Facilities Management

Year in Review 2012-2013

DALHOUSIE UNIVERSITY
Inspiring Minds

Our Mission

To provide the Dalhousie community with an inviting, safe and sustainable environment which supports and enhances an inspiring experience in learning, living, working and research.

Our Vision

To be an innovative team of motivated professionals recognized for excellence in facilities services.

Our Values

Commitment - We care

Dedication - We are devoted to excellence in facilities management

Integrity - We treat everyone with respect and honesty

Leadership - We lead by example in everything we do

Quality - We do the right thing at the right time

Teamwork - We work together to achieve success for all

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ON OUR COVER: Catherine MacAulay, Project Manager; David Adyemi, Custodian; Randy MacAskill, Carpenter

FACILITIES MANAGEMENT YEAR IN REVIEW
Editor: Brenda MacPhee
Photography and Design: Dalhousie Creative Services


Working together across our campuses

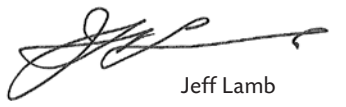
Welcome

EACH MORNING AS I ARRIVE ON campus, I have the unique opportunity of seeing the many impacts our department makes on campus life. During the summer, I see our Grounds team helping maintain our plants and shrubs; during the winter, they are equally busy clearing snow and making walkways safe and accessible.

I can often see our Security team as they drive around campus, on their way to open our buildings so the day's activities can begin. I see our Custodial team members ensuring that front doors and windows are free of the previous day's fingerprints and smudges. And as I pass by construction projects happening around campus, I feel a sense of pride knowing that so many of our team members have played a role in delivering an outstanding final product.

Each year, we hire some of Dalhousie's best and brightest students to work in Facilities Management during their co-op work terms. And each year, our students consistently tell us, "I had no idea your department did so much across campus." Our role on campus is often behind-the-scenes and out of sight, so I wanted to take this opportunity to profile some of our people, our work, and our stories.

Enjoy.



Jeff Lamb
Assistant Vice-President
Facilities Management

Campus spaces

WITH THE AGRICULTURAL CAMPUS becoming part of the Dalhousie campus, we literally gained 154 acres over-night, adding on to our existing 79 acres. There are many people and resources dedicated to determining exactly what is on our Agricultural Campus and making this information accessible and available to those who require it. Some of the things we accomplished on the Agriculture Campus in 2012/13 were:

- Documenting all buildings and adding to Dalhousie's existing space inventory
- Gathering and revising all building floor plans and migrating into our document management system
- Coordinating monthly space meetings
- Developing and issuing a request for proposals for a Campus Master Plan
- Migrating all property leases into our Real Property Management system

Space guidelines

To formalize our approach to managing space on all Dalhousie campuses, Facilities Management engaged a space consulting service provider (ECS) to develop space guidelines and policies that will serve as an aid in planning, allocating and managing space on the campus.

The guidelines and policies will assist the Dalhousie community in establishing and maintaining planning parameters that are equitable, consistent, efficient and flexible for new, renovated and reallocated space. While the guidelines are not intended to be rigid, they will define typical space expectations depending on space categorization such as office, classroom, dry lab, and wet-lab. For space planning, and in some cases due to existing facility layouts and structure, deviations from the guidelines may be justified, and each case will be examined on an individual needs basis.

Campus renewal

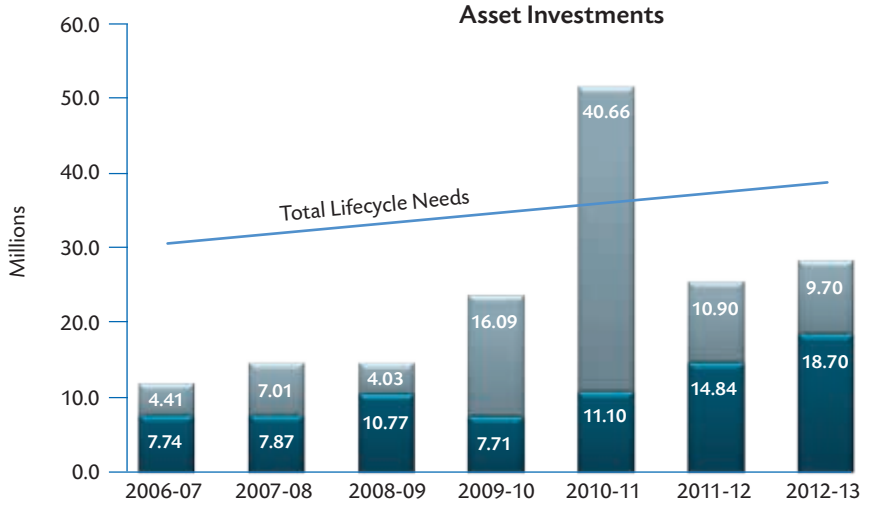
DALHOUSIE UNIVERSITY HAS TAKEN significant strides towards improving the condition of facilities over the past few years through a combination of new construction and renewal of existing buildings. We have implemented a new software system to track the condition of the buildings and help prioritize where the renewal budget is spent.

