THE CORE AREA MASTER PLAN
An essential tool for campus and capital planning

Our Sense of Place: The Core Area Master Plan remains an essential tool for campus and capital planning at the University of Saskatchewan. It is a very fluid process that requires continual re-evaluation and adjustment to suit current institutional priorities. Planning staff at Facilities Management Division (FMD) are guiding this renewal under the direction of the Integrated Planning process. An outline of proposed directions and outcomes is expected in the fall of 2008. The longer term goal will then be to review and revise the Master Plan for the next planning cycle.

RECENT PROGRESS
The Master Plan has been an essential guide in the development of several recent projects in terms of determining such things as location and architectural design. In addition, several key documents have been undertaken that complement the Master Plan, including the Infrastructure Master Plan and the Transportation Study. These documents help provide a level of detail not found in the Master Plan itself.

ACTION PLANS
Action plans report on four years of campus growth with detailed descriptions of projects continued on back page...
To ensure the workspace occupied by the operations and maintenance trades personnel complies with all code and safety regulations identified by Occupation Health and Safety, and to address space and layout deficiencies, the University Services Building (formerly Maintenance Building) is being reconfigured. The carpentry shop, electrical shop, and tool crib occupy space in new additions. Space made available by these moves will be reconfigured to accommodate other trades groups, as well as FMD’s Safety and environment employees.

The service mechanics and the steam fitters have moved into the space formerly occupied by the electricians. Construction of the new plumbers’ area and upgrades to the refrigeration area are underway and are expected to be complete by May 30, 2008. Once the plumbers and controls groups are settled in their new shops, several new offices, much-needed meeting space, a training facility, and the work control centre will be relocated to the space formerly occupied by the plumbers and controls groups.

Also included within the renovated space will be an information technology services (ITS) server room, which will house operations servers, new computer network servers, and new research clusters.

In conjunction with the renovations, new air conditioning and ventilation will be installed in the offices and lunch rooms in the new and renovated areas over the summer.

An addition to the heating plant has been constructed to accommodate the new chiller required to cool the expanding infrastructure on the University campus. Chiller #4 is the first new capacity added since 1988. The building addition allows space and provisions for a future chiller #5, which is not anticipated to be required until at least 2015.

All new motors, driving pumps, cooling tower fans, and other ancillary equipment associated with chiller #4 are very high efficiency with variable speed controllers to minimize energy consumption. Infrastructure to support chiller #4 was tendered in November 2006 and work began immediately. Chiller #4 was operational for the 2007 cooling season.
The recently completed College of Law Expansion project involved a three-storey expansion as part of the ambitious Building of Our Future campaign to return the college to pre-eminence in Canadian legal education. The expansion addresses serious overcrowding, modernizes the facility, and rectifies function and accessibility deficiencies. It meets the present needs of students, faculty, and staff, and allows for future growth of the college.

The construction of approximately 2,987 square metres of new space yielded an opportunity to renovate vacated spaces within the existing Law Building to accommodate new functions. The expansion also houses the Native Law Centre, which was previously located in the Diefenbaker Centre.

Construction was completed in Fall 2007 and occupancy coincided with term two classes starting in January 2008. The building includes many sustainable features including natural light to over 75% of the interior spaces; Saskatchewan’s first Extensive Living Roof on both the lower and higher roofs, and a displacement ventilation system providing 100% outdoor air to the building. Sustainable construction practices were also followed: building materials with over 32% recycled content were selected and on-site recycling and construction salvage diverted 87% of construction waste from the landfill.

The College of Law expansion and Native Law Centre grand openings were held on March 14, 2008. “The law building marks a new phase in the way the University is enhancing the student experience and advancing our building standards,” said Brent Cotter, Dean of the College of Law. “This facility will help enrich teaching and learning at our law school for decades to come.”
Work continues on the expansion and renovation of the Western College of Veterinary Medicine (WCVM). The improvements, including upgrades to facilities for teaching, research, diagnostics, and clinical purposes, were necessary to ensure the college continued to meet national and international accreditation standards.

