

DYNAMIC COLUMNS

THE eNEWSLETTER OF THE STRUCTURAL ENGINEERS ASSOCIATION OF ALABAMA

Winter 2015

Contents

www.seaoal.com

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Please visit our page and "like" us for
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- Welcome 2015 President
- Farewell 2014 President
- Scholarships
- SEER
- Engineers Week 2015
- YMG News
- 2014 in Review
- Membership Dues
- Our Sponsors
- Spring Seminar
- Advocacy
- Seminar Description
- Board Meeting Highlights
- 2015 Board of Directors
- Employment Opportunity

**SEAOAL Young Member Group
busy building bunk beds
at Birmingham's Firehouse Shelter,
a homeless shelter for men.**



Welcome From the 2015 President

Greetings! As your newly elected President, it is my pleasure to share with you another issue of Dynamic Columns. I look forward to working with you in 2015 and encourage your ideas and feedback about how to make our organization stronger and more effective in every way.

With the new year, I've been thinking a lot about collaboration. A truly collaborative enterprise is a rare treasure. One of my treasures is working with my fellow Board Members and our Executive Director to build and maintain a strong, vibrant organization that brings value to our members. We've come a long way since I joined the Board of Directors and I'm excited about where we are heading.



There are many promising initiatives on the horizon. One in particular is our newly formed alliance with our sister organizations in Georgia, Florida, North Carolina and South Carolina. I believe there is much we can learn from each other and much that we can accomplish together.

This past year, I attended my first National Council of Structural Engineers Associations (NCSEA) conference as Alabama's NCSEA Delegate. I gained a new understanding of the importance of the Delegate, who is responsible for coordinating the efforts of the member organization with the national organization. Our national organization is increasing its efforts to support member organizations like SEAoAL, which makes this a critical time to have a long-term Delegate. In preparation for next year's national conference, the Board will be discussing how to fill this role in the future.

Our Younger Members Group (YMG) has set a fine example collaborating with similar groups at Birmingham AIA, AGC and ASCE over the past few years. We would do well to follow this example and increase our collaboration efforts with our fellow industry organizations. I have high hopes for such efforts over the next year.

Finally, don't forget to sign up for our March Seminar with Dr. Timothy Mays. If you haven't been to one of Dr. Mays' seminars, you've been missing out. If you have, I doubt we have to twist your arm to sign up for this one.

There is a lot happening this year, so stay tuned; and Best Wishes for 2015!

Cheryl E. May

2015 SEAoAL Scholarships

SEAoAL is proud to announce our 2015 scholarship application is on the website and colleges have been notified. SEAoAL awarded \$7000 in 2014 in partnership with the Delahay Foundation. Please share with any students who are planning a career in structural engineering.



Last year's scholarship presentation

Farewell From the 2014 President

As the outgoing President of SEAoAL, I would first like to thank you, the membership, for allowing me the opportunity to serve as President. I have enjoyed the experience and look forward to continuing to serve our organization in other ways.

To those of you who have provided advice or valuable feedback during the year, I extend great appreciation for your willingness to be involved. Speaking up to offer suggestions for improvement, ideas for moving forward or praise for successes is an indication that you are paying attention and care enough to speak up. I call that "engagement". When people are engaged, it is a sign of success.



However, success is not the finish line. There is always room for improvement which is why it is so important for our board to hear from you, our membership. For those of you who are engaged, please continue your involvement. For those of you who are struggling to find the time or who may be discouraged, I encourage you to become involved. If you're passionate about speaking to young people about our profession, ask a board member about our advocacy opportunities. If you have an idea for a seminar and know a good speaker, find a board member or fill out the survey sheets passed around at each seminar. If you like photography and would like to take pictures at our seminars or other events, let a board member know.

There are many "known" ways to be involved and there are many more "unknown" possibilities. The ways to involvement are as infinite as your imagination. No idea is a bad idea – some just might take a little more work to pull off than others.

On a final note, a very special thank you to our current Board of Directors for their efforts and time in serving our organization. I can say with certainty that our board works very hard to keep SEAoAL moving forward.

Thank you again for allowing me to serve as your President. I very much appreciate the opportunity.

Michael Kingsmore,

SEER

We are thankful we did not suffer any natural disasters in Alabama in 2014; we hope and pray for a quiet 2015. FEMA did provide a FREE Storm Shelter Design seminar in Birmingham and Montgomery last year. We are trying to see if we can get one on the books in 2015. That may have been a onetime FEMA opportunity.

However, if you are interested in getting your ATC-45 certification, or if your certification is out of date, SEAoAL is planning to host another ATC-45 training seminar this year! We are in discussion with AIA regarding an ATC 45 seminar. We will keep you posted on the progress.