A facility condition index (FCI) is used to provide a benchmark so we can compare the condition of our facilities to those of similar universities across North America. Wondering how we determine our FCI? Simply put, we determine the cost of maintenance, repair and replacement deficiencies and divide this number by the current replacement value of all University facilities.

Currently Dalhousie has an overall FCI of approximately .21 (calculated using a figure of ~$300M for deferred maintenance divided by a replacement value of $1.5 billion). Our goal is to continue increasing facilities renewal spending in the coming years; ideally we would like to reach ~$30M per year in order to maintain facilities in their current state.

Recognizing a need to invest in its infrastructure, the University has increased its spending for facility renewal from ~$7 million in 2006 to ~$20 million (a record amount) in 2012/13. The University is not only spending more on renewal, but is spending more efficiently and effectively. For the past three years, an independent auditing company called Sightlines has been assessing just how we spend our renewal funding. The news is great – Sightlines findings indicate that we are outpacing our peers in how much is being spent on facilities renewal and how effectively we are spending what we have.

If you look around campus, you can see some of the improvements made to building exteriors (stonework and windows), roofs, ventilation systems, accessibility, electrical systems, and classrooms.



Minor project profile

WITH 249 MINOR PROJECTS COMPLETED in 2012/13, we thought we would mention a few that profile the dedication and commitment of our planners, project managers, and various trades.

Life Sciences Centre Biology lab renovations

After two years of planning and four months of construction by FM trades, renovations to three first-year Biology labs in the Life Sciences Centre were recently unveiled. Highlights include:

- Old, large lab benches were replaced with custom-made hexagonal workstations, ideal for student interaction
- Lighting was upgraded to improve efficiency
- Double sinks, new flooring, and comfortable chairs were installed
- Two new projectors were added to the space

Medjuck Building renovations

We have had great feedback from faculty and students who have seen noticeable improvement:

- Temperature levels for the space are more comfortable
- New blinds that better control glare
- Black window frames are now set further back into the wall to give an authentic neo-classical appearance
- Replacement bricks were coloured to match the original 1903 masonry
- New operable windows were installed, providing increased energy efficiency

Arts Centre elevator renovation

As part of an ongoing commitment to accessibility, elevators across campus were renovated, starting with the Arts Centre and Tupper Building. The goal was to increase reliability and, in the case of the Arts Centre, reduce operating noise which in the past had affected recording performance.

Capital projects

LeMarchant Mixed Use Building

This seven floor, residence/student services building is really starting to take shape, with a completion date of April 1, 2014. The building will welcome its first residence students in September 2014.

The top five floors will be dedicated to residence rooms accommodating over 300 students, while the bottom two floors will house a variety of student services.

New and improved fitness and recreation facilities

In 2012, a project development committee focusing on fitness and recreation facilities at Dalhousie coordinated a series of community consultations. The purpose of these consultations was to determine the needs and wants of the facility users. Members of the project team were joined by Halifax architects Fowler Bauld & Mitchell and Toronto-based MacLennan Jaunkalns Miller architects. Armed with story boards and sticky notes, the project team and various consultants met face-to-face with current and potential users for 32 hours of consultation sessions. The suggestions received ranged from better lighting and atmosphere to more food offerings; however at the top of the list for most current Dalplex users were improved cardio and weight facilities. As the locations and budget for the project are determined, the architects will be working closely with the University to take what they have learned from consultations to move forward with design and construction phases.