The diverse nature of this project has brought funding from various sources, including Agriculture and Agri-Food Canada, the Province of Saskatchewan, and a WCVM capital fundraising campaign.

Following a complicated construction schedule ensured the college’s operations could continue throughout the project. Construction of a new loading dock, food animal clinical sciences building, and animal care unit, as well as expansion of the veterinary teaching hospital and research wing are now complete. Work continues on the major addition to the diagnostics area, including additional space for Prairie Diagnostics Services. In addition, numerous retrofits and renovations within the building will address bio-security and safety issues within the small and large animal clinics to ensure the college mandate of teaching and hands-on experience are properly supported.

The majority of the project should be complete by the end of this summer, however, some smaller elements will continue into 2009.
BUILDING matters  

GORDON OAKES—RED BEAR STUDENT CENTRE  

In Design

Planning continues for the development of an Aboriginal student space, recently named the Gordon Oakes—Red Bear Student Centre. The vision for this project is to provide resources and amenities for Aboriginal students while engendering knowledge and understanding of Aboriginal history and culture among non-Aboriginal students and the campus community.

The proposed project hinges on securing capital funds to develop three components totaling approximately 1,300 square metres. While separate, the following three components will collaborate to create stronger relationships and increased opportunities:

- Space for Aboriginal students, coordinated through the Indigenous Students’ Council, including a lounge, resource/computer room, and student office
- Aboriginal Students’ Centre/Student and Enrolment Services offices and facilities for student advisors/counselors, including space for elders
- Central teaching/learning/ceremonial space

The location of this project, Wiggins Court, will allow the facility to be linked to the Lower Arts/Place Riel Tunnel and the new Academic Health Sciences D Wing.

INTERVAC

Under Construction

The new International Vaccine Centre (InterVac) will be the first laboratory in Western Canada to allow research on both animal and human health for current and emerging infectious diseases. The centre is being developed collaboratively by the Vaccine and Infectious Disease Organization (VIDO), the College of Medicine, and the Western College of Veterinary Medicine. The bio-containment facility will be one of the largest vaccine research laboratories in North America and will lead Canada into world leadership in vaccine research and development for diseases as diverse as hepatitis C, SARS, HIV, tuberculosis, and avian influenza.

A containment facility of this nature requires strict monitoring in all areas of construction, certification, and operation. As a result, almost 75% of the 13,670 square metre facility will be used for complex building support systems. In order to create the airtight rooms and environments necessary for the research, facilities of this type have very strict parameters for construction.

Funding for this world-class facility comes from the Canadian Foundation for Innovation, the Province of Saskatchewan, the Government of Canada, the City of Saskatoon, and the University of Saskatchewan. Construction will take approximately 32 months to complete.
The Academic Health Sciences project involves a series of additions and renovations. This sequencing was necessary due to the scale of the project and the infrastructure changes required. Some of the components are finished, others are in progress, and some are still moving through the design phase.

**Design Phase**

**D Wing**

The D Wing addition to the B Wing of the existing Health Sciences Building will be a large four-storey addition on the east side and six-storey addition on the north side of the B Wing. The majority of the new space will house laboratory and vivarium space for research.

Temporary space has been leased at Innovation Place for the biomedical researchers and animal facilities that were required to vacate the existing B Wing facility to make room for the D Wing addition. These researchers will move into D Wing once the project is complete.

As part of the D Wing expansion, a pedestrian tunnel is being constructed under Campus Drive. Once construction of D Wing and the Aboriginal Student Space (see page 5) is complete, a new link will connect to the tunnel from Place Riel to the Health Sciences Complex.

**E Wing**

The E Wing addition will include a new library, the first 500-seat lecture theatre on campus, and new clinical learning resource space. The existing Medical Research Building will be deconstructed to make way for the E wing addition. The majority of the E wing will be a stand alone building extending from the pedestrian intersection of the Academic Health Sciences Building and the Dental Clinic all the way to Campus Drive. Currently in the design phase, several user group and working group meetings have been held to determine space allocation needs. Tender documents should be issued in the fall of 2008.
Under Construction

Site Utilities

Utility relocations and upgrades were required to meet the needs of the large additions to the Health Sciences Building (D Wing and E Wing). Utilities affected include steam, chilled water, electrical infrastructure, gas lines, and fire lines.

