JANUARY LUNCHEON

DATE: Thurs. Jan. 22, 2015 11:30 AM Registration, 12:00 P.M. Lunch & Presentation

LOCATION: Crowne Plaza North, 6500 Doubletree Ave, Columbus, OH 43229

TOPIC: EWB Update - Flood Mitigation Project in the Esfuerzo de Paraiso, Dominican Republic

This presentation will be on the Central Ohio Professional chapter of

Engineers Without Borders USA. The guiding principles of EWB are based upon sustainability and community ownership and involvement. The implementation of these philosophies will be reviewed through a case study of two projects undertaken by the Central Ohio chapter of EWB. The first project is a municipal roadway project in the Las Pilitas neighborhood of San Pedro Puxtla, El Salvador. The project constructed a 400 foot long street and drainage system for an isolated residential area at the edge of the village of San Pedro Puxtla. The street, which is now complete, connects the Las Pilitas neighborhood to the rest of the town, eliminates unhealthful exposure to contaminated drainage, and allows safer access to the residences in the rainy season. The project was named the 2014 project of the year by EWB-USA. The second project is a flood mitigation project in the Esfuerzo de Paraiso neighborhood of Santo Domingo Norte, Dominican Republic. This neighborhood, located within a floodplain, bounded by the Yaguaza river to the west and an agricultural canal to the east, experiences frequent and severe flooding. The residents experience near weekly flooding during the rainy season (April to October) with flood water reaching 10+ feet during hurricane level events. The floodwaters also carry contaminants from nearby trash dumping piles and restrict access from the neighborhood to the surrounding city. The Central Ohio Professionals chapter is currently teamed with the OSU student chapter in the assessment phase of this project.

SPEAKER: Robert Ferguson, PE - Project manager at EMH&T & President of the Central Ohio Professionals Chapter of Engineers Without Borders

MENU: Chicken Roulade or Chef's Choice Vegetarian meal, Traditional Salad, Chef's choice of seasonal fresh vegetable, Chef's choice of potato, Assorted rolls, Caramel apple pie, Coffee, Tea, Iced tea.

CPD: A certificate for one 1 CPD hour will be issued.

COST: \$20 ASCE Members & Guests, \$15 ASCE Life Members, \$10 Students.

REGISTER: Registration is due by 5:00 PM on Friday, Jan. 16, 2015. Late registrations and walk-ins may not be accepted. Registration fees may apply for no-shows and registrants canceling after the deadline. Contact Carlos Vazquez at 614-634-7132, or register@centralohioasce.com to register.

PAYMENT: The preferred method of payment is online (click HERE) before the registration deadline. Payment on the day of the event is available by cash or check payable to Central Ohio ASCE.

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LETTER FROM THE PRESIDENT

Central Ohio Section Members:

If you ever have those days, weeks or even months where you get down on your job, and you start asking "do I really make a difference", think about the numerous ways that our companies and organizations help our communities and the world.

Recently the Council for State Governments (CSG) released their to 5 state issues for 2015, and the top two are under the purview of Civil engineers. Not surprising to us...the top two issues mentioned are 1. "Waters importance in Economic Development", and 2. "Infrastructure

Neglect". These are two issues that have been repeatedly mentioned in the infrastructure report card at the Federal and State levels, and it is good to see that it is being discussed in circles of decision makers. To see more about the discussion it can be found at the following link: http://www.csg.org/pubs/capitolideas/2015_jan_fe b/top5_state_issues.aspx

Sincerely,

Mark Seidelmann, PE, GISP, M.ASCE

President – ASCE Central Ohio Section President@CentralOhioASCE.com

MOVIE



It's official! Brought to you by ASCE, production has begun on "Dream Big!," a celebration of engineering that will leave viewers breathless by taking them above, below, around, and through some of engineers' most impressive achievements, all in stunning lifelike clarity on eight-story-tall IMAX® and other giant screens.

