

# BSCES NEWS

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

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Engineering Management Group

## Insights from the 2017 ASCE Civil Engineering Salary Report

by Mike Cunningham, PE, Program Manager, Kleinfelder

ASCE published the results of its annual salary survey in September 2017 in the form of a Salary Report and two tools: a Salary Calculator and Searchable Salary Data.

The results are based on actual salary data provided by 5,868 ASCE members in 2017 who participated in a detailed survey conducted annually through the ASCE website, open to all members. They can be accessed at the following web page: [www.asce.org/civil-engineering-salaries](http://www.asce.org/civil-engineering-salaries).

The survey results provide the civil engineering industry a glance of current and long-term income and can be used both by individuals and employers to benchmark salaries and assist with achieving appropriate compensation.

According to the results, the average civil engineering salary in the US increased from \$88,000 to \$96,000 between 2014 and 2016, which is a 9% increase, or 4-5% per year. This is impressive and a positive sign of the value of our industry.

The following is a summary of other noteworthy observations using the Searchable Survey Data:

### Entry Level Salaries

- The median and average entry level salaries for civil engineers in the US are \$60,500 and \$63,376, respectively.
- In New England, the median entry level salary is about 4% greater than the overall national median; however, the average entry level salary is about 4% less than the overall national average.
- The Mid-Atlantic region results have the highest average entry level salary. This region consists of NJ, NY, and PA.

### National Salaries

- The median and average total compensation based on all 5,868 respondents is \$99,000 and \$112,606, respectively. Total compensation consists of base salary plus any commissions, bonuses, and “net self-employment income.”

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## President's Report

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



It is with great honor that I report that BSCES has won the 2017 ASCE Outstanding Section and Branch Award for Very Large Sections and Branches. We appreciate BSCES Vice President Charlie Roberts of

Childs Engineering for working hard to assemble and submit the ASCE nomination form. I am deeply proud to report that BSCES won this award for the seventh consecutive year. Thank you to all our technical group, institute chapter, and committee members and leaders who work hard every year and make our Society the winner of this prestigious award, which recognizes all the criteria that distinguishes our organization as offering the most value to its members.

Also, I am very pleased to report that BSCES just received a \$10,000 grant to support BSCES Future City competition activities. On behalf of the BSCES Board, I would like to extend BSCES's gratitude to Tufts Health Plan for their

generous grant and investment. Thanks to Olivia Richards of Gill Engineering and Public Awareness & Outreach Committee members for their efforts and quantitative results.

Donations and sponsorships 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 programing.

Please take pride in your membership in this 169th year of BSCES. Take a leadership role and thank your company for supporting the profession through BSCES, or ask them to support BSCES with sponsorship if they are not sponsors. I am available to assist you if you need more information to take this step. Also, your individual donation will be highly appreciated and thank you for your support.

It is the time of year again to start planning for our next fiscal year. We will be looking for volunteers

## UPCOMING EVENTS

YMG Billiards Tournament February 7, 2018

BSCES Professional Engineer Refresher Course February 13 – April 12, 2017

EMG Lecture & Networking Event February 21, 2018

YMG Movie Screening & Networking Event February 24, 2018

SEI Boston Chapter Lectures March 13 & 20, 2018

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

Further Details Inside



## 2017–18 Society Sponsors:



to lead our organization next year in a variety of positions. The BSCES Nominating Committee will be soliciting nominations for the 2018–2019 BSCES Board of Government and Nominating Committee. Please contact me at [president@bsces.org](mailto:president@bsces.org) or Ali Touran the chair of the Nominating Committee at [atouran@coe.neu.edu](mailto:atouran@coe.neu.edu) to nominate yourself or others.

Also, the Awards Committee will be soliciting nominations for a variety of awards. This is an excellent opportunity to recognize people who have made significant contributions to the civil engineering profession and their communities. The following BSCES Annual Awards:

**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

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## 2017–18 BSCES Board of Government

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Boston Society of Civil Engineers



## Insights from the 2017 ASCE Civil Engineering Salary Report

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### Impacts of Education

• Of the respondents, 51% have a bachelor's degree and 38% have a master's degree. Those with a master's degree earn about \$8,000 or 7% more than those with a bachelor's degree. The graphic below, provided with the survey results, summarizes additional results associated with education and licensure.

### Local Salaries

- There are 348 respondents from New England, or 6% of the total. Unfortunately, this data shows that the median and average salaries in New England are less than the overall national salaries. The average in New England is about \$7,000 or 7% less.
- There are 175 respondents from Massachusetts, or 3% of the total. The average salary in MA is about 1% greater than the rest of New England based on the data.

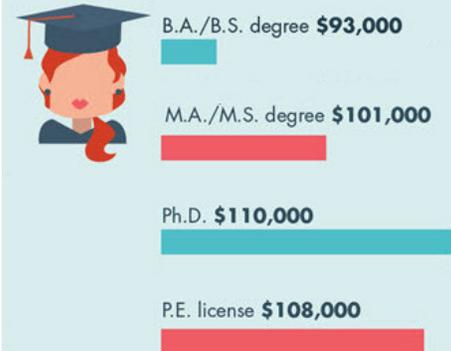
### Salaries by Discipline, Job Function, and Sector

- The data is also searchable by discipline. The graphic below, provided with the survey results, summarizes results based on engineering discipline with construction being the highest compensated and structural and geotechnical the lowest.
- There are 1,443 respondents, or 25% that listed consulting as their primary job function. The average salary for consulting is about 2% greater than the overall national average.
- The private sector dominated with 55% of the respondents. The average salary for engineers working in this sector is about 3% greater than the overall national average.
- On the other hand, those working in state and local government (24% of the respondents) earn about 11% less than the overall national average.

