of the American Society of Civil Engineers, served two terms as ASCE Region 1 Governor, and served as Congressional Fellow for the American Society for the Advancement of Science. Dave is a Life Member and past president of BSCES and has served in various capacities, including two eighteen-month terms as BSCES Legislative Fellow, chair of the Water Resources Committee and member of the Past Presidents Committee, where he played a prominent role in organizing two BSCES-sponsored Infrastructure Awareness Days. He was the BSCES representative to the Massachusetts Infrastructure Investment Coalition steering committee and introduced and moderated a series of public forums on infrastructure in 2011.

A sampling of publications Dave has written and/or co-authored includes: "New Orleans Sustainable Infrastructure after Katrina: A Case Study of Charity Hospital," "A Legacy of Neglect, the Longfellow Bridge and the Cost of Deferred Maintenance," and "Trends in Public Infrastructure Funding, An Engineer's View from Capitol Hill." Dave has earned four civil engineering degrees: an associate's from Wentworth Institute, a BS from the University of Massachusetts, and his MS and PhD from Worcester Polytechnic Institute.

## Featured Group

### ASCE EWRI Boston Chapter Update

by Ronald Burns, PE, Principal Engineer, ARCADIA Technology, Inc., Chair, Environmental & Water Resources Boston Chapter

The Boston Chapter of the ASCE Environmental & Water Resource Institute (EWRI) continues to work hard to help fulfill the mission of the EWRI to “provide for the technical, educational, and professional needs of its members, and to serve the public in the use, conservation, and protection of natural resources and in the enhancement of human well-being.” Annually the chapter organizes and sponsors events that include a series of lectures and dinner meetings on current subjects of interest to our members. Visit the chapter’s [landing page](#) on the BSCES website for more information. We also manage the Jonathan B. Golden Scholarship given biennially to an environmental engineering graduate student. In addition to these activities EWRI Boston Chapter also works on sponsoring workshops, tours and networking/social activities.

#### For the 2017–2018 season, EWRI Boston Chapter has hosted one event to date

**October 26, 2017:** EWRI Boston Chapter and Boston Society of Architects Infrastructure Committee co-sponsored a panel presentation entitled: *Waste Not- Design Excellence and Resilience in Wastewater Treatment* by G. Clawson from Ennead Architects and S. Estes-Smargassi from MWRA. They presented on New York City’s Newton Wastewater Treatment Plant and facilities within the MWRA system. The talk was very well received.

This event highlights one of the Boston Chapter’s goals to collaborate more with other like-minded organizations. These collaborations have been great in a number of ways including sharing the load of organizing and sponsoring the events, expanding our ideas on subjects for the events, and the chance to network and learn from other professionals in different disciplines.

#### Upcoming events we are planning include

**March 20, 2018:** The biennial Thomas R. Camp Fund Lecture on environmental engineering. This year’s speaker will be Dr. Lawrence Susskind from Massachusetts Institute of Technology, an expert in consensus building and negotiations who will speak about consensus building for climate change and corporate social responsibility.

**April 10, 2018:** The annual John R. Freeman Fund Lecture on water resources. This year’s speaker will be Professor Daniele Lantagne from

Tufts University, who will speak on water sanitation and hygiene in emergency settings and natural disasters.

See the inserts included at the end of this newsletter for more information.

*The EWRI Boston Chapter is always looking for members to participate and help us deliver the best events and activities for our members. We meet monthly either by conference call or in person. Please contact me at [rburns@arcadia-tec.com](mailto:rburns@arcadia-tec.com) for the date of our next meeting and how to become involved.*

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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 April 2018 issue of the newsletter for example, will highlight the BSCES Government Affairs & Professional Practice Committee and feature one or more articles on the theme of State of Infrastructure.

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](mailto:rkeenan@engineers.org) or at 617/305-4110.

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

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



February 7 was supposed to be the last day for reports to be made from the joint committees on bills filed in the first annual session of the 190th General Court (except for health care financing). However, the

Legislature extended to March 10 the reporting date for H. 2777, the bill that would authorize state delegation of the NPDES permit program. Furthermore, I was told that the Joint Committee on Environment, Natural Resources and Agriculture reported out the related bill, H. 2139, which would require a study of the state’s water pollution programs, including NPDES. Some see this as an alternative to H. 2777.

A study of Springfield-to-Boston rail service appears to be revived. MassDOT included the study in its draft *Massachusetts State Rail Plan*, which it released in early January. Amendments to the Senate’s bond authorization bill also include this study, as described below. The Legislature had considered this before, in 2016 when Governor Baker vetoed it, and in 2017 when it reportedly died in committee.

**Bond Bill.** The Senate Ways and Means Committee reported out an amended \$3.5 billion bond authorization bill (S. 2279), which legislators amended further with dozens of specific projects. The bill covers repairs and improvements to state and local capital facilities. It includes planning, design, and construction of facilities, a grant program for municipalities, and energy and climate resiliency for state facilities. Facilities include state and local government infrastructure, offices, schools, hospitals, universities, rinks, and public safety centers. One amendment would authorize \$2 million to study high-speed rail service between Springfield and Boston. Another would authorize \$10 million to complete the draft

Environmental Impact Report (EIR) for the North-South Rail Link tunnel.

**Transportation.** In the Legislature, the Joint Committee on Transportation held two hearings on January 24. These included bills pertaining to a timeline for implementing the completed plan for interchange improvements along Route 128 (H. 1874), using different colors to indicate the year that bridges are painted (H. 1855), construction inspection by public employees on surface transportation projects (H. 2728), tolls on the state highway system (electronic or otherwise) (H. 3641/S. 1987), three bills pertaining to privacy of data from automatic license plate readers (ALPRs) (H. 3439/S. 1909/S. 1936), funding alternatives to the fuel tax (S. 1940), state funding and the design of roads in accordance with local speed limits (S. 1977), a requirement for a MassDOT permit for buildings constructed on land purchased from railroads (H. 3442), and creation of a Transportation Technology Advisory Commission (H. 2721/S. 1937).

On January 21, Governor Baker issued Executive Order 579 establishing the Commission on the Future of Transportation in the Commonwealth. The Commission is to address anticipated “disruptive changes in transportation,” due to technology, climate, land use, and demographics.

**Zoning and Housing.** Early last year the Legislature introduced two bills on zoning reform (H. 2420/S. 81). Then in December the Baker administration announced its Housing Choice Initiative and filed a “housing choices” bill in the Legislature. The three bills contain similar incentives for housing production, while the two zoning bills are much broader. The Legislature held hearings on the zoning bills last year and a hearing on the Governor’s housing bill last month. The reporting date for the two zoning bills has now been extended to March 7, while the fate of the Governor’s housing bill seems unclear.

The Housing Choice Initiative will promote housing production through incentives, rewards,

and technical assistance. It has a goal of 135,000 new housing units by 2025. Participating communities will be eligible for new Housing Choice Capital Grants, and will have priority access to programs such as MassWorks, Complete Streets, MassDOT capital projects, and LAND and PARC grants. Applications for the Housing Choice Designation are due by April 30, 2018. [Click here](#) for further information.