All around the world, engineers are pushing the limits of ingenuity and innovation in unexpected, imaginative and amazing ways. Dream Big will take viewers on a journey of discovery from the world's tallest building to a bridge higher than the clouds and a tunnel deep below the earth. Along the way the audience will witness how today's engineers are shaping the world of tomorrow.

"Dream Big!" will have its world premiere in 2016. Although a lot of great plans are in the works, your ideas can help make the experience even more amazing. What should be featured in "Dream Big!"?

Share and submit your inspirations via the THIS LINK, especially in these three areas:

• A civil engineering project that could be featured as a main storyline for the film. A project that is unique, revolutionary and filled with innovations and one that connects with other areas of engineering.

• A charismatic, pioneering engineer involved in a compelling project that could be featured as a main character in the film.

• A captivating, unforgettable engineering image or sequence that would be mind-blowing on an IMAX 3D screen.

Watch for more about "Dream Big!" and its production in the coming months. See more HERE.



MEMBERSHIP RENEWAL



The 2015 ASCE Section Renewal Race has completed. While we did not win, we will strive to beat our neighbors to the south who finished in

5th place this year. We hope you'll renew your membership in the Central Ohio Section for your personal benefit and to keep our group thriving. Just go to <u>www.asce.org/renewal</u> and renew your ASCE membership.

Final Standings (Medium Section Size, as of December 19, 2014): 1. Montana, 2. Alaska, 3. Nebraska, 4. Iowa, 5. Cincinnati.



2015 STEM EXPO

What: 2015 STEM Expo When: Sat. Feb. 28, 2015

9:00 AM-1:00 PM Where:The Metro School

(OSU campus) 1929 Kenny Rd, Columbus, OH 43210



After much success in 2014, the ASCE Central Ohio Section Younger Member Group is hosting a STEM (Science, Technology, Engineering, Math) Expo at the Metro School on the Ohio State Campus on Saturday, February 28, 2015 to conclude Engineer's Week. The Younger Member Group is seeking local STEM



companies to sponsor hands-on, STEM related activities for the event. The goal is to expose K-8 students to

the world of STEM through fun, interactive activities.

Rather than seek monetary sponsorship, we invite local STEM professionals to organize an activity on behalf of their employer. Sponsoring

an activity is an easy and great way to get involved in this educational and outreach event. Activity sponsor responsibilities would include:

- Developing a fun, interactive STEM related activity
- Obtaining funding through your employer for the activity materials, if necessary
- Facilitating the activity at the STEM Expo event (typically 2-3 people are needed)

Information for the event, including a list of sponsors and the planned activities can be found at

http://www .centralohi oasce.com /STEM-Expo

Please help us make this a great community event.



Event T-Shirts will be available for activity sponsors for a cost of \$12 per shirt. Contact STEMexpo@centralohioasce.com to RSVP, sponsor an activity, order T-Shirts, or submit questions. We thank you for your support!

CIVIL ENGINEERING ACHIEVEMENT AWARD

Ohio Outstanding Civil Engineering Achievement Award Criteria

The Ohio Council of ASCE will soon be soliciting nominations for the 2015 Ohio Outstanding Civil Engineering Achievement Award. Selection criteria for the Ohio OCEA Award parallels national ASCE's criteria except that nominated projects must be located within Ohio's borders. Projects nominated for but not winning the national ASCE OCEA competition are eligible. Ohio Council's OCEA winner will be selected by a committee of judges representing each Ohio Section. The award is given annually to a Civil Engineering project, not an individual or firm, to recognize the contribution of the many engineers who have worked on the project.

Selection is based on how the project demonstrates the application of civil engineering skills and its contribution to civil engineering progress and mankind. Judges will consider the following criteria: (1) contribution to the wellbeing of people and communities, (2) resourcefulness in planning and in the solution of design problems, (3) pioneering use of materials

and methods, (4) innovations in construction, (5) impact on the physical environment, unusual aspects, and esthetic values, and (6) the project's potential adverse effects. The nomination should look frankly at the project's potential problems.