The number of respondents varies depending on the search parameters and some searches return a small sample size. This should be taken into consideration when interpreting the results. Nevertheless, the survey is a very useful tool for civil engineers. The report is available for purchase through the ASCE website and the tools can be used by ASCE members a limited number of times for free. Additional use is available through purchase.

The 2018 Salary Survey will be open for participants starting in February 2018, for a limited time. Participate and get bonus uses of the tools in addition to the ones you get as a member!

### EDUCATION PAYS Median Salaries for Those With



Source: ASCE 2017 Salary Survey

### MEDIAN SALARY BY DISCIPLINE



Source: ASCE 2017 Salary Survey

## Seven Strategies to Double your Profits

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

One of the most important lines that a successful engineer should concern themselves with is the bottom line. With that in mind, the Southeastern Massachusetts Committee (SEMAC) of BSCES held their 6th successful event on October 27, 2017 at Bella's Restaurant in Rockland, MA, for which a group of engineering professionals gathered to hear Bernhard Heine and Philip Ashcroft of Professional Business Coaches, Inc. (PBCI) delight their audience with the secret to success!

During their workshop *The Bottom Line: Seven Strategies That Work Together to Double Your Business Profits*, the PBCI presenters stimulated thoughts and raised awareness of how to fully transform the function of sales in our business and how to train one's staff to be world-class sales professionals. The Workshop explored the practical and powerful Seven Step Client Builder sales methodology. Discussion included combining the latest sales philosophies and reinforcement training with drills and role playing to ensure that one's sales organization is

performing at its best. A simple breakdown of the Seven Strategies included the following:

- Increase the number of prospective clients with benefit focused marketing;
- Increase workload with existing clients with improved two-way communication;
- Improve relationships with past clients by knowing why they left and fix it;
- Improve your sales conversion rate by using a "selling system;"
- Increase your average job sales with up-sells and add-ons;
- Increase your gross margin by increasing your prices;
- Decrease your fixed costs by reviewing your overhead.

The theme of the discussion centered on establishing a focused, repeatable and results-oriented strategy to secure both short and long-term success with the sales and marketing of our profession. Engineers are often focused on the technical task at hand and give less attention to the business side

of the equation. It was refreshing to be reminded that our work indeed has value and that it's up to us to see that we harvest the fruits of our labor.

SEMAC extends its gratitude to SEMAC member Jack O'Leary, P.G., and the PBCI presenters for sharing their powerful message with our membership, which we expect will result in some much needed sharpened business skills to strive for a profitable new year.

SEMAC holds monthly lunch meetings on the 3rd Friday of the month on the South Shore, and extends an open invitation to all interested parties. Please contact any of us below for additional information on becoming active in the SEMAC.

*Azu Etoniru, SE, PE, PLS, Committee Chair*  
[aetoniru@etengineering.com](mailto:aetoniru@etengineering.com)

*Charles Gross, PE, Committee Vice Chair*  
[chgpelle@me.com](mailto:chgpelle@me.com)

*John Cavanaro, PE, Committee Clerk/Secretary*  
[jcavanaro@cavanaroconsulting.com](mailto:jcavanaro@cavanaroconsulting.com)

## President's Report

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

**The Lester Gaynor 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.

**The Government Civil Engineer 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.

**The Clemens Herschel Award** recognizes an individual who has published papers 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.

**The Ralph Horne Award** is presented to an individual who is 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.

**The BSCES Journalism Award** is presented annually to a member of the media who reports on engineering topics, particularly civil

engineering, in a manner that benefits the profession. The Public Awareness & Outreach Committee reviews these nominations and recommends the recipient to the Board.

**The BSCES Pre-College Educator Award** is 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 Awareness & Outreach Committee reviews these nominations and recommends the recipient to the Board.

**The Technical Group Awards** are 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.

**The BSCES Younger Member Award** was established by the Board for a member who is 35 years old or younger and has made an outstanding contribution to the Society.

**The BSCES Employer Recognition Awards** were created by the BSCES Board of Government to recognize and honor organizations that encourage their engineers to actively participate in ASCE and BSCES activities; allow engineers time off to attend Society meetings and seminars;

support and encourage technical and professional growth; encourage engineers to prepare articles for publication in Society professional and technical journals; and, assist in the payment of Society dues. There are two types of employee recognition awards:

*The Small Employer Recognition Award* is given to deserving organizations with less than 50 employees.

*The Large Employer Recognition Award* is given to organizations with more than 50 employees.

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 or Charlie Roberts, the chair of the Awards Committee, at [Vice.President2@bsces.org](mailto:Vice.President2@bsces.org).