The Governor’s housing bill would allow cities and towns to approve certain changes to their zoning laws by a simple majority vote, rather than the 2/3 majority required now. The zoning changes that the bill would allow by majority vote pertain to lot dimensions, smart growth, starter-homes, multi-family housing, mixed-use development, “in-law” apartments, cluster development, density, and parking.

The two zoning bills are similar. Like the Governor’s housing bill, they would provide incentives for housing production. They would also address infrastructure needs and development impact fees; discrimination and inclusionary zoning, site plan review; form-based codes; lower thresholds for zoning and permitting; streamlined requirements for master plans, abuse of “vesting” rules when rezoning is proposed, expanded training for local board members, and additional funding for local planning and rezoning.

**State Rock Song.** And finally, on January 24, the committee on State Administration and Regulatory Oversight held a hearing on a bill that would make “Roadrunner” the official rock song of the Commonwealth (H. 1683). 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](mailto:bclemence@verizon.net).

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## Recent News and Updates

### Renew Your BSCES Membership Today!

As an ASCE member you received a notice to renew your society membership. When renewing your ASCE membership, please don't forget to also renew your BSCES membership to continue to receive the numerous member benefits that BSCES has to offer and be among the leaders of your profession who make a difference. Thank you for your contribution.

### BSCES Welcomes its New Members

The BSCES Board of Government is pleased to welcome the following new members who joined BSCES in December 2017:

#### Members

Craig Curtin Jr., EIT, GHD Inc.  
Daniel Dobbels, McMillen Jacobs  
Scott Macdonald, CDM Smith

#### Students

Shubham Amritkar, Northeastern University  
Trevor Ciempa, Merrimack College  
Ryan Coulson, University of Rhode Island  
Yaroslav Mayboroda, University of Massachusetts Amherst  
Kevin McGarth, University of Massachusetts Lowell  
Matthew McWeeney, University of New Hampshire  
John Nagle, University Of Massachusetts Boston  
Gustavo Netto, University of Massachusetts Dartmouth  
Allison Paiva, Roger Williams University  
Carina Thompson, University of Massachusetts Amherst

### 2018 Section Awards—Call for Nominations

Each year, BSCES presents Section Awards to members and other individuals who have made significant contributions to the profession and their communities. Section Award recipients are chosen by members of the BSCES Board of Government from among a group of deserving candidates who are nominated by their peers in recognition of their service. There are a variety of awards including those recognizing individuals for their technical expertise, community involvement and government service. Please review the list of these awards below and nominate a colleague or friend who deserves special recognition by downloading, completing and submitting a [2018 Section Award Nomination Form](#) by the March 15, 2018 submission deadline.

• **Citizen Engineer Award:** This award is presented to a BSCES member or registered professional engineer for outstanding public involvement in local or national legislation, education (at any level), non-profit volunteer organizations,

community activities, or similar activities improving the image of ASCE, BSCES and the civil engineering profession.

- **Lester Gaynor Award:** This award is presented to a BSCES member or registered professional engineer for part-time elected or appointed service as a city or town official, whose reimbursement for this service has not been more than an honorarium.
- **Government Civil Engineer Award:** This award is presented to a BSCES member who is serving as a paid public sector engineer at a federal, state, or municipal agency, department, or authority in Massachusetts.
- **Clemens Herschel Award:** This award recognizes those individuals who have published papers that have been useful, commendable and worthy of grateful acknowledgment.
- **Ralph Horne Award:** This award is presented to a BSCES member or registered professional engineer for unpaid public service in a municipal, state or federal-elected or appointed post for philanthropic activities in the public interest.
- **Journalism Award:** This award is to be presented to a member of the media who reports on engineering topics, particularly civil engineering, in a manner that benefits the profession.
- **Pre-college Educator Award:** This award is to be presented to a member of the K-12 educational community who integrates engineering topics, particularly civil engineering, in a manner that benefits the profession and may promote students to pursue an engineering career.
- **Technical Group Award:** This award is given for papers which have been presented at a technical group or institute chapter meeting or for papers that were submitted to a technical group or institute chapter for review and recommended for publication.
- **Younger Member Award:** This award is intended to recognize a member, 35 years of age or younger on February 1, 2018, who has made an outstanding contribution to BSCES.

### Ernest A. Herzog Award Submission Deadline is March 15, 2018

The Transportation & Development Institute Boston Chapter will be accepting papers for consideration for the 2018 Ernest A. Herzog Award through March 15, 2018. Submitted papers should present an infrastructure project, innovation or idea in which the author was actively involved in as an owner, advocate, engineer, or end-user. The paper must address specific benefits to current professional practices, lifestyle, and/or sustainability through the

application of existing or innovative technologies or methods. Areas of application may include design, construction, operation, maintenance, management or financing of infrastructure components or systems. For more details about this award, please see the insert at the end of this month's newsletter.

### Bertram Berger Young Engineer Award Submission Deadline is March 15, 2018

The Transportation & Development Institute Boston Chapter is accepting nominations for the 2018 Bertram Berger Young Engineer Award until 5:00 PM on Wednesday, March 15, 2018. This award serves to recognize an outstanding BSCES younger member for his or her professional achievements and service to the community. For more information, please see the insert at the end of this newsletter.

### ASCE Announces 2019 President-Elect Official Nominees

The official nominees for 2019 ASCE president-elect, as selected by the Society's Board of Direction Nominating Committee, are Louis C. Aurigemma, PE, F.ASCE, and Kancheepuram (Guna) N. Gunalan, PhD, PE, D.GE, F.ASCE. The Society's election will be conducted May 1 through June 1 via online balloting. Members at the grade of Associate and above in good standing as of April 1 will be eligible to vote. For more information on the nominees, [click here](#).

### Hillary Lacirignola Named Vice President of Weston & Sampson

Weston & Sampson recently announced the promotion of BSCES member Hillary Lacirignola, PE, to the position of vice president. Hillary has over 20 years of experience in the planning, design, construction, and evaluation of wastewater, stormwater, infrastructure management, and water resource engineering projects. She has a strong knowledge of federal, state, and local regulatory agency policies, procedures, and permitting requirements, and has been responsible for managing several projects. Hillary is also involved in corporate risk management for the firm.

### Courtney Simard Named One of ASCE's 2018 New Faces of Civil Engineering—College

Each year, ASCE recognizes 10 remarkable college students—young engineers in training whose early achievements mark them for greatness as professionals and point toward an optimistic future for civil engineering. BSCES member Courtney Simard was named one of the 10 New Faces of Civil Engineering—College. Courtney is a civil and environmental engineering major at the University of Massachusetts Lowell.

## Upcoming Events

For more information and to register for events, please visit [www.bsces.org](http://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.