The most visible aspects of this project was the relocation of Campus Drive to make room for D Wing, the underground conduit being installed to accommodate electrical services, and the demolition of the old Royal University Hospital laundry building. The project is essentially complete with some minor paving and roadway work and the final sewer and storm drain line relocation to be done in May.

Construction Complete

GEMS Laboratory Renovation

The B307 Gene Expression Mapping Using Synchrotron Light (GEMS) Laboratory renovation has converted an under-utilized anatomy teaching lab into biomedical research space for the GEMS research group. This is a demonstration lab for the open design concept being considered for D Wing. Researchers and scientists working in the new space were able to witness first-hand the development of the collaborative lab space. The project is complete and functioning well, and has been a valuable test bed for ascertaining which design features will be incorporated into the D Wing project.

4th Floor Renovation

The new lecture theatre space and breakout rooms on the 4th floor (B Wing) have been in use for both curriculum and non-curriculum bookings since January 2006. The Interim Clinical Learning Resources Centre is also complete and has been in use since September 2006.

Preliminary Planning

A Wing and B Wing Renovations

Once D and E Wings are functional, renovations will begin in the existing A and B Wings of the Health Sciences Building. This portion of the project is still in the preliminary planning stages.
PLACE RIEL EXPANSION
Design Phase

The Place Riel Expansion will incorporate the renovation of the lower level of Place Riel, the renovation and expansion of the main floor, and the addition of three floors above the expanded main floor.

Most of the courtyard to the north of Place Riel, between the Murray and Marquis Buildings, will become an all-season interior concourse connecting the bowl to the bus mall.

Reorganization of the lower level will increase the seating capacity of the food court and improve circulation through Lower Place Riel. The Cove and Global Commons will be relocated to other areas of the lower level and the University of Saskatchewan Students’ Union (USSU) offices will move to the main and second floors. The Centre Shop will move to Marquis Hall as part of another project.

On the main floor, relocation of the Crepe Factory to the lower level will provide additional seating adjacent the bus mall and will improve pedestrian circulation. A portion of the USSU office will occupy part of the expanded main floor space, along with a pharmacy, student health office, and a student information desk.

The existing escalators leading to the lower level will be replaced by stairs. Elevator access will maintain barrier free accessibility and will link the existing and new floors of Place Riel with the existing floors of Marquis Hall. USSU office space on the second floor will be accessible from an open stair within the USSU office space and by key- or card-access elevator.

Plans for the third and fourth levels are currently undefined.

Funding for the project has been raised primarily from the student body, with supplementary funds from the University. Completion is anticipated in early 2010.
The 4th floor of the Spinks Addition is uniquely suited to house research computing clusters—racks of computers that can draw large amounts of power (10 or more kW per rack) and therefore require tremendous amounts of air conditioning. Before construction of the High Performance Computing Research Facility (HPCRF) could begin, the students occupying that space needed to be relocated. Phase 1 of the project was the construction of new Computer Science Graduate Student space in Room S426.

Now that the graduate students have moved out of Room S404, renovations have begun to develop the HPCRF space. The major components of Phase 2 include the installation of the following:

- A new transformer and high voltage distribution system to supply power to the racks of computer equipment and all the air conditioning required to keep them cool
- Air conditioning in the room and on the roof
- Ventilation, fire suppression, and monitoring systems
- Steel structure for both snow and condenser equipment load on the rooftop directly above Room S404
- Concrete and vibration dampening pads required for much of the large equipment both within the space and on the roof
- A wider and taller doorway, along with a raised ceiling and support system for hanging the overhead cooling units, the rack top coolers, refrigerant piping, as well as electrical and network cable trays

The wiring, piping, pressurizing, and testing/commissioning of the above systems will begin in May and should be complete in June.

