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LDDI Bridges
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*Land Development
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Summer greetings from Virginia Tech! While the mercury continues to climb and campus has a quiet, laid back feel, a storm of excitement and energy is brewing on the horizon. Indeed, in just over a month thousands of students will descend on Blacksburg for the start of the 2015 fall semester. Now entering our ninth year, this fall LDDI will be offering three courses – CEE 3274, Introduction to Land Development Design, CEE 4264 – Sustainable Land Development, and CEE 4274 – Land Development Design. All three continue to remain very popular course offerings among our students, and demand to get into them has never been higher. Outside of the classroom, LDDI has a number of exciting activities planned for this fall including student club service projects, land development career night, a football viewing party, and other fun and educational activities.

On July 24th, LDDI will host its annual summer meeting in Richmond. This is the first assembly of LDDI's general membership since our meeting in Arlington on a cold morning back in January. These semiannual meetings provide an opportunity to showcase our students, update our industry partners on program activities, and discuss topics that impact the land development industry. This summer's meeting will feature six guest speakers, who will talk about the challenges and lessons learned during the first year of implementation of Virginia's new stormwater management laws. Attendees will be awarded two PDH credits.

I hope you will enjoy reading this edition of our newsletter and learning more about the people and companies that enable LDDI and Virginia Tech to offer the most comprehensive land development curriculum in the entire country. As always, I welcome your feedback on how we can continue to build LDDI!

Dr. Randy Dymond, PE, VT LDDI Coordinator

Ongoing Curriculum Enhancements

by Kevin Young

Over the past nine years, LDDI has grown from a single, elective land development course to now include a total of five individual courses, with six course sections offered each academic year. While "traditional" civil and environmental engineering focus areas boast an abundance of textbooks and other learning materials, land development design is an evolving topic with limited educational resources, particularly those targeted specifically to undergraduate students. As the LDDI curriculum grew, so did the need for the "in-house" creation of these resources. The development of courses such as Introduction to Land Development Design, Sustainable Land Development, and Municipal Engineering, in particular, has resulted in a myriad of newly developed learning resources now available to LDDI students. One such learning resource is Civil 3D video tutorials specifically tailored to land development design applications.

Although numerous civil design software programs exist, one of the most popular in the land development design industry is Autodesk's Civil 3D. Civil 3D is used extensively in several LDDI courses, and always in the context of a design aid – not as drafting tool or a substitute for engineering knowledge. In an effort to help our students gain proficiency in Civil 3D while limiting the amount of classroom time allocated to the topic, LDDI produced a series of Civil 3D video tutorials. These tutorials cover topics such as basemapping, creation of roadway alignments and profiles, site grading, and many others. Since these videos were first deployed to students in the fall 2011 semester, feedback has been overwhelmingly positive. This summer, LDDI is working to update these videos using the most recent Civil 3D version, and to improve and expand upon the videos' content. Rising senior Lauren Cetin is one of two students currently working on updates to the Civil 3D video tutorials and said, "As a student in CEE 3274 and CEE 4274, I found the Civil 3D tutorials to be an extremely valuable learning resource. As I work on updating these tutorials, I want to make them even better so that the next generation of LDDI students benefits from them as I have." We are excited to release these new tutorials to students this fall!



Bohler Engineering is providing numerous services for two redevelopment projects in Old Town, Alexandria.

Bohler Engineering Delivers Services to “Not So” Old Town, Alexandria

edited by Kelly Shayne Young

Bohler Engineering is proud to play a significant role in two large-scale redevelopments in Old Town, Alexandria. Robinson Terminal South and 500/501 North Union Street, currently two industrial warehouses, will be transformed to add luxury housing units, a hotel, retail shops, fine dining, and parking to Old Town. In addition, both developments will highlight the beloved Potomac River waterfront, adding an entirely new landscape plan with a walkable promenade and a reconditioned pier, new benches, and sophisticated public art. They will also provide public access to the waterfront in an area that is currently closed off.

The new developments will remain in compliance with the historic nature and feel that Old Town provides, while generating an upscale, elegant experience, significantly increasing the number of residents and enhancing the already popular tourist destination. Robinson Terminal South and 500/501 North Union Street are projected to be complete by 2018.

Robinson Terminal South is a proposed multi-block, mixed-use development. The plans call for 26 luxury townhouses with elevators, up to 70 condominiums, and a new restaurant. It includes a walkable waterfront promenade with new seating and wider sidewalks. The project is anticipated to be LEED certified. Bohler Engineering is providing site civil and consulting engineering, permitting, and land surveying services.

