

## **Alumni Spotlight**

**By 1LT Richard Franko**

**Class of 2007**



**1LT Richard Franko (2nd from left)  
with Iraq soldiers**

I am the 3rd Platoon Leader of the 591st Engineer Company stationed out of Fort Campbell, Kentucky. My company is comprised of combat engineers who are trained in route clearance. Route clearance is a very important mission in Iraq because the leading killer of U.S. Forces, Iraqi Forces, and Iraqi civilians are Improvised Explosive Devices. Improvised Explosive Devices or IED's can be anything from a military-grade mortar round with a cell phone and wiring attached to something as complex as homemade explosives attached to an infrared laser in order to be set off by a convoy which passes by completely oblivious to its whereabouts. Route clearance is basically a game of chess. Whatever "Tactics, Techniques, and Procedures" we expose on our patrols, the enemy immediately counters with a new type of IED in order to defeat us. The enemy utilizes everything from cooking pots to animal carcasses in order to conceal IED's.

My platoon of 22 combat engineers is currently operating in the city of Mosul, Iraq, on "Forward Operating Base Diamondback". Mosul is located in northern Iraq and has a population of nearly 2.5 million people. With an extremely high poverty rate, crowded living conditions, and trash everywhere for the enemy to conceal IED's, it is a very volatile area of operations. My platoon arrived in Mosul on the 16th of January. Within the past 30 days we have already accomplished many things.

My platoon was chosen by our company commander to conduct joint route clearance missions with the 2nd Iraqi Army Engineer Regiment located at Al-Kindi Army Base, Mosul. As well, we are tasked to conduct weekly training with the Iraqi's on route clearance techniques and basic soldier and leader skills. The past 30 days have already been some of the most rewarding of my life, and I'm sure the same is true for all of my Soldiers. We have conducted 15 route clearance missions alongside the Iraqi's, including critical missions on the 30th and 31st of January, in order to keep the streets clear of IED's for the Provincial Elections. Voter turnout neared 50% in Mosul, a number that even American's would be proud of.

I hope that all Rose-Hulman Civil Engineering Alumni and Army ROTC Alumni receive this in good health. We will continue to fight to help the people of Iraq, and most importantly the fight to bring our American Soldiers home safely.

## Chairman's Perspective

**By Dr. Robert J. Houghtalen**

There will be a lot of changes in the Civil Engineering (CE) Department next year. Dr. Thomas and I will be gone (see the fall edition of the CE Echoes) which precipitated many changes. Dr. Kevin Sutterer has been selected as the new CE Department Head. His duties will officially begin on July 1<sup>st</sup>. Kevin has been at Rose for over a decade, so the transition will be very smooth. He brings with him some excellent managerial skills and a zeal for the Rose-Hulman mission. In addition, we are in the process of interviewing for a new faculty member in the environmental engineering area. This new faculty member will replace Dr. Thomas in the classroom (as if that is possible). One thing is certain. The CE Department will continue to deliver a top-rated education to all who graduate.

Once again, the Civil Engineering Board of Advisors and the Board of Associates came to campus during the first week in December. The ASCE Christmas banquet is hosted at the same time as a luncheon with Board members. These events are enjoyable and build a sense of community among the Rose civil engineering students, faculty, staff, and alumni. I want to personally thank the Board members who came to campus to review senior design projects and work on curriculum improvements. Those who came are:

Anthony Broadnax	Fred Clayton	Judith Congdon	Chuck Ennis
Pat Goodwin	Laura Hemming	Greg Henneke	Mickey Hines
Pat Martin	David Maxwell	Shelia McKinley	Glen Morrow
David Myers	Steve Roetter	Eric Smith	Jon Stolz
Ralph Wagle	Mike Waldbieser	Roger Ward	David Warder
Martin Wessler			

Our scheduled banquet speaker was Jim O'Brien from ASCE headquarters. Unfortunately, Jim became ill before the event and had to cancel. As a backup, my wife Judy and I spoke to the Board and students about our sabbatical in the Sudan last year. She covered a lot of the cultural aspects of our adventure, and I spoke briefly about the water filter project I worked on with a Sudanese humanitarian organization. The rest of the afternoon was spent with Board members advising students on internships and job offer benefit packages and in focus groups discussing curricular enhancements.