BSCES success throughout all these years could only be achieved by the diligence of fellow engineers working hard on their daily jobs and devoting time and effort to lead our organization to its prominent level nationwide. I invite you to join the leadership of this organization. I am humbled being the president of such a great organization and thank all the leaders for their active role working with me and working together for the good of our organization and our profession.

## Featured Group

### BSCES Engineering Management Group

by Jason Coy, PE, Project Engineer, CDM Smith, and Engineering Management Group Chair

The Engineering Management Group's (EMG) mission is to host two to three events each year. Historically, topics have ranged considerably from Public Private Partnerships, engineering at the National Aeronautics and Space Administration (NASA), and the expansion of the Panama Canal. The aim of these events is to cast a wide net to draw as many different types of professionals as possible.

Our first event of the current fiscal year, which will be held on February 21, 2018, will focus on the infrastructure program in Somerville, Massachusetts. Jessica Fosbrook, utilities project manager for the City of Somerville Department of Capital Projects and Planning, will discuss the current challenges Somerville is facing. Regular flooding from intense rain storms is a reality of life in Somerville, particularly in the area of Union Square, which receives 60% of the city's stormwater flows. Somerville's proposed infrastructure program is of critical importance to achieving an adequate level of service at present and the community's vision for private redevelopment in the future. Rain storms in the northeast will very likely intensify due to climate change and continue to tax the city's aging infrastructure. The program, when executed, will alleviate flooding and achieve separation of stormwater for a significant portion of the city through a series of projects including upstream separation, storage, conveyance, and discharge. Jessica will present the proposed projects, which range from the planning phase (Spring Hill Sewer Separation, Poplar St Stormwater Pump Station) to completed design (Nunziato Stormwater Storage) and construction bid phase (Somerville Ave Utility and Streetscape Improvements). Please see the insert included at the end of this

newsletter for additional information including how to register for this event.

The final event of the season will be the highly acclaimed Joseph C. Lawler Lecture, which is tentatively scheduled for mid-June 2018. The lecture is held annually in honor of Joseph C. Lawler, CDM Smith's first president. Each year, EMG is given the responsibility of selecting a prominent leader with significant ties to the engineering community to present the lecture. The 2017 Lawler Lecture presenters were Rick Dimino, president and CEO of A Better City, and Barry Bluestone, senior research associate, Dukakis Center for Urban & Regional Policy, Northeastern University. The event focused around the summer 2016 report, which includes such topics as the region's transportation, energy, water, sewer and waste management systems, as well as the consequences of forecasted climate change on the region's seaports over the next 15 years. The presentation also provided information for regional leaders and stakeholders

who plan to address Boston's and the surrounding community's infrastructure needs up to 2030 all the while taking into consideration projected pollution and economic growth. The Engineering Management Group is still coordinating with prospective speakers for this year's event. Check the BSCES website for more details as spring 2018 approaches.

Hopefully many of you have time and interest to attend this year's EMG events. If you have an interest in engineering management, engineering leadership, or associated topics related to either, I encourage you to participate and become involved with the EMG. We typically convene in downtown Boston on the second Wednesday every other month to coordinate and plan our event calendar. Please contact me if you would like to become involved, have any questions, or would like to register for an upcoming EMG event. I can be contacted via e-mail at [EMG@bsces.org](mailto:EMG@bsces.org) or by phone at 617/452-6585.

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



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

Visit [www.aldrichcenter.org](http://www.aldrichcenter.org) for more information.

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

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



The second annual session of the 190th General Court is underway. February 7 is the last day for reports to be made from the joint committees on bills that were filed in the first session (except for health care financing).

In the Legislature, the Joint Committee on Transportation held a hearing on December 6. This included a bill pertaining to the “Dig Safe” system and professional land surveyors (H. 1813). This bill would give professional land surveyors access to underground utility information at the preliminary design phase of a project. They have advocated this for years as a way for surveyors and engineers to produce more accurate design plans, thereby reducing problems during construction. The bill would amend portions of the existing Dig Safe law, which currently applies only to excavators (MGL Chapter 82, Sections 40 through 40E). Professional land surveyors would be required to premark the proposed excavation at the preliminary design phase and notify Dig Safe. Utility owners would be required to respond by marking their utilities. However, professional land surveyors would *not* be required to *maintain* the Dig Safe utility markings as excavators are (i.e., no change to Section 40C is proposed).

This hearing also included bills that would establish a study by MassDOT and DPU of methods to improve road repair procedures after excavation (H. 1875); require notice and mitigation by MassDOT for tree removal (H. 1885); prohibit liquid calcium chloride for snow and ice removal (H. 1889); create an Office of Maritime Planning and Policy Development (H. 1896); improve maintenance and visibility of roadway markings (S. 1946); authorize reduced speed limits and increased fines in construction zones (S. 2217); and establish a study of cost and safety of flaggers and police details on public works projects (H. 1869 and S. 2004).

The Joint Committee on Public Health held a hearing on December 19. This included a bill that would establish a study of health and noise

impacts of airplane flights on communities represented by the Massport Community Advisory Committee. This covers the greater-Boston area and the City of Worcester (S. 1275).

