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While Virginia Tech's Blacksburg campus grows quiet over the summer months, the Land Development Design Initiative continues to thrive. The Advisory Board recently held its quarterly meeting in Blacksburg and was excited to welcome two new members to the board, Adele Schirmer with the Town of Blacksburg and James Patteson with Fairfax County. I also want to give a warm welcome to our newest sponsors: Patton Harris Rust & Associates (platinum level) and McKim & Creed, P.A. (gold), and Vanasse Hangen Brustlin, Inc. (gold).

In an ongoing effort to expand course offerings for our students, LDDI's Curriculum and Course Enhancement committee worked to develop two new seminars held for the first time this spring, Introduction to Land Development and Sustainable Land Development. These one-credit seminars gave students an opportunity to discover some of the key topics facing land development professionals today.

In this issue of LDDI Bridges, you can read about the latest efforts of LDDI and some of our sponsors. We welcome you to also check out our website at www.lddi.net, where you can read about innovative land development projects and various LDDI events and happenings. As always, I hope you enjoy this issue of our newsletter and let me know how we can make it better.

Best wishes for a safe and enjoyable summer!
Randy Dymond, VT LDDI Coordinator

LDDI course introduces students to sustainable land development

by Kelly Young

With society's increasing focus on sustainability, land development engineers must balance client requests with government regulations while also striving to minimize the negative environmental impacts and ecological stress so often associated with land use intensification.

To educate future professionals on these important topics, LDDI offered a one-credit seminar on sustainable land development during the spring 2008 semester. The course was co-taught by Randy Dymond, Kevin Young, and Meredith Jones and featured a number of guest speakers and site visits.

Instructor Meredith Jones manages the design and construction processes for several developments in Roanoke and Blacksburg and is committed to sustainable land development practices. "In addition to employing innovative designs to preserve our natural ecosystems," explains Meredith, "industry professionals are also considering



Meredith Jones at the entrance to The Village at Tom's Creek, a site toured by the class.

the 'livability' features of sustainable development."

With enrollment open to any major, the seminar allowed students from varying academic backgrounds to learn the latest

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"My education was invaluable, but my internship ultimately steered me toward a career in land development. Students at Virginia Tech are fortunate to have an opportunity like the LDDI, which can help them prepare for a successful future in land development." - Ashley Stafford, P.E., Paciulli, Simmons & Associates Project Manager

Career Spotlight: Ashley Stafford, P.E., Paciulli, Simmons & Assoc. *Education, internships lead to career in land development*

by Kelly Young

With a civil engineering degree from the University of Virginia and five years of experience under her belt, Project Manager Ashley Stafford still gets a thrill from seeing her projects come to fruition.

Hailing from Williamsburg, Va., Ashley headed north to the Leesburg-based firm Paciulli, Simmons & Associates soon after graduation in 2003 to begin her professional career. "Although I learned about certain land development aspects through many of my civil engineering classes, the university didn't offer any courses exclusively on land development," explains Ashley. "It was through my internship back in my hometown that I gained a large amount of skills and knowledge that prepared me for a career in land development."

Ashley is currently managing the development of Oaklawn at Stratford, a large mixed-use site in the Town of Leesburg. Designing three residential sections and a parkway in the development enabled her to become intimately familiar with the area and

its constraints, which can be crucial to the timely and successful completion of any large development.

Having graduated in 2003, Ashley vividly remembers what it was like to transition from her educational environment to the professional world. The keys to a smooth transition: "Proficiency in AutoCAD and other computer drafting programs, communication skills, and the realization and acceptance that you just can't sleep late anymore." She also encourages students to learn as much as they can about hydraulics and hydrology, since stormwater management is such a vital component in every land development project she's managed.

Although Ashley played for the women's nationally ranked Ultimate Frisbee team at the University of Virginia, she is not the only member of her family to receive athletic accolades. Her dog, a Papillon named Cedric, participates in AKC agility contests, has won several titles, and competes at the Excellent level.



