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In this issue:

- LDDI Coordinator recognized for outreach efforts (p. 1)
- New developments come to Maryland (p. 2)
- A recent graduate and an LDDI Board member reflect on the past and present (p. 3)
- Washington, D.C. and Virginia Beach residents will soon enjoy new mixed-use and recreational facilities (p. 4)

LDDI Bridges is a publication of Virginia Tech's *Land Development Design Initiative*

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Warm summer greetings from Virginia Tech! I hope this newsletter finds you enjoying the pool, vacation, cookouts, and everything else that summer has to offer. The quiet, laid back feel of campus during the summer months provides us with a great opportunity to reflect on the success and achievements of the previous academic year, while planning for the next wave of students who will arrive in Blacksburg in just a few short weeks. This fall, LDDI will be providing four course offerings to Virginia Tech CEE students – CEE 3274, Introduction to Land Development Design (2 sections), CEE 4264, Sustainable Land Development, and CEE 4274, Land Development Design. Outside of the classroom, LDDI has a number of exciting activities planned for this fall including student club service projects, land development career nights, football viewing parties, and local field trips.

On July 21st, LDDI is hosting its summer meeting in Richmond. The meeting will feature presentations by student design teams from the spring 2017 semester, an update on the current state of the program, and guest speakers from the Urban Land Institute and HH Hunt. As with all LDDI general membership meetings, attendees will be awarded 2 PDH credits for attending.

I hope you will enjoy reading this issue of our quarterly newsletter. As always, I invite your feedback and ideas on how we can grow the LDDI program and ensure that Virginia Tech continues to set the standard as the national leader in undergraduate land development design education.

Dr. Randy Dymond, PE, VT LDDI Coordinator

LDDI Coordinator Receives Prestigious Outreach Award

by Kevin Young

In April, LDDI Coordinator Dr. Randy Dymond was selected as the 2017 recipient of the university's Alumni Award for Outreach Excellence. With support from the Virginia Tech Alumni Association, the Alumni Award for Outreach Excellence is presented annually to recognize outstanding contributions by a Virginia Tech faculty member who has extended the university's outreach mission throughout the Commonwealth, the nation, and the world. The prestigious award recognizes Dymond's efforts over the past decade, including first identifying a need for improved undergraduate land development design education and then working tirelessly to ensure that the LDDI program not only addressed that need, but did so with substantial input from professionals in the land development industry. Under Dymond's direction, the LDDI program has grown to include a general membership of nearly 800 individuals representing more than 100 organizations.

Jeff Gilliland (Principal – J2 Engineers) put forth Dymond's nomination for the award, and his submittal packet included letters of support from numerous LDDI affiliates, including Jeff Lighthiser (CEO/President – Draper Aden Associates), who stated, "Partnership with private businesses may be an established approach for some university departments. However, it was not common practice in 2006 in the land development sector. Virginia Tech's LDDI program was the first in the nation to create a partnership with land development companies and to establish dedicated coursework to address the needs of these companies. The program has allowed both private and public sector industry to develop strong ties to Virginia Tech students and faculty, and has inspired many to give back to their profession and their alma mater. Dr. Dymond has been a driving force behind the LDDI program and is certainly worthy of the recognition this award brings."

Dymond will be formally recognized at a university ceremony to be held in September.



LDDI Coordinator Dr. Randy Dymond speaks to attendees at the spring '17 outreach road show in Charlotte, NC.



Under Armour's Global Headquarters will boast a 50-acre campus along the Port Covington waterfront.

Photo credit: Bohlin Cywinski Jackson Architecture

Kimley-Horn Highlights Teamwork Throughout Under Armour Global Headquarters Development

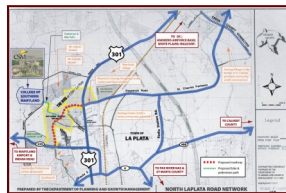
edited by Kelly Shayne Young

Selected in June 2016, Kimley-Horn will oversee the company's phase one master plan of the brand-new Under Armour Global Headquarters in Baltimore, MD by providing planning, civil, structural, transportation, electrical, environmental, and water/wastewater services. This isn't just any corporate campus—the exciting, new site will use cutting-edge technology to help visitors navigate the campus, be multimodal friendly, and reduce potable water consumption by 80%. To meet this ambitious goal, Kimley-Horn has partnered with specialized subconsultants to integrate into the design a geothermal element known as the Bay Heat Exchange System. This will not only save money and energy by more efficiently heating and cooling the buildings, but it will also clean the Middle Branch of the Patapsco River and strengthen the local ecology.

