

June-July 2012

Volume 12, Issue 5

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Enjoy Florida Summers



**ASCE SunCoast
Branch President
Amjid Hussain**

Dear Members and Friends of ASCE

I would like to start the message with a reminder for two very important upcoming events. On August 10th, ASCE SunCoast will hold a Laws and Rules Workshop for Florida Professional Engineers (P.E.) at Sarasota County BOB building. All participants will receive four professional development hours (PDH) of Laws and Rules that are required for biennial P.E. license renewal. Please register on our website <http://ascesuncoast.weebly.com/announcements.html> and help spread the word. More details are provided in the Newsletter.

On August 7th, ASCE the annual P.E. exam review classes will begin. These classes are offered to both members and non-members at no cost. These classes are taught by ASCE SunCoast Branch's qualified professional engineers. Please contact me [\[ahussain@scgov.net\]](mailto:[ahussain@scgov.net]) if you would like to attend.

An update on recent activities:

In May, ASCE SunCoast held annual scholarship golf tournament. The tournament was a

great success. Our VP Gary Downing and committee members deserve appreciation for the success of this event..

Another major event ASCE SunCoast held in May was the final round for the West Point Bridge Design Contest. The contest was held at Riverview High School and the finalists from middle and high school categories competed for cash prizes and a place for the State finals. Our two winners from each category are competing in upcoming Florida Section Annual meeting in Orlando on July 20th.

In June, ASCE SunCoast annual awards were presented to ASCE SunCoast members for their services to ASCE and our profession. We highly appreciate the work of our Branch awards committee. The award winners are listed on our website.

Our next monthly meeting will be on July 26th. Sean Collins from Atkins will present I-4/Selmon freeway interchange project.

Please visit our website to register for Laws and Rules Workshop today. Although the deadline for registration is August 3rd, registration will close once all available spots are filled. Please contact me if you have any questions regarding the workshop.

Thank you for your continued support.

Amjid Hussain, P.E., M.ASCE

July Luncheon Meeting Details

This months luncheon meeting is on Thursday July 26th with **Colin Seaman, P.E.** presenting on the I-4 Connector as our guest speakers.

Starting at 12 noon with registration starting at 11:30 am.

When: Thursday July 26, 2012

Check in begins at 11:30 AM

Where: Derr Dutchman (fka Troyers Dutch Heritage)

Please RSVP: <http://ascesuncoast.weebly.com/monthly-meetings.html>

Upcoming Meeting Information

July 26, 2012

Colin Seaman, P.E.
I-4 Connector

August 16, 2012

Joint EWRI-ASCE Meeting

Dr Lawrence Miller

City Manager, City of Arcadia

July 2013
Sarasota will host
the annual ASCE
Florida Section
Meeting.

Congratulations to Adnan Javed
and Amjid Hussain on successfully lobbying to bring this event to our SunCoast Branch.



Laws and Rules

Professional Ethics

By Dr Charles Glagola, University of Florida

This will be the first of a series of ethics articles that I have been asked to contribute to the Sarasota ASCE periodical. First, let me introduce myself for those who don't know me. I'm Chick Glagola and I teach in the Civil Engineering Department at the University of Florida. I also provide PDH workshops and have given the Laws & Rules class to you guys in Sarasota. As to ethics, I was asked to contribute ethics articles based on my experience, my teaching, and my involvement. Briefly, in the early 90's the teaching of engineering ethics became a requirement mandated by our civil engineering accreditation board ABET. I volunteered to take the lead at UF to develop a course. In this effort, it went to a week-long workshop at Texas A&M where the authors of the textbook I currently use were developing case studies with invited ethics professors from around the country to participate. It was a wonderful experience interacting with the authors and engineering faculty members who had a similar interest in disseminating the value of ethics to undergraduate engineering students. Having been an engineer and a contractor for twenty five years before I went back to teach here at UF, I have a great deal of experience with ethical conduct as well as unethical conduct. Because of my direct experience, I firmly believe that it is important for us to educate our engineers starting as students and then to mentor them in correct professional behavior throughout their career.

In these articles I hope to be able to provide you with an understanding of ethical behavior, why we, as engineers, are expected to conduct ourselves in such a way as to uphold our professional obligations to the public we serve. I intend to use Case Studies and general material from the text (*Engineering Ethics*, Harris, Prichard, and Rabins, Wadsworth, Cengage Learning, 4th ed, 2009) that I use in the course here at UF. I will start out providing a basis for our professional behavior similar to the class that I teach and will always include a case study for you to consider. In this regard, I encourage readers to send me any ethics cases with which they are familiar or even ethical situations in which they may be involved. I will happily include discussions on these if that is something that the readership would like to see; so, let's get started.