The University Learning Centre and Library Transformation project will involve major renovations of the ground and first floors of the Murray Library Building (south wing), which will nearly double the space devoted to student programs and services within the library. The project includes a University Learning Centre, dedicated to the development of learning skills for students and teaching skills for faculty. It will be a casual and flexible space, connected to new media resources and designed to accommodate the new ways in which students are learning.

The Learning Centre will be developed in phases. Phase 1, which is now complete, provided a new home for the Gwenna Moss Centre for Teaching Effectiveness. The Writing Help and Math Help services of the University Learning Centre were also established on the first floor, Murray Building South. These changes accommodated the most critical components of the University Learning Centre.

Phase 2 is now under construction and the new student facilities are due to open in December 2008. The ground floor of the Murray Building South will be transformed into an exciting new space that will include a café, group study and meeting rooms, and a large new study lounge with wireless internet access and comfortable seating. The circulation desk and reserve collection will be moved to the ground floor and library staff will relocate to renovated space on the sixth floor.
GRAINS INNOVATION LAB
In Design

The Crop Development Centre in the Department of Plant Sciences, College of Agriculture and Bioresources, currently operates a grains quality screening laboratories program. The program has outgrown the physical space in which it operates. The creation of a new and expanded Grains Innovation Laboratory at the Crop Science Field Laboratory (CSFL) will not only provide the College of Agriculture and Bioresources with improved and increased research space, it will allow for the provision of service-related activities such as screening, grinding, and milling in conjunction with the CSFL.

Pending the final confirmation of capital funds, the proposed 1,466 square metre addition to the CSFL will consolidate and enlarge the malting, baking, and wet chemistry laboratories together with milling, grinding, and office facilities that are presently located in the College of Agriculture. An area for grain drying will replace the existing facility, which is scheduled for demolition to make room for the proposed addition. If funds are available, space will also be provided for the Soil Science Field Research Facility, which is presently located in nearby Quonsets.

Tendering of the project is scheduled for late spring with construction to start in late October. It is expected to be ready for occupancy in August 2009.

DAIRY RESEARCH FACILITY
Preliminary Planning

Since the University’s inception, the College of Agriculture and Bioresources has operated a dairy facility in support of its research and educational programs, as well as sustaining outreach services. The facility was housed in the Stone Barn (built in 1912) until the construction of the present Dairy Barn in 1972.

The current facilities need to be modernized or replaced to address the University’s commitment to research, teaching, extension, and technology transfer. The Department of Animal and Poultry Science is investigating the redevelopment of the existing Dairy Unit to bring the dairy teaching and research facility up to modern standards. The renewed facility will need to meet Canadian Council on Animal Care standards and will emphasize teaching, applied research, extension, and technology transfer activities. The facility will continue to serve the needs of nutrition, feeds, health, management, and genetics research and training. To support research needs, the size of the milking herd should be increased.

Preliminary space requirements for the facility include the following:

- A dairy barn for lactating cows with new robotic and milking parlours, including laboratories and receiving/holding areas
- New areas for metabolic research, including feed preparation and laboratory areas
- New public viewing galleries
- Support areas (locker rooms, washrooms, and storage areas)
- Potential for a Bio-Energy Centre to be developed

FEED TECHNOLOGY RESEARCH FACILITY
In Design

Plans continue to develop for the Feed Technology Research Facility, intended to be the first of its kind in Canada, to fill a critical infrastructure gap in feed processing research and development. Research activities within the facility will benefit the Canadian feed industry and promote rural economic development while demonstrating applied scientific research in feed processing technology and animal nutrition. The proposed project, which hinges on securing capital funds, will consist of a multi-level structure situated at the corner of Preston Avenue and 108th Street, just south of the Crop Science Field Laboratory. The Feed Technology Research Facility will support interdisciplinary collaboration for researchers and graduate students from animal nutrition, crop genomics and breeding, animal health, food safety, and biotechnology.
CORE AREA REVITALIZATION
In Design

Core Area Revitalization is an ambitious and much needed multi-year, multi-project program to address the University’s most critical space needs within the campus core. There is a deficiency of approximately 44,000 square metres, including an office deficiency of 9,000 square metres. The objective is to address immediate academic space needs for Arts and Science, Engineering, and the School of Environment and Sustainability. The plan will also address emerging and anticipated space demands for the School of Public Health, the School of Public Policy, and the School of Environment and Sustainability, as well as graduate student office space.