With a business based on helping athletes and teams succeed, Under Armour's headquarters design is focused on people—

both employees (aka teammates) and customers. As a result, employees participate in focus groups to help lead the design of the facility to ensure their voices are heard. Kimley-Horn believes that its people-centered focus and emphasis on giving its employees the opportunities and resources to flourish makes the firm the ideal partner to help with Under Armour's important next step.

Kimley-Horn's Baltimore office is located less than two miles from both the current and future Under Armour headquarters locations. The firm brings Under Armour the local knowledge the Baltimore office provides, combined with resources from the firm's Virginia Beach water/wastewater group, the Northern Virginia transportation team, and regional partners in Atlanta. As the design process continues, the project will leverage the firm's structural and electrical engineering partners as well, leading to a truly multidisciplinary team effort.



The HUB at CSM/La Plata will enhance the identity of several communities and serve as an emerging business and residential center in the region.

ATCS Lends Expertise to The HUB at CSM/LaPlata

by James W. Whitehead (VT Class of '69)- ATCS Vice President, Land Development

The HUB at CSM/La Plata is a walkable, bikeable mixed-use community infill development that extends Rosewick Road to connect to MD 225, linking Charles County, MD to the College of Southern Maryland and the Town of La Plata. The road begins at the intersection of 301 and Rosewick Road and proceeds westward through The HUB, an urban mixed-use community of 435 acres comprised of five neighborhoods.

The serpentine roadway design is a careful balance between good transportation design, environmentally sensitive stream crossings, the need to save mature hardwood forests, and also serve the people of the Town of La Plata and Charles County.

ATCS PLC, in support of owner/developer Hawthorne Rosewick Associates, LP, has provided the primary design with assistance from a highly talented team of professionals including Seth Harry and Associates, Inc. With an estimated cost of \$14 million, the roadway connects five neighborhoods offering 1,500,000 SF of office space, 1,100,000 SF of retail space, 200,000 SF of hospitality service, 2,300,000 SF of residential/hospitality product, and 700,000 SF of residential/institutional development.

In the process of defining the roadway corridor, every opportunity was taken to adopt environmentally sensitive stormwater management control techniques, requiring a

design that relied heavily upon grass swales, gravel wetlands and other microscale environmental design techniques. ATCS formed a partnership with EnviroProjects, LLC (Aaron Keel) and, together, approached the complex approval process. ATCS designed 1,150 feet of stream mitigation featuring 18 low-flow weirs, cobblestone streambed in-fills, boulders/stone divergent dikes, cutback slopes, bank modification with root wad stabilization, and modifications to stream alignment and channel.

On May 1, a construction permit was issued for the three stream crossings, thus creating the opportunity for the project to proceed to construction. The project is scheduled for construction in 2018 and will be home to a major GSA entity, numerous retail and commercial interests, and the workplace for a great many people in Charles County. The project uniquely offers:

- Mass grading to minimize environmental impact of 3 stream crossings
- Project provides virtually adjacent distributed offices with places to live.
- Environmentally sensitive mixed use residential/commercial/retail on 435 ac.
- Project saves over 50% of the site in forest and sensitive stream corridors
- Project creates 20,000 jobs and provides for 2,000 places to live

Who We Are: Lance Kilby - Director of Engineering, Burgess & Niple, Inc.

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

Lance currently serves as Director of Engineering for Burgess & Niple's Northern Virginia operations. He has been involved with LDDI since 2009, teaching classes, mentoring students, and now serving on the Advisory Board.

What is your specialty within the land development industry?

Land development engineering from the initial feasibility study through construction.

What attracts you to land development?

I enjoy the technical components of the various projects, and helping his clients meet their goals. I also enjoy developing relationships with peers and clients that last well beyond the projects, and taking an active role in the landscape of our communities.

Please mention the highlights of your career?

I have been an instructor and peer reviewer at Engineers Surveyors Institute (ESI) where I received recognition for quality plan preparation and as a senior instructor. I am a member of NAIOP, NVBIA, and ICSC, serving on various committees and as a past local chapter

president for NVBIA. I have more than 30 years of experience in the industry and have designed/managed multiple projects from Delaware to North Carolina throughout the Mid-Atlantic region.

What motivated you to become involved with LDDI?

I enjoy the training and relationship components of my job, and helping students learn and grow in the engineering industry is a great thing for our future.

What do you think are the strengths of this program?

The ability for students to be mentored by seasoned professionals and the interaction between them is unlike most other programs. It is vital to the program's success to give the students real life experience prior to them obtaining their first job.

Could you please share a personal hobby or interest?

I enjoy traveling and, within the last two years, visited Yellowstone, the Grand Canyon, and recently Alaska where I saw glaciers and a Grizzly bear. Next year I plan to travel to Italy and Sicily where my wife's family was from.