## Mark Your Calendar

May 23, 2009—ASCE Golf Tournament (Tentative) Rea Park Golf Course

May 30, 2009—Commencement

## Senior Design Projects

### Water Supply System in Pakistan

Human Relief Organization

Team: Beller, Berry, Butz, Montiero Silva, and Sliwinski

Coach: Thomas

Approximately 1 mile from the village of Shah Maidan are the four 72" main pipelines which supply water by gravity from a government dam/reservoir in the nearby mountains to the cities of Islamabad and Rawalpindi. The village elders have petitioned the regional Capital Development Authority (CDA) for authority to make a tie-in to one of these large pipelines. Design the branch tie-in of the new water line to Shah Maidan from the government pipelines. Design the branch water line of approximately 1 mile length including steep, rocky terrain. Design a concrete water storage tank (~40,000 gallons) at the top of a hill keeping in mind the resources and labor available regionally in this high seismic zone. Primary areas of civil: water resources, geotechnical, structural.

### East Side Drainage Study

City of Terre Haute

Team: Abram, Gore, Lawhorn, Ross

Coach: Houghtalen

The area on the east side of Terre Haute, bound by Wabash Avenue (US 40) to the north, State Road 46 to the east, Poplar Street to the south and Keane Lane to the west is experiencing numerous problems with storm drainage and sanitary sewer backups. The problem with the area is there are a number of inlets connected to the sanitary sewer that cause backup problems under medium to heavy rains. There are also a significant number of undersized storm pipes in the neighborhood that cause water to pool and damage private property. A drainage study of the neighborhood is being requested for solving the drainage problems within the neighborhood. The study should include several evaluations of alternatives and design considerations. Primary areas of civil: geotechnical, transportation, water resources.

### Fall Creek Dam

Burgess &amp; Niple

Team: Bierman, Hawkins, Jent, Ruiz

Coach: Niezgodna

Veolia Water Indianapolis is the operator of the water system for the City of Indianapolis Department of Water. Burgess & Niple (B&N) has been retained by Veolia to design a replacement to the low-head dam on Fall Creek that provides water to the Fall Creek Water Treatment Facility. This new dam will be about 600-feet downstream of the existing dam to address flow re-routing issues. Determine the dam height and overflow width needed to maintain current water surface elevations for the intake to the Fall Creek Water Treatment Facility. Provide a structural design of the concrete dam considering soils, survey, and hydraulic conditions (i.e., minimize design of a "drowning machine"). Prepare preliminary design and recommendation on potential wetland mitigation. Primary areas of civil: water resources, structural, geotechnical.

### Broad Ripple Crossing Development

HIS Constructors

Team: Cooper, de Pinho Nogueira, Mader, Pinkstaff, Whalen

Coach: Sutterer

Broad Ripple Crossing is a 36.5 acre residential subdivision in rural, northwest Shelby County, Indiana. In an effort to be environmentally conscious, Broad Ripple Crossing will employ green design and construction techniques using the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) as a guide. The proposed subdivision should meet the requirements of a Conservation Subdivision as defined by the Shelby County Unified Development Ordinance which allows for increased home density within a development in exchange for protecting the natural features of property and providing centralized waste treatment in areas where municipal services are not available. This development will incorporate approximately 25 homes sites with access roads, common open space, wastewater disposal, and stormwater drainage. Primary areas of civil: site engineering, geotechnical, water resources, environmental.

## Senior Design Projects (cont.)

### Maintenance Yard Design

Los Angeles County Public Works

Team: Lyman, Mahlan, Rappl, Smith, Toth

Coach: Robinson

Road Maintenance Division is requesting a full site design proposal including plan drawings for rehabilitation of one of the Road Maintenance Field Yard Facilities. The main purpose of re-design of current facilities is to upgrade current pavement conditions with permeable features including but not limited to: permeable pavement design, parking layout (for employee parking and equipment parking), design of covered bunkers for storage of rock, soil, debris w/best management practices in mind, incorporation of structural design for bunker canopy, and design of landscaped areas. Sustainable design is desired in all aspects of the site re-design including but not limited to consideration of on-site rain storage and/or treatment. Primary areas of civil: site engineering, water resources, structural, transportation.