If we are to understand our responsibilities as engineers, we need to start with our obligations when we become licensed. The state of Florida (and all other states) control the practice of engineering through Statutes (laws) and administrative rules that hold similar enforcement powers as statutes. These are the "Laws & Rules" requirements that you must meet every two years when you renew your license. Because they are so voluminous most engineers don't often refer to these laws and rules until there is a problem. What we do have that we can easily refer to, however, is our code of ethics. Unfortunately, these codes are guidelines and do not hold the same legal obligations as the Laws & Rules. They are, however, succinct and easily accessible and relatively easily understood. Generally, our code of ethics is the one that can be found on the ASCE website <http://www.asce.org/Ethics/Code-of-Ethics/>. As we will see in future articles that many of the requirements of the Laws & Rules are directly related to our obligations under the code. I guess you could say that, in most cases, if you followed to code, you pretty much have met your Laws & Rules obligation so in my articles we will not be hung up with Laws & Rules, but will deal specifically with our code of ethics obligations. Before someone calls me to task, there are many engineering codes of ethics that we could use. NSPE has a code of ethics, the electrical engineering society has a very good and usable code of ethics, but here, for convenience, we will stick to the ASCE Code of Ethics.

I'll start out by defining three different types of Ethics or Morality that concern us. Most people are only concerned with the first two, but as engineers we must also concern ourselves with the third which is our Professional considerations. The first is what is referred to as Common Morality. This is a set of moral beliefs that everyone is concerned with and that deal with basic human conduct. This morality deals with basic social obligations as not killing, not stealing, not cheating, not breaking promises, etc. Everyone understands these common requirements although not everyone follows them. The second type is Personal Morality. This is the morality that we acquire as personal beliefs through our parents, our peers, our teachers, or generally our environment. Personal Morality defines, more specifically, our beliefs about Common Morality. We may believe that killing is wrong, but we may also believe that abortion is a right although many people believe that it is a violation of Common Morality. The third kind of morality is Professional

Laws and Rules (continued)

Morality or Professional Ethics. This deals specifically with our obligation to the public. These types of ethics concern all professional such as Doctors, Lawyers, Accountants, and us as Engineers. Unlike Common Morality or Personal Morality, our Professional Morality is written down in a Code of Ethics. Generally, we are expected to follow our professional code above our personal code, but not always as long as we are not endangering anyone by doing so. An example would be our obligations to our client or employer as a professional. Say that our client decided to create a new business unit for the manufacture of military hardware and that we have a personal moral objection to the application of our engineering talent to engines of destruction of any sort. Since a decision not to be involved in this client's new venture does not harm anyone, we are allowed to defer our obligation to this client due to our personal beliefs.

Below is a case related to a type of engineering work in which many of you may be or have been involved. I'm going to present the case, which I obtained from ASCE, and the question in these articles and will, in the next article, provide you with the solution to the case based on the Code. Look at your code and see how it might help in resolving this ethical problem.

Situation

Moreover, the expert's own analysis of the case contains marked contradictions. He testified that he had seen "much" cracking and spalling of the roadway, but his own sketch of the roadway indicated only one crack with spalling and that crack was some 250 ft from the point where the plaintiff lost control of his vehicle. The member's initial report attributed the accident to improper roadway maintenance, maintenance that was the sole responsibility of the state department of transportation, an entity protected from litigation through the state's sovereign immunity. Yet the engineer's second report of the accident, drafted less than a month after his first, named poor design and construction as the "sole" cause of the accident.

Despite the many inconsistencies, the expert makes a plausible witness on the stand, and the defendants fear that the plaintiff's injuries will elicit the sympathy of the jurors. Faced with the possibility of an unfavorable verdict, both engineering firms make a settlement offer to the plaintiff. The case is settled, and an employee of the design firm forwards transcripts of the expert's testimony to ASCE's Committee on Professional Conduct (cpc).

Question

Did the engineer's actions in presenting expert witness testimony without a more extensive investigation of the case violate ASCE's Code of Ethics?



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2012 Announcements

Laws and Rules of Professional Engineering Practice in Florida

August 10, 2012

8am to 12 noon

1001 Sarasota Center Boulevard

Agenda

The workshop will be four hours and will be divided into four modules. All participants will receive credit for the 4-pdh hours of Laws & Rules that are required each two years for PE license renewal.

Hour 1: 8:00-8:50

- Introduction
- Review of the process for changing laws and rules
- Review of the FBPE Website

Review of the changes to laws & Rules since the last Workshop

Hour 2: 9:00-9:50

- Break up into teams
- Teams work on solutions to hypothetical legal situations for engineers/contractors

Review of Teams solution

Hour 3: 10:00-10:50

- Presentation of cases that have come before the board
- Teams look up in handouts the applicable laws and rules appropriate for cases

Review of important sections of the Laws and the Rules

Hour 4: 11:00-12:00

Teams to take test on Laws & Rules. Test will be based on work done during hour three and will be a team effort. Teams are free to go upon completion of the test.

