Ah Spring at last! … a time of rebirth and inspiration … of change and opportunity. The campus will soon be alive with our summer deferred maintenance work and that, coupled with City road work at Division and Union streets and our continuing exciting work at the Innovation and Wellness Centre, will make for a very busy campus over the next few months.

Every summer we welcome new students into our office and this year is no exception. I’d like to extend a warm welcome to Aaron Best who just finished his second year in Mechanical Engineering and will be supporting the work of our engineering team. In addition an equally warm welcome to Katharina Holt, a second year geological engineering student, and Bill Poldon, a fourth year mechanical engineering student who will be supporting our sustainability and energy management teams.

On the project management team, our interim Director of Construction, Ron Kowalczyk, just completed a successful project manager hiring process and I’m excited to announce that Susan Dart and Rachel Quittkat will be joining Physical Plant as project managers shortly.

Our parking team is happy to welcome Victoria Atchison and our trades team is welcoming several additions including Electricians Marc Compeau and Harvey Bradley, Carpenters Justin Clancy and Cory Burns, Steamfitter Adam Griffin, Kitchen Equipment Mechanic Denis Landry and Elevator Mechanic Shawn Rowsome.

Welcome all … we continue to build a strong team.

I’d also like to wish Karl Hinch, Mike Van Alstyne, and Brian Makosky all the very best in their retirement and thank them for their many years of service to Queen’s.

Congratulations to Mike Woods who has successfully completed his elevator apprenticeship program and is now certified as an Elevating Devices Mechanic, Class A.

And finally, congratulations to Nathan Splinter and Joel Keenleyside for successfully completing the Foundational Leadership Program … well done!

The staff within Physical Plant Services are the foundation and strength of our department and it is really great to see us continuing to add highly skilled people to the team … let’s keep it going!

I hope you find this addition of our newsletter enjoyable.
Parking Update
BY GINETTE DENFORD, DIRECTOR, FINANCE (FACILITIES)

Software Upgrade

Compliance with PCI Security standards is enforced and mandated by the major payment card brands who established the PCI Security Standards Council. These standards are being implemented by Queen’s and as such, all units with credit card activity must be PCI compliant by May 2017.

Following a detailed review of Parking credit card operations by ITS and the University’s PCI Committee it was determined that the equipment in the Stuart Street and Queen’s Centre garages were not PCI DSS compliant.

During the week of March 20, Amano McGann (credit card supplier) began the first stage of the process by replacing the hard drives in all of the pay stations. This advance work will keep the capability of credit card processing to a minimum when completing the final phase the following week. ITS and Amano McGann upgraded the software the week of March 27 with the aim to go live after the installation. During this process, payment by credit card was not available. It is anticipated this timeframe will be limited to a maximum of two hours. Posted notifications will be displayed to advise all users of the disruption.

You may be wondering what is PCI (Payment Card Industry) DSS (Data Security Standard)?

The PCI Data Security Standard represents a common set of industry tools and measurements to help ensure the safe handling of sensitive information. It is comprised of 12 general requirements designed to: build and maintain a secure network; protect cardholder data; ensure the maintenance of vulnerability management program; implement strong access control measures; regularly monitor and test networks; and ensure the maintenance of information security policies.

Why should we comply with PCI Security Standards?

- Compliance with the PCI DSS means that our systems are secure, and customers can trust us with their sensitive payment card information;
- Compliance improves the reputation of the University with its business partners;
- Compliance is an ongoing business process, not a one-time event. It helps prevent security breaches and theft of payment card data, not just today, but in the future;
- Compliance has also indirect benefits – better prepared to comply with other regulations as they come along; basis for a corporate security strategy; and likely identify ways to improve efficiencies within our IT infrastructure;
- But, if we are NOT compliant, it could be disastrous; lawsuits; insurance claims; cancelled accounts; payment card issuer fines and government fines.

The Parking Office would like to thank the PCI Compliance Team, ITS and Amano McGann for their help working through this complex process. For more information about the University’s efforts to protect all cardholders, please refer to http://www.queensu.ca/financialservices/procedures/payment-card-industry-pci
Deferred Maintenance
BY: LARRY PATTISON, DIRECTOR, ENGINEERING & OPERATIONS

The 2017 deferred maintenance season got off to a spectacular start with the replacement of the two main cooling towers at Biosciences. This effort was led by Dave Clark, Facilities Manager and the work was carried out by PPS Millwrights, Plumbers, Steamfitters and Trades helpers working with the supplier and a local crane company.