On December 4, I attended Fast Forward 2017, a seminar on autonomous vehicles (AVs) which was a hot topic at the State House earlier in the legislative session. Transportation for Massachusetts (T4MA) organized the seminar and the 495/MetroWest Partnership hosted it. There were presentations by the Partnership, Metropolitan Area Planning Council (MAPC), Conservation Law Foundation (CLF), and T4MA.

Seminar topics included data sharing, zero emissions, land use changes, changes in state and municipal revenue, economic impacts such as infrastructure costs, and the proposed federal and state legislation. MAPC is working with the Governor’s office, Metropolitan Mayors Coalition, and MassDOT on an Memorandum of Understanding for AVs. The “Fast Forward” report is available at [www.t4ma.org/fastforward](http://www.t4ma.org/fastforward).

This is a collaborative effort addressing mobility industries. CLF is preparing a report on state and municipal revenue and economic impacts such as infrastructure costs.

For me the key seminar points were as follows:

- Basically, the two federal bills focus on design of AVs, while the state bills focus on testing and operation of AVs.
- Fiscal and economic impacts of AVs can be avoided, and tradeoffs need not be necessary.
- AV manufacturers are not discussing infrastructure changes that may be necessary to support AVs (as if they have agreed not to discuss this).
- Cities and towns are likely to be affected economically by AVs because 89% of road miles in Massachusetts are municipal.

Further information on specific bills is available on the [Legislature’s website](http://legislature.gov). 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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### Become a BSCESNews Contributor

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

Typically 300 to 700 words, BSCESNews featured articles are about technical topics or professional matters of interest to civil engineers. The March 2018 issue of the newsletter for example, will highlight the Construction Institute Boston Chapter and feature one or more articles on the theme of Construction.

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 Honors 2017 Award Winners

by Katya Gonzalez-Willette, Membership Associate, BSCES

At the 169th BSCES Annual Awards Dinner, which was held at the Royal Sonesta Boston in Cambridge on December 12, 2017, the BSCES Board of Government honored the following 2017 award winners. Presiding over the dinner was BSCES Past President Brian A. Morgan, Esq.

### 2017 BSCES Section and Employer Recognition Award Winners

**Citizen Engineer Award**—presented to a BSCES member or registered professional engineer for outstanding public involvement in local or national legislation, education at all levels, non-profit volunteer organizations, community activities and similar activities improving the image of ASCE, BSCES and civil engineering.



This award was presented to **Peter Shanahan, PhD, PE**, Hydroanalysis, Inc., for his contributions to MIT and numerous professional and community organizations.

**Journalism Award**—presented to an individual who writes about engineering topics, particularly civil engineering, in a manner that benefits the profession.



This award was presented to **Neil Swidey**, The Boston Globe Magazine, for his book entitled Trapped Under the Sea.

**Small Employer Recognition Award**—presented to an organization with less than 50 employees that encourages its engineers to actively participate in ASCE and BSCES activities; allows engineers time off to attend Society meetings and seminars; supports and encourages technical and professional growth; encourages engineers to prepare articles for publication in Society professional and technical journals; and, assists in the payment of Society dues.



This award was presented to **Perry Associates, LLC** for its longstanding support of ASCE and BSCES. William A. Perry, PE, owner, accepted the award on behalf of the firm.

**Government Civil Engineer Award**—presented to a BSCES member who is serving as a paid public sector engineer at a federal, state, or municipal agency, department, or Massachusetts authority.



This award was presented to **Richard M. Bessom, PE**, for distinguished public service during his tenure at the Massachusetts Port Authority.

**Pre-College Educator Award**—presented to a member of the K–12 education community who integrates engineering topics, particularly civil engineering, in a manner that benefits the profession and may promote students to pursue an engineering career.



This award was presented to **Michael Coughlin** for inspiring his students to have a lasting excitement for science and engineering. Michael is a middle school science teacher at the Dr. Albert F. Argenziano School at Lincoln Park, a Somerville public school.

**Sustainability in Civil Engineering Award**—intended to recognize a Massachusetts civil engineering infrastructure project constructed within the last three years that exemplifies the principles of sustainability espoused by the Institute of Sustainable Infrastructure (ISI).



This award was presented to **Town of Wilmington** for the Yentile Farm Recreational Facility. Paul Alunni, PE, accepted the award on behalf of the Town of Wilmington. Danielle H. Spicer, PE, accepted the award on behalf of Green International Affiliates.

**Clemens Herschel 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.



This award was presented to **Matthew J. Eckelman, PhD**, Northeastern University, and **Mithun Saha, PhD**, AIR Worldwide, for their paper entitled “Urban Scale Mapping of Concrete Degradation from Projected Climate Change”

**Younger Member Award**—intended to recognize a member, 35 years of age or less on February 1st in the year of the award, who has made an outstanding contribution to the society.



This award was presented to **Jessica L. Wala, PE**, Nitsch Engineering, for her contributions to the BSCES Younger Member Group.

**President’s Award**—presented at the discretion of the President to Section Members for their contributions to the engineering profession and especially to the Boston Society of Civil Engineers Section/ASCE.

This award was presented to:



**Michael R. Cunningham, PE**, Kleinfelder, for his exemplary leadership and commitment to the BSCES Newsletter Editorial Board.