500/501 North Union Street is a two-building, mixed-use development encompassing 240,000 total square feet. 500 North Union includes nearly 30 new condominiums, 125 hotel rooms, ground floor retail, and below-grade parking. 501 North Union features 48 condominiums, also with ground floor retail and below-grade parking. It will also include a brand new pavilion, leading to the promenade and breathtaking views of the Potomac River. Both buildings are also anticipated to be LEED certified. Bohler Engineering is providing site civil and consulting engineering, permitting and land surveying services.



Kimley-Horn provided numerous services for the recent demolition and redevelopment of the Palm Beach Mall into Palm Beach Outlets and Marketplace at the Outlets.

Kimley-Horn Lends Services to Outlet Mall and Marketplace Development in West Palm Beach, FL

edited by Kelly Shayne Young

In 2011, the 86-acre Palm Beach Mall located in West Palm Beach, FL, was acquired by Palm Beach Mall Holdings, LLC, composed of New England Development, Eastern Real Estate, LLC, and Lubert-Adler. Kimley-Horn was retained to provide due diligence, transportation planning/traffic engineering, civil engineering, permitting, and construction phase services to redevelop the site into Palm Beach Outlets and its accompanying retail shopping center, Marketplace at the Outlets.

Kimley-Horn was tasked with addressing a number of complicated issues, the most critical of which was stormwater management/treatment. The firm's civil engineering team worked extensively with both the South Florida Water Management District (SFWMD) and the City of West Palm Beach to develop a solution to address required compliance with current stormwater regulations without compromising the development intensity vested for the site by its historic use. That solution is an entirely underground stormwater treatment system

that provides 150% of the typically required water quality treatment. Composed of nearly 5.6 miles (29,700 linear feet) of exfiltration trench, it is the largest project application of this system type in the United States. Professionals from 17 Kimley-Horn offices across the U.S. collaborated to provide the wide-ranging civil engineering services required for the successful completion of this major redevelopment project.

The 460,000-square-foot outlet mall, 300,000-square-foot marketplace, and outparcels resulting from this extraordinary urban redevelopment effort will be a significant revenue generator for the city, a source of jobs for the community, and a shopping destination for the region for many years to come. Palm Beach Outlets opened on February 14, 2014, drawing more than 200,000 shoppers during its grand opening weekend and one million visitors within the first month of opening. The accompanying retail center, Marketplace at the Outlets, opened in late 2014.

Who We Are: Kevin Murray– President, Tri-Tek Engineering

Each issue of *LDDI Bridges* focuses on Advisory Board members who make LDDI happen.

Kevin is one of Tri-Tek Engineering's founders and serves as the firm's president. He is one of LDDI's newest advisory board members.

What is your specialty within the civil engineering field?

I've always had an affinity towards the environmental aspects of the land development process. I enjoy applying those concepts early in the project planning process and working closely with our clients to help their vision take shape as the design process evolves.

What attracts you to land development?

Civil engineering is rewarding because there is tangible feedback to our efforts. We get to see the constructed results of our designs and how they become useful elements of our daily lives.

Please mention the highlights of your career?

Academically, I will always be thankful for the guidance and encouragement provided by the engineering professors at Virginia Tech; professionally, I'll always remember the first plan I signed and sealed as a milestone accomplishment. Starting Tri-Tek Engineering has certainly been the

major highlight of my career that has led to many memorable projects with both our private sector and government agency clients.

What motivated you to become involved with LDDI?

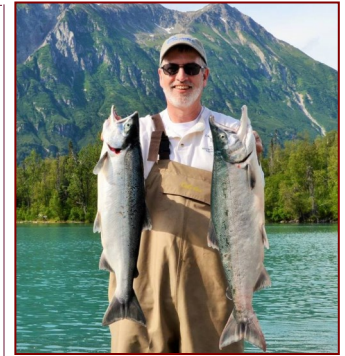
The idea of helping Virginia Tech produce civil engineers that are better prepared for the demands and expectations of the Land Development industry was enticing, and the sincerity of Randy and Kevin's efforts to help their students succeed is very motivating.

What do you think are the strengths of this program?

The program is successfully blending the theoretical aspects of civil engineering with the practical requirements of the land development industry. That success is initiated through the LDDI curriculum and is strongly reinforced by the engagement of land development professionals in the mentoring and internship programs.

Could you please share a few of your personal hobbies and/or interests?

I enjoy fishing and seeing new places. Combining those two activities, like my recent trip to Alaska, is the ideal combination!



"I enjoy applying my engineering experience to helping others through volunteering with local community programs and non-profit organizations. On a much more personal note, I've participated in three mission trips to Guatemala helping to improve the health and living conditions in remote villages by constructing water filters and building houses. Teaching the kids in the villages to shout "Go Hokies!" has been a highlight of each trip." - Kevin Murray– Tri-Tek Engineering Co-Founder and President

LDDI Graduates in the Industry: Greg Schmitt

Kimley-Horn Civil Engineering Analyst

by Kelly Shayne Young

Hailing from Ocean City, NJ, former Hokie Greg Schmitt landed in Virginia Beach, VA, after graduating from Virginia Tech in May 2014. He began working at Kimley-Horn & Associates, Inc. immediately following graduation and currently serves as one of the firm's civil engineering analysts.

