RUTGERS TO QUANTIFY PHYSICAL ASSETS IN MAJOR CONDITION ANALYSIS

Rutgers University Facilities and Capital Planning is embarking on a major infrastructure assessment initiative to develop a comprehensive database regarding the condition of its physical properties statewide. The project will ensure the continued responsible stewardship of vital educational and research facilities on the New Brunswick, Newark, and Camden campuses and across the Rutgers Biological and Health Sciences division.

“I’m very pleased to be directing this effort. It’s an extensive and varied collection of buildings and equipment that will be evaluated over the next few months. Mechanical, electrical, and plumbing systems, as well as roofing systems, building exteriors, accessibility conditions, and the utility infrastructure will be inspected and then catalogued into a central database. This will give us a clear picture of what we have and the condition it is in,” said Joseph Holtsclaw, Assistant Director Facilities Condition Analysis (FCA) for Rutgers University, University Facilities & Capital Planning unit.

ISES Corporation, an architectural and engineering consulting firm, has been retained to conduct the initial assessment on approximately 500 buildings encompassing 22 million gross square feet of space. The study is expected to be completed by the last quarter of 2014.

In addition to performing an inventory of equipment, the assessment will determine immediate and long-term cost liabilities for building component lifecycle renewal, deferred maintenance, and code compliance based on an institutional standard cost database. Another important part of the initiative is the application of bar code tags on equipment. These tags will monitor and track physical assets, providing a foundation for a seamless process of data collection, planning, and communication of vital information. To accomplish this substantial assignment, the ISES Corporation architectural and engineering teams will perform walk-through inspections of each building, gathering information based on actual conditions. Facilities personnel will serve as escorts to provide operational information and access to mechanical rooms, utility spaces, and roof tops. There will be little to no impact on the daily routine of building occupants throughout the process.

With the merger of UMDNJ and Rutgers, the current physical scope of Rutgers University is quite extensive statewide—1009 buildings, 27 million gross square feet, a considerable utility infrastructure, a collective value in excess of $8 billion, and wide variety in type, style, and age. This assortment of assets and potential issues, makes advanced planning more critical now than ever.

A LIFE SAVING ENCOUNTER

Last October 1, Scott McQuade, clocked in as he normally does on the Camden campus, and as is routine for that time of day, a group of woman, campus custodians, were seated around a table talking. “After clocking in, I stood outside the room and one of the woman came running out indicating that another woman, Martha, was unresponsive in her seat.” McQuade, a Senior Electrician, and Cherry Hill Township volunteer firefighter is trained in CPR. “I went in and Martha was slumped in her chair and unresponsive,” McQuade recounted of custodian Martha Brown. “I reached under her neck to check her main artery; there was no pulse. Her head was bent because of the way she was sitting so I got her on the floor to see if I could feel a pulse. There was no pulse, no respiration.”

In the midst of all this, someone had called 911 and McQuade yelled for someone to get Rutgers Police with an AED--Automated External Defibrillators. The Rutgers police vehicles are all equipped with AEDs, which automatically determine if the patient needs a shock. McQuade does not know how long he

A MESSAGE FROM TONY CALCADO

We just had an exciting ground breaking ceremony for a new Chemistry and Chemical biology building on the Busch campus that will make Rutgers significantly more competitive in science education. The 145,000 square foot facility will house classroom, laboratory, and administrative space to provide Rutgers with the physical support it needs to continue its research into drug design, alternative energy, biomaterials and nanotechnology. This is an exciting time as we continue to transform our university system into a national powerhouse that attracts students, researchers and employees from all over the world.

In a campus system as large as ours, exciting things can happen among our colleagues, as well, and they are worth noting. Melvin Braxton, for example, graduated from Rutgers University this year after accumulating his credits, sometimes one course at a time for 28 years. Melvin started as a custodian, and because he recognized opportunities when they arose, he would eventually apprentice as a carpenter, and ultimately advanced to his present job of planner estimator. Now, he also holds a degree in economics.
Town Hall meetings summarize Master Plan survey findings

A year-long strategic planning process to develop the university’s master plan culminated with a series of town hall style meetings, hosted by Antonio Calcado, Vice President of University Facilities & Capital Planning.