**Ralph Horne Award**—presented to an individual who is 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.



This award was presented **Paul J. Tyrell, PE, PLS, STV** Incorporated, for his years of service as a member of the Massachusetts Board of Registration of Professional Engineers and Land Surveyors.

**Large Employer Recognition Award**—presented to an organization with more than 50 employees that encourages its engineers to actively participate in ASCE and BSCES activities; allows engineers time off to attend Society meetings and seminars; supports and encourages technical and professional growth; encourages engineers to prepare articles for publication in Society professional and technical journals; and, assists in the payment of Society dues.



This award was presented to **Skanska USA Civil** for its longstanding support of ASCE and BSCES. Paul S. Pedini, PE, vice president, accepted the award on behalf of the firm.

## Recent News and Updates

### Ernest A. Herzog Award Call for Papers

The Transportation & Development Institute Boston Chapter wishes to announce that the deadline for submitting a paper for consideration as the winner of the 2018 Ernest A. Herzog Award is Wednesday, March 15, 2018. Established in memory of Ernest Herzog, a nationally recognized civil engineer past BSCES president and ASCE Fellow, this award exists to promote awareness and recognition of innovative improvements to infrastructure.

Award applicants are asked to submit a paper that identifies 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. The recipient will receive a \$500 award and a memorable plaque, which will be presented at the Bertram Berger Seminar on April 12, 2018. Please see the insert at the end of this newsletter for more information.

### Bertram Berger Young Engineer Award Call for Nominations

The Transportation & Development Institute Boston Chapter is now accepting nominations for the 2018 Bertram Berger Young Engineer Award, which serves to recognize an outstanding BSCES younger member for his or her professional achievements and service to the community. The successful candidate should:

- 1) be less than 35 years old on May 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.

The Bertram Berger Young Engineer Award winner will receive a \$2,500 stipend to be used for continuing education and/or professional development. Nominations for this award will be accepted until 5:00 PM on Wednesday, March 15, 2018. Please see the insert at the end of this newsletter for more information.

### BSCES Welcomes its New Members

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

#### Members

Mohammed Aljuboori, PMA Consultants LLC  
 Kathryn Eagan, BSC Group  
 Walter Heller, Milton, MA  
 Edward Taylor II, Simpson Gumpertz & Heger

#### Students

Louis Andy, Rochester Institute of Technology  
 Kevin Bermingham, University of Massachusetts Lowell  
 Meghan Cavalier, University of Massachusetts Lowell  
 Ola Dac, Abia State University, Uturu  
 Claire Faddis, Villanova University  
 Levin Finck, University of Massachusetts Lowell  
 Tiffany Floria, University of Maine  
 Claudia Ho, University of Massachusetts Lowell  
 Brandon Hooper, Wentworth Institute of Technology  
 Lea Hyland, University of Delaware  
 Koosha Kalhor, Northeastern University  
 Joanna Keaton, University of Maine  
 Tucker Kelly, Rochester Institute of Technology  
 Sarah Kim, University of Massachusetts Amherst  
 Michael Mantoni, University Of Maine, Orono  
 Vashkar Palma, University of Massachusetts Dartmouth  
 Jakub Taraba, Northeastern University  
 Sarah Tavares, Wentworth Institute of Technology

### 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.

### Ninth Edition of the State Building Code Now in Effect

The Commonwealth of Massachusetts' ninth edition building code became first effective on October 20, 2017 and, with a shortened concurrency period, the new code has come into full force and effective as of January 1, 2018. The Construction Supervisor License (CSL) exam will transition to the ninth edition code beginning January 1 as well.

### 2018 ASCE Leadership and Management Awards Call for Nominations

ASCE invites you to submit nominations for awards recognizing ASCE members as outstanding leaders and managers. These awards include the Civil Engineering Entrepreneur of the Year Award, the Edmund Friedman Professional Recognition Award, the Government Civil Engineer of the Year Award, the Outstanding Public Official Award, and the Parcel-Sverdrup Civil Engineering Management Award. Nominations are due by March 1, 2018.

### You Could Have the Next Infrastructure Breakthrough

The ASCE Innovation Contest serves as an avenue to transform our nation's infrastructure. Now in its third year, the contest has a track record of reaching a worldwide audience and attracting industry attention. Winners will present their ideas to network and industry leaders. Be part of the movement and share your innovation. To learn more about this ASCE contest, including how to enter, [click here](#).

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



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

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## 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.

### YMG Billiards Tournament

**Wednesday, February 7, 2018**  
Scholars Boston Bistro, Boston, MA  
6:00 PM – 9:00 PM

### Annual Billiards Tournament & Networking Event

Join the Younger Member Group for their annual billiards tournament and networking event at Scholars Boston Bistro. Participants will compete in teams and prizes will be given to 1st, 2nd and 3rd place winners.

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

### BSCES Professional Engineer Refresher Course

**Tuesdays and Thursdays**  
**February 13 – April 12, 2018**  
Northeastern University, Boston, MA

7:30–9:30 PM except for the initial session which runs from 7:30–10:00 PM

### Spring 2018 BSCES Professional Engineer Refresher Course

Are you or is someone you know taking the PE exam? This course will feature 12 sessions covering all aspects of the Professional Engineer State Exam. Taught by leading authorities in their fields, session topics include exam review, geotechnical, water supply, wastewater, hydraulics, highway design, engineering economics, transportation, hydrology, structures, and construction management.