A bronze plaque will be awarded to the winning Ohio Project to be mounted in a prominent location at the project site. The presentation ceremony will provide an excellent opportunity for publicity and recognition.

Guidelines for Eligibility

Projects must generally be substantially completed and operating for their intended purpose to be considered for the award. Most any civil engineering project is open for consideration. Detailed guidelines will be available soon.

Submittals

The submittal deadline is February 27, 2015. For additional information, entry forms and detail requirements click HERE.



FREE WEBINAR - FOUNDATIONS/EQUIPMENT SUPPORT

What: Free Webinar - 1.5 PDH When: Friday., Jan. 23, 2015 11:30 AM - 1:00 PM Bring your own lunch

Where: E.L. Robinson Engineering 1801 Watermark Drive, Suite 310 Columbus OH 43215

Topic: Design of Foundations for Equipment Support RSVP: To newsletter@centralohioasce.com by Tuesday, Jan. 20, 2015.

*Open only to Central Ohio ASCE Section Members.

*Seating is limited to the first 25 people.

Purpose and Background

Design of foundations for equipment support is often required in industrial and process facilities, yet this topic is rarely, if ever, included in the engineering college curricula. Engineers are left to learn on the job – a process that often produces a variability of foundation designs for similar installations. In some cases the design is performed by the engineers who may or may not even have structural background. Yet whenever any component of an equipment foundation fails, the resulting strengthening and retrofit activities are often very expensive and intrusive into the equipment operations.

There is a wealth of information developed by the engineering firms that specialize in the design of equipment foundations, but this information is often unknown to those who rarely perform such design. The purpose of the webinar is to provide an overview of the practical methods used for design of equipment foundations, introduce attendees to the common foundation solutions, and discuss the reasonable design assumptions.

The foundations for statically and dynamically loaded equipment are designed differently. The statically loaded equipment typically includes various electrical components, such as transformers, vessels (horizontal, vertical and spherical), mechanical equipment (heat exchangers, radiators towers), stacks, etc. The presentation includes some actual design drawings and practical details for some of these components. The dynamically loaded equipment includes compressors, turbine generators, pumps, blowers.



In addition to the foundations, the equipment support systems typically include anchors and grouting, and questions are often asked about designing and specifying both of these components. The instructor offers some specific guidance on these items as well.

Learning Outcomes/Benefits

- Learn about the available foundation systems for supporting equipment
- Become familiar with differences in the design approach for statically and dynamically loaded equipment
- Explore the contemporary foundation systems used equipment support
- Find out which grout materials are most appropriate for various types of equipment
- Discover the practical methods of designing foundations for statically loaded equipment
- Learn why and how the foundations used for dynamically loaded equipment differ from static equipment
- Find out how the latest code changes affect the design of anchors used in equipment support systems

Webinar Outline

- Introduction
- Foundations for statically loaded equipment
 - General types
 - Design criteria and methods
- Foundations for dynamically loaded equipment
- Grout for equipment bases
- Anchors/concrete embedments for equipment support
- Avoiding foundations for in existing buildings
- Conclusion, final Q&A

The Central Ohio Section sponsors free continuing education webinars as a service to our members. These webinars are produced by ASCE and normally cost \$250 or \$300 for ASCE members. However, the Section is paying the registration fee and inviting any interested section members to attend for free. You can see the complete list of webinars available from ASCE National on their website. If you see one you like, let us know. If you and your company would like to host one, let us know that too. If you open it up to any interested Central Ohio ASCE section members to come, we will pay the registration fee.

CIVIL ENGINEERING REFERENCE BOOKS

Late last year, the Central Ohio Section bought a number of civil engineering reference books and donated them to the Columbus Library for public use. The titles are as follows:

- Minimum Design Loads (7-10)
- Design of Marine Facilities for Berthing, Mooring
- •FRP Composite Connections
- Foundation Engineering Handbook
- Trenchless Technology Piping
- Civil Engineer's Handbook of Professional Practice

•Building Code Requirements and Specification for Masonry Structures (5-11 & 6-11)

- Urban Stormwater Controls
- Municipal Wastewater Plants
- •Structural Steel Designer's Handbook

The books are for reference use and cannot be checked out. They are located on the 3rd floor in a special collection area of the main Columbus library (north side of building in the half-height stacks).