"I started working for Balzer, but left after two years to go to another firm for about one and a half years. Fortunately, I was able to come back when I realized I really missed it." - Cameron Palmore, Vice President at Balzer and Associates, Inc. in the Henrico, Virginia office

Who We Are: Cameron Palmore, Balzer and Associates, Inc.

Cameron Palmore is Vice President of Balzer and Associates, Inc. and runs the residential development section in the Henrico, VA office. His career spans more than 12 years working on public and private road projects, residential developments, and utility projects. He is a licensed PE in Virginia and will be taking his LS exam in 2009.

What attracts you to civil and environmental engineering (CEE)?

The thing that attracts me to CEE is that we are truly designing and building our communities. We work on projects that shape the face of our region of the state. We get to see the projects that we design get built very quickly, and seeing the land manipulated to your vision that you put on paper gives immediate gratification.

What are the highlights of your professional career?

It starts with graduating from Virginia Tech with a civil engineering degree in four and a half years. Seeing the first subdivision that I designed get built. Becoming the department head for the residential design department in the Henrico office and growing that department. Being named a Vice President of Balzer and Associates, Inc.

What motivated you to become involved with the LDDI?

Giving back to the university in a way that is unique and can directly assist Virginia Tech's CEE department. It also provides me the opportunity to have interaction with students, colleagues, and professors.

What do you think are the strengths of this program?

The passion of the people involved for the school and the industry. Randy Dymond and Kevin Young have invested an amazing amount of time to see this vision through. All of the members of LDDI have done the same to get the program to where it is today. And of course the students. It always amazes me to see their excitement to learn and the effort that they put forward.

What are your favorite past time activities?

I have three sons that keep me and my wife extremely busy. I enjoy coaching their soccer teams and taking them fishing. We enjoy going camping and vacationing at the beach and river. I used to hunt, but haven't had time for it lately. Once the boys get older I can hopefully take them with me.

Draper Aden brings historic State Capitol into the twenty-first century

edited by Kelly Young

Built between 1785 and 1788, Virginia's State Capitol remains an historic landmark and the second-oldest working capitol building in the nation. However, its size and outdated infrastructure proved insufficient for today's government program needs.

Draper Aden Associates, as sub-consultant to RMJM Hillier, provided the Virginia Department of General Services with subsurface utility, civil, and geotechnical engineering, as well as surveying and environmental services. This complex renovation and expansion project involved replacing the Capitol's critical systems, adding new infrastructure, and creating additional space.

A source of Richmond community pride, the Capitol was in dire need of additional space for visitors. The design team created a new 27,000-square-foot underground visitors' center, including a grand lobby, café, gift shop, and exhibit space. Draper Aden Principal-in-Charge Jeff Lighthiser, explains the challenge of creating an

underground addition to such a delicate structure. "This idea produced the need to create a multifaceted soil retention system in order to stabilize the building. Assuring no impacts on the Capitol's building face was critical to the project's success."

Stormwater management proved to be another key issue around the Capitol and in the surrounding Capitol Square. Beyond the problem of water intrusion into the building, the entire Capitol Square area lacked any sort of stormwater management system. DAA designed a system of perimeter drains around the Capitol, a system of underground piping to capture stormwater in Capitol Square, and a concealed 132,000-gallon underground retention vault.

The Capitol reopened in May 2007, just in time for Queen Elizabeth II's arrival from England. At the heart of a city rooted in its history, this much needed renovation and expansion will allow the Capitol to serve the Commonwealth for many years to come.



The newly renovated Virginia State Capitol boasts new infrastructure and additional space to meet critical needs.

New Town at Williamsburg: Mixed-use development revives colonial style with an urban twist

edited by Ana Constantinescu

A few years ago, engineers from the Virginia-based AES Consulting Engineers (AES) were facing a challenge. They had to design a large scale mixed-use community on a site with significant topographical difficulties, while addressing concerns of the local "no growth" movement that was opposing the project. Today, the multi-year development is starting to take shape, thanks to innovative engineering solutions and low impact development techniques.