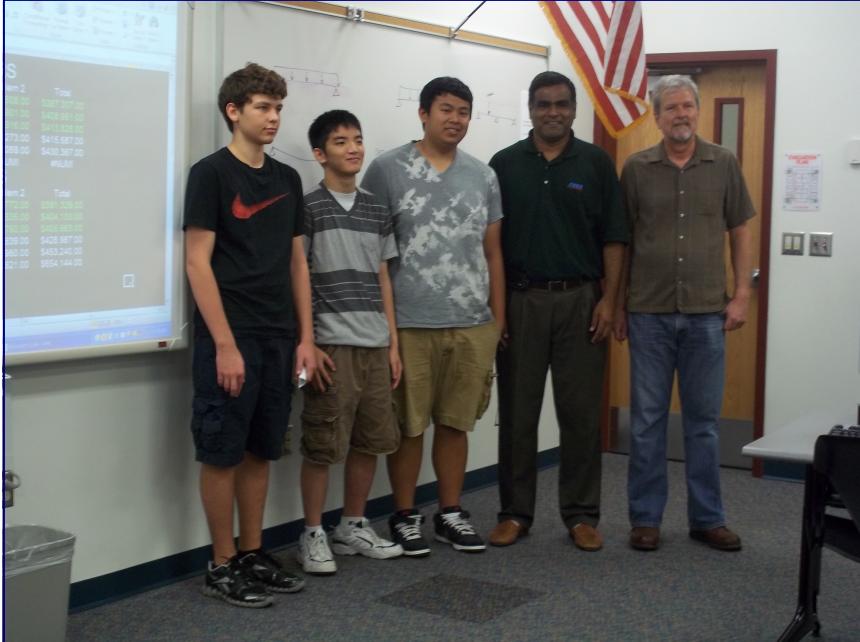
Registration Fee: \$70/person, checks payable to ASCE SunCoast

Registration Link: <http://ascesuncoast.weebly.com/announcments.html>

Instructor: Dr. Charles R. Glagola, PhD., P.E. PDH Provider # 3651

Contact: Amjid Hussain, P.E., ahussain@scgov.net

2012 Awards



ASCE SunCoast Branch
sponsors
Math ACES

in conjunction with the State College of Florida. Top high school senior math students from both public and private schools in Sarasota and Manatee counties are awarded a \$100 cash award. We sponsored 6 students for a total of \$600 to future engineers.

Congratulations

West Point Bridge Winners

Our SunCoast Branch awarded \$500 to local middle school and high school students.



PE Exam Review Classes

ASCE SunCoast Branch is offering a free PE Exam review class. Classes will be held on Tuesdays from 5:30 pm to 7:30 pm at the BOB building (1001 Sarasota Center Blvd) in Conference Room 3 starting August 7th. The classes are taught by local, qualified professionals. Please contact Amjid Hussain, P.E. at ahussain@scgov.net if you would like to attend.

Class Schedule

Aug 7: Test Preparation Overview/
Horizontal & Vertical Curves

Aug 14: Stormwater, Hydrology, Hydrographs, SCS

Aug 21: Geotechnical Eng, Foundations & Retaining Walls, Soil Mix

Aug 28: Water Supply, Pumps, Pipes, Reservoirs, Water Quality

Sept 4: Construction, Scheduling, Engineering Economics

Sept 11: Wastewater Design

Sept 18: Traffic Systems, Intersection Design, HCM, Accidents

Sept 25: Structural Engineering, Steel, Concrete

2012 ASCE SunCoast Executive Board

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ajaved@scgov.net

Please visit
<http://www.ascesuncoast.weebly.com>



Other News of Interest

TOP FIVE NET-ZERO BUILDINGS

By Jon Walton [http://www.constructiondigital.com/top_ten/top-ten-netzero-buildings](http://www.constructiondigital.com/top_ten/top-ten-net-zero-buildings)



1.) The Research Support Facility

The National Renewable Energy Laboratory in Golden, Colorado is home to one of the world's most sustainable buildings. Built in conjunction with the United States Department of Energy, the 360,000 square foot facility is LEED Platinum certified and a showcase for efficiency and renewable energy technologies.

Among the facility's green features is advanced daylighting, electrochromic windows, labyrinth thermal storage, and under-floor ventilation. Outside air is passively preheated via a transpired solar collector on the buildings south-facing wall, while most of the building is made from recycled, locally-sourced materials. Large-scale solar paneling provides all the site's power needs,

At just over \$91 million, the project achieved a remarkable \$254/square-foot cost, and will provide working space for over 1,300 employees – all of whom will be helping innovate the next generation of energy-efficient buildings

2.) Pearl River Tower

One of the most environmentally-friendly skyscrapers in the world, the Pearl River Tower is an enormous step towards sustainability for the Chinese building industry. At 71 stories, it is the largest radiant-cooled office building in the world, and is also one of the most energy-efficient despite its nearly 213,000 square foot sprawl



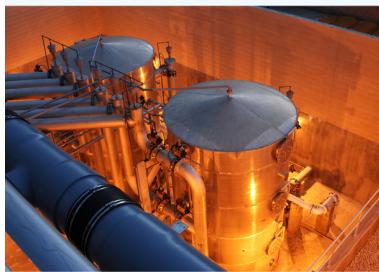
3.) World Wildlife Fund Dutch Headquarters

4.) NYCTech

5.) Pusat Tenaga Malaysia's Zero Energy Office

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