ROBERT O'SHEA ENGINEERING ETHICS AWARD

The Ohio Council of ASCE is seeking papers from Ohio ASCE Student Chapters/Clubs and Younger Members Groups for the 2015 Robert O'Shea Engineering Ethics Award. One winner will be selected to receive an award certificate and a cash award in the amount of \$500.00. The organization to which the winner is affiliated (Student Chapter/Club for a student, Section Younger Members Group for a younger member) will receive the cash award. The author of the paper representing the organization that is selected as the winner will receive the award certificate.

Younger members of any of the Ohio Sections of ASCE and undergraduate members of the ASCE Student Chapters/Clubs from any college or university located in Ohio who are in good standing at the time their papers are submitted are eligible to author the paper. Each Younger Member Group from a Section located in Ohio and each Student Chapter/Club from a college or university located in Ohio may submit one paper to the competition. The author may be selected in any manner by the Younger Members Group or Student Chapter/Club according to local practice.

Papers are to be submitted using the topic of the 2015 National ASCE Daniel W. Mead Prize, and papers submitted for the Robert O'Shea Engineering Ethics Award may also be submitted for the Daniel W. Mead Prize. The 2015 Mead Prize topic for students is "Should the Engineer of Record (who has sealed a set of plans) be held responsible, to any degree, for injury or death to builders or bystanders that occurs during the construction of his/her design?" The 2015 Mead Prize topic for younger members is similar but authors need to review the instructions for the 2015 Mead Prize for Younger Members HERE.

Papers shall not exceed 2,000 words and must be submitted by March 1, 2015. Individuals interested in submitting should contact their respective Younger Member Group or Student Chapter/Club for additional details and requirements.

2014 LEGISLATIVE YEAR IN REVIEW

ASCE staff and members worked throughout the year on many issues important to the profession. From federal issues to state and local ballot initiatives supporting infrastructure investment, we have much to celebrate. - See more HERE:

Federal Issues

**Passing the Water Resources Reform & Development Act: ASCE provided critical support leading to the enactment of the Water Resources Reform and Development Act of 2014 (WRRDA).

- Created a levee safety program
- Solves long standing expenditure issues with the Harbor Maintenance Trust Fund
- Makes a number of long-sought changes to the Clean Water State Revolving Fund
- Creates a new Water Infrastructure Financing
 Program (WIFIA)

**Reauthorizing MAP-21 & Highway Trust Fund: As a result of the society's efforts, an immediate crisis to the Highway Trust Fund was averted and the program was extended until May 2015. Further effort will be necessary in 2015 to urge Congress to identify additional revenues to provide multi-year funding and project certainty. We continued to promote our priorities for reauthorization of the federal surface transportation programs, including:

- Increasing program funding and financing available to deliver projects
- Focusing on freight to improve national economic competitiveness

 Streamlining the environmental review process in a responsible way

State Issues

**Transportation infrastructure financing was again one of the top issues facing states, and ASCE played a key role in supporting measures in many states across the country. ASCE also provided legislative testimony in many states, including Ohio during the State Legislative Day.

**ASCE actively collaborated with State Sections to support legislative causes.

**ASCE continued our valuable partnerships with the Council of State Governments (CSG) and the National Conference of State Legislatures (NCSL), through participation in forums that bring state legislative leaders together to discuss transportation issues and the challenges they are facing in their respective states.

**ASCE volunteers worked, with help from ASCE staff, to release 8 state and local Infrastructure Report Cards in 2014 that have received unprecedented media coverage.