Calcado reported on the findings of a survey, integral to the development of the Physical Master Plan. He elicited ideas and comments from the meeting attendees.

There were several topics covered in the survey, and subsequent discussions: transportation, parking, classrooms, libraries, open space, food choices and dining issues, safety concerns—both perceived and real.

Based on the survey results, improved mobility and connectivity within and between campuses is called for, as are improvements to the libraries in order to enrich the out of classroom learning environment. “What libraries have come to do is refine how they are used,” Calcado said. “The tech age has redefined its focus and the library is the single most important place academically.”

There are opportunities to create hubs of student activity and learning by improving amenities in key locations on each campus. Calcado suggested that greater connections to the Ecological Preserve and the Raritan River could also enhance the physical campus.

Calcado highlighted the more iconic landscapes across the campuses and indicated he would like to export similar landmarks to other campuses. “Outdoor space usually defines what a campus looks like,” he said. “The geographic variety among all of the Rutgers campuses is clearly a strength. Each campus’s unique qualities can be enhanced and further developed. We can use the landscape to define what the University looks like and to create a sense of space for the students. The picture you leave with matters, whether you are here four, five, or six years as a student, or for one day, to attend a conference.”

Frank Wong, Executive Director, Planning & Development, explained that one of the challenges of the Physical Master Plan is to maintain the uniqueness of each campus but also be able to unify disparate and geographically separate elements of the university into a single physical entity that is one Rutgers. “The survey results really help us to prioritize and focus. It is an exciting time for Rutgers, and in the end, the execution of the Physical Master Plan will aid recruitment, research, alumni giving, and enhance everything that makes for a great learning environment.”

Faculty, staff, and students were all invited to participate in the survey. Generally speaking, most surveys attain about a two percent response rate. The overall response to this survey was much higher, with Camden coming in at 8.6%, New Brunswick/Piscataway response was 11%, and the overall response rate for Newark was 5.1%. The responses do not include the RBHS campuses.

Among those iconic landscapes that add a special feel to the RU campuses include from the top, the fountain on the Piscataway Campus, the Voorhees Mall on the College Avenue Campus, Passion Puddle and the Rutgers Gardens, both on the Cook/Douglass Campus.

Rona Lehtonen appointed Associate Director

Congratulations to Rona Lehtonen who has been appointed Associate Director, Operations and Services, Camden Campus. Rona will be responsible for the day-to-day operations of Facilities on the Camden Campus. Oversight of renovations and improvements is also under her purview. Rona, who will be reporting to Dianne Gravatt, has been with Facilities for 14 years.

“My main focus now is to implement the AiM system, on this campus,” Lehtonen said from her Camden office. “I expect to get this done by July 1. The people here are terrific, and they do a great job. By implementing the AiM program here, we create uniformity from campus to campus, and it will improve our database.”

“Her experience makes her an idea fit for this position,” said Antonio Calcado, Vice President, University Facilities & Capital Planning, “and I look forward to working with her and with Dianne to strengthen the operations and services area on the campus.”
LEED Gold Awarded in NJMS Vivarium Reconstruction

Modernization, increased capacity, streamlined operations, and energy efficiency are the major outcomes of the just-completed 30,000 GSF, $15M American Recovery & Reinvestment Act (ARRA) Funded Vivarium Reconstruction of a 1975 Central Research Animal Facility for Rutgers Bio-medical and Health Sciences New Jersey Medical School (RBHS-NJMS). The renovation project that began with the goal of achieving basic LEED certification resulted in the medical school vivarium receiving the second highest level of certification, the only Vivarium in the nation to reach this level.

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class green building strategies and practices. Depending upon how much criteria a specific project meets, it earns credits toward certification. To get a building or project certified, it must attain 40-49 credits. To reach a silver level certification is 50-59 credits; the gold level is 60-79 credits and the platinum level is 80 credits and higher. In this case, the vivarium received Gold level certification with 66 points.

The ARRA grant stipulated that the project must meet LEED certification. “We went into the design phase with 49 credits,” said Matthew Peterson, Senior Project Manager. “As the project continued, we realized we would be able to apply for a much higher level, and we ended up applying for Gold level certification.”