### SEI Boston Chapter Lectures

**Tuesdays, March 13 & 20, 2018**

Transportation Building, 10 Park Plaza, Boston

8:00 AM—4:30 PM

#### Steel Bridge Coatings Lectures

**Day 1: Tuesday, March 13, 2018**

*Kenneth A. Trimmer, President, KTA-Tator, Inc.*

Session 1—Corrosion Control Using Protective Coatings

Session 2—Bridge Coating Maintenance Strategies

Session 3—Coating System Selection for Steel Bridges

**Day 2: Tuesday, March 20, 2018**

*William D. Corbett, Chief Operating Officer, KTA-Tator, Inc.*

*Michael Hewins, Coatings Engineer,*

*Massachusetts Department of Transportation*

Session 4—Surface Preparation Methods & Standards

Session 5—Quality Assurance & Quality Control

Session 6—Coating Specifications & MassDOT's

Approach to Protection of Steel Structures

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

### 2018 Thomas R. Camp Lecture

**Tuesday, March 20, 2018**

District Hall Boston, 75 Northern Ave, Boston

5:45 PM Social/Registration; 6:30 PM Dinner

7:00 PM Presentation

#### Environmental Dispute Resolution: The Importance of Consensus Building in Environmental Problem-Solving

*Dr. Lawrence Susskind, Ford Professor of Urban Development and Environmental Planning, MIT and Vice-Chair & Co-Founder, Program on Negotiation, Harvard Law School*

How should disagreements about the use of natural resources or the setting of environmental standards be resolved? If the political majority rules, ecosystems on which we rely could be inadvertently destroyed. If final decisions are up to the courts, there is a good chance that scientific or inter-generational considerations

will be ignored. No one is ready to turn such decisions over to a scientific or technical elite. Professor Lawrence Susskind will speak about his work as an environmental mediator and describe consensus building as an alternative approach to resolving environmental disputes.

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

### BSCES Program Committee Sponsored NHI Training

**Monday – Friday, April 23 – 27, 2018**

Hilton Garden Inn Worcester

35 Major Taylor Boulevard, Worcester

8:00 AM – 4:30 PM

#### FHWA-NHI-130056 Safety Inspection of In-Service Bridges for Professional Engineers

This five-day course, intended for Professional Engineers (PEs), is based on the "Bridge Inspector's Reference Manual" (BRIM) and provides training on the safety inspection of in-service highway bridges. This adaptation of the 10-day Safety Inspection of In-Service Bridges course (FHWA-NHI 130055) has been streamlined to better suit experienced PEs, while retaining strong emphasis on bridge inspection, documentation, and coding requirements. The course includes one virtual bridge inspection trip; new instruction on critical findings, their identification and response; curriculum on the new AASHTO Element level evaluation; and updated activities that maximize participant engagement throughout the course. Please note that to take this course, participants must show that they are certified as PEs and have passed one of the three prerequisite courses: FHWA-NHI-130054, *Engineering Concepts for Bridge Inspectors*; FHWA-NHI-130101, *Introduction to Safety Inspection of In-Service Bridges*; FHWA-NHI 130101a, *Prerequisite Assessment for Safety Inspection of In-Service Bridges*.

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

### 29th Annual Francis M. Keville Dinner

**Tuesday, May 1, 2018**

Courtyard Marriott Boston Downtown

275 Tremont St, Boston,

5:30 PM Reception; 6:30 PM Dinner

*Keynote Speaker: Joseph Aiello, Chair, Fiscal & Management Control Board, Massachusetts Bay Transportation Authority*

*Introduction: Mayor Joseph Sullivan, Mayor, Town of Braintree, Massachusetts and Board Member, MassDOT*

The Francis M. Keville Memorial Fund was established in 1989 from donations in recognition of Mr. Francis M. Keville's efforts and abilities to take his vision of large public transportation projects and make them a reality. The fund provides for this forum to discuss important aspects of transportation and construction related matters.

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

### BSCES Program Committee Sponsored NHI Training

**Monday – Friday, May 7 – 11, 2018**

Hilton Garden Inn Worcester, 35 Major Taylor Boulevard, Worcester, MA

8:00 AM – 4:30 PM

#### FHWA-NHI-130110 Tunnel Safety Inspection

This five-day course is highly interactive and builds upon participants' prior knowledge of tunnel and/or bridge inspection. The course covers the entire breadth of knowledge necessary to manage or execute a successful tunnel inspection based on the National Tunnel Inspection Standards (NTIS), Tunnel Operations, Maintenance, Inspection and Evaluation (TOMIE) Manual and Specifications for the

*continued on page 10*

### 2017–2018 BSCES Program Sponsors

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## Upcoming Events *(continued from page 9)*

National Tunnel Inventory (SNTI). During the course, the instructor will lead participants through a series of case studies and a virtual tunnel inspection. Please note that 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*.

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

### **BSCES Program Committee Sponsored NHI Training**

**Tuesday – Thursday, May 22 – 24, 2018**

Mott MacDonald  
101 Station Dr, Suite 130, Westwood

8:00 AM – 4:30 PM

### **FHWA-NHI-130053 Bridge Inspection Refresher Training**

The major goals of this course are to refresh the skills of practicing bridge inspectors in fundamental visual inspection techniques; review the background knowledge necessary to understand how bridges function; communicate issues of national significance relative to the nations' bridge infrastructures; re-establish proper condition and appraisal rating practices; and review the professional obligations of bridge inspectors. This course is based on the "Bridge Inspector's Reference Manual," 2002 (updated 2006), with reference to the AASHTO Manual as defined by the National Bridge Inspection Standards regulation.

*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

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 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.*

### **Register Today!**

**Thursday, March 22, 2018**

### **The Engineering Center 2018 Career Fair**

Wyndham Boston Beacon Hill, Boston, MA  
3:00 PM – 6:00 PM

The Engineering Center Education Trust (TECET) invites college students who are interested in a career in engineering or land surveying to attend The Engineering Center 2018 Career Fair. This event is expected to attract more than 20 employers with engineering and land surveying-related job openings, internships, and co-op opportunities. The Career Fair also attracts several institutions of higher education offering graduate programs of interest to students with engineering degrees.

*For more information and to register to attend this event, [click here](#).*

### **Mark Your Calendar!**

**Thursday, April 12, 2018**

### **2018 Betram Berger Seminar**

Marketing Massachusetts: Paving the Way to Economic Development

*Sponsored by the Transportation & Development Institute Boston Chapter*

Maggiano's Little Italy, Boston, MA

8:00 AM – 2:00 PM

The Bertram Berger Seminar is an annual event focusing on transportation issues as well as state and city-wide projects. This year's seminar will examine the steps the Commonwealth has taken to attract major developments to build here and how Massachusetts plans to continue this growth.

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

### **Save the Date!**

**Tuesday, April 10, 2018**

### **2018 John R. Freeman Lecture**

Water, Sanitation, Hygiene, and Engineering in International Humanitarian Response: Lessons Learned from Haiti and Worldwide

*Sponsored by the Environmental & Water Resources Institute Boston Chapter*

Massachusetts Institute of Technology, Cambridge, MA

6:00 PM Reception; 7:00 PM Lecture

### **Featuring: Daniele Lantagne**

Professor, Department of Civil and Environmental Engineering, Tufts University

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

## Classifieds

### **Milone & MacBroom, Inc.**

Milone & MacBroom, Inc. offers a full integration of specialty practices in water resources engineering, community planning, landscape architecture, water and wastewater engineering, civil/structural engineering, transportation engineering, geotechnical engineering and construction administration to bring projects from the planning level through construction.

