Shop Talk

Facilities Management

Duke University
Creating Tomorrow’s Duke Today

July 2015

Message from the VP

In June I attended the Ivy Plus annual meeting, held this year at Brown University. The meeting was attended by senior facilities staff from Brown, Columbia, Cornell, Dartmouth, Georgetown Harvard, Johns Hopkins, MIT, Princeton, Stanford, University of Chicago, University of Michigan, University of Pennsylvania, and Yale. The meeting provides an opportunity for us to compare notes and learn from each other.

I briefed the group on our work implementing a Critical Systems Team, which will allow us to better manage our high performance buildings such as CIEMAS and French Family Science Center. The critical systems team is responsible for making sure that building performance will not be compromised by changes to the buildings. Duke is one of the first schools to develop a critical building systems team and my colleagues look forward to learning about our progress. The creation of the Critical Systems Team is one of ten Strategic Initiatives that we are focusing on this year and is an example of the importance of different functional areas working together to care for our high-tech buildings.

Also in June I met with the 12 summer interns hired to help move several projects along throughout the department. It is important to us that these students learn what Facilities Management is and why our work is fundamental to the success of Duke University, so they are offered the opportunity to learn about the department. Thanks to everyone who has worked to teach these students about the function of Facilities Management and expose them to the wide variety of work we do.

John J. Noonan
Vice President for Facilities

BUSINESS SERVICES KNOWS TIME IS MONEY

The Budget and Business Services team develops all FMD budgets, tracks over $120 million spent annually in operations and over $200 million in capital projects. Over the past two years the team has reorganized and reduced costs through the use of technology.

Joe Stewart, Director of Capital Budgets & Reporting for the University for nine years, moved to FMD in 2013, when staff from Duke Central Finance merged with Business Services. The four financial analysts responsible for tracking spending of each functional area are Tommy Davis (DUES and OPM), Regina Elliott, Joe Stewart and Whit Hughston (Projects and Capital Budgets), Regina Elliott (Landscape Services, Housekeeping, and Sanitation & Recycling), and Whit Hughston (Facility Operations, special projects and consolidated financial reporting). Monica Young supports OPM by making sure that all the firms hired by OPM are paid and that the project managers stay within their spending goals. Irene Watkins handles payroll, purchasing, and invoice management for the entire department.

Business Services played a key role in bringing EAM to Facilities Management, and it has proven to be a valuable tool. EAM creates detailed reports so Directors can make sure they do not overspend. EAM also automates many tasks that used to be done manually, such as recording the time each skilled trade worker spends on every work order to SAP.

Buy@Duke has streamlined the purchase process and keeps better records. For example, in the past, a large invoice needed three separate signatures and took up to a week to be approved. By using EAM and Buy@Duke, purchase orders no longer need to be printed and the approval process can take as little as one day.

Business Services’ plays a critical role in management of Duke’s financial resources and supports FMD’s mission to be good stewards of the University.

Summer Interns tour the West Campus Steam Plant

Clockwise: Monica Young, Whit Hughston, Tommy Davis, Regina Elliott, Joe Stewart, Irene Watkins, Adrienne Elliott

Buy@Duke
Landscape Services recently changed its name from Grounds to better reflect its wide variety of responsibilities. Led by Bryan Hooks, Landscape Services is responsible for the appearance of both the University campus and the Medical Center grounds. Since the condition of the campus is the first thing prospective students, medical patients, and their families notice when they visit Duke, Landscape Services plays a vital role to the success of Duke University.

Landscape Services staff includes grounds workers, pest-control experts, irrigation specialists, sports turf specialists, arborists, landscape designers, and a landscape architect. They provide expert care for 539 acres, including 133 acres of parking lots, 138 acres of turf, 31 acres of athletic fields, 70 acres of hardscapes and plazas, 55 acres of flower beds and shrubs, and 48 miles of sidewalks.

Thirty six employees are assigned to one of six zones, and are responsible for picking up trash, mowing, weeding, trimming shrubs, keeping hardscapes and plazas clean, caring for green roofs, and making sure the storm drains are clear. There is also a nine-member Horticultural Team, which covers the entire campus, responsible for tree care and installations of plant material. In addition, Linda Washington coordinates schedules and purchases supplies and Travis Lewis, Senior Mechanic, maintains the 300 vehicles and pieces of equipment.