Dalhousie Ocean Sciences Building

The spectacular new Dalhousie Ocean Sciences Building officially opened its doors on Wednesday, June 5th. The stunning facility features four floors of research labs and offices, an expanded Aquatron tank capacity, a three-storey atrium connecting the building to the Life Sciences Centre, and a unique container bay that will hold several portable labs constructed from standard 20-foot shipping containers.

Something to celebrate

NOW IN ITS SECOND YEAR, THE Facilities Management **EMPLOYEE SCHOLARSHIP** continues to be a source of pride for the department. Launched in May 2011 as part of Dalhousie's Bold Ambitions campaign, the scholarship fund is entirely funded by staff contributions.

Facilities Management's **HAZARDOUS MATERIALS TEAM** received a 2012 Environmental Health and Safety Award in recognition of outstanding service to the University community. The award was in recognition of the team's "proactive initiative to conduct environmental assessments to identify and address potential hazards within University buildings".

Facilities Management is extremely proud of their ongoing relationship with the **OPTIONS AND OPPORTUNITIES PROGRAM** (known as O2). Facilities Management has been participating in the program for six years, providing an experiential learning opportunity for high school students to gain practical trades education in the field they're interested in.

Our department was happy to be nominated for the **UNIVERSITY'S 2012 HEALTHY WORKPLACE AWARD**.

The Facilities Management Grounds Team recently received a Landscape Nova Scotia Award for the raised planter bed in front of the Killam Library. The team, represented here by Derek Pearson (left) and James Leslie, won in the category of commercial-level landscape design under $25,000.

JULIO ORTIZ
Project Manager

Investing in our people

Project management training

Facilities Management planners and project managers collaborate on a daily basis, so it's crucial that they approach projects with a shared understanding of project management principles. With this in mind, Facilities Management engaged consultants to deliver a series of project management workshops.

An initial first workshop was attended by eight project managers responsible for delivering minor projects, two project managers who manage capital projects, and two planners who are involved in the pre-design phase.

A second workshop included the same attendees, in addition to a project manager and planner from the Agricultural Campus.

Profiling excellence

Gail Best

Gail is Dalhousie's first and only female plumber. She has worked hard to achieve her Red Seal endorsement, as part of nationally designated trade under the inter-provincial program.

What makes Gail tick:

Gail's favourite part of her job is working with young apprentices. "The apprentices are able to receive a different learning experience than the textbooks they are used to. I have an opportunity to share my knowledge by taking the students around to the mechanical rooms and explaining systems to them by actually showing them. I love to see their 'ah ha' moment when they get a better understanding through the hands-on approach."

Challenges to our workforce




LIKE ANY EMPLOYER, FACILITIES

Management recognizes the importance of finding and keeping the best people. Some of the challenges we faced in 2012/13 and continue to face include:

- A shortage of skilled trades in Nova Scotia
- Changing priorities mean younger workers are more concerned with salaries than benefits and stability
- The lure of higher salaries for skilled trades workers in western Canada, Newfoundland, and as part of the Nova Scotia ship building contract
- A shrinking workforce due to an aging population
- Private sector employers that can offer more money or faster career advancement

Finding solutions

- We highlight the advantages of working at the University; tuition assistance, a defined benefit pension plan, discounted fitness memberships, professional development opportunities, etc.
- We identify that our wages and benefits packages are competitive with the local job market
- We highlight Halifax as a desirable place to live and work
- We share the University's belief in striving for a work/ life balance
- We help build the future workforce by hiring apprentices. Apprentices benefit through training and experience required to become a skilled trades professional and we benefit by improving the skills of the workforce
- We participate in programs like Options and Opportunities (O2); a high school program which offers students hands-on learning experiences and an opportunity for admission into a specific community college program
- We host an annual career fair
- We hire co-op students for various units within the department
- We have recently launched a successful, flex time pilot project

GLEN DEVEAU
Zone Supervisor

Same role, different campus

YOU MIGHT THINK THAT A TYPICAL day of a zone supervisor on one of Dalhousie's Halifax campuses would be very different than that of a zone supervisor on the Agricultural Campus, but the roles are a lot more similar than you would imagine. Glen Deveau is one of three zone supervisors responsible for Halifax campuses; Glen is responsible for zone 3, which encompasses Studley Campus, west of LeMarchant Street. Tony Fleck is in a relatively new position as zone supervisor for the Agricultural Campus.