### Warehouse Facilities in Ghana

KNUST (on behalf of Ghana Cocoa Board)

Team: Byrd, Gonzalez, Hochstedler, Mendes, Rousson

Coach: Aidoo

The Ghana Cocoa Board has initiated a scheme to develop and improve Cocoa Storage facilities in Kumasi. The project objective is to build warehousing facilities which will facilitate cocoa export and subsequently lead to improvement in the national economy. The project will require the design of the warehouse facilities, pavement design considering regional materials and construction techniques, parking and traffic planning, drainage, water supply, and wastewater treatment. The team will have access to site information from a student team at KNUST. Primary areas of civil: structural, geotechnical, transportation.

### Solomon's Training Center

New Haven of Hope Church

Team: Corkill, Hester, Ridgway, Woodard

Coach: Hanson

The center will house a full gym, classrooms for life-skills, after-school programs, a library to help adults obtain their GED and help youth with remedial skills and/or tutoring, a computer lab, clothes closet, food pantry with a gardening available for qualifying families (wherein they can grow their own fresh produce), complimented by classes in health, wellness, and nutrition. Therefore, New Haven of Hope is requesting a full site design proposal for Solomon's Training Center, which will to include floor plans, site layout, accessibility, necessary parking facilities, and 3D renderings of what the facility will look like to present to possible funders. Primary areas of civil: site engineering, geotechnical, structural.

## 2008/2009 Hot Mix Asphalt

### Quality Assurance/Quality Control Program

This year marked the twenty fourth year of the Rose-Hulman Civil Engineering (RHIT)/Asphalt Pavement Association of Indiana (APAI)/Indiana Department of Transportation (INDOT) Hot Mix Asphalt Quality Assurance/Quality Control (HMA QA/QC) Certification Program for hot mix asphalt construction in the State of Indiana. The program came about through the diligent efforts of the former INDOT Chief Engineer- Donald W. Lucas, Rose CE, Class of 1959. All HMA contractors performing paving operations on state and federal highways in Indiana must have technical personnel certified through the RHIT-INDOT HMA QA/QC Certification Program. 40 HMA contractors, aggregate producers, material testing laboratory personnel, and consultants took part in the Certification Program this past winter - either a week-long, laboratory session which were held on the RHIT campus or a multi-day recertification program. Since its inception in 1986, a total of 2098 people have enrolled in the HMA QA/QC Program. The program has been widely accepted by the Hot Mix Asphalt paving industry and will be repeated next year.

The HMA QA/QC Program has also allowed us to develop long term relationships with INDOT, APAI, and various hot mix asphalt contractors. This has resulted in a number of students receiving summer internships with government and industry, as well as permanent employment opportunities for graduates. Additionally, APAI has annually sponsored scholarships for two or three of our students. Since 1998, thirty one students have receive financial assistance, including this year's recipients: seniors Jay Bierman (Carlinville, IL) and Zach Smith (Kendallville, IN) and junior Alexandria Kowatch (Tinley Park, IL).

## ASCE Student Chapter Update

By Brad Pease

The Cecil T. Lobo Chapter of ASCE has had a great start in 2009, with a smooth transition of newly elected officers. The new officers are President Jon Seger, Vice President Corbin Clow, Secretary Brad Pease, and Treasurer Cole Perry. The first activity of the year was the ASCE Workshop for Student Chapter Leaders (WSCL). President Jon Seger deferred from attending again, as he had already participated in the 2008 WSCL in Baltimore, MD; but Corbin Clow, Brad Pease, Cole Perry, and 2010 Great Lakes Conference Chair Bill Crosby joined Chapter Advisor Dr. Sutterer on the trip to Cherry Hill, NJ. WSCL provided a great opportunity to form goals and inspire new ideas that will keep the success of our chapter strong. At the event, the chapter was recognized one more time for winning the 2008 Ridgway Award and the first Richard Scranton Community Service Award.

