



Faculty of Medicine  
Faculty of Dentistry  
Faculty of Science  
Faculty of Education

Teaching and Learning Services