Located in the Greater Williamsburg, Va. area, the New Town project consists of 375 acres of residential, retail, office, and multiple public open spaces, including an archaeological preservation park. In fact, the site is primarily designed as a pedestrian friendly community that encourages shared parking with a series of interconnected sidewalks and trails. "This promotes pedestrian movement and convinces the driving public that it is acceptable to park in one place and walk to the desired restaurant, store, or home,"

says Bob Cosby, AES project manager.

The mixed-use and traditional neighborhood design concepts employed by AES at New Town set this project apart from others in the area. New Town is the first project in the Greater Williamsburg Area to utilize the best elements of town planning exemplified by the nearby Restoration at Colonial Williamsburg.

Special attention and planning have been directed to providing ADA accessibility throughout the community and to reducing runoff pollution in the downstream waterways. Bob explains that the topographical issues have been solved such that all buildings are ADA accessible, while providing positive drainage away from the buildings. Bioretention cells, dry swales, and rain gardens provide stormwater runoff control throughout the site.

Upon completion of construction in 2015, New Town will combine traditional features of the colonial style with exciting contemporary urban living.



New Town at Williamsburg will provide office space, retail space, as well as various homes within a confined area that creates the Live, Work, Play environment that allows mixed-use communities to work.

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Unique Virginia playground welcomes every child

edited by Ana Constantinescu

Opened to the public in the fall of 2006, Clemyjontri Park in McLean, Va. is a unique eight-acre facility that puts smiles on all children's faces. The playground is the first of its kind in the state that provides accessibility to every child, thanks to Paciulli, Simmons & Associates' (PSA) careful design of ADA accessible facilities and low impact development techniques.

The 18-acre residential property was donated by the Lebowitz Family to the Fairfax County Park Authority. Mrs. Adele Lebowitz, the park's benefactor, originally envisioned the redevelopment of the property to a recreational use with playground amenities where children of all abilities can play side by side.

Clemyjontri Park was designed to suit any child's needs and includes features like ramps that connect structures, swings that have high backs, arm rests and special safety features, and rubber surfacing that allows wheelchairs to roll easily. The equipment is designed to be sensory rich so all children can participate with peers. PSA engineers worked closely with the Fairfax County Land Development Services to implement the newest engineering and environmental standards

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"green aspects" of land development as they relate to their individual fields of study. "It is important for all students, regardless of major, to understand the specific issues that must be overcome for a land development to succeed in a sustainable way," says Meredith.

"The mix of students in the course provided interesting perspectives. The engineers were able to interact with the planners in the class and think about sustainability in a more holistic way, while the planners began to understand why grading, utilities, and other engineering components are important in creating sustainable developments."

Class participant Erika Seelenbinder, a recent Virginia Tech graduate now employed by VHB, Inc. in Virginia Beach, wanted to learn more about sustainable engineering and Leadership in Energy and Environmental Design (LEED). "I found it interesting to see some of the new technologies used in LEED and green

for the park. Close attention was paid to retaining the existing mature vegetation, as well as adding generous landscape buffers and runoff diversions.

According to the Fairfax County Park Authority, the near future will bring new features to Clemyjontri Park. These include the building of a house and gardens (projected to become one of the park's main features), regional trails, a gazebo, and extended parking.



Clemyjontri Park in McLean Va. is a playground where every child is welcome.

Fairfax County Park Authority photo

engineering practices," says Erika.

CEE graduate student Dan Phipps added that he "used his newfound understanding of LEED developments



CEE graduate student Dan Phipps wanted to learn about the methods and technologies of sustainable development.

when talking with future employers."

As LDDI's Curriculum and Course Enhancement Committee expands the seminar into a three-credit course,

students will be exposed to a combination of lectures, real life case studies, and "hands on" group designs, providing exposure to many of the topics necessary to gain a comprehensive understanding of sustainability as it relates to land development.