Glen and Tony both start their days in a similar manner, arriving on campus early, pouring a morning coffee, and starting their regular routine tasks including answering messages, going over scheduling matters, taking phone calls and dealing with service requests and invoices.

Glen's major tasks as the zone supervisor for Dalhousie's zone 3 include meeting with contractors to discuss upcoming shutdowns, going to the buildings within the zone to look at flooring problems, leaks and any other issue that may need to be resolved. Tony's major tasks as the zone supervisor for the Agricultural Campus include arranging to have storm drains pumped out by external contractors, ordering equipment parts and supplies, approving expenditures, discussing work orders with project managers and contacting electricians in case of emergency repair at the "Farm".

"Our zone supervisors and their staff are really the people who are in the trenches, dealing with clients, maintenance issues, and emergencies on a day-to-day basis."

Darrell Boutilier, Director of Operations

Despite performing their roles on two unique campuses, Glen and Tony have one common goal; both maintain their campus and play their part in delivering on the department's mission of providing an inviting, safe and sustainable environment.

Both Glen and Tony are part of Facilities Management's Operations unit, under the leadership of Darrell Boutilier, Director of Operations. Darrell further explains that the role of a zone supervisor is anything but predictable, "Our zone supervisors are really the people who are in the trenches, dealing with clients, maintenance issues, and emergencies on a day-to-day basis. It would be hard to predict a typical day on any of our campuses since there are always things we anticipate and prepare for and things that just happen. As a team, we do our best to be flexible, prepared, and ready to react to find solutions to problems."

TONY FLECK
Zone Supervisor

Keeping things safe and secure

Dalhousie's Restorative Justice program

The Dalhousie University Restorative Justice Pilot Project is a relatively new partnership between Dalhousie, Halifax Regional Police (HRP), and the Nova Scotia Department of Justice. The pilot project is the first of its kind in Halifax and Security Services played an invaluable role in the program's successful launch.

The goal of restorative justice is simple – to offer assistance to Dalhousie students who have received a summary offence ticket (SOT) or are facing specific criminal charges, by using positive steps to address their offenses. The restorative justice approach brings our students, the greater community, and partners together to encourage and support the acceptance of responsibility and accountability.

Tiger Patrol

Many people may be aware of Dalhousie's Tiger Patrol shuttle service that is free to all students, faculty and staff of Dalhousie University and the University of King's College. But what most people don't know is just how many people take advantage of this program each year. This partnership between the DSU, Student Services and Security Services is run by a group of dedicated students and ridership is increasing each year.

Tiger Patrol drivers have a set route that they follow each night, and will take passengers to where they need to go along the main routes; sometimes dropping people right at their door!

Look at how our ridership has increased over the past three years:

2012/13	2011/12	2010/11
20,606 passengers	**17,000** passengers	**7,000** passengers

Supporting "Night Owls"

The period leading up to exams can be stressful for even the most prepared students. So when the Killam Library and Student Services introduced a Night Owls program with extended library study hours, our Security Services team wanted to be part of making sure students arrived home safely at the end of the night.

When library hours were extended from 1:30 am to 3:00 am, Dalhousies's shuttle service (Tiger Patrol) followed suit, keeping one van running until 3:00 a.m., from Thursday to Sunday each week.

Advanced Medical First Responder training for Security Services

Early in 2013, Dalhousie Security officers attended St. John Ambulance Advanced Medical First Responder training. This training provides the University with a core group of individuals who are available on a 24/7 basis to better respond to serious injuries or medical emergencies.

JACOB MACISAAC (l)
Community Safety Officer,
Security Services

REYNALDO DAMES (r)
Tiger Patrol

New technology and convenience

Online parking

September 2012 saw the launch of Dalhousie's new online parking permit system and the end of students and staff standing in line-ups to purchase parking permits.

Approximately 75% of the parking permits sold in 2012/13 were purchased using the new online system. Student and staff still had the option to purchase permits at the Security Services office but Security Services is confident that they will see an increase to online purchasing for 2013/14.