“It’s very difficult to reach this level for a research laboratory or a vivarium,” said Nicholas L. Fabbro, Director, Project Services. “Laboratories and vivariums use a lot of energy, which presents a challenge when trying to reach all of the specified criteria. Gold level is a major accomplishment. We are the first vivarium in the state and in the nation to reach this level of certification.”

The original vivarium, located in the RBHS-NJMS Medical Science Building, was built about 40 years ago. The scope of the project required reconstructing the vivarium to accommodate improved operating efficiencies, mechanical systems, and reconfigured administrative space. Spaces include, Small & Large Animal Holding Rooms, Procedure Suites, Surgery Suites, Rack & Cage Wash Area, Bedding & Food Storage, Isolated Administrative Suite and a Future Imaging Suite. Project phasing strategies were employed to maintain funded research programs during construction.

Improved operating efficiencies include optimized work practices, flexibility, and disease control measures which all contribute to RBHS-NJMS’s enhanced faculty recruiting capabilities. “Within the same footprint we can house and use more animals in a safe and modern environment,” said Bruce Scharf, Executive Director, NJMS Comparative Medicine Resources.

Among the requirements that had to be satisfied to meet LEED certification was an 85% recycling level of the construction materials. “We actually had a 92% recycling level,” Peterson said. In addition, the new design increased energy efficiencies, enhanced water conservation methods, and reused as much of the existing furniture as possible.

“We received maximum credits for furniture reuse,” said Project Manager, Fernando Arroyo.

Because vivariums use a lot of energy, the new energy efficient sterilizers and cleaning equipment were critical to meeting LEED standards. In addition, with the project located in the city of Newark, it received a lot of credits for accessibility to mass transit and the use of bikes. “We created dedicated bike storage and bike racks, and we have the light rail, city buses, Rutgers Shuttle, and CHEN shuttle,” Peterson said. (The CHEN shuttle conducts runs among the colleges located in the University Heights section of Newark.) These alternate modes of transportation resulted in additional credits. The paint and epoxy floor materials were all low volatile organic compound (VOC).

“It was truly a team effort to meet gold level criteria,” Peterson said. “Nalls Architects shepherded everything and made the actual submission. Torcon Construction tracked all of the materials and actually inventoried what was going into the dumpsters.”

The project was submitted in two phases. The design phase allowed for feedback from the Green Buildings Council. Since that phase confirmed that the project already met the 49 points needed for basic certification, the Facilities team worked aggressively to accumulate more points for the final submission.

A new cage wash room (top) and training room were part of the vivarium reconstruction.

A MESSAGE FROM TONY CALCADO

(Continued from page 1.)

In Newark, an Operating Engineer at the RBHS campus has been jockeying a rotating schedule while pursuing a degree in history from Jersey City University. He did it in six years, and we congratulate Kevin Koepeke. Now he will be returning for his master’s degree in education. Both Melvin and Kevin are great inspirations.

What really struck me, however, is the story you will read in this newsletter about a Camden employee who saved another employee’s life when she went into cardiac arrest. Scott McQuade, a Senior Electrician on the Camden campus, had just punched in when custodian Martha Brown went into cardiac arrest. She was totally unresponsive. Scott is trained in CPR and thankfully administered CPR to Martha until the police arrived with a defibrillator and then the ambulance came that would take Martha to Cooper hospital for the critical care she needed. Martha is back at work, and we are glad for that and thankful that Scott McQuade was there that day. Imagine the thrill of saving someone’s life and for Martha, to have survived a serious cardiac event because of the person who she now calls her hero. Just another day in University Facilities!

We never really know what challenges we will meet in the course of a workday, or the challenges we place on ourselves such as obtaining a college degree while working fulltime and tending to a family. It’s nice to know the character and caliper of people we have in University Facilities.
A fully functional solar display, powering a working geothermal air conditioning model, were among the projects the Utilities Operations group of University Facilities had on display for Rutgers Day. The geothermal model represented the 700 ton geothermal system that heats and cools the new Business school. The solar panels are the same type in use on the 1.4 MW, 7 acre ground mounted solar farm and its 28 acres of solar canopies. These solar arrays make Rutgers one of the largest producers of solar electric energy at a university. Solar powers 62% of the Livingston Campus.