Advocacy/Media/Engagement

**Legislative Fly-In: 185 participants from 43 states conducted meetings with over 200 Congressional offices.

**8,807 print media mentions in all 50 states and 15 countries around the world, including 5,969 Report Card mentions.

**347 stories appeared in major media outlets/wire services



FREE WEBINAR-SUSTAINABLE URBAN CORRIDOR

What: Free Webinar - 1.5 PDH

When: Tues., Feb. 10, 2015 12:00 PM - 1:30 PM Bring your own lunch Where: Burgess & Niple

5085 Reed Road Columbus OH 43220

Topic: Sustainable Transformation/Rehabilitation of an Urban Corridor

RSVP: To newsletter@centralohioasce.com by Friday, Feb. 6, 2015.

*Open only to Central Ohio ASCE Section Members.

*Seating is limited to the first 25 people.

Purpose and Background

During the past 50 years, roadway infrastructure in the urban environment has been focused on moving vehicles as quickly as possible from one place to another – generally into the city in the morning and to the suburbs in the evening. As urban living becomes more popular and dependence on the automobile becomes less desirable, city officials are looking at ways to transform roadway corridors into comprehensive transportation networks. This hierarchical network needs to function efficiently to support the movement of people and goods, as well as benefit the communities in which they are located. This webinar will show various challenges and solutions addressed in a rehabilitation infrastructure project in Washington DC – the Rehabilitation of H Street NE.

Primary Discussion Topics

- Incorporate traffic calming devices
- Integrate multi-modal transportation strategies
- Expand the public realm
- Mitigate disturbance to businesses during construction



 Design is a process – stakeholder involvement is not just for the community; it includes navigating through multiple government needs, requirements, and future goals

Learning Outcomes/Webinar Benefits

- Develop a strong team of professionals
- Maintain a consistent dialogue between the design team and the client, and the client and the community
- Respond to the changing nature of public expectations
- Apply the three principles of sustainability cultural, economic, and environmental. Add a four element which is the human impact to the environment
- Improvise when design standards cannot be applied
- · Discover how to avoid costly errors
- Learn technical solutions applied in the design
- Understand the symbiotic relationship between civil engineers, landscape architects, traffic engineers, lighting engineers, urban designers, and public outreach consultants needed to complete the project
- Understand how the corridor has transformed after three years of construction completion and how it will change in the next three years
- Learn design production tricks
- Hear about the importance of checking condition in the field during the design process

Webinar Outline

- Description of the Corridor before the project
- Description of how improvements along the corridor help economic, cultural, and environmental conditions.
- Stakeholder engagement process public, private developments, and government agencies
- Technical challenges resolved during the design process
- Lessons Learned

CADD CLASS VOLUNTEERS



Starting again in 2015 the ASCE Younger Member Group (YMG) will be presenting instructional Autodesk Civil3D Computer Aided Design (CAD) seminars on the campus of

the Ohio State University. The seminars will introduce the students to drafting software and

provide an introductory level of instruction to familiarize students with the skills necessary of a typical entry-level engineering position. The YMG is seeking volunteers from the Central Ohio Section to supplement our teaching group. This is also a great way to see prospective interns in action learning valuable job skills. Please contact Matt Baxendell (Matt.Baxendell@woolpert.com) if you're interested in taking part.

2015 OHIO CONSTRUCTION CONFERENCE

What: Ohio Construction Conference When: March 19, 2015 Where: The Ohio Union -1739 North High St.



a unique mix of industry leaders in the commercial construction community - representing owners, facility managers, architects, engineers, contractors, subcontractors, and suppliers in a constructive, collaborative conference aimed to benefit each component of a project team. For additional information, click <u>HERE</u>.

