

# SEGMENTS

## ADVANCING THE INDUSTRY

Volume 65 | Spring 2023



Editorial by  
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### A Message from the President

#### GREETINGS FROM ASBI!

I trust that this edition of Segments finds all of our members and industry participants well. Spring has sprung here in north Florida and with it comes warmer weather and longer days. I know winter is still raging in many locations, so hang in there!

Taking on the role of ASBI president is a privilege and an honor. I look forward to an exciting two years and want you to know I value any and all input that will lead us to be a better organization. I want to thank those who have done this job in the past, especially Elie Homsy for leading over the last two years. Thanks also to Gregg Freeby and Ingrid Ramsey, that dynamic duo who keep ASBI ticking on a daily basis. I have great respect for these folks.

Respect is a thought that has been racing around in my mind a lot lately. Collectively, we are engaged in the most exciting aspects of bridge design and construction in the United States. I way too often get caught up in the minutiae of daily work. But, when I reflect on the quality of the women and men who lead state agencies, teach, research, design, supply, and build - I feel great respect for all.

The feeling of respect was in all of our minds when we heard of the passing of Dr. Jack Breen this February. A giant in our industry. The life that Dr. Breen lived, the work he accomplished and the lives he touched cannot be measured. I was not a student of Dr. Breen's, but to those who were, how special that must have been.

ASBI has always conducted itself with the utmost respect for our members. This is why it was so difficult for the Board of Directors to enact increases in our annual dues. Our team has been able to provide a continued high quality of service even though we have not increased dues over the last 16 years! To ease the impact of the increases, the total increase in your category of membership will be phased in over two years. Fifty percent this year and fifty percent in 2024.

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Follow us on



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**I think it is important to let you know what the increase in dues will let ASBI accomplish. Here are a few things to look for:**



- A refreshing of our marketing appearance – not a complete rebranding but keeping us relevant.
- An overhaul of our website – it has been 12 years since we last undertook this. Look for a cleaner look, easier navigation, and better document access.
- Greater industry visibility – we are able to better fund ASBI's involvement in two important supporting organizations:
  - The Concrete Bridge Engineering Institute at the University of Texas under the direction of Dr. Ozzie Bayrak.
  - The National Concrete Bridge Council – “A council of allied organizations dedicated to quality concrete bridge construction.” Our executive director, Gregg Freeby, currently presides over this diverse council.
- Updated and new publications which are/will be available on the ASBI website:
  - Brendan Gill, WSP, chaired the ASBI Technology and Innovation Rail Working Group to produce the “Guidelines for Design and Construction of Segmental Bridges for Rail.”
  - Dr. Andrea Schokker and Brett Pielstick worked very hard to update the ASBI Durability Survey.
  - Early this summer we will be releasing the ASBI Segmental Bridge Design Manual. Thank you to all of the contributing authors and our Blue Ribbon Review Panel. Special thanks to Ken Price for leading this effort.

**This year’s conference, our 35<sup>th</sup>, will again be held at the Westin La Paloma Resort and Spa in Tucson, Arizona.** The dates are November 5<sup>th</sup> through the 8<sup>th</sup>, 2023. We are returning to this property because of the special way they worked with us during COVID. The property is beautiful, and the program will be great. I look forward to seeing everyone there.

With Deep Respect,

John

# communication news

## Moved and Have a New Address?

Please let us know if you have had an address change so we may update the information on the ASBI website as well as the mailing list. Don't forget to include new telephone and e-mail address. You may send any updates to [info@asbi-assoc.org](mailto:info@asbi-assoc.org).

## A Refreshing New Look!

This edition of Segments has been published with the updated ASBI logo and colors. It has been 10 years since the ASBI logo has been refreshed and we are excited to launch the update. We will be using the refresh throughout all ASBI communications, including stationery, business cards, advertising, and PowerPoint presentations.

## Mark Your Calendar



### ASBI 35<sup>th</sup> Annual Convention and Committee Meetings

ASBI 35th Annual Convention and Committee Meetings to be held at the The Westin La Paloma Resort & Spa, Tucson, Arizona, November 5-8, 2023



### ASBI 36<sup>th</sup> Annual Convention and Committee Meetings

ASBI 36th Annual Convention and Committee Meetings to be held at the Loews Atlanta Hotel, Atlanta, Georgia, October 20-23, 2024.

Please see Events at [www.asbi-assoc.org](http://www.asbi-assoc.org) for further information.

## Grouting Certification Training 2022

There were 4 classes held in 2022. In total we trained 101 people with 6 new Certified Technicians.