In addition to these functional models, there were posters to explain not only the processes but the projects themselves that represent Rutgers's commitment to sustainability and renewable energy. There were also poster presentations for cogeneration and controls. One poster, for example, showed how Utilities Operations heats and cools a majority of University buildings with chilled water and high temperature hot water. Utilities is responsible for over 192 miles of piping underground.

The Utilities group operates and maintains two cogeneration facilities owned by Rutgers: a 14 MW plant on the Busch Campus and a 10.5 MW plant in Newark. The 10.5 MW plant powers RBHS. The 14 MW plant supplies power to both the Busch and Livingston campus. This, along with a number of electric substations, and miles of electric cable, keep Utilities busy 24/7.

“Many visitors were pleasantly surprised at our commitment to sustainability and energy,” said Michael Kornitas, Director of Sustainability and Energy. “Our participation in Rutgers Day also gave us an opportunity to speak to many of our accomplishments and our vision for what needs to be done,” Kornitas added.

Next year, the group plans to have a model for cogeneration and elevators, with elevators being another area of responsibility within Utilities Operations.

**FACILITIES SHOWS OFF PIPELINE PROJECTS DURING RU DAY**

The Rutgers of the future was on display at Rutgers Day with renderings and models consistent with the Physical Master Plan on exhibit. It was and well received by Rutgers Day visitors.

“We had a busy display. There was a lot of interest among students, alumni, and especially parents visiting with prospective students,” said Frank Wong, Executive Director, Planning & Development. The display was held on the Busch Campus in the International Lounge. In addition to Wong, University Architect, Jeff Livingston; Executive Director, Program Development, Dave Schultz; and Elizabeth Reeves, Assistant Facilities Planner took turns manning the display, greeting visitors and answering questions. “I think it was particularly useful for prospective students,” Wong said. “Both the prospective students and their parents were very interested in the plans for developing the University, and this exhibit provided them a chance to see what is in the pipeline.”

At left, visitors review renderings. At right, visitors enter the Busch Campus Center to see the display sponsored by University Facilities.
SEEING RED....
Facilities Groupleader, Faisal Altairi, finds himself surrounded at Color Me Red Day on the Livingston Campus, one of the many campus events in which Facilities employees play a vital role.

How do you take a campus, let tens of thousands of people in for Rutgers Day, tens of thousands more for commencements in 57 different locations, let in tens of thousands throughout the year for sporting events, and put everything back together so that within hours, it looks as though no one was ever there?

University Facilities manages between 800 to 1200 events a year. Whether it’s a small conference, or a major event like Rutgers Day, University Facilities provides the support services necessary to manage these events. Depending on the intricacies of an event, setting up may be outsourced, but clean-up is almost always the work of Facilities. Our tradespeople, grounds staff, and custodians all provide support for the campus events.

Maruza McDonald who coordinates events for our department, gave a rundown of some of the more recent campus activities. “We had Rutgers Day, Ag Field Day, and commencements to name a few,” she said. “There were 57 different programs for commencement over a two day period, and we had the alumni reunion during those two days, as well.” Maruza, a self-described perfectionist, says it never really slows down.

“The summer is just as busy with some high schools holding project graduation on campus, and we have summer sports camps, there are concerts, orientation and before you know it, students are returning to campus.”

Here are a few pictures from recent events. At top, the Engineering Mall on the Busch Campus decked out for Rutgers Day, Convocation at the Louise Brown Athletic Center on the Livingston Campus, University Commencement preparations at High Point Solution Stadium on the Busch Campus, SEBS convocation ceremony at Passion Puddle on the Cook Campus, and readying for convocation at the recreation center on College Avenue Campus.
Life Saving Encounter

administered CPR, but based on what those around him said, it may have been as long as ten or 15 minutes.

The police arrived with oxygen and the AED and when it administered a shock, Brown opened her eyes a bit. “She became responsive,” McQuade said. Once in the ambulance, en-route to Cooper Hospital, she went out twice, and again the AED was administered. By this time, McQuade went out for a short walk to calm himself and then went to work.

In the meantime, Brown was transported to Cooper Hospital in cardiac arrest. “I remember talking to my co-workers that day and the next thing I know I was in the hospital,” she said. Brown had been placed into a coma by her doctors for four days. “The doctor said I was very lucky Scott was at the clock.” Brown continued, “God always puts people where they need to be at a point in time. I am a woman of faith, and I would be okay here on earth or with the Lord, but God put Scott there. He is my hero. Neither Brown nor McQuade knew each other prior to this other than seeing each other at the time clock. She, of course, was told by co-workers what happened and who saved her life.