Please contact our Executive Director, Rhea Williams (rhea@karmamanagementinc.com), if you are interested.

Volunteer Opportunity

<http://www.discovere.org/>

DiscoverE (formerly the National Engineers Week Foundation) helps unite, mobilize, and support the engineering and technology volunteer communities. Why? To increase their collaborative footprint in K-12 education and celebrate with the public as it discovers the value of engineering education and careers.



YOUNG MEMBER GROUP NEWS

2014 Summary

This past year the SEAOAL Young Member Group participated in several events in the Birmingham area in conjunction with other younger member groups in the A/E/C industry. On September 11th, we joined the Emerging Professionals of AIA at a site visit of The Florentine Building in downtown Birmingham. The historic Florentine Building was originally constructed in the 1920s and has undergone a \$2.5 million renovation into a restaurant, bar and event space.

On October 7th, the SEAOAL YMG hosted a site visit to the UAB Wallace Tumor Institute Advanced Imaging Facility, PET/MRI Suite Expansion. Starting in 2010 UAB's Comprehensive Cancer Center has undergone a \$30 million renovation project to the Wallace Tumor Institute (WTI). The PET/MRI Suite Expansion is the last piece of the building to be renovated, and one of the most challenging. The renovation is in the basement of the 6-story building which is currently being occupied by researchers, administrators, and patients. The only access into the space was through an 11'x11'x18' deep access way created in the alley behind the building and through the side of the existing basement wall. Attendees of the site visit learned about the permanent H-pile shoring system and *shotcrete* concrete walls used to create the access way.

During the first week of October the SEAOAL YMG participated in a service project to help build bunk beds at Birmingham's Firehouse Shelter, a homeless shelter for men. In conjunction with the young professional groups of AGC (YCF), AIA (EP), ASCE (YMG), and CFMA (YPL) the group designed and built 25 bunk beds for the shelter within a week's time. More than 40 volunteers contributed over 600 man-hours to the design, construction, and delivery of the bunk beds. The SEAOAL YMG would like to give a special thank you to all of those who came out and volunteered your time to such a wonderful service project!

On December 16th, the SEAOAL YMG participated in a joint Holiday Social hosted by the Young A/E/C Council of Birmingham at the Wine Loft in downtown Birmingham. More than 50 young Architects, Engineers, and Contractors turned out to network and show continued support for the Firehouse Shelter. Over \$350 was raised and a large box of art supplies was given to benefit the Firehouse Shelter's upcoming art workshop series. These gifts will positively contribute to the lives of people struggling with addiction and homelessness, ultimately elevating the local Birmingham community. Thank you to all who participated.



Upcoming Events for 2015:

The young professional groups of CFMA (YPL), AGC (YCF), ASCE and AIA are teaming up to host a series of meetings tailored to the young professional. They are taking a known Birmingham project, the Grandview Hospital on 280, and using it to walk through a job from the perspective of each industry group. If you are new to your industry or a seasoned veteran, this is something you don't want to miss. The meeting schedule is as follows:

1. Kickoff Meeting - **Friday, January 30th at 11:30am** at the AGC Headquarters Building. Robert Robison of Brasfield and Gorrie will be the presenter. Lunch will be provided and there is no cost to attend. **Please RSVP by Wednesday, January 28th**
2. Friday, February 20th – Architectural Insight
3. Friday, March 20th – TBD
4. Friday, April 17th – TBD
5. End of Series Site Visit and Networking Event - TBD

Mark your calendars for February 25th! The McWane Science Center is hosting an Engineering Showcase in which middle-school and high-school kids are introduced to the wonderful world of Engineering! The SEAOAL will have a booth for the 3rd consecutive year and we are looking for volunteers. If you're interested in talking about what structural engineers do on a daily basis and assisting with a hands-on activity with the kids, please contact Nicole Sommerville at nsommerville@lbyd.com. The event will be held from 9am-2pm at the McWane Science Center.

If you would like to learn more about the SEAOAL YMG and receive updates on the upcoming events, contact Nicole Sommerville at nsommerville@lbyd.com.





It's Time to Renew Your Membership

We have an exciting 2015 planned for you! We had such a good time in 2014.

Can't remember? Let me remind you of all the SEAoAL member benefits provided last year. We...

- Provided 21.5 PDHs (FL Approved) of learning opportunities
- Held our annual Expo, 14 exhibitors participated
- Awarded \$7000 in scholarships to Structural Engineering students in partnership with the Delahay Foundation
- Presented to AU, UA, and UAB engineering students
- Exhibited at the Code Officials Conference for SEER
- Provided SEAoAL representation at the first Governors Preparedness Conference
- Helped form a South Eastern Coalition of SEA (AL, FL, GA, NC, and SC)
- Offered a **FREE** FEMA Safe Room Design Course
- Held several SEAoAL & AIA Birmingham joint meetings – Great networking!
- Assisted with designing and building 25 bunk beds for the Firehouse Shelter through our Young Members Group
- Our Young Members Group went on site visits and had educational meetings

Please renew your membership and be a part of the beautiful smart cool organization.