The cooling towers work in conjunction with the building chillers to provide cooling for research and teaching spaces in the building. Layup inspections conducted last fall indicated that the towers were in poor condition and that they would require major repairs or complete replacement in order to be ready for this year’s cooling season. Given the importance of this building and the importance of the cooling system to the building’s operation, the choice was made to do a complete replacement.

Through the course of the winter and spring, PPS worked with the supplier to obtain an exact replacement so that no modification to the building or its systems would be required. Even though the towers were made more than 20 years ago, the drawings and tooling were still available and the new equipment fit perfectly when it was hoisted into place. The old towers were disconnected and made ready for removal well in advance.

A road closure was required to lift the old towers off the building and to hoist the new ones into place. In spite of a cool rainy conditions, the work went smoothly and was completed in one day.

Congratulations to all of those involved on a job well done.

As the summer proceeds a number of large stone pointing, roofing and fire alarm projects (to name just a few) will be carried out under the Deferred Maintenance portfolio.
Opportunities in Optimization

BY: NATHAN SPLINTER, ENERGY ENGINEER and CONNOR REED BALEN, ENERGY ENGINEER INTERN

Energy management projects can be sorted into three broad categories: demand management, energy efficiency upgrades, and performance optimization. Primarily the PPS energy management team has focused on the first two categories – demand management and energy efficiency upgrades, we are now focusing our efforts to address the last category – performance optimization.

For reference, demand management is the practice of reducing peak power (or ‘demand’) in order to reduce utility costs. Reducing demand does necessarily translate into lower energy consumption, as the measures could be as simple as scheduling power intensive equipment to operate at different times, instead of all at once. Peak shaving during the summer – running the cogeneration units and reducing cooling loads – is a clear example of demand management on campus.

Energy efficiency upgrades involve updating or replacing existing equipment with equipment that is more energy efficient. The lighting retrofit projects that are ongoing in Mac-Corry, Duncan McArthur, Theological Hall, and Harrison-LeCaine Hall, are good examples of energy efficiency projects. We are in the process of updating outdated and inefficient T12 lighting systems with more efficient T8 or LED products. Cumulatively, these projects will save the university an estimated 538 MWh of electricity annually.

Another example of a significant energy efficiency upgrade on campus is the replacement of the two air conditioning chillers in Stauffer library. Investing in top-of-the-line energy efficient chillers will translate into more than 165MWh of energy savings annually. Together, the energy savings from the retrofit and chiller upgrade projects are equivalent to the electricity usage of nearly 65 average Canadian homes.

There are many more efficiency projects on the horizon, including improvements to the underground steam infrastructure. A study has been commissioned to investigate alternative energy sources to replace the steam system at West Campus. On main campus, an audit was completed by PPS staff to investigate the condition of insulation on the steam line using a thermal imaging camera. Both of these measures will support planning projects that reduce the energy used to heat campus buildings.

Performance optimization on the other hand, involves working with the existing equipment to ensure it operates only when necessary, or in the correct conditions, and in this way reducing energy usage. For example, if you want to reduce your car’s gas usage you can buy a more fuel efficient car (energy efficiency upgrade) or you can take measures like driving less frequently, choosing the shortest route, ensuring your tires are properly inflated, not idling, etc. (performance optimization). Of course you will see the largest results if you do both.

Although the list of opportunities is long, the energy management team is focused on finding time and resources to tackle performance optimization. PPS is in the process of upgrading our campus wide electricity metering system, which will give us the opportunity to monitor energy usage across campus in real time. Real time monitoring of water and condensate usage is planned be incorporated into this system in the not too distant future. Rapid development in technology is leading to new and more effective methods of data collection which supports optimization and project development. Staying aware and educated on new products and new technologies on the market is an integral part of reducing risk and finding the best solutions for the University. To support technology testing, the energy management team plans pilot projects in order to vet the best options for our campus buildings. Stay tuned for an update on our pilot programs in the next newsletter!
Renewed Focus on Recycling
BY: AARON BALL, SUSTAINABILITY MANAGER and LLYNWEN OSBORNE, WASTE COORDINATOR

We’re seeing greater commitment from the Canadian government to preserve the environment by reducing the impacts of climate change. In Ontario, this is being demonstrated through the adoption of a Climate Change Action Plan, the implementation of various programs such as Cap and Trade, Green Investment Funds and through changes to legislation such as the new Waste-Free Ontario Act.