Brown who has been with Rutgers 25 years, returned to work February 10. “I thank everyone for all of their well wishes. I got so many cards and phone calls. I just thank everyone so much.” The day Brown was being released from the hospital, McQuade was coming to visit her. “I saw him walking down the hallway and said ‘There’s my hero,’” she recounted.

McQuade received an award and recognition from his co-workers and a card from Martha and her entire family. “Her whole family signed the card, 28 people. She’s got a lot grandkids, and I am glad she’ll be sharing more Christmases and birthdays with them,” he said. The best reward for McQuade, is seeing Martha each day. “I walk in, and she’s sitting in the same seat. My reward is to see her sitting there.”

Administering CPR, he said is a skill you hope you never have to use, but McQuade added, that it is something in which everyone should receive training. “Think how bad you would feel if you just stood there, unable to do anything. It could be a family member, friend, co-worker, even a child. It’s a great thing to know.”

McQuade also said, “It was one of those things where all the stars aligned. As a custodian Martha could have had this episode when she was alone, in a closet or bathroom. It was also the shift change time for the police, so all of the squad cars were in the area instead of on the other side of campus. Everything lined up for her.”

Brown and McQuade now have one other thing that links them. When Brown began seeing the cardiologist for her follow-up, she described to him what happened and described the man who saved her life. The doctor recognized the description of McQuade as a patient of his as well. “I have some minor heart issues,” McQuade said. “I see a cardiologist occasionally. It turns out Martha and I now have the same doctor!”

Rutgers Business School highlighted in Architect magazine

The brand new Rutgers Business School was featured in the June issue of Architect magazine, and received high marks for style as well as function. The building, now a gateway of the Piscataway Campus, is described by the magazine as having a “whip smart” interior. It was designed by TEN Arquitectos, a firm with offices in New York City and Condesa, Mexico. The article goes on to say, “To the architects’ great credit, the interior spaces of the building are in fact very cool. And functionally so. The trend among contemporary business schools is to give precedence to spaces for collaborative work. Here, those ‘non-programmed’ spaces, as Norten [Firm principal, Enrique Norten] calls them, generate the logic of the whole. A series of open lounges and labs, and a stack of conference rooms enclosed by fogged glass, inhabit a tall, narrow zone just behind the fully glazed, amply fritted, campus-facing wall of the main wing. Then—across a light-giving slot—offices and small classrooms are hung in a second discrete volume, the exposed surfaces of which are wrapped in shiny black-plastic sheets studded with little pyramids. That funky material also marks one side of the main corridor in an abutting third zone, where elevators, plumbing, larger classrooms, and the school’s enormous main auditorium find their home, backing up to the building’s great, blind wall facing the outside world.”

Here is a link to the full article and it has some great photography: http://www.architectmagazine.com/education-projects/rutgers-business-school_o.aspx

While still in its construction phase, the Financial Times, in a January 2013 post, noted that the building’s bold design was clearly part of a trend in business schools around the world.

At right, the main staircase in the business school, and pictured at left, is the lounge at the top of the main staircase.
PROJECT MOVE OUT EASES BULK WASTE COLLECTION FOR NEW BRUNSWICK AND FOR STUDENTS

Because so many Rutgers students occupy apartments in New Brunswick and other area towns, for the past three years, University Facilities & Capital Planning has teamed with the city of New Brunswick to collect bulk waste that students want to discard prior to vacating the area at the end of the semester.

Students register for the free program and then drop off unwanted waste at predetermined sites. According to David DeHart, Facilities Director of Environmental Services, the project not only keeps trash from piling up on city streets, but the discarded items are then separated and disposed of properly. "We separate items for recycling or landfill, and items that cannot go to landfill go to a waste-to-energy facility where the incineration process results in energy production." Before this partnership, DeHart explained that mountains of bulk waste ended up on city streets, in some cases, overflowing into the streets.