Your membership does make a DIFFERENCE and is so appreciated. Plus, you save money on seminars by being a member.

Contact Info

This eNewsletter is published for the members of the SEAoAL.

For information about news or article submissions, or advertising, please contact Rhea Williams at (205) 601-2345 or rhea@karmamanagementinc.com

I enjoyed working with each of you in 2014 and am ready for more good times in 2015. We have an exciting 2015 planned for you, don't miss it! Go to www.seaoal.com and click on the link for membership renewal. Follow the instructions on the application for payment methods. Or contact Rhea Williams at rhea@karmamanagementinc.com for a renewal form....Peace,

Rhea Williams

Our Sponsors

Take the time to thank our sponsors when you see them at one of our events, or otherwise. We really appreciate the support they give us. Having them as sponsors makes it possible for us to plan some of our events with more confidence. Their sponsorship eliminates some of the uncertainty associated planning where costs are a big factor.

You can reach our sponsors at the following web addresses:

<http://redbuilt.com/>

<http://www.strongtie.com/>

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<http://parrotss.com/>



SEAOAL Spring Seminar

Applying the 2012 IBC to the Design of Concrete Building Systems: Engineering Tilt-Up & Pile Cap Analysis, Design, and Detailing

TUESDAY, MARCH 24TH, 2015

Alabama AGC Conference Center

5000 Grantswood Road
Irondale, AL 35210
(205) 451-1422

TOTAL OF 8 PDHS (NCSEA DIAMOND APPROVED ALL STATES)

SEAOAL member price: \$195 early registration/ \$230 late registration

**Non-member price: \$235 early registration/ \$285 late registration
(Includes BINDER)**

Advocacy

College students have many good choices when it comes to their field of study which ultimately leads them to their careers. As engineering graduates, we all know the rigors of engineering school, especially those first two years of pre-engineering courses when our classes are just not very practical. We all need bright, innovative, new graduates if we want our industry to flourish. We feel that one of the best ways to encourage college students, to consider a career in structural engineering, is to meet with them and talk to them about what we do. SEAOAL is making an effort through our Advocacy Program to visit the various state engineering schools to discuss structural engineering.



Last year we had Board members speak to students at The University of Alabama, Auburn University and UAB. We have a presentation scheduled for The University of Alabama ASCE Student Chapter in early January of this year. It is our goal to speak to engineering students at all of the state universities with engineering schools this year.

We typically speak to Civil Engineering students, many of whom already have an interest in Structural Engineering. There have also been some first and second year students in our presentations that are in the process of deciding which engineering discipline they will choose to study. Typically our presentations are case studies of projects that the presenters designed that we think would be of interest to students. All presentations include a question/answer time for the students and professors to ask questions about our specific case studies as well as general questions about the practice of Structural Engineering.

Let's face the facts, structural engineering is not an easy profession, however, it is a very rewarding profession. The structural engineering curriculum is not the easiest path to take in college. The curriculum has evolved to a point to where a majority of the design courses are now taught in graduate school. Many of today's students are looking for the easiest and the quickest path to obtain a degree. These presentations are a way for the structural engineers to demonstrate the importance of what we do, and, to generate interest in our field.

If you are interested in presenting a case study or simply discussing your experiences practicing Structural Engineering to a group of engineering students, please contact a SEAOAL board member or Rhea Williams, our Executive Director. It is our responsibility to recruit the best engineering students to Structural Engineering to keep our industry vibrant and growing.

Jeff Hillman



Discount on Tim Mays BOOKS!

	Regular Price	SEAOAL Seminar Price
Engineering Tilt-Up	\$255	<u>\$100</u>
Pile Cap Design Guide (includes design software!)	\$64	<u>\$39</u> (one copy only per attendee)

If you want a better understanding of pile cap behavior for vertical and lateral loading and access to the latest tools to design pile caps more efficiently and economically, you don't want to miss this opportunity.

Please visit the SEAOAL website to register or complete the attached Registration form and mail it to the Executive Director at the address listed at the top of this eNewsletter.

About Timothy Mays

Timothy Wayne Mays, Ph.D., P.E. is President of SE/ES and an Associate Professor of Civil Engineering at The Citadel in Charleston, SC. Dr. Mays recently served as Executive Director of the Structural Engineers Associations of South Carolina and North Carolina. He currently serves as NCSEA Publications Committee Chairman. He has received three national teaching awards (ASCE, NSPE, and NCSEA) and both national (NSF) and regional (ASEE) awards for outstanding research. He is the recipient of the 2009 NCSEA Service Award. He is a prolific speaker who sits on several code writing committees and his areas of expertise are code applications, structural design, seismic design, steel connections, structural dynamics, and civil engineering aspects of antiterrorism.