The February monthly meeting was a presentation by J. Riley Edwards, lecturer from the University of Illinois at Urbana-Champaign about the future of railroad infrastructure. The railroad industry is strong and there is a coming need for more civil engineers to address likely expansion of the rail network. The presentation was very interesting and exposed students to a field of civil engineering that they do not often get to hear about.

ASCE has scheduled this year's Fundamentals of Engineering (FE) Review Sessions for March and early April as graduating seniors prepare for the Fundamentals of Engineering Exam in late April. Rose-Hulman students consistently do very well each year on the FE exam.

The student chapter plans to again attend the Great Lakes student conference, held this spring on April 3rd and 4th at Notre Dame University. Next year, Rose-Hulman will be hosting the conference, so we will be watching and learning from our friends at Notre Dame during this year's event.

The chapter asks that our alumni and other friends watch for announcements for our annual golf tournament for charity. The tournament is held on a Saturday in May at Rea Park golf course here in Terre Haute. The event is always well attended and we are hopeful for another great fundraiser. We expect to be sending out more information about the tournament soon.

## Thanks To Our Donors

Civil Engineering alumni continue to be generous with their gifts to Rose-Hulman. Those alumni who have donated this past three months to the Institute and designated that their gift should go to the Civil Engineering Department include:

David J. Elmer (1983)

Arthur P. McLaughlin (1967)

Richard R. Roll (1981)

Leon R. Goble (1971)

Stephen W. Meier (1974)

Philip K. Salitros (1975)

James A. Jacobi (1995)

Raymond H. Naras (1952)

Mark W. Young (1994)

*Note: If we missed your name, email [Kathy.Nicoson@Rose-Hulman.edu](mailto:Kathy.Nicoson@Rose-Hulman.edu) and we will include you in our next CE Echoes.*

## Alumni Highlights

**JOHN LUEKEN (1987)** relocated to southern California last September to lead McDonald's real estate and construction team.

**RENEE SCHWECKE (1998)** won the ASCE Edmund Friedman Young Engineer Award for Professional Achievement. Congratulations Renee!

**KIRK MYERS (1999)** is stationed in Italy and working as a logistics officer. When we heard from him in November he was a Captain and reported he was about to be promoted to Major. He's been in the Army a little over nine years and has been to England, Honduras, Korea, Italy, Germany and Afghanistan on various assignments. In September he got married to an Italian lady named Erika. Congratulations to Kirk and Erika!

**ERIC HAENLEIN (2000)** and his wife welcomed Audrey Elise into their family on November 3, 2008. Big brother Ethan turned 3 in August. Congratulations to the whole family.

**JARET GAITHER (2002)** took a new position with E. Roberts Alley & Associates, Inc. in Johnson City, Tennessee as a senior engineer.

**SHAD SCHOPPERT (2002)** and his wife Anna are excited to announce after 12 years of marriage that they are expecting their first child October 2<sup>nd</sup>. Congratulations to Shad and Anna!

**MATT HORNE (2004)** reports he is moving to California with Kimley-Horn and Associates, Inc. He will be working in the same office as **Zach Johnson (2006)**.

**CARRIE WILEY (2005)** reports that **NATHAN STEVENSON (2002)** was awarded Employee of the Month for December at LA County Public Works.

**CASSIDY SUTTON (2006)** is engaged to be married on April 25<sup>th</sup> of this year. Her and her fiancé Tyler, are building a log home. Congratulations to Cassidy and Tyler.

**WILLIAM KENNY (2007)** is at the Ali Air Base in Iraq. In November he reported he had about 5 months left... stay safe!

**NATE BLOSS (2008)** reports he has been in Africa (Namibia) since the first of November. He is learning to speak Oshindonga and basic African. He is in a small village in the North teaching Math. Good luck Nate!

### KEEP IN TOUCH

We are always interested in how our alumni are doing. Let us know about you! Keep in touch by e-mailing us at [Kathy.nicoson@rose-hulman.edu](mailto:Kathy.nicoson@rose-hulman.edu) with your current contact information and what you are doing.