While a student, Greg took advantage of LDDI's course offerings, namely Intro to Land Development Design, Sustainable Land Development, Municipal Engineering, and Land Development Design. "These courses, particularly the senior design course, provided a great deal of direction, interaction, and insight to the land development industry," he explains. "Land Development Design truly provided a sturdy foundation for me to build upon as I began my career as an engineer." Long before he entered the senior design classroom, Greg was hooked on land development by the intro class, which taught him about the industry, basic design calculations, and overall design considerations in preparation for later LDDI coursework.

Although he has successfully transitioned from college student to practitioner, Greg is still learning. As any student or professional must, he continues to listen and ask questions in order to become an expert on the constraints of each project. While working on site developments along the Virginia Beach Oceanfront, he has employed these skills in order to effectively communicate and coordinate with not only City staff, but also residents, utility companies, and a Resort Advisory Committee that oversees all developments at the Oceanfront. "Much of the industry is based around design and consulting," says Schmitt. "In both cases, it is imperative to be a good listener and to ask questions, to learn from previous mistakes or successes."

Greg may miss his walks around the Drillfield at Virginia Tech, but he now spends his free time surfing, wakeboarding, hiking, playing soccer, and building furniture.



"LDDI's mentoring program is unmatched by other programs in that it provides extensive interaction with industry experts, Professional Engineers, project engineers, fellow students, and professors." - Greg Schmitt, Kimley-Horn Civil Engineering Analyst

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LDDI Students are Recognized

by Kevin Young

Those of us involved with LDDI have a hard time hiding the pride that we feel when our students succeed in the classroom (and beyond!). In April, and for the first time, the LDDI Advisory Board decided to recognize some of the truly exceptional students in the program. On the last day of spring semester classes, Dr. Randy Dymond and Kevin Young presented the following student awards. Please join us in congratulating these outstanding students!

Hokie Stone Award: This award will be given annually to the LDDI student who is as solid as its namesake – a team player whose leadership and motivational skills elevate the performance of all those around him. This year's winner was Joe Whartenby, a 2015 graduate now working for Dewberry in their Lanham, Maryland office.

Hokie Spirit Award: This award will be given annually to an LDDI student whose pride in Virginia Tech knows no bounds. While juggling a demanding CEE course load, Gwen Elwood has served two years as Drum Major for the Marching Virginians, as the Director of Relations for the Student Engineers' Council, and is a student ambassador for the College of Engineering. This spring, Gwen also completed CEE 4274 and is working as an intern with Bohler Engineering in their Sterling, Virginia office.

Leadership in Sustainability: The Leadership in Sustainability award will be given annually to recognize an LDDI student with a commitment to sustainability as it relates to land development design. For the past year, Mike Roselius served as the President of the Sustainable Land Development Club. During his time guiding the SLDC, he worked extensively on the club's various service projects. Mike graduated this semester, and is now working for GORDON in their Chantilly, Virginia office.

Ut Prosim Award: The Ut Prosim award will be given annually to an LDDI student who embodies the Virginia Tech motto "That I May Serve." Over the past year, Dylan Hale has worked countless hours in his role as SLDC Service Project Coordinator. Dylan has also been successful in recruiting other students to participate in the SLDC's various service projects. Dylan is interning this summer for Dewberry in their Orlando, Florida office.

CEE 4274 Female Student of the Year: This award will be given annually to the exceptional female student in the fall and spring offerings of CEE 4274. For Lauren Cetin, handling one demanding LDDI course at a time was simply not enough. During the spring semester, Lauren took CEE 4274 and 4284 (Advanced LD) simultaneously, and excelled in both courses. Lauren is interning with Gay & Neel this summer in their Christiansburg, Virginia office.

CEE 4274 Male Student of the Year: This award will be given annually to the exceptional male student in the fall and spring offerings of CEE 4274. During the fall 2014 semester, Eric Lemieux was a member of a student design team mentored by Chuck Fitzgerald of Bowman Consulting. Eric graduated this semester, and has just begun his career with Land Design in their Charlotte, North Carolina office.

At this year's award ceremony, we also recognized Jessie Hekl, who over the past two years has served as a GTA in multiple LDDI courses, as well as serving as the student representative to the LDDI Advisory Board. This spring, Jessie successfully defended her Master's thesis, and is set to begin her career with Bowman Consulting in their Denver, Colorado office.



Eric Lemieux receives the 2015 CEE 4274 Male Student of the Year Award.