"From teaching a few LDDI courses to mentoring students within the program, I've seen firsthand the unique experience and preparedness LDDI graduates bring to the industry immediately following graduation." - Lance Kilby, Burgess & Niple Director of Engineering

LDDI Graduates in the Industry: Jessica Hekl

Bowman Consulting Design Engineer

by Kelly Shayne Young

Hailing from Northern Virginia, Jessica Hekl made the same decision many of her classmates made after high school and became a Hokie. Having earned both a bachelor's and master's degree in civil engineering from Virginia Tech, Jessica's pursuits in the land development field have taken her 1,500 miles west to Golden, Colorado, where she currently serves Bowman Consulting as a design engineer.

While a student at Virginia Tech, Hekl utilized the curriculum options made available by the LDDI program to prepare herself for the transition from student to practitioner. She took almost every class offered through LDDI and was well prepared for her position at Bowman. "I have used several things I learned in class at my job, especially from Land Development Design and Advanced Land Development," explains Hekl. "I felt like I had a leg up from other new hires who did not have access to those types of classes. I have even been able to teach a few

coworkers some of the Civil 3D skills I learned in school."

During the past two years with Bowman, Jessica has acquired and honed new skills, learning along the way that preparation, research, and creativity can be the keys to any successful project. "The main project I worked on was one of the largest mixed-used developments in the country located in Castle Rock, Colorado," she says. "While working on a variety of projects for our Winter Park office, including a distillery, brewhouse, campground, and ski resort plaza, I've learned the importance of brainstorming solutions for the challenges of each project, as well as being able to justify every design decision."

While she misses the flexibility that comes with being a college student, Hekl manages to make time for snowboarding, rock climbing, backpacking, and throwing pottery. Last May, she, along with her sister and boyfriend, mountain biked 100 miles on the West Highland Way trail in Scotland.



"I strongly believe that every student in the LDDI program has a significant advantage over graduates from other universities; by graduation, they already understand the design process, are proficient in Civil 3D, gain essential experience working on a team, and have a close connection with industry professionals." - Jessica Hekl, Bowman Consulting Design Engineer

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LDDI Bridges July 2017

Bohler Lends Services to Half Street Development in the Heart of Washington, D.C.

edited by Kelly Shayne Young



The Half Street development promises to create a unique experience for Washington, D.C. area residents and visitors.

2019.

Bohler's role is to help create a pedestrian-friendly section of Half Street by providing a street layout plan to support the overall design, a utility plan, and utility profile plan. This included proposed storm drain profiles associated with the implementation of the stormwater management design, as well as a complete District Department of Transportation (DDOT) public stormwater management design required under the new D.C. stormwater management regulations, which shows locations of the bio-retention and landscape areas along with specific media and ponding depth elevation.

Clark Nexsen Helps Reinvent VA Beach's Marshview Park

edited by Kelly Shayne Young

In partnership with the City of Virginia Beach and Virginia Beach Department of Parks and Recreation, Clark Nexsen is part of a team that is reimagining Marshview Park as a welcoming outdoor space for surrounding residential neighborhoods. Once an underutilized area by the Rudee Inlet, the land was acquired by Naval Air Station Oceana in 1983 and in recent years given to the city for use as a public park.

To create a space that meets the needs of local residents, a substantial community involvement effort was undertaken throughout the design process, providing opportunity for initial input and rounds of feedback on the resulting design. It was important to both the city and area residents to keep the park area as natural as possible while creating a usable recreation space. Clark Nexsen's civil engineering team worked with geotechnical, environmental, and landscape architecture partners to develop a design that responded to this requirement. The development of Marshview Park is taking place in two phases. Phase 1 will include an eight-foot wide paved trail, fenced-in dog parks, a multi-purpose playing field, and two new parking lots. Picnic shelters, benches, a playground, and a restroom facility are planned for future development within the park. Associated landscaping, aesthetics, stormwater management, and other infrastructure improvements will also be provided.

The Marshview Park Phase I project recently received an Envision Silver award from the Institute for Sustainable Infrastructure (ISI) and is only the second project in the Commonwealth of Virginia to earn an Envision sustainable infrastructure rating system award. Envision is a verification that recognizes infrastructure projects for the maintenance of natural areas, sustainable elements, and the use of local resources and materials. Clark Nexsen is a charter member of ISI and has supported the Envision rating system since 2012 when it was launched. The firm provided pro-bono service to the City of Virginia Beach in the pursuit of the Envision verification.



Marshview Park will offer new recreational and environmental benefits to City of Virginia Beach residents and visitors.