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

### EMG Lecture and Networking Event

**Wednesday, February 21, 2018**  
Somerville Brewing Company, Somerville, MA  
5:30 PM – 8:00 PM

### Somerville Infrastructure Program Presentation

Jessica Fosbrook, PE, ENV SP, Project Manager–Utilities, Department of Capital Projects & Planning for City of Somerville, Massachusetts  
The City of Somerville's proposed infrastructure program is of critical importance to achieving an adequate level of service and the community's

vision for private redevelopment in the future. The program, when executed, will alleviate flooding and achieve separation of stormwater for a significant portion of the city through a series of projects including upstream separation, storage, conveyance, and discharge. Jessica Fosbrook will discuss the proposed projects which range from the planning phase (Spring Hill Sewer Separation, Poplar St Stormwater Pump Station) to completed design (Nunziato Stormwater Storage) and construction bid phase (Somerville Ave Utility and Streetscape Improvements).

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

### YMG Movie Screening & Networking Event

**Saturday, February 24, 2018**  
Museum of Science, Boston, MA  
1:00 PM – 4:30 PM

### Dream Big Screening & Networking Social

Join the Younger Member Group for a screening of the Dream Big IMAX Film at the Museum of Science in Boston. The screening will be followed by a networking social at the Cheesecake Factory where light appetizers and refreshments will be served.

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

*continued on page 9*

### ASCE Webinars



ASCE WEBINARS

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

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Massport | McMillen Jacobs Associates | Nitsch Engineering | Department of Civil and Environmental Engineering, Northeastern University  
Skanska Civil | Tufts University | VHB | Weston & Sampson Engineers, Inc.

## Upcoming Events *(continued from page 8)*

### SEI Boston Chapter Lectures

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

State Transportation Building, Boston, MA

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, Part 1:** Coating Specifications

**Session 6, Part 2:** MassDOT's Approach to Protection of Steel Structures

*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 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 prerequisite 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.*

### Suggest a Seminar Topic

Is there an engineering topic that you would like BSCES to feature in an upcoming seminar?

If so, members of the BSCES Program Committee would like to hear from you.

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

# BSCES

Boston Society of Civil Engineers Section  
American Society of Civil Engineers

### BSCES Awards Nominations Deadline is March 15

Do you know a worthy award recipient? If so, then download, complete and submit the 2018 BSCES Employer Recognition and/or Section Awards form contained in this newsletter by the Monday, March 15, 2018 submission deadline. The Large and Small Employer Recognition Awards are given to those organizations who exhibit exemplary support of ASCE and BSCES. The long-standing BSCES Section Awards are given to individuals who have made significant contributions to the civil engineering profession and their communities.

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

## Classifieds

### MassDOT Hiring Critical Positions

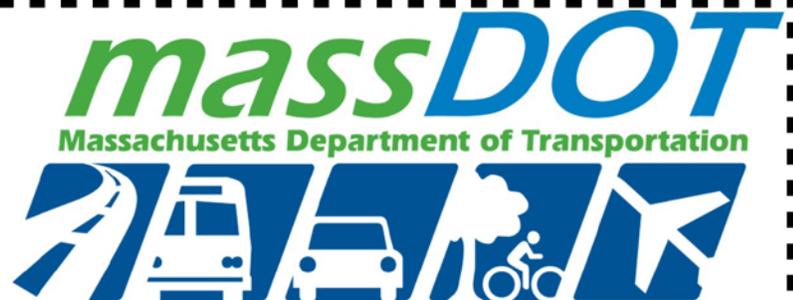
- Tunnel Maintenance Engineer
- Movable Bridge Engineer
- Construction Claims Managers
  - High Voltage Electricians

MassDOT is also hiring Interns for Summer 2018!

Apply at [www.Mass.gov/MassCareers](http://www.Mass.gov/MassCareers)

Questions: Email [Catherine.Chaput@dot.state.ma.us](mailto:Catherine.Chaput@dot.state.ma.us)

*An Equal Opportunity / Affirmative Action Employer. Females, minorities, veterans, and persons with disabilities are strongly encouraged to apply.*





*Please join us!*

# Annual Billiards Tournament & Networking Event

**Wednesday, February 7, 2018**

**6:00 PM – 9:00 PM**

**Scholars Boston Bistro  
25 School Street, Boston, MA**

Join the Younger Member Group for the annual billiards tournament and networking event at Scholars! Participants will compete in teams and prizes will be awarded to 1st, 2nd, and 3rd place winners.

For more information, please contact [YMG@BSCES.ORG](mailto:YMG@BSCES.ORG)

**Registration Deadline: February 1, 2018**

\$30 Member; \$35 Non-Member; \$25 Student Member

\*Registration fee includes tournament entry and appetizers.

## **Registration Information:**

Register to attend this event and pay by credit card online at <http://bit.ly/YMGBilliards2018>. 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 617/305-4113. 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 the registration deadline and no-shows will be billed.