New Facilities Management website

Facilities Management launched their new website on the University's CQ5 platform, making navigation and updates simple and instantaneous.

Steps toward sustainability

Aquatron Laboratory

Location: Oceanography wing of the Life Science Centre

Budget: $4.9 million

Construction start date: August 2010

Construction completion date: July 2013

The Aquatron Laboratory offers researchers approximately 50,000 square feet of research space and houses a large number of marine and fresh water labs where scientists conduct work in marine engineering, marine biology and oceanography. Renovations to the 40 year old infrastructure finally achieved the original design intent to re-circulate fresh and sea water, allowing for long-term sustainability.

The goal of the renovations was to decrease city (or purchased) water consumption by 80% or more, significantly reducing thermal energy costs and renewing 40 year old infrastructure for greater reliability and efficiency.

Notable improvements included:

- An ambient sea water pre-treatment system that is more reliable, helping stabilize seawater distribution pressures and flows to the wet labs and reduce energy consumption
- A fresh water pre-treatment system that reduces potable water consumption and reliance on de-chlorination facilities, reducing thermal energy consumption
- A heat recovery system that reduces steam heat demand by pre-heating ambient sea water

Energy generation – looking at our options

Dalhousie's 40 year old heating plant is maxed out (96% capacity) and at the end of its service life. The University must replace existing equipment or invest in a new system capable of generating enough heat to meet the demands of a growing campus.

Facilities Management has been working closely with CEM Engineering and Dalhousie's Office of Sustainability in developing a feasibility study that examines the benefits of an energy generation system that uses natural gas turbines to produce electricity, with waste heat used for space cooling and space heating.

This system would offer many benefits when compared to simply replacing and/or upgrading existing equipment – lower utility costs, greater energy efficiency and reduced greenhouse gas and air pollutant emissions to name a few. An energy generation system would also enable the University to provide a reliable, centrally located source of thermal heating, thermal cooling and electricity in a long-term, cost efficient manner while achieving campus sustainability objectives. Other Canadian universities are currently doing this, but Dalhousie would be the first university in Atlantic Canada to generate its own power.

Lighting retrofit

Replacing more than 20,000 ballasts, 40,000 lamps and 25,000 fixtures across 40 buildings is a huge undertaking; in 2012/13 Facilities Management and the Office of Sustainability took on the challenge. The project goal – to replace existing lighting with more sustainable and efficient technologies. Improvements have included:

- The introduction of exterior LED fixtures and lamps on all Halifax campuses
- Installation of motion sensors, and high efficiency T8 lamps and electronic ballasts inside 40+ buildings on Halifax campuses

The result:

- An estimated annual energy savings totaling about $392,000 with an estimated payback of 10 years or less
- Recycling of approximately 20,000 ballasts
- A savings of approximately 3,623 tonnes of CO_2 emissions a year (equivalent to keeping 710 cars off the road)
- Recovery of 9195 milligrams of mercury from 49,930 lamps

Performance highlights

Our major expenditures for 2012/13 and forecasted funding for major budget categories in 2013/14.

Fiscal Year	2013 actual	2014 forecast
Facilities Management Operating Statistics *(in millions of dollars)*		
Gross Operating Expense	25.9	25.6
Non Space	0.6	0.4
Facilities Renewal	20.2	25.8
Client Funded Projects	6.2	11.0
Capital Projects	35.8	41.4
Utilities Expense	17.0	19.8
Total Expenditure	105.7	124.0

Our staff numbers

Groups	Number of Employees
Management	67
Support Staff	27
Custodial	193
Grounds, Transport, Mail	22
Security	35
Trades	148
Students	79
TOTAL	571

Includes Agricultural Campus.