We are seeking a Geotechnical Engineer to perform field inspections of geotechnical and foundation projects and assist with the preparation of technical reports, specifications, and plans for designing foundations, retaining walls, and other geotechnical aspects of construction. The qualified candidate should hold an MS in Civil Engineering with a

geotechnical specialty and have 0–2 years' experience in geotechnical engineering.

For more information on this opportunity, please visit [www.miloneandmacbroom.com/careers](http://www.miloneandmacbroom.com/careers).

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## Steel Bridge Coatings Lectures

Tuesdays, March 13 and March 20, 2018

Transportation Building, 10 Park Plaza, 2nd Floor Conference Rooms, Boston, MA  
8:00 AM Registration, 8:15 AM Start, 12:15-1:00 PM Lunch, 4:30 PM Adjourn

Day 1 – Tuesday, March 13, 2018

Sessions 1 – 3

Kenneth A. Trimber, President, KTA-Tator, Inc.

### Session 1 – Corrosion Control Using Protective Coatings



Corrosion is a process where metals (e.g., steel) give up energy and return to their natural state. There are significant costs and consequences associated with corrosion; the National Association of Corrosion Engineers estimates that the cost of corrosion approaches \$300 billion annually. While corrosion cannot be completely halted, it can be slowed. The most widely used method to prevent/slow the onset of corrosion today, particularly on carbon steel, is the application of high performance coating systems. Session One includes the definition of corrosion, explains the

corrosion process and the elements of a corrosion cell, describes various types of corrosion present on bridge structures, and highlights design configurations that are conducive to corrosion. The role of high-performance coatings in corrosion prevention is explained, including the various protective properties of coatings: barrier, inhibitive and galvanic. Session one is worth 1.5 PDH credits.

### Session 2 - Bridge Coating Maintenance Strategies



While properly installed coating systems can protect steel bridges for 25 years or more, they require interim maintenance to control corrosion and minimize surface preparation requirements. Cost-effective maintenance requires scheduling the repair of coatings before deterioration progresses to the point that the only option is total removal and replacement of the coating system. However, prior to selecting a maintenance strategy, the condition of the existing coating system must be carefully assessed. This session will emphasize the importance of steel bridge coating system maintenance and will explain the impact on

installation costs and life-cycle costs. The importance of assessing the condition of the existing coating system will also be described, as well as how the results of the coating condition assessment are used to determine whether maintenance painting is warranted, and which strategies are likely to provide adequate preservation of the structure. There are five maintenance painting strategies that may be selected for any given painted steel bridge. These include: do nothing, spot repair, spot repair and overcoat, removal and replacement in zones, and removal and replacement of the existing system for the entire structure. The advantages and limitations of each will be explored. Session two is worth 2.5 PDH credits.

### **Session 3 – Coating System Selection for Steel Bridges**



There are a variety of coatings and coating systems that can be used to protect steel bridges; selection is based on the prevailing service environment, the maintenance strategy, available funding and other factors. The advantages, limitations and curing mechanisms of common steel bridge coating systems will be described in Session Three, along with the function of the various coating layers, the importance of coating thickness and when selection of two coat systems may be justified over traditional three-coat systems. The impact of Volatile Organic Compound (VOC) regulations on coating system selection will also be explained. The use of duplex coatings systems (hot-dip galvanizing with liquid or powder coating finishes) and thermal spray coatings (and the associated industry guides/standards) will be discussed, as well as when and where the use of weathering steel may be justified.

Most steel bridges contain connections that are slip-critical. When the EOR elects to coat faying surfaces, the coatings (i.e., primers) are required to demonstrate resistance to slip once the bolts are tensioned. Session Three will include an explanation of how coatings are tested and classified according to the requirements of Appendix A of the RCSC Specification for Structural Joints Using High-Strength Bolts.

Because not all generic coatings systems are created equally, many transportation agencies will create an Approved Products List (APL) or Qualified Products List (QPL) based on laboratory testing of candidate coating systems and/or successful track records. Session Three will conclude with an overview of the National Transportation Product Evaluation Program (NTPEP) for Structural Steel Coatings, as well as how the Northeast Protective Coatings Committee (NEPCOAT), a consortium of ten northeastern states, including Massachusetts uses NTPEP-generated data to generate an APL. Session three is worth 2.5 PDH credits.

### **Day 2 – Tuesday, March 20, 2018**

#### **Sessions 4 – 6**

**William D. Corbett, Chief Operating Officer, KTA-Tator, Inc.**

**Michael Hewins, Coatings Engineer, Massachusetts Department of Transportation**

### **Session 4 – Surface Preparation Methods & Standards**



Preparation of steel surfaces for coating application is typically regarded as the most important step, as it effectively lays the foundation for the coating system. Session Four begins a discussion of pre-surface preparation concerns that may need to be addressed in coating specifications (e.g., edges, weld spatter, laminations, section loss, grease/oil, chemical contaminants, etc.). Various methods of surface preparation will be described, including advantages and limitations of each, and which are appropriate for shop work versus field preparation. Subsequently, factors associated with selection of surface preparation method(s) for inclusion in coating specifications (e.g., maintenance strategy, coating system requirements, access and worker/environmental concerns) will be discussed. Session Four will conclude with a discussion of the industry

standards for surface preparation published by organizations such as ASTM International, SSPC: The Society for Protective Coatings, and NACE International that can be used in the preparation of project specifications. Session four is worth 2.5 PDH credits.

### **Session 5 – Quality Assurance & Quality Control**



Verification of quality is a shared responsibility of the facility owner and contractor. The roles and responsibilities of quality assurance (QA) and quality control (QC) personnel and the associated reporting relationships will be explored in Session Five. The inspection requirements that may be invoked by project specifications related to pre-surface preparation, surface preparation and coating application for both existing and new steel bridges will be described. Session Five will conclude with a discussion of the inspection instruments, visual guides and test kits that are used to verify quality at each step of the surface preparation and coating application process. Session five is worth 2.5 PDH credits.

## Session 6, Part 1 – Coating Specifications



The first part will focus on the purpose and content of coating specifications, including common formats. The instructor will compare coating specification content for new steel bridge structures, (including the advantages and limitations of total shop painting), and coating specifications for maintenance painting of existing structures (including sequencing and impact of the maintenance strategy on specification content). Part one will conclude with a discussion of specification preparation, including common submittal requirements. Session six, part one is worth 1.5 PDH credits.

## Session 6, Part 2 – MassDOT's Approach to Protection of Steel Structures



The second part of Session Six will be led by Michael Hewins, Bridge Coatings Engineer, who will describe Mass Highway's approach to protecting steel bridge structures from corrosion using protective coatings. Mike will describe the maintenance strategies employed by the Agency; the coating systems used; surface preparation methods specified; contractor certification requirements; and management of quality assurance inspection. Mike will also share some of the challenges his Agency encounters related to corrosion control of steel bridges in Massachusetts. Session six, part two is worth 1 PDH credit.