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Howard Stein Hudson | Hoyle, Tanner & Associates | Massport | McMillen Jacobs Associates | Nitsch Engineering  
Department of Civil and Environmental Engineering, Northeastern University | Skanska Civil | Tufts University | VHB  
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# Professional Engineer Refresher Course

## Spring 2018 Schedule

The BSCES Professional Engineer Refresher Course consists of twelve classes covering both the breadth and depth portions of the five Civil Professional Engineer Exams. Course lectures will be held at Northeastern University, Boston, MA. All lectures are presently scheduled for Tuesday and Thursday evenings from 7:30-9:30 PM except for the initial session which runs from 7:30-10:00 PM. Due to inclement weather or changes in instructor availability it may be necessary to schedule make-up sessions on prearranged "Open" dates, which include Tuesdays, March 6 and April 10, and Thursdays, March 22 and April 12.

Class	Day	Date	Time	Subject	Instructor	Email
1	Tuesday	02-13	7:30-10:00 PM	Geotechnical & Exam Review	Jim Lambrechts	<a href="mailto:lambrechtsj@wit.edu">lambrechtsj@wit.edu</a>
2	Thursday	02-15	7:30 - 9:30 PM	Geotechnical	Jim Lambrechts	<a href="mailto:lambrechtsj@wit.edu">lambrechtsj@wit.edu</a>
3	Tuesday	02-20	7:30 - 9:30 PM	Water Supply	Bruce Jacobs	<a href="mailto:bruce.jacobs@earthsoft.com">bruce.jacobs@earthsoft.com</a>
4	Thursday	02-22	7:30 - 9:30 PM	Wastewater	Annalisa Onnis-Hayden	<a href="mailto:a.onnis-hayden@northeastern.edu">a.onnis-hayden@northeastern.edu</a>
5	Tuesday	03-06	7:30 - 9:30 PM	Open		
6	Thursday	03-08	7:30 - 9:30 PM	Hydraulics	Annalisa Onnis-Hayden	<a href="mailto:a.onnis-hayden@northeastern.edu">a.onnis-hayden@northeastern.edu</a>
7	Tuesday	03-13	7:30 - 9:30 PM	Highway Design	Peter Reed	<a href="mailto:preed@bscgroup.com">preed@bscgroup.com</a>
8	Thursday	03-15	7:30 - 9:30 PM	Engineering Economics	Cristina Cosma	<a href="mailto:cosmac@wit.edu">cosmac@wit.edu</a>
9	Tuesday	03-20	7:30 - 9:30 PM	Transportation	Rick Bryant	<a href="mailto:Rick.Bryant@stantec.com">Rick.Bryant@stantec.com</a>
10	Thursday	03-22	7:30 - 9:30 PM	Open		
11	Tuesday	03-27	7:30 - 9:30 PM	Hydrology	R. Edward Beighley	<a href="mailto:r.beighly@neu.edu">r.beighly@neu.edu</a>
12	Thursday	03-29	7:30 - 9:30 PM	Structures	Ann Mercado	<a href="mailto:Andrea.Mercado@stantec.com">Andrea.Mercado@stantec.com</a>
13	Tuesday	04-03	7:30 - 9:30 PM	Structures	Ann Mercado	<a href="mailto:Andrea.Mercado@stantec.com">Andrea.Mercado@stantec.com</a>
14	Thursday	04-05	7:30 - 9:30 PM	Construction Management	Cristina Cosma	<a href="mailto:cosmac@wit.edu">cosmac@wit.edu</a>
15	Tuesday	04-10	7:30 - 9:30 PM	Open	Tuesday	
16	Thursday	04-12	7:30 - 9:30 PM	Open	Thursday	
17	Friday	04-13	8:30 AM - 5:00 PM	State Exam		

**Registration deadline is Friday, February 9, 2018.** [Click here](#) to register for this program and pay by credit card online. To register online at the BSCES member rate you must use your BSCES-assigned user name and password. Call 617/227-5551 if you do not know your username or password. You may also register by completing and returning this registration form and including payment by check (made payable to BSCES) or credit card. Mail your completed registration and payment to: BSCES, The Engineering Center, One Walnut Street, Boston, MA 02108-3616. Email or fax your registration to [bscesreg@engineers.org](mailto:bscesreg@engineers.org) or 617/227-6783, respectively. If you register in this manner and are paying by check, you must also mail a copy of this form with your payment. No phone reservations will be accepted. Registrations canceled after Friday, February 9, 2018 will be charged the full program registration fee. For more information, call 617/227-5551.

Registration Fees: (Please check the box to the left of the appropriate per person registration fee below):

\$525 BSCES Member Rate     
  \$610 Non-Member Rate     
  \$525 Quantity Discount Rate\*

Name: \_\_\_\_\_ Day Phone/Fax: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

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

Please bill my: (Check one)     
 Visa     
 MasterCard     
 American Express

Name On Credit Card: \_\_\_\_\_

Credit Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Credit Card Billing Address: \_\_\_\_\_

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

\* Individuals are eligible to register at the Quantity Discount Rate when five or more individuals from the same organization are paid registrants for this Professional Engineer Refresher Course. If this is the case, please include the names and email addresses of the other individuals from that organization who are attending this course. Complete and attach an additional registration form if more than five individuals from the same organization are registering.