### 2023

The next class will be held April 24. For information and registration, go to the ASBI website, Grouting Certification tab and 2023 Certification Training.



## Monthly Webinars

ASBI will be offering monthly webinars beginning in February:

### APRIL 26

12:00 - 1:00 CT

Incremental Launching of Concrete Segmental Bridges

### MAY 24

12:00 - 1:00 CT

Electronically Isolated Tendon Pilot Project - SH146 in Kemah, Texas

All webinars are free of charge, but you must register to attend. Recordings of past webinars are available for viewing on the website.

Go to the ASBI Events page and follow the link to the Monthly Webinars for more information and to register.

## New ASBI 2021-2023 Members

(Since Spring 2021 Newsletter)

WE ARE PLEASED TO WELCOME THE FOLLOWING NEW MEMBERS TO ASBI:

### Organizational Members

#### 2021

**FUCHS Lubricants Co.**  
Material Supplier

**Great Lakes Engineering Group**  
Consultant

#### 2022

**CONSOR Engineers, Inc.**  
Consultant

**Ames Construction, Inc.**  
Contractor

**Kelly McNutt Consulting**  
Consultant

### Professional Members

#### 2021

**Togarepi Chitakara**  
LU Engineers

**Marco Figueiredo**  
CST

#### 2022

**Pablo Hinojosa**  
Bogin SA

**John Poulson**  
WSP

**Charles Layman**  
HDR

**Terry Tamutus**  
Structural Monitoring Solutions

**Kyle Liu,**  
PBS Engineering & Environmental

**Andrew Wahr**  
Jacobs Engineering

**Pietro Paolo Mossone**  
Studio Pietro Paolo Mossone

### Transportation Official

#### 2021

**Emad Labib**  
Ministry of Transportation Ontario

**Rob Simmons**  
City of Virginia Beach

**Brad Updegrave**  
Pennsylvania Turnpike Commission

#### 2023

**Kira Robinson**  
West Virginia DOT

### Transportation Agency

#### 2021

**Tanarat Potisuk**  
Oregon DOT

#### 2022

**Sam Fallaha**  
Virginia DOT

### Student

#### 2021

**Hesam Eshraghi**  
K.N. Toosi University of Technology

**Pablo Hurtado**  
Auburn University

**Ali Javed**  
Florida International University

**Luke Woody**  
University of Georgia

#### 2022

**Arjun Basnet**  
University of Texas at San Antonio

**Furkan Cakmak**  
Wayne State University

**Dikshit Goel**  
Seattle University

**Nuzhat Kabir**  
Texas A&M University

**Mike Orang'l**  
University of Nairobi

#### 2023

**TJ Costello**  
University of Oklahoma

## 2023 – 2024 ASBI Executive Committee

The following ASBI members were approved by the Board of Directors to serve on the Executive Committee for 2023-2024:

- **John A. Corven**, President
- **Steven Byars**, Vice President
- **Matthew Chynoweth**, Secretary/Treasurer

Members:

- Steven Austin
- Sereno Brown
- Sam Fallaha
- Elie Homsy
- Gregory Hunsicker
- Andrea Schokker

Steven Austin and Sereno Brown are serving as new members on the Executive Committee.

ASBI would like to thank Mike Kiggins and Patrick Malone for their many years of service on the Executive Committee as their terms have ended.

## Have ideas worth sharing?

New ideas are always important, contact a committee member and get involved today.

# communication news

## Have news to share? THEN TELL US!

Whether you have moved and need to update your information or have a story idea for an upcoming newsletter email us at [info@asbi-assoc.org](mailto:info@asbi-assoc.org).



### Dr. John E. “Jack” Breen

**ASBI would like to recognize the passing for Dr. John E. “Jack” Breen on February 14, 2023, at the age of 90.**

Dr. Breen was one of the most influential individuals in bringing concrete segmental bridging technology to the United States. He was the lead researcher for the design and construction of the first precast concrete

segmental bridge in the United States, the JFK Causeway in Corpus Christi, Texas. This structure has been in flawless service since 1973 in large part due to Jack’s research and guidance throughout the project. His subsequent research was voluminous and greatly expanded the current state of the art for not only concrete segmental bridges but concrete structures in general. In 1989, ASBI recognized Dr. Breen with a Leadership Award for his contributions to advancing concrete segmental bridge technology. At the 2022 ASBI Convention in Austin, Jack was able to join us and reconnect with several of his former students and colleagues. He leaves with us an incredible legacy of unsurpassed research, students, both undergraduate and graduate, as well as innumerable colleagues in the U.S. and worldwide. His impact on our industry and the value of his mentorship to many of us cannot be overstated.