In addition to the everyday care and upkeep of campus, Landscape Services staff is also responsible for:

- Preservation and health of Duke’s tree canopy: Over 11,500 trees across campus have been inspected to make sure they are healthy. With three licensed arborists and a tree pruner on staff, the Landscape Services plants more trees on campus than are removed. The trees that are removed are either donated, made into wood chips, or sent to a local lumber mill and turned into lumber. The Arbor Day Foundation has recognized Duke for its efforts for seven years as a charter member of Tree Campus USA.

- Snow and Ice Removal: Before and during winter storms, Landscape Services staff work around the clock to prep roads and sidewalks for ice and snow as well as clear them.

- Division I Athletic Fields: The Athletic zone crew cares for the playing fields per NCAA Division I regulations. They make sure our fields look great on TV by maintaining the irrigation systems, making sure the turf roots are as healthy as the fields, and painting field lines for multiple sports with assistance from the paint shop for home football games. They are responsible for making sure Duke Athletics can meet its demanding schedule, even if it means removing snow from a field in time for practice.

- Event Prep and Clean Up: Landscape Services prepares for and cleans up after major campus events such as Commencement and the bonfire celebrations after basketball wins. They have to make sure that the quads are mowed and the trimming is complete before event tents are constructed. They also clean up the campus afterwards, usually in the early morning hours.

- Synergy: Landscape Services is working more closely with other functional areas within FMD to improve Duke’s campus. They specifically work closely with FMD Engineers to relocate trees and improve landscaping when underground utilities are relocated or installed. A representative also reviews all construction drawings for landscape issues.

- Commitment to Sustainability: Landscape services uses non-phosphorus fertilizers, EPA approved paint for athletic fields, purchases locally grown flowers and plants, comports yard waste, mulches grass clippings and leaves, utilizes propane fueled mowers and electric carts, and collects rainwater to use on flowerbeds in cisterns.

Students, faculty, patients, and other visitors reap the benefits of their efforts every day. Duke often shows up on lists of ‘most beautiful campuses’ because of Landscape Services. The name change reflects the full ranges of services to design, plant, construct and maintain landscapes and hardscapes at Duke.

Fun Fact: The new grass football field will be installed in mid-July, and will be painted and ready for the first scrimmage of the season on August 22nd. Landscape Services selected a hybrid turf Bermuda grass that was developed and patented by Oklahoma State University in 2011. Five professors from three different departments at the University developed the hybrid and tested it for seven years. UVA was the first school to use the new Bermuda grass in its athletic facilities. Several NFL teams use the same grass including the The Washington Redskins and the Tennessee Titans. It takes 14 months for the turf to grow. Scott Thompson took this photo in June when he last visited the turf farm in Georgia.
SUMMER INTERNS STAY BUSY
This summer FMD welcomed 12 interns, working in several areas in Facilities:

Hanadee Abu-Zayed is a rising junior at ECU majoring in Biomedical Engineering. She is working for Utilities and Engineering on many projects, including the Emergency Response Plan.

Eli Frazier a rising 5th year senior at NCSU double majoring in Turfgrass Science and Parks, Recreation & Tourism Management. He works for Landscape Services, taking care of the athletic fields after the harsh winter.

Dylan Gleit is a rising senior at Duke University majoring in Mechanical Engineering. He works for Facility Operations labeling the assets in critical buildings and expanding and organizing the data associated with them in EAM.

La’Creesha Gore is a graduate student at NC Central studying Clinical Mental Health Counseling. She works for HR and is updating policy and procedures manuals.

David Huff will be a freshman at Virginia Tech in the fall. He is working for Facility Operations updating labels and on-line diagrams in the steam plants and chiller plants.

Lee Kimmel is a graduate student at NCSU in Plant and Microbial Biology. He works for Landscape Services taking inventory of campus trees by recording the species, diameter, and health for each tree.

Aravind Ramesh Kumar is a graduate student at NCSU in Industrial and Systems Engineering. He works with University Housekeeping as a Database System Analyst, creating a user-friendly database of 200+ employee schedules.

Kelsey Liu is an architecture student at NCSU working in Project Management on the campus design guidelines.

Sanskar Shrivastava is pursuing a Masters in Engineering Management from Duke University. He is working in Energy Management developing data models to form strategies to optimize cost and reduce energy use and our carbon footprint.

Alexa Wegerski is a rising senior at Cary High School, working in Project Management. She organizes archived drawings for university facilities construction, renovations and maintenance projects completed throughout the campus.

Chantel Williams is a rising junior at NCSU working for Landscape Services taking inventory of campus trees by recording the species, diameter, and tree health for each tree.