So, what does the new waste management legislation mean for Queen’s? According to the Strategy for a Waste-Free Ontario: Building the Circular Economy, the government is implementing specific measures to support a circular economy that will reduce greenhouse gas emissions from landfills. As part of the Industrial, Commercial and Institutional sector, the university will be required to strengthen its current waste diversion programs, specifically organics collection, in order to reduce the amount of waste being sent to landfill.

In anticipation of these changes to legislation, the Sustainability Office has been conducting audits of campus buildings to improve the availability and accessibility of waste and recycling stations and expanding the organics collection program in public spaces. The university has been participating in organics collection for over a decade in our campus dining rooms, retail food outlets and through the volunteer office organics program. In the last few years, in support of requests from students and staff, the organics program has expanded to the John Deutsch University Centre, the Queen’s Centre, Duncan McArthur Hall and most recently, Beamish-Munro and Biosciences. We will continue to gradually increase the presence of organics bins alongside our existing recycling stations.

In October 2016, the Sustainability Office partnered with Professor Moore’s COMM 408 and ENSC290 classes to conduct a campus waste audit. According to this audit, the university’s waste diversion rate is 43%. The audit also revealed that organic material represents 52% of the university’s waste stream. Current campus strategies to improve waste diversion include:

- Improving availability and accessibility of recycling stations
- Maintaining a consistent campus standard for recycling stations and signage
- Providing waste diversion awareness training to custodial staff
- Bi-annual emails to the campus community to promote campus waste diversion/reduction programs
- Adoption of a target waste diversion rate for the university.
The May 2017 “Tool of the Month” is the Alnor Model RVA801 Rotating Vane Anemometer.

The RVA801 measures air velocity, air volume and temperature using simple button operation and displays readings in metric or imperial mode from 50–6000 ft/min (0.25–30 m/s). The tool is lightweight, easy to use, and a good starting point when diagnosing HVAC problems. Applications around campus include HVAC commissioning, heating and cooling coil analysis, diffuser and grille measurements, fume hood face velocity tests, indoor air quality tests and filter face velocity measurements. It features a 180-degree rotating head which allows the LCD display to be viewed from the front of the instrument while the head is oriented in the direction of flow of the airstream. The anemometer measures the air velocity but can also display the air volume based on the cross-sectional area of the duct or grille entered by the user.

The RVA801 Rotating Vane Anemometer is available from the engineering group to all in PPS.
Thank You!

I have been meaning to email you to let you know how pleased we are to work with John Timmerman, employed by PPS. He greets us with a smile and a chat each day, our workplace and the area around is very clean and he always seems to be available if needed.

John Timmerman’s professionalism, expertise and warm demeanor are genuinely appreciated. Thanks to him and to your entire team.

With respect.

Peter Wolf
Associate Vice-Provost (Teaching and Learning)
Director, Centre for Teaching and Learning
Announcements

New Hires
Victoria Atchison, Parking By-Law Officer, February 21, 2017
Marc Compeau, Electrician, March 6, 2017
Harvey Bradley, Electrician, March 6, 2017
Justin Clancy, Carpenter, April 3, 2017
Cory Burns, Carpenter, April 3, 2017
Shawn Rowsome, Elevator Mechanic, April 17, 2017
Denis Landry, Kitchen Equipment Mechanic, May 8, 2017
Susan Dart, Construction Project Manager, May 23, 2017
Adam Griffin, Steamfitter, June 1, 2017
Rachel Quittkat, Construction Project Manager, June 5, 2017

Retiring
Karl Hinch, Plumber, June 30, 2017
Brian Makosky, Construction Project Manager, May 25, 2017
Mike Van Alstyne, Carpenter, June 30, 2017

Thinking of Retirement?
Queen’s Human Resources offers a Series of Pre-Retirement planning courses designed to encourage Queen’s employees to begin planning earlier in their lives so that they can live the way they want to when they retire. For more information, check the online catalogue located at http://www.queensu.ca/humanresources/apps/training/

We Want To Hear From You
Do you have a news story or an announcement you would like to make, a cartoon or photograph you’d like to share? We’re always looking for submissions for future publications.

Have an idea on what we should name our newsletter. All suggestions are welcome. Submit your ideas to any of the newsletter committee members:

Tracy Elliott, tracy.elliott@queensu.ca
Larry Pattison, pattison@queensu.ca

If you would like to start receiving an electronic version of the PPS Newsletter send an email to one of the newsletter committee members and you will be added to the email distribution list.

queensu.ca/pps