**Dr. Breen’s full obituary can be found here:**

<https://www.statesman.com/obituaries/paco0427793>

The family has asked that to honor Jack, please consider donating in Jack’s name to the **Christopher Breen Memorial Scholarship at St. Austin’s School,**

800 Herndon Lane, Austin, TX 78704:

<https://www.staustinschool.org/support-us/give-online>

or

**The Christopher D. Breen Memorial Scholarship of the Charles L. Sommers Alumni Association, Inc.’s Northern Tier Seasonal Staff Scholarship Program:**

<https://www.holry.org/programs/scholarships>



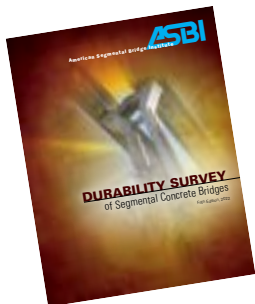
## New Publications

Several new and updated publications have been created by ASBI and are available on the website under the ASBI Publications tab.

<https://www.asbi-assoc.org/index.cfm/publications/publications>

## ASBI Segmental Bridge Database

The first is a link and login information to view the ASBI Segmental Bridge Database. This is an interactive database that lets you view geographically the segmental bridges identified in the National Bridge Inspection Database maintained by the Federal Highway Administration. This data was used to revise the Durability Survey.



## Durability Survey Fifth Edition

The new Durability Survey identified 453 segmental bridges for inclusion in the report. This fifth edition of the ASBI Durability Survey includes data up to 2020 and marks 47 years of concrete segmental bridge construction in the United States. While some bridges are readily identifiable as segmental bridges, particularly during construction, many variations exist. For this survey, segmental bridges are confined to those defined in the Definition of Concrete Segmental Bridges document. Only bridges with segmental superstructure elements are included since this is the only segmental attribute type found in the National Bridge Inventory (NBI) database.

## Definition of Concrete Segmental Bridges

If you want more information on what is and is not included in the ASBI Segmental Database as well as the Durability Survey, a supporting document can also be found on this page, Definition of Concrete Segmental Bridges.



## Guidelines for Design and Construction of Segmental Bridges for Rail

Also published in 2022 were the Guidelines for Design and Construction of Segmental Bridges for Rail. The purpose of this document is to provide guidance to the industry (owners, designers, suppliers, contractors, and others) on considerations when using a concrete segmental-type bridge to carry rail, including transit rail, heavy or freight rail, and high-speed rail.

# convention news

## 2022 ASBI Annual Convention

The 2022 ASBI Annual Convention was held on October 30 - November 2 at the Hyatt Regency, Austin, Texas. The Convention was well attended with 287 registrants and 25 exhibitors.

### THE 2022 BIENNIAL LEADERSHIP AWARDS WERE PRESENTED TO:



**Jeremy Johannesen**  
*McNary Bergeron & Johannesen*



**Elie Homs**  
*Parsons*



**Jerry Pfuntner**  
*COWI*

We hope you will join us in Tucson, Arizona, on November 5-8, 2023, for the 35<sup>th</sup> Annual Convention and Committee Meetings. Please see Events at [www.asbi-assoc.org](http://www.asbi-assoc.org) for further information and online registration.

## 2022 ASBI Convention Student Competition

As part of the ASBI 34<sup>th</sup> Annual Convention, university students were invited to participate in the 2022 Student Competition. They provided a video and presentation in response to a problem statement regarding segmental bridges and sustainability.

### TWO STUDENTS WERE SELECTED TO PRESENT:

- **Nuzhat Kabir** - Texas A&M University
- **Thomas (TJ) Costello** - University of Oklahoma



Pictured left to right: Jacob Martin - RS&H, Tim Barry - RS&H, Craig Finley - COWI, TJ Costello, Nuzhat Kabir, Tom Stelmack - Parsons, Carter Masterson - Malcolm International, and Ken Price - WSP

We would like to thank the following for sponsoring the competition:







## 2022 ASBI Convention Exhibitors

Commerical Metals Company - ChromX	R.J. Watson, Inc.
Deal / Rizzani de Eccher USA, Inc.	RS&H, Inc.
Doka. The Formwork Experts.	Schwager Davis, Inc.
D.S. Brown	Sika Corporation
DYWIDAG	SOFISTiK North America Corp.
Enerpac	Structural Technologies
Euclid Chemical Company	Sumiden Wire Products Corp.
Freyssinet Inc.	Trenton Corporation
FUCHS Lubricants Co.	Trompler Fluid Power, Inc.
General Technologies, Inc.	US SPEC / Oldcastle APG West Inc. - US Mix
Hilman Rollers	Watson Bowman Acme
LARSA, Inc.	Williams Form Engineering Corp.
PERI Formwork Systems, Inc.	