Judy Zhu is a rising senior studying Mechanical Engineering at Duke University. She is currently working for Utilities, analyzing energy consumption of athletic buildings, updating the electrical database, and supporting a variety of Electrical Engineering projects.

CONGRATULATIONS TO THE JUNE EMPLOYEES OF THE MONTH

Steve Carrow, Project Manager, 8 years of service. Building a 5.5-acre pond in a 14 acre park in order to provide 100 million gallons of water to the chiller plant, all while meeting the city, county, state and federal requirements can be unnerving. Steve did it without losing his nerve, working with numerous stakeholders to ensure that the pond opened in time for commencement.

Larry Dunkins, Lead Recycler 13 years of service. Last month Larry completed training in order to operate a roll-off sanitation truck, one of the largest vehicles in our fleet. With an employee on personal leave, there was an immediate need and Larry stepped up with a wonderful attitude, and filled this position until the staff member could return.

Erica King, Safety Specialist, 1 year of service. Besides her regular duties writing safety programs, Erica took it upon herself to borrow equipment needed to determine and document the push/pull weights of the equipment in the trades areas. This helps assess lifting restrictions for injured employees, and OESO has asked if they can have access to these measurements. Her dedication is tremendous.

Albert Nelson, Housekeeper, 2 years of service. Albert was nominated by Diane Brincefield, the FMD Building Coordinator for the Bryan Center. She notes that even though he has only worked at the Bryan Center a short time, he has gone beyond the call of duty and the entire area has improved since he arrived. He is an outstanding employee.

Randy Orange, Building Coordinator, 15 years of service. When the Forlines House ceiling collapsed, Randy responded immediately and took care of everything from clearing the building, helping the occupants relocate, and working to fix the problem. He kept management and Alumni Affairs informed, and he often worked into the evening to insure all issues were handled in a safe, efficient manner.
Safety Zone

SUNSCREEN NOW PROVIDED TO EMPLOYEES

Sunscreen dispensers are being installed across campus to help protect FMD employees who work outside from too much sun exposure. These 32oz containers enable employees to apply sunscreen as they head outside for the day. For situations where reaplication is necessary (and that’s about every two hours, on average), tubes of sunscreen will be provided in the tool crib/supply area or from the supervisor. Do yourself AND your family a favor by protecting your body from dangerous skin cancers!

HEAVY EQUIPMENT TRAINING COMPLETED

During the month of June, heavy equipment training was completed by the High Voltage Shop, as well as 26 employees from Landscape Services. Although OSHA does not require this training for the skid-steer, front-end loader, or backhoe, FMD hired a contractor to come in to give these four hour classroom and practical applications classes. The feedback on the class and the instructor was VERY positive from all attending.

SAFETY TRAINING COMPLIANCE

In June, the FMD, Facilities Trades and Support Group, Housekeeping, and Sanitation & Recycling all attained compliance rate of 96.8% for the first time since we began tracking safety training compliance. The department continues to consistently maintain that compliance at over 95%. Kudos to all for your help and support in this area!

SAFETY STRATEGIC GOAL INITIATIVES UPDATE

In May, FMD partnered with the Pacific Industrial Contractor Screening (PICS) to manage and assist us in determining if contractors hired by FMD have: 1) completed all OSHA or other federal/state/other agency safety training requirements, and 2) a company safety manual describing the company’s safety program. In addition, FMD has prepared a safety orientation presentation that each contractor working for FMD will be required to view. It covers safety requirements and expectations, and other non-safety related items such as parking on campus, the smoking policy, and Duke’s harassment and discrimination policy. Thanks go out to Thomas Kelly, Mark Browning, Mark Carpenter, Ed Sinnott, Darin Smith, Steve Carrow, Erica King, and Mike Snyder who helped move this strategic initiative along. Facilities Management is the first university in the United States to engage a supply chain risk management provider!

Chapel Update

As part of the Chapel restoration, seven stained glass windows have been removed for restoration. The project is so large and the time-line so tight that four separate stained-glass studios are working together to complete the job. The four studios decided among themselves which studio would work on which window. The windows were removed in panels, packed in large wooden crates and driven to one of the four studios in Michigan, New York, and Virginia. At the studio, the window is dismantled, each piece of glass cleaned and the lead joints replaced. Previous window restorations were done one at a time and each took 9 months. Three of the windows will be reinstalled after only 5 months because they must be in place before the roof replacement work can begin.

Our Mission: To be stewards of Duke University by providing excellence in planning, design, construction, cleanliness, operations and maintenance for facilities, grounds and utilities in a customer-focused, efficient and sustainable manner.