Course attendees may visit [The Power to Pass](#) website to order copies of *Civil Engineering Reference Manual for the PE Exam* and *Practice Problems for the Civil Engineering PE Exam: A Companion to the Civil Engineering Reference Manual*. Send an email to [bsces@engineers.org](mailto:bsces@engineers.org) requesting the promotional code that will enable you to receive a 15% discount on the cost of these and other PPI-published materials.

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- McMillen Jacobs Associates
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- Department of Civil and Environmental Engineering, Northeastern University
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- Tufts University
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## Somerville Infrastructure Program

**Jessica Fosbrook, PE, ENV SP**

*Project Manager - Utilities*

*Department of Capital Projects & Planning*

*City of Somerville, Massachusetts*

### Wednesday February 21, 2018

**Somerville Brewing Company**

**15 Ward Street, Somerville, MA**

**5:30 PM Registration, Social and Refreshments; 6:30 PM Presentation**

Regular flooding from intense rain storms is a reality of life in Somerville, particularly in the area of Union Square, which receives 60% of the city's stormwater flows. The City of Somerville's proposed infrastructure program is of critical importance to achieving an adequate level of service and the community's vision for private redevelopment in the future. Rain storms in the northeast will very likely intensify due to climate change and continue to tax the city's aging infrastructure. The program, when executed, will alleviate flooding and achieve separation of stormwater for a significant portion of the city through a series of projects including upstream separation, storage, conveyance, and discharge. Jessica Fosbrook, PE, ENV SP, will present on the proposed projects which range from the planning phase (Spring Hill Sewer Separation, Poplar St Stormwater Pump Station) to completed design (Nunziato Stormwater Storage) and construction bid phase (Somerville Ave Utility and Streetscape Improvements).

### Registration Deadline: Friday, February 16, 2018

**\$25 Member; \$40 Non-Member**

**\$20 Public Sector Member; \$25 Public Sector Non-Member**

**\$20 Student & Senior Member (65+)**

### Registration Information

Register to attend this meeting and pay by credit card online at <http://bit.ly/EMGSomerville>. 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 February 16, 2018 and no-shows will be billed.





*Please join us!*

# Dream Big Screening & Networking Social

Saturday, February 24, 2018

## **Dream Big Screening**

1:00 PM – 2:30 PM

Museum of Science

Mugar Omni Theater

Boston, MA

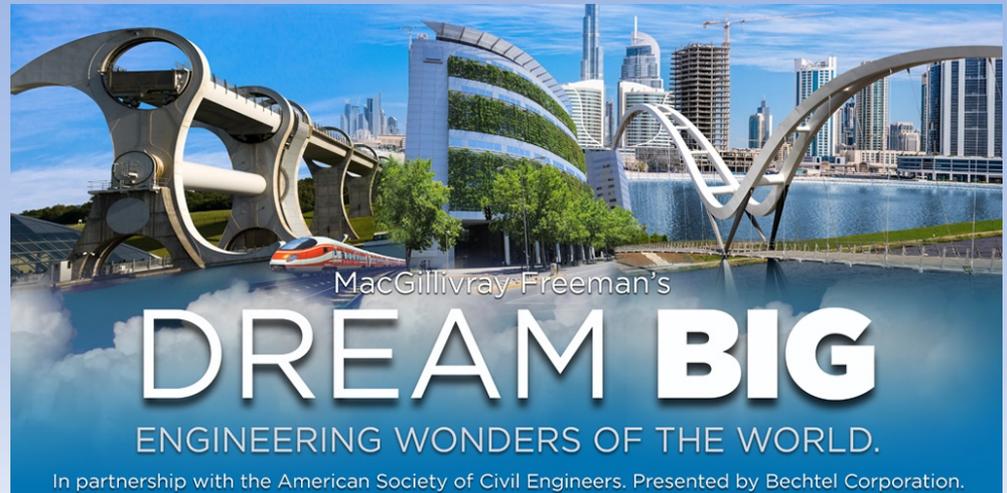
## **Networking Social**

2:30 PM - 4:30 PM

Cheesecake Factory

100 Cambridge Side Pl

Cambridge, MA



Join the BSCES YMG for a screening of the Dream Big IMAX Film at the Museum of Science, Boston. The screening will be followed by a networking social at the Cheesecake Factory where light appetizers and refreshments will be served.

**Registration Deadline: Monday, February 19, 2018**

\$20 Member; \$25 Non-Member, \$15 Student Member

*\*Registration includes movie ticket and appetizer*

Register and pay by credit card online at <http://bit.ly/YMGDreamBig>. 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 617/305-4113. 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 Monday, February 19, 2018 and no-shows will be billed.

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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

Or Pay with (Check one):  Visa  Master Card  American Express

Card Name: \_\_\_\_\_  
Card Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_  
Billing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Signature: \_\_\_\_\_



## Program Committee



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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)**

Supported by the staff of The Engineering Center Education Trust



TRANSPORTATION  
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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.



TRANSPORTATION  
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Boston Chapter

## **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?*

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 [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.

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.