## 2022

### Convention Sponsors

ASBI Would Like to Thank the Following Organizational Members for Their Sponsorship of the 2022 Convention

### Gold

**AECOM** **COWI**

**Hardesty & Hanover** **HNTB**

**KRAEMER** **PARSONS**

**RS&H** **WSP**

### Silver

**McNARY BERGERON & JOHANNESSEN**

**Watson Bowman Acme**

### Bronze

**FLATIRON** **HR**

**TYLin**

# project news



Photos courtesy of SYSTRA IBT.

**OWNER**  
Chicago Transit Authority

**ENGINEER**  
**SYSTRA IBT**

## The CTA's Red Purple Modernization Project

**CONSTRUCTION OF THE CHICAGO TRANSIT AUTHORITY'S SEGMENTAL VIADUCT WITHIN THE RED PURPLE MODERNIZATION PROJECT REACHED A MILESTONE AT THE END OF 2022 WITH THE COMPLETION OF THE 1.3 MILE LONG EASTERN ALIGNMENT.**

The erection gantry has been dismantled and trackwork and systems components are being placed to allow train traffic to switch to the new tracks. The western half will then be taken out of service and construction can begin anew. Over 40% of the segments for the western half have been cast.





## The New Mosquito Road Bridge

### THE NEW MOSQUITO ROAD BRIDGE SPANNING THE SOUTH FORK OF THE AMERICAN RIVER IN EL DORADO COUNTY, CA WILL REPLACE A ONE-LANE TIMBER SUSPENSION BRIDGE BUILT IN 1939.

The new 1180 ft three-span post-tensioned concrete box girder bridge has a 536 ft main span with 322 ft end spans. The 38-ft-wide bridge, which will be constructed using the cast-in-place balanced cantilever segmental method, varies in depth from 12 ft to 30 ft and is supported by two hollow main piers consisting of 5 ft confined corner octagons joined by 2 ft wide walls. The columns rise nearly 200 ft above the CIDH supported footings; but due to the steep slope of the river gorge, the roadway reaches heights of approximately 375 ft above the river. Concrete for the northern half of the project will be supplied by an on-site batch plant since there is limited access to that side of the river.

The bridge design was a joint effort between Quincy Engineering (now Consor) and SYSTRA IBT, with Quincy Engineering responsible for the main pier foundations, abutments, and retaining walls and SYSTRA IBT responsible for the main piers and the segmental box girder superstructure.

The construction contract was awarded to Shimmick in May of 2022, and official notice to proceed was issued in July. Progress to date consists of access road and trestle construction. Access, ground anchor, retaining wall, and foundation work is expected to extend through 2023.

Photos courtesy of SYSTRA IBT.

The new 1180 ft three-span post-tensioned concrete box girder bridge has a 536 ft main span with 322 ft end spans.

**OWNER**  
El Dorado County, CA

**ENGINEER**  
**SYSTRA IBT** / Consor

**CONSTRUCTION**  
Shimmick



# project news



Visualization: Visualization of completed bridge. Photos Courtesy of FHWA FLH Office of Bridges & Structures.

OWNER  
??

ENGINEER  
????

## Blue Ridge Parkway over Interstate 26

### INNOVATIVE THINKING! CREATIVE DELIVERY!

The bridge on the Blue Ridge Parkway over Interstate 26 in Asheville, NC is currently being replaced with a 275' main span precast segmental box girder.

The bridge will be replaced due to widening of the Interstate below from the existing 4 lanes to 10 future lanes. Because of the long span, box girders vary from 8' to 16' in depth. The casting yard is located at Wilmington, NC, some 350 miles away. Transporting the deep segments on their side was required to clear the many overpasses along the route. This innovative method of transporting segments provides a practical solution for precast segmental construction with longer spans, where casting yards are not local to the project location. This solution requires additional permits for wide loads. One cantilever of the three-span structure is well underway while the second cantilever will start soon.



Segments being erected on north pier.



North pier as of December 2022.



**Have a project to share?  
THEN TELL US!**

Whether you have an update to an existing project or information on a new project contact us at [info@asbi-assoc.org](mailto:info@asbi-assoc.org).



Follow us on



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