What it takes to run a campus

249
Number of minor projects completed in 2012/13

$20.2 million
Spent on facilities renewal

$6.2 million
Spent on client-funded projects

172,510 kg
Amount of paper taken to a recycling facility in 2012/13

3,272,258
Amount of sq ft cleaned by custodians

2916 hours
Time spent mowing lawns in 2012/13

78,750 kg
Amount of compost sorted between May and September

141,750 kg
Amount of compost sorted between October and April

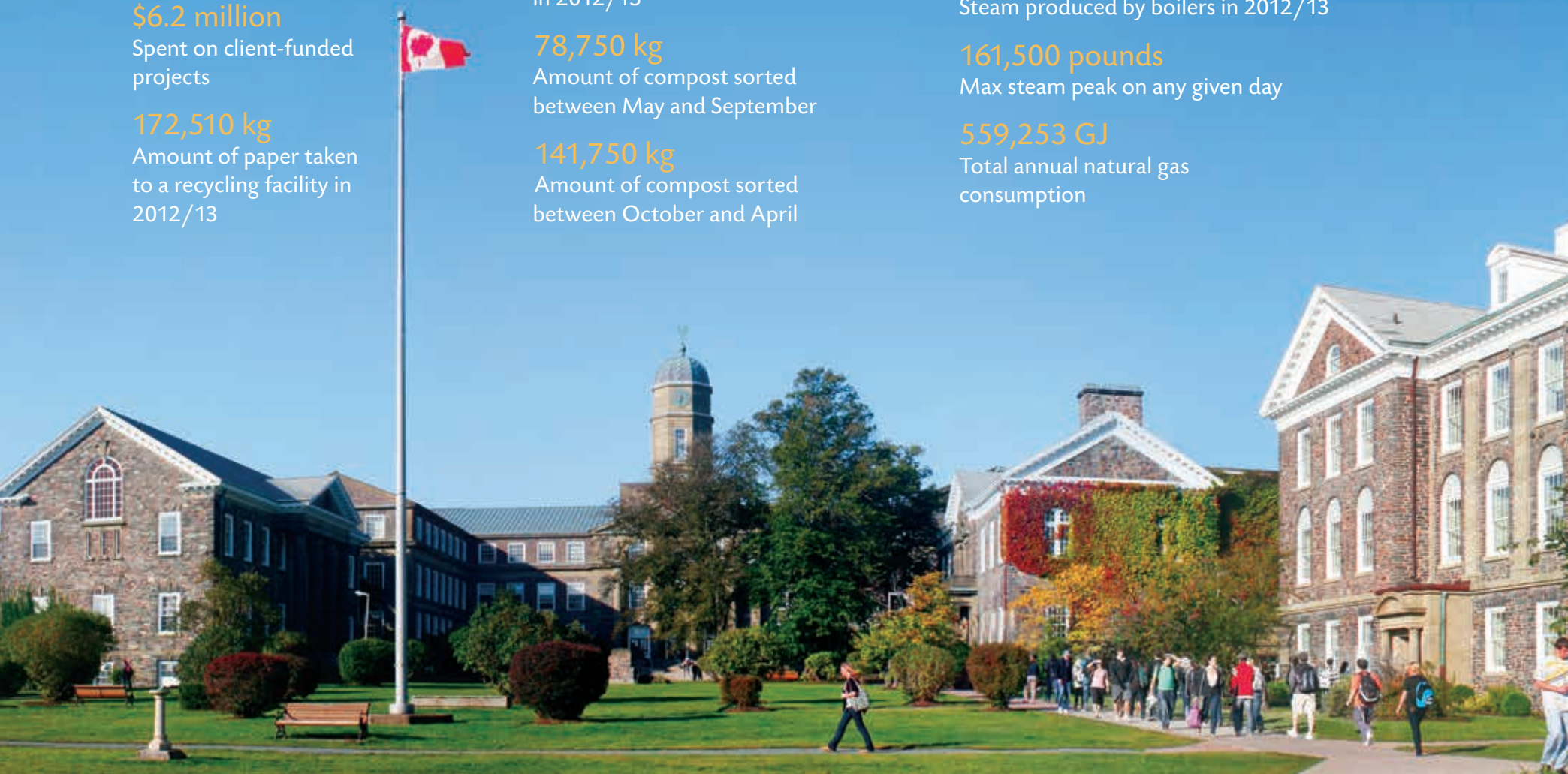
16,260 (avg 65/day)
Total repair requests per year

115
Most requests in one work day

519,327,400 pounds
Steam produced by boilers in 2012/13

161,500 pounds
Max steam peak on any given day

559,253 GJ
Total annual natural gas consumption



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fm.dal.ca

Facilities Management
1236 Henry Street | PO Box 15000 | Halifax, NS B3H 4R2
Tel: 902-494-2470