## SPEAKERS

### **Kenneth A. Trimber, President, KTA-Tator, Inc.**

Ken Trimber is the President of KTA-Tator, Inc. (KTA) in Pittsburgh, Pennsylvania, where he has been employed since his graduation from Indiana University of Pennsylvania in 1974. With nearly 45 years of experience in the industrial painting field, he oversees the technical delivery of KTA's products and services, acts as a senior coatings consultant and client liaison on multi-disciplinary and DB/P3 projects, and serves as a principal specification writer/reviewer. Ken is a NACE Level 3 Certified Coatings Inspector, an SSPC Certified Protective Coatings Specialist, and an SSPC C-3 Supervisor/Competent Person for the Deleading of Industrial Structures. He is a Past President of the SSPC, Chairman of the Commercial Coatings Committee, Chairman of the Committee on Surface Preparation, Chairman of the Visual Standards Committee, Chairman of the Task Group on Containment, and is a member of the Standards Review Committee. He is also Past Chairman of ASTM D1 on Paints and Related Coatings, Materials, and Applications. Mr. Trimber authored *The Industrial Lead Paint Removal Handbook* and co-authored Volume 2 of the *Handbook: Project Design*. He has been formally recognized by industry associations/publications on numerous occasions including being selected by the *Journal of Protective Coatings and Linings (JPCL)* in 2004, 2009, and 2012 as one of the Top Leaders and Thinkers in the Coatings & Linings Industry. He was named the SSPC Honorary Life Member in 2015.

### **William D. Corbett, Chief Operations Officer, KTA-Tator, Inc.**

Bill Corbett is the Chief Operations Officer for KTA-Tator Inc. (KTA) in Pittsburgh, Pennsylvania, where he has been employed for 39 years. He holds an AD in Business Administration from Robert Morris University. He is an SSPC Certified Protective Coating Specialist, an SSPC Level 3 Certified Protective Coatings Inspector, an SSPC Level 2 Certified Bridge Coatings Inspector, as well as a NACE Level 3 Certified Coatings Inspector. He is an approved training course instructor for both SSPC and KTA. Bill authored the first, second and third editions of the KTA publication, *Using Coatings Inspection Instruments*. He received SSPC's Coating Education Award in 2006, the SSPC John D. Keane Award of Merit in 2011, an ASTM Committee D01 Award of Appreciation in 2016, and the SSPC President's Lecture Series Award in 2017. He is the Chair of the SSPC Dry Film Thickness Committee and Chair of the SSPC Education and Certification Committee. He is also a member of ASTM Subcommittees D01.23 and D01.46.

### **Michael Hewins, Coatings Engineer, Massachusetts Department of Transportation**

Michael Hewins is the Coatings Engineer for MassDOT – Highway. Michael started with MassDOT in 1997 and is responsible for the administration and oversight of consultant contracts providing 3rd party coating inspection services for both the field and shop. He also provides technical assistance for various aspects of the maintenance coating of bridges and related issues. He is a NACE Level 3 Certified Coating inspector.

## Registration Deadline: Wednesday, March 7, 2018

Register to attend individual lectures or the full lecture series and pay by credit card online at <http://bit.ly/SEILectures2018>. 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. To register for multiple lectures, please complete the registration form below and mail, email or fax it to BSCES, The Engineering Center, One Walnut Street, Boston, MA 02108, [bscesreg@engineers.org](mailto:bscesreg@engineers.org) or 617/227-6783, respectively. Cancellations received after March 7, 2018 and no-shows will be billed.

**Handouts:** Registered attendees will be provided a website reference for downloading handouts/notes.

**Lunch and Refreshments:** Morning and afternoon refreshments will be provided. Lunch will be the attendee's responsibility.

**Registration Form** BSCES SEI Steel Bridge Coatings Lectures  
Tuesdays, March 13 and March 20, 2018  
Transportation Building, 10 Park Plaza, 2nd Floor Conference Rooms, Boston, MA  
8:00 AM Registration, 8:15 AM Start, 12:15-1 PM Lunch, 4:30 PM Adjourn

### Registrant Information

Name: \_\_\_\_\_  
Company (if applicable): \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

### Registration Fees

#### Full Series – Both Days

- \$200 BSCES Member
- \$250 Non-Member
- \$170 Public Employee Member
- \$200 Public Employee Non-Member
- \$70 Senior/Student

#### Day 1 or Day 2

- \$140 BSCES Member
- \$175 Non-Member
- \$120 Public Employee Member
- \$140 Public Employee Non-Member
- \$50 Senior/Student

Check Day Attending:  1  2

**Total Amount Enclosed** \$ \_\_\_\_\_

Make checks payable to "BSCES" and mail with completed form to: BSCES, The Engineering Center, One Walnut Street, Boston, MA 02108-3616

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

## 2018 Thomas R. Camp Lecture

# Environmental Dispute Resolution: The Importance of Consensus Building in Environmental Problem-Solving

**Dr. Lawrence Susskind**

*Ford Professor of Urban and Environmental Planning, MIT  
 Vice-Chair & Co-Founder, Program on Negotiation, Harvard Law School*

**Tuesday, March 20, 2018**

**District Hall Boston, 75 Northern Avenue, Boston, MA 02210  
 5:45 PM Social/Registration; 6:30 PM Dinner; 7:00 PM Presentation**

How should disagreements about the use of natural resources or the setting of environmental standards be resolved? We face an increasing array of such conflicts — how should scarce resources be allocated? How should health and safety standards be set? What policy objectives should be given priority? If the political majority rules, ecosystems on which we rely could be inadvertently destroyed. If final decisions are up to the courts, there is a good chance that scientific or inter-generational considerations will be ignored. No one is ready to turn such decisions over to a scientific or technical elite. So, what’s to be done? Professor Lawrence Susskind, Ford Professor of Urban and Environmental Planning at MIT and Vice-Chair and Co-Founder of the Program on Negotiation at Harvard Law School will speak about his work as an environmental mediator and describe consensus building as an alternative approach to resolving environmental disputes.

**Registration Deadline: Thursday, March 15, 2018**

**\$85 Members, \$105 Non-Members  
 \$70 Public Sector Members, \$85 Public Sector Non-Members  
 \$30 Senior Members (65+), \$30 Student Members**

### Information/Registration:

Register to attend this meeting and pay by credit card online at <http://bit.ly/2018CampLecture>. 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 March 15, 2018 and no-shows will be billed.



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**FHWA-NHI-130056**

## Safety Inspection of In-Service Bridges for Professional Engineers

**Monday, April 23, 2018 – Friday, April 27, 2018**

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

This five-day course, intended for Professional Engineers (PEs), is based on the "Bridge Inspector's Reference Manual" (BRIM) and provides training on the safety inspection of in-service highway bridges. This adaptation of the 10-day Safety Inspection of In-Service Bridges course (FHWA-NHI 130055) has been streamlined to better suit experienced PEs, while retaining strong emphasis on bridge inspection, documentation, and coding requirements. The course includes one virtual bridge inspection trip; new instruction on critical findings, their identification and response; curriculum on the new AASHTO Element level evaluation; and updated activities that maximize participant engagement throughout the course.