"The first year we collected over 50 tons of bulk waste. The next year we handled over 70 tons of bulk waste," DeHart said. He added that this also ensures that certain materials are properly handled. "Freon is captured from air-conditioners and refrigerators and electronics are separated and sent to the proper facility for disposal."

Facilities Condition Analysis

(Vice President of University Facilities & Capital Planning, Antonio Calcado, said "The information gathered from the assessment will help build a very stable foundation for facility renewal planning. It avoids a seat-of-the-pants approach, especially for our older buildings. Our facilities include structures that were just recently constructed and some that are 200 years old with historic significance. Through this initiative, we prioritize our needs. The analysis will also enable us to differentiate between maintenance needs and renewal needs, which is critical when we are dealing with such a wide range of assets. It’s a focused and cost effective approach to the stewardship of these taxpayer owned physical assets.”)

At the core of the emerging program will be the creation of a centralized database within the existing departmental system. This Facilities Condition Assessment module is scheduled to be deployed in the first quarter of 2015. The module will not only contain basic asset information such as quantities, locations, and model numbers, but more detailed data related to lifecycle analysis and cost modeling. "The creation of a central database is the cornerstone of the FCA process. It will provide a cohesive and reliable source of information that will help us make smart, informed decisions and provide significant strategic analysis and reporting. It’s an indispensable tool to help manage a vast asset portfolio," said Holtsclaw.

THANKS FOR A JOB WELL DONE.... It's always nice when people are recognized for their work. Here are some recent “kudos” for the Facilities team:

For the eighth year in a row, Rutgers University has won the coveted Gorilla Award for most pounds recycled in the RecycleMania competition. Interim Executive Director of Communications extended a special word of thanks to Yohanna Alcantara, Operations Area Manager, RU Newark, who enhanced the program and student involvement this year. Great job Yohanna!

The former director of the Zimmerli Art Museum, Suzanne Delehanty, before her departure, sent a word of thanks to Vice President Facilities & Capital Planning, Antonio Calcado: "I want to thank you and the team at Rutgers Facilities for your assistance and support of the Zimmerli Art Museum during my five year watch....The members of the Zimmerli’s Board of Overseers are especially proud of the improvements to the building and donors have increased their support significantly. In short, your investment has had a ‘good rate of return’. ... The positive outcomes were possible thanks to the dedication and skills of many members of your staff, especially: John Blendowski, Foreperson, Custodial Services John Fritzen, Senior Facilities Project Manager Maria Gomez, Custodial Services Fred Montferret, Operations Area Manager Mike O’Keefe, Foreperson, Grounds Eileen Schaeffer, Planner Estimator.”
POWER PLANT OPERATING ENGINEER RECEIVES DEGREE

“I finally got it done,” was the thought that crossed Kevin Koepke's mind when he received his diploma from New Jersey City University (NJCU) on May 15. Koepke, who is an Operating Engineer I on the Rutgers Biomedical and Health Sciences (RBHS) Newark campus, said it was extremely satisfying to receive the degree that he began pursuing in 2008.

And while this milestone may be enough for some people, the 45 year old, who received a bachelors degree in history, is now going to pursue his masters degree in education this fall.

It is never easy returning to school as an adult, but fitting in a class schedule and studies while doing shift work is even more difficult. “I am lucky to have a great job and very supportive managers and co-workers,” Koepke said. “When I return for my master's, I'll be doing the same thing, fitting in school around my work schedule.” You can say practice makes perfect, as Koepke managed to attain his associate's degree at Hudson Community College while working three jobs.

Attaining his degree makes Koepke the first in his immediate family to get a college degree. That distinction was clearly behind his drive to go to school, but there was something else that motivated him even more: he wanted to show his high school aged daughter the importance of getting an education in the hopes that she will follow his example. His lead-by-example strategy may well be working, as Koepke's daughter, currently a high school freshman, has expressed a desire to become a Medical Examiner, and that takes a lot of schooling.

In addition to a love of history, Koepke is also a serious hobby photographer and very interested in Architecture. He owns about 60 cameras, acquired over years of devotion to his hobby, and often photographs city skyscrapers and other urban scenes.

So what will he do once he completes his masters? “I am not sure. Maybe with the love of history and photography, I’ll write a book.” For now, Koepke, who began working at the power plant in 2006, is happy with his job and the fact that he is able to simultaneously pursue his dreams.