SPRING SEMINAR COURSE DESCRIPTION

Engineering Tilt-Up

Part I of the course introduces Tilt-Up as a unique form of precast concrete construction and provides an overview of special design provisions from ACI 318 as applicable to slender walls. This portion of the course is focused on understanding how Tilt-Up walls are designed for the combined effects of vertical and out-of-plane seismic and wind loading. Part II of the course covers lateral (i.e., in-plane) design and detailing of tilt-up walls including special connection details unique to Tilt-Up foundation elements. Parts III and IV highlight the design and detailing of actual Tilt-Up structures and cover special topics such as diaphragms, chords, collectors, roof expansion joints, foundation design, and simplified analysis procedures that do not require the use of computer software.

Authored by Timothy W. Mays, Ph.D., P.E. and Joseph J. Steinbicker, P.E., S.E., Engineering Tilt-Up is a newly published 365 page textbook that presents basic engineering principles, code interpretation, and practical design methodologies for tilt-up structures and their components. The organization of the chapters making up the main body of the text are ideal for engineers just beginning with tilt-up or for seasoned tilt-up engineers looking for excellent example problems that focus on the latest codes and standards such as the 2012 IBC and ASCE/SEI 7-10. In addition to the chapter material, Engineering Tilt-Up features three, full-building design examples presenting simplified standard practice approaches to the design of realistic projects with common building irregularities.

Pile Cap Analysis, Design, and Detailing

Part II of the course provides a thorough overview of pile cap analysis, design, and detailing in accordance with the latest codes and standards. Part II of the course covers vertical load design of pile caps and uses practical design examples to show how all relevant limit states should be considered. Part III expands the previous portion of the course to include lateral loads and overturning. Part IV highlights proper use of tabulated design details for vertical and lateral loads and provides example applications of the software program which allows the user to make assumptions that are different than those made when developing the tabulated design solutions.

December Board Meeting Highlights

The board met in early December to work on ideas for the Spring seminar and the Expo in August. We decided on again inviting Tim Mays to speak for the spring seminar. Tim is always a good speaker and everyone enjoys his presentations. The Expo theme is still undecided, but we will meet again on the 12th of February. We would accept a good idea from any of the SEAoAL membership. We also discussed our desire to have an event in Montgomery if we can find the right situation.

Our financial position is improving steadily under the able leadership of our presidents, past and present. Interest in sponsorship is increasing. New opportunities are presenting themselves, in areas such as collaboration with NCSEA. Presentations are planned at the various state universities to increase awareness of our organization. With receipts from book sales, we are boosting our ability to award scholarships. All in all, things are going pretty well.

Nicole Sommerville was in attendance to give a report on the 2014 YMG calendar. It has been a busy year for them with site visits and community service projects. They made the nightly news and the cover of Build South magazine for their service to the community. The McWane Science Center requested that the SEAoAL return again this year for the Engineer Showcase on the week February 25th. We need more volunteers to man the structural engineer table and help with hands on demonstrations for the kids. Watch for your opportunity in the YMG email blasts that will go out to all members. We discussed using our facebook page as well to promote these events. The Organization needs more lunch n learn topics and leads for 2015 on any topic that should be of interest to structural engineers.

We discussed the need for content for the newsletter and the collaborative effort that is being discussed with NCSEA for some news content to be provided by that organization. Any content from the broader membership of SEAoAL would be welcome by the board; we have the ability to bring it all together if members step up to provide items of news of interest specifically to Structural Engineers in Alabama.

We discussed the newly formed South East Structural Engineers Association Alliance, formed with the nearby States of Georgia, Florida, South Carolina, North Carolina. This alliance was formed to help each member SEA to grow and to develop and discuss best case-studies, advocacy and find opportunities to help each other with issues of common interest.

We discussed a recent conference call organized by the NCSEA to reach out to the state associations for ways it can better serve us. On this call, the NCSEA announced a grant they have made available to its members that is to be used for anything. i.e. research, special projects promoting the profession, etc. The amount is \$20K per year, the deadline is February to submit.

Next Board Meeting will occur on February the 12th.

EMPLOYMENT OPPORTUNITY !

STRUCTURAL ENGINEERS WANTED - Come be a part of our Team! LBYD, Inc. has openings in our Birmingham and Huntsville offices for Structural Engineers with 1 to 5 years of experience in design of structures. Competitive salary & excellent benefits.

Send resume to bwilson@lbyd.com . EOE/AA

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