Please note that to take this course, participants must show that they are certified as PEs and have passed one of the three prerequisite courses: FHWA-NHI-130054, *Engineering Concepts for Bridge Inspectors*; FHWA-NHI-130101, *Introduction to Safety Inspection of In-Service Bridges*; FHWA-NHI 130101a, *Prerequisite Assessment for Safety Inspection of In-Service Bridges*. Please forward your prerequisite certificate in the form of a PDF document to [bsces@engineers.org](mailto:bsces@engineers.org) before Friday, March 23, 2018.

**Registration Deadline: Friday, March 23, 2018**

**Registration Fees: \$1,600 Members, \$1,750 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/InServicePE2018>. 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 March 23, 2018 will be billed.



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## 29th Annual Francis M. Keville Dinner

### Keynote Speaker:

**Joseph Aiello**

Chair, Fiscal & Management Control Board  
Massachusetts Bay Transportation Authority

### Introduction:

**Mayor Joseph Sullivan**

*Mayor, Town of Braintree, Massachusetts  
Board Member, MassDOT*

**Tuesday, May 1, 2018**

**Courtyard Marriott Boston Downtown  
275 Tremont Street, Boston, MA 02116  
5:30 PM Reception; 6:30 PM Dinner**

**Registration Deadline: Friday, April 20, 2018**

**\$85 Members, \$115 Non-Members  
\$75 Public Sector Members, \$85 Public Sector Non-Members  
\$70 Senior Members (65+), \$65 Students  
\$850 Table of 10**

### Information/Registration:

Register to attend this meeting and pay by credit card online at <http://bit.ly/KevilleDinner2018>. 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 April 20, 2018 and no-shows will be billed.



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# FHWA-NHI-130110 Tunnel Safety Inspection

**Monday, May 7, 2018 – Friday, May 11, 2018**

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

This five-day course is highly interactive and builds upon participants' prior knowledge of tunnel and/or bridge inspection. The course covers the entire breadth of knowledge necessary to manage or execute a successful tunnel inspection based on the National Tunnel Inspection Standards (NTIS), Tunnel Operations, Maintenance, Inspection and Evaluation (TOMIE) Manual and Specifications for the National Tunnel Inventory (SNTI). During the course, the instructor will lead participants through a series of case studies, concluding with a virtual tunnel inspection that takes place in a computer-simulated, 3D environment.

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-130055, *Safety Inspection of In-service Bridges*, 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, March 30, 2018. Please forward your prerequisite certificate in the form of a PDF document to [bscesreg@engineers.org](mailto:bscesreg@engineers.org). Please visit the NHI website at [www.nhi.fhwa.dot.gov](http://www.nhi.fhwa.dot.gov) or contact them at 703/235-0500 for additional information on the prerequisite course requirements.

### **Registration Deadline: Friday, March 30, 2018**

**Registration Fees: \$2,100 Members, \$2,500 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/NHITunnelSafety05072018>. 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 Friday, March 30, 2018 will be billed, including those that do so due to failure to take one of the prerequisite courses.



**This presentation provides 3.2 Continuing Education Units (CEU)**  
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## FHWA-NHI-130053

### Bridge Inspection Refresher Training

**Tuesday, May 22, 2018 – Thursday, May 24, 2018**

**Mott MacDonald, 101 Station Drive, Suite 130, Westwood, MA**  
**Tuesday through Thursday, 8:00AM – 4:30PM**

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The major goals of this course are to refresh the skills of practicing bridge inspectors in fundamental visual inspection techniques; review the background knowledge necessary to understand how bridges function; communicate issues of national significance relative to the nations' bridge infrastructures; re-establish proper condition and appraisal rating practices; and review the professional obligations of bridge inspectors. This course is based on the "Bridge Inspector's Reference Manual," 2002 (updated 2006), with reference to the AASHTO Manual as defined by the National Bridge Inspection Standards regulation.

Core course topics include inspector qualifications and duties, bridge mechanics, record keeping and documentation, fatigue and fracture in steel bridges, traffic safety features, safety, National Bridge Inventory (NBI) component ratings, superstructure type identification, inspection techniques and case studies for decks, superstructures, bearings, substructures, channels and culverts, and a mock bridge inspection classroom exercise. Optional topics include inspection of truss gusset plates, adjacent box beams, and post-tensioning tendons.

### Registration Deadline: Tuesday, April 10, 2018

**Registration Fees: \$1,400 Members, \$1,600 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/NHIBridgeInspectionRefresher2018>. 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 April 10, 2018 will be billed.

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## 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**

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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, May 25, 2018. Please forward your prerequisite certificate in the form of a PDF document to [bsces@engineers.org](mailto:bsces@engineers.org).

### 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.

2018 John R. Freeman Lecture

# Water, Sanitation, Hygiene and Engineering in International Humanitarian Response: Lessons from Haiti and Worldwide

Daniele Lantagne

Professor, Department of Civil and Environmental Engineering, Tufts University

Tuesday, April 10, 2018

6:00 PM Reception; 7:00 PM Lecture

Massachusetts Institute of Technology Tang Center (Building E51)  
70 Memorial Drive, Cambridge MA 02139

[View Map](#)

Worldwide, both the number of emergencies (including natural disasters, outbreaks, and conflict) and the number of people affected by emergencies are increasing, and the rate of increase is anticipated to accelerate with climate change and population densification. Depending on context, affected populations may have both material and health needs, including shelter, health care, mental health care, and/or protection. Water, sanitation, and hygiene (WASH) provision are often critical needs in humanitarian contexts. This talk will begin with a history of humanitarian response, followed by a discussion of the current humanitarian landscape (including types of emergencies, affected populations, and their health needs), the types of emergency WASH interventions, knowledge gaps in WASH response that engineers can help fill, and thoughts on the future of humanitarian response. The talk will be grounded with field experiences from Dr. Lantagne's 16 years' of work in humanitarian response in over 50 countries, focusing on Haiti.

Dr. Lantagne is an Associate Professor in Civil and Environmental Engineering at Tufts University, with undergraduate and master's degrees in civil and environmental engineering from MIT, a PhD from the London School of Hygiene and Tropical Medicine, and a post-doc from Harvard's Center for International Development. She has provided technical assistance or conducted research, in both development and emergency contexts, in more than 60 countries in Africa, Asia, and Central/South America, and is a technical advisor to Potters for Peace, FilterPure, and charity: water.



**This is a FREE event** funded by the BSCES John R. Freeman Fund as outreach to students and young professionals interested in careers in water resources engineering. All are welcome.