In Phase 1, approximately 2,050 square metres of new office space, the entire 5th floor of 121 Research Drive, will be developed to accommodate University Advancement, the Industry Liaison Office, and a third group (to be determined). Completion is expected in fall 2008.

Renovations to the Animal Science Building will accommodate College of Engineering functions on the second floor. Parking and Campus Safety and Security will be relocated from the University Services Building to the ground floor. These renovations are expected to be completed fall 2008.

Phase 2 involves the renovation of Kirk Hall to make the building more functional and improve the productivity of its occupants. Accessibility enhancements will include the installation of an elevator and a chair lift and construction of a new barrier-free washroom. Roofing and lighting upgrades will improve the overall efficiency of the building. Construction is expected to begin in this summer and should be complete for fall 2009.

Changes to the Arts Building, McLean Hall, and the University Services Building will provide additional space relief.

The Core Area Revitalization Feasibility Study is searching for long-term solutions for the needs of University Advancement, the Industry Liaison Office, Information Technology Services, and other identified units with space needs. Ongoing consultation with these units to determine the most appropriate location, adjacent units, and potential for growth are nearing conclusion. Requirements include office spaces, server rooms, and storage space. To meet these needs, we are exploring the re-use of Emmanuel and St. Chad residence and various other locations. The final components of Phase 3 are conditional upon the findings of this study. A final report is expected in May 2008.

CAMPUS LIGHTING RETROFIT PROGRAM
Under Construction

Existing fluorescent fixtures on campus will be phased out by 2010. The campus lighting retrofit program will systematically replace fluorescent light fixtures and exit lights in areas that have not yet been retrofitted through capital renewal projects.

The lighting retrofits are critical to a wide range of energy conservation measures that support the University’s commitment to sustainability. They will reduce energy consumption (thereby energy costs) and greenhouse gases, and they will improve the indoor light quality throughout campus.

To date, the Crop Science Field Laboratory, Diefenbaker Centre, Administration Building, Dental Clinic, John Mitchell Building, and Williams Building have been retrofitted. Work is underway on the Engineering Building.

Disposal of the fluorescent bulbs in an environmentally responsible manner is an important component of this project. Since November 2007, a bulb crusher, designed to crush fluorescent tubes in order to recycle all components (glass, phosphor powder, mercury, and aluminum) has crushed 5,600 bulbs. By using this disposal method, an estimated 33.6 g of mercury has been kept out of our environment. Based on the Canadian Council of Ministers of the Environment guidelines approximately 4.9 tonnes of agricultural soils and approximately 1.1 billion litres of freshwater would have been impacted by the direct release of this volume of mercury.
in planning, in design, and under construction. All of the projects included in the action plans reference the key principles of the Master Plan and provide a full update on its progress.

SUSTAINABILITY
Also critical to the direction of the Master Plan is the issue of sustainability, which was just introduced in the 2003 Master Plan. As the Master Plan forms the basis for all campus growth, it is critical that sustainability be infused in the Master Plan and that all sections and directions consider current and future sustainable practices.

KEY ELEMENTS
The review process has identified several key elements the revised Master Plan should address:
- Review and redevelop the long-term demonstration plan and develop a short-term campus plan
- Complete the first action plan
- Create an implementation plan for key aspects of the Master Plan
- Add parameters that direct physical development and focus opportunities
- Review the capacity of campus buildings and recommend growth potential
- Enhance the strong sense of place on campus
- Coordinate growth opportunities such as for student housing
- Ensure development with partners such as the Saskatoon Health Region, City of Saskatoon, and Innovation Place
- Evaluate architectural style, scale, and character to successfully integrate future development
- Initiate a way-finding sub-plan
- Provide commentary on existing campus design and buildings
- Relate suggested strategies to the Guiding Principles and Parameters
- Ensure ongoing evaluation of the Master Plan and local area plans

THE CORE AREA MASTER PLAN
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