Save the date for the 2015 Ohio Construction Conference. The conference will bring together



2014-2015 CENTRAL OHIO ASCE MEETINGS							
Meeting Date	Торіс	Group(s)	Location	Coordinator			
Thursday January 22, 2015 Lunch	EWB Update - Santo Domingo Flood Control	ASCE/ EWB	Crowne Plaza North	Amanda Engle			
Thursday February 26, 2015 Lunch	Engineers Week - Engineering New Horizons: Honda and the Power of Dreams	ASCE/ ALL	Bridgewater Conference Center	Engineers Week Committee			
Thursday March 26, 2015 Lunch	Bridge Park Development	ASCE/ SEAoO	Villa Milano	Matt Inkrott			
Wednesday April 22, 2015 Dinner	OU/OSU Student Chapter Presentations & Portsmouth Bypass	ASCE	Old Canal Smokehouse - Chillicothe, OH	Tony Klimek - Lower Scioto Valley Chapter			
April/May 2015 (TBD) All Day	ASCE Spring Seminar - Roundabouts	ASCE	TBD	Chris Nye			
Thursday May 21, 2015 Lunch	ASCE Region 3 Director & Awards Luncheon	ASCE Schmidt's Sausage Haus		Carlos Vazquez			
June, 2015	2015-2016 Planning Meeting	All	Tommy's Pizza - Dublin, OH	A.J. Smith			
Friday June 12, 2015 Lunch & Dinner	Annual Golf Outing	ASCE	Darby Creek Golf Club	Jim Pajk			

OSU MASTERS LEVEL STRUCTURES COURSES

The Ohio State University Department of Civil, Environmental & Geodetic Engineering announces the introduction of structures graduate-level courses beginning at 4:00 PM that may be of interest to Central Ohio working professionals. These courses start in the Spring semester of 2015 and include Earthquake

KEEP UP TO DATE

Join Our E-Mail List! Stay up to date with current news go to http://centralohioasce.com/e-mail.

Web: www.centralohioasce.com E-Mail: asce@centralohioasce.com

Engineering and Advanced Behavior and Design of Metal Additional information found the may be University's College of Engineering website at https://ceg.osu.edu/graduate.



BOARD MEETING

Our Next Board Meeting Will Be 11:30 AM February 12, 2015 Location: Stantec 1500 Lake Shore Drive, Suite 100 Columbus OH 43204

www.centralohioasce.com

REGIONAL CONTINUING EDUCATION SEMINARS

ASCE's Continuing Education Department is proud to announce the schedule of seminars and workshops for the fall in winter in the Region 3 geographic area. Additional information on these seminars may be found at the following website: http://mylearning.asce.org/diweb/catalog/t/2116/c/79. These face-to-face seminars are comprised of small groups of like-

	minded individuals,		·				
	allowing for	Program	Full Dates	City/State			
	personalized attention from	Design of Concrete Pavements — NEW	November 6—7, 2014	Cincinnati, OH			
	instructors to meet your needs. More	Structural-Vibration Analysis: Design and Troubleshooting	November 19—21, 2014	Chicago, IL			
		Designing Nonbuilding Structures Using ASCE/SEI 7-10 ~NEWLY UPDATED	December 4—5, 2014	Cincinnati, OH			
	Register two or more	Managing the Design Process: Keeping on Schedule, within Budget, and Selecting the Right Resources	December 11—12, 2014	Chicago, IL			
	individuals from the same organization for the same Seminar (title, date, and location) and save 10% on each	Instrumentation and Monitoring Bootcamp: Planning, Execution, and Measurement Uncertainty for Structural and Geotechnical Construction Projects	February 26—27, 2015	Chicago, IL			
		Wind Loads for Buildings and Other Structures	February 5-6, 2015	Chicago, IL			
	seminar registration.	Leadership Development for the Engineer	March 5—6, 2015	Cincinnati, OH			

OUR PROFESSIONAL SPONSORS





EMPLOYMENT OPPORTUNITIES

As a service to our members and colleagues who may be seeking employment opportunities, we have provided links directly to *Human Resources* or *Careers* pages on the company website below. Please click any of the company logos to visit the site. We thank the companies below for their support of the Central Ohio Section of ASCE.



The ASCE National website also provides employment assistance with hundreds of job postings and additional resources. Please click the image to the right to visit the webpage.

OUR PROFESSIONAL SPONSORS