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**Save the Date and Watch for Future Announcements!**

## **2018 Betram Berger Seminar**

### **Marketing Massachusetts:**

### *Paving the Way to Economic Development*

**Thursday, April 12, 2018**

**Maggiano's Little Italy**

**4 Columbus Ave, Boston, MA 02116**

**8:00 AM Registration**

**8:30 AM Panel Discussion**

**11:30 AM Social**

**12:15 PM Luncheon, Bertram Berger Tribute, Keynote Address, and Awards**

### **About the Seminar**

The Bertram Berger Seminar is an annual event focusing on transportation issues as well as state and city-wide projects. This year's seminar, "Marketing Massachusetts: Paving the way to Economic Development" revolves around the steps the Commonwealth has taken to attract major developments to build here and how Massachusetts plans to continue this growth.

More information will follow as the event date approaches.

Each year, BSCES presents awards to deserving individuals in the Section or in the community who are nominated by their peers in recognition of their service. Here is your opportunity to nominate a co-worker, friend, or someone who you think deserves special recognition. To submit a nomination, complete this form and return it via email, fax, or mail to [bscses@engineers.org](mailto:bscses@engineers.org), 617/227-6783, or BSCES Awards Committee, Boston Society of Civil Engineers Section/ASCE, The Engineering Center, One Walnut Street, Boston, MA 02108-3616, respectively.

The Nominations Deadline is **Monday, March 15, 2018**. The Awards Committee will review all nominations and present a list of candidates for selection by the Board of Government. Awards will be presented at the 170th BSCES Annual Awards Dinner.

I would like to nominate \_\_\_\_\_ For the:

- \_\_\_\_\_ **CITIZEN ENGINEER AWARD:** This award is presented to a BSCES member or registered professional engineer for outstanding public involvement in local or national legislation, education (at any level), non-profit volunteer organizations, community activities, or similar activities improving the image of ASCE, BSCES and the civil engineering profession.
- \_\_\_\_\_ **LESTER GAYNOR AWARD:** This award is presented to a BSCES member or registered professional engineer for part-time elected or appointed service as a city or town official, whose reimbursement for this service has not been more than an honorarium.
- \_\_\_\_\_ **GOVERNMENT CIVIL ENGINEER AWARD:** This award is presented to a BSCES member who is serving as a paid public sector engineer at a federal, state, or municipal agency, department, or authority in Massachusetts.
- \_\_\_\_\_ **CLEMENS HERSCHEL AWARD:** This award recognizes those individuals who have published papers, not necessarily published in the BSCES Journal, that have been useful, commendable, and worthy of grateful acknowledgment. If nominating for the Clemens Herschel Award, please attach the name of the paper and names of all authors, if co-authored.
- \_\_\_\_\_ **RALPH HORNE AWARD:** This award is presented to a BSCES member or registered professional engineer for unpaid public service in a municipal, state or federal-elected or appointed post for philanthropic activities in the public interest.
- \_\_\_\_\_ **JOURNALISM AWARD:** This award is to be presented to a member of the media who reports on engineering topics, particularly civil engineering, in a manner that benefits the profession. The Public & Outreach Committee reviews these nominations and recommends the recipient to the Board.
- \_\_\_\_\_ **PRE-COLLEGE EDUCATOR AWARD:** This award is to be presented to a member of the K-12 educational community who integrates engineering topics, particularly civil engineering, in a manner that benefits the profession and may promote students to pursue an engineering career. The Public & Outreach Committee reviews these nominations and recommends the recipient to the Board.
- \_\_\_\_\_ **TECHNICAL GROUP AWARD:** This award is given for papers which have been presented at a technical group or institute chapter meeting or for papers that were submitted to a technical group or institute chapter for review and recommended for publication by its Executive Committee. Each paper should be original (i.e., not contributed or published elsewhere). This award is open to all BSCES members.
- \_\_\_\_\_ **YOUNGER MEMBER AWARD:** This award is intended to recognize a member, 35 years of age or younger on February 1 in the year of the award, who has made an outstanding contribution to BSCES.

Name and Company Address of Nominee(s)\*:

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Is this a re-nomination? Yes \_\_\_\_\_ No \_\_\_\_\_

*\*Please attach a brief (no more than one page) explanation of the candidate's qualifications for nomination.*

Your Name: \_\_\_\_\_ Daytime Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

**NOTE:** If you nominated someone last year who was not selected, you may re-nominate the individual(s).

**QUESTIONS:** Contact BSCES Awards Committee Chair Charlie Roberts at 508/966-9092 or [Vice.President2@BSCES.org](mailto:Vice.President2@BSCES.org).

*The Boston Society of Civil Engineers Section of the American Society of Civil Engineers Awards Committee invites you to nominate an organization to receive the Small Employer Recognition Award or the Large Employer Recognition Award. Please see the following awards description and page 2 of this form for nomination instructions. To be eligible to receive this award your award nomination must be received by the BSCES Awards Committee no later than Monday, March 15, 2018.*

As a means of fostering participation in Society activities, the Boston Society of Civil Engineers Section/ASCE established an award to recognize those employers who encourage their engineers to actively participate in ASCE and BSCES. Special recognition will go to those organizations who exhibit exemplary support as evidenced by:

- Providing a model for involvement through organization-wide participation in local, regional, and national ASCE and BSCES activities.
- Allowing engineers time off to attend ASCE and BSCES meetings and seminars.
- Being sponsors of ASCE and BSCES meetings/ seminars or being sponsors of the BSCES newsletter.
- Supporting and encouraging technical and professional growth.
- Encouraging engineers to prepare articles for publication in the BSCES Newsletter or ASCE and BSCES professional and technical journals.
- Assisting in the payment of ASCE and BSCES dues.

Members who want their organization to be considered for recognition should fill out the attached nomination form which describes their organization's level of support to ASCE and BSCES. The Awards Committee will review the nominations and select an exemplary small employer and a large employer in the Section. Organizations with less than 50 employees are eligible for the Small Employer Award. Awards will be presented at the 170th BSCES Annual Awards Dinner. Successful recipients will be considered for endorsement as potential (future) applicants for the ASCE Employer Recognition Award. No organization will be eligible to receive the award in consecutive years.

Name of Employer: \_\_\_\_\_

Complete and return this nomination form and attachment to the BSCES Awards Committee no later than Monday, March 15, 2018 to be eligible for the award.

Nominator/Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Employer: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Title: \_\_\_\_\_

Office Address: \_\_\_\_\_ Website: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

Please answer the following questions:

How many employees do you have? \_\_\_\_\_

How many are civil engineers? \_\_\_\_\_

How many civil engineers are members of ASCE? BSCES? \_\_\_\_\_

How many times in the last year have you provided sponsorship of BSCES meetings/seminars or sponsorship of the BSCES Newsletter? \_\_\_\_\_

Please attach a list of ASCE and BSCES Members in your organization.

For those engineers who are ASCE and BSCES Members, please answer the following questions:

What percentage of ASCE and BSCES dues are paid by the employer? \_\_\_\_\_

Does the employer pay for subscriptions to ASCE and BSCES technical or professional journals? \_\_\_\_\_

On average, how many Technical/Professional seminars (one day or longer) does each of your engineers attend annually? \_\_\_\_\_

Does the employer allow time for members to attend ASCE and BSCES activities? \_\_\_\_\_

How many technical/professional articles were published by your engineers within the last two years? \_\_\_\_\_

How many of your engineers are active on an:

BSCES Board of Government \_\_\_\_\_

BSCES Technical Group or Committee \_\_\_\_\_

ASCE Regional (District) Council \_\_\_\_\_

ASCE National Committee \_\_\_\_\_

**Please attach a brief (no more than one page) description of any specific activities or policies which demonstrate your employer's support for involvement in ASCE and BSCES.**

Please complete and return this form and the additional page no later than Monday, March 15, 2018, via email, fax, or mail to [bscesreg@engineers.org](mailto:bscesreg@engineers.org), 617/227-6783, or BSCES Awards Committee, Boston Society of Civil Engineers Section/ASCE, The Engineering Center, One Walnut Street, Boston, MA 02108-3616, respectively. For questions contact BSCES Awards Committee Chair Charlie Roberts at 508/966-9092 or [Vice.President2@BSCES.org](mailto:Vice.President2@BSCES.org).

Thank you for your continued support of ASCE and BSCES.

## Ernest A. Herzog Award Call For Papers

### Background

Ernest A. Herzog was a nationally recognized civil engineer. During his career, he served a term as president of the Boston Society of Civil Engineers Section and was also a fellow of the American Society of Civil Engineers (1987).

Mr. Herzog began his career with Spencer, White and Prentis at the atomic energy facility in Oak Ridge, Tennessee. After World War II, he transferred to a Boston-based firm named Chas. T. Main Inc. Eventually, Mr. Herzog joined the firm of Alonzo B. Reed Inc. where he progressed into the highest role of president and remained in that role for 20 years thereafter.

While in the transportation field, Mr. Herzog was actively involved in the design and construction of the monorail used at the 1962 Seattle World's Fair. This monorail, which is still in use today, has served as the prototype for several other monorail systems including those at Disney Land in Anaheim, California, Disney World in Orlando, Florida, and one in Tokyo, Japan. In fact, Mr. Herzog was a strong and persistent advocate of a monorail system to serve Boston's south shore communities to relieve the traffic congestion on the Southeast Expressway.

In 1973, Mr. Herzog co-founded Herzog-Hart, a full-service engineering firm that specializes in the design and construction of research and production facilities for the pharmaceutical and process industries.

Mr. Herzog was well known for his generous support of and encouragement to young college students and young professionals just at the onset of their careers. He lectured at Tufts University, Dartmouth College, University of Massachusetts, and Northeastern University. He also wrote and published numerous papers, particularly concerning the effects of transportation systems on society.

In memory of Mr. Herzog's commendable career achievements, the Ernest A. Herzog Award was established to promote an awareness of and to recognize innovative improvements to infrastructure. This award is given annually to the author(s) whose submitted paper is chosen to best recognize innovation and awareness of infrastructure.

### Paper Guidelines

Submitted papers shall present an infrastructure project, innovation, or idea in which the author was actively involved in as an owner, advocate, engineer, or end-user. The paper must be well written and address specific benefits to current professional practices, lifestyle, and/or sustainability through the application of existing or innovative technologies or methods. Areas of application may include design, construction, operation, maintenance, management or financing of infrastructure components or systems.

## Rules

- A. The paper should be original and not be less than 2,000 words and not more than 6,000 words. The paper should clearly describe the project, innovation, or idea and highlight benefits to the current engineering and construction practices. Graphic material including photographs should be included to highlight specific areas of the project. The paper may have been previously published in a journal.
  
- B. Three copies of the papers shall be submitted to:
  - a. BSCES/ASCE
  - b. The Engineering Center
  - c. One Walnut Street
  - d. Boston, Massachusetts 02108-3616
  - e. Attn: Boston Chapter TD&I Herzog Award Committee

An electronic copy should also be sent to [bscesreg@engineers.org](mailto:bscesreg@engineers.org).

**Deadline for submittal: March 15, 2018.**

## Reviewers

The BSCES Herzog Award Competition Subcommittee.

## Evaluation Criteria

Topics for the papers shall be related to one or more of the 17 infrastructure systems defined in ASCE's infrastructure report card (see <http://www.infrastructurereportcard.org/>). Papers are evaluated by the reviewers on the basis of the following criteria:

- A. Technical writing; organization, graphics, grammar, and technical accuracy (30%)
- B. Benefits to the current design, construction, operation, maintenance, or financing practices of infrastructure (20%)
- C. Innovation; uniqueness of concepts (10%),
- D. Benefits to lifestyle of the general public or other end-users (20%)
- E. Sustainability, life-cycle cost benefits, or cost effectiveness (20%)

## Award

The recipient will receive a \$500 award, which will be presented at the BSCES Bertram Berger Seminar on April 12, 2018 in Boston.



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## ***2018 Bertram Berger Young Engineer Award Nomination Form***

The BSCES Transportation and Development Institute Boston Chapter is now accepting nominations for the **2018 Bertram Berger Young Engineer Award**. The annual Bertram Berger Young Engineer Award serves to recognize an outstanding younger member of the Boston Society of Civil Engineers for his or her professional achievements and service to the community.

The successful candidate should (1) be less than 35 years old on April 1, 2018, (2) have attained exemplary professional achievements as a young engineer, (3) demonstrate leadership in the practice of civil engineering with emphasis on transportation, (4) enhance the stature of civil engineers within the community, (5) be active with professional organizations such as BSCES or similar, and (6) be a registered, or soon-to-be registered, professional engineer.

In addition to recognition within the engineering community, the Award winner will receive a **\$2,500 stipend** to be used for continuing education and/or professional development. The award winner will be notified by the end of March 2018, and will be presented with the award at the upcoming annual BSCES Bertram Berger Seminar on Thursday, April 12, 2018.

To nominate an individual for the 2018 Bertram Berger Young Engineer Award, please fill out the attached form or provide a narrative statement up to two (2) pages describing how the nominee meets the above described criteria. Nominations will be accepted until 5:00 p.m. on **Wednesday, March 15, 2018** and should be submitted via mail or e-mail to:

Mr. Kurt Jelinek, P.E., Nobis Engineering, Inc., 585 Middlesex Street, Lowell, MA 01851, e-mail: [kjelinek@nobiseng.com](mailto:kjelinek@nobiseng.com), phone: (978) 683-0891.



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## **Nomination Form**

*Name of Nominee:*

*Age of nominee as of April 1, 2018:*

*Years of Full-Time Experience in Field:*

*Is the nominee a registered Professional Engineer?*

*Is the nominee active in any professional organizations, such as BSCES or similar?*

*Please list all organizations:*

*Length of membership (in years) for each organization:*

*Committees served on and length of time served (in years):*

*Please describe how the nominee has attained exemplary professional achievements as a young engineer:*

*Please describe how the nominee has demonstrated leadership in the practice of civil engineering (with an emphasis on transportation)?*

*Please describe how the nominee enhances the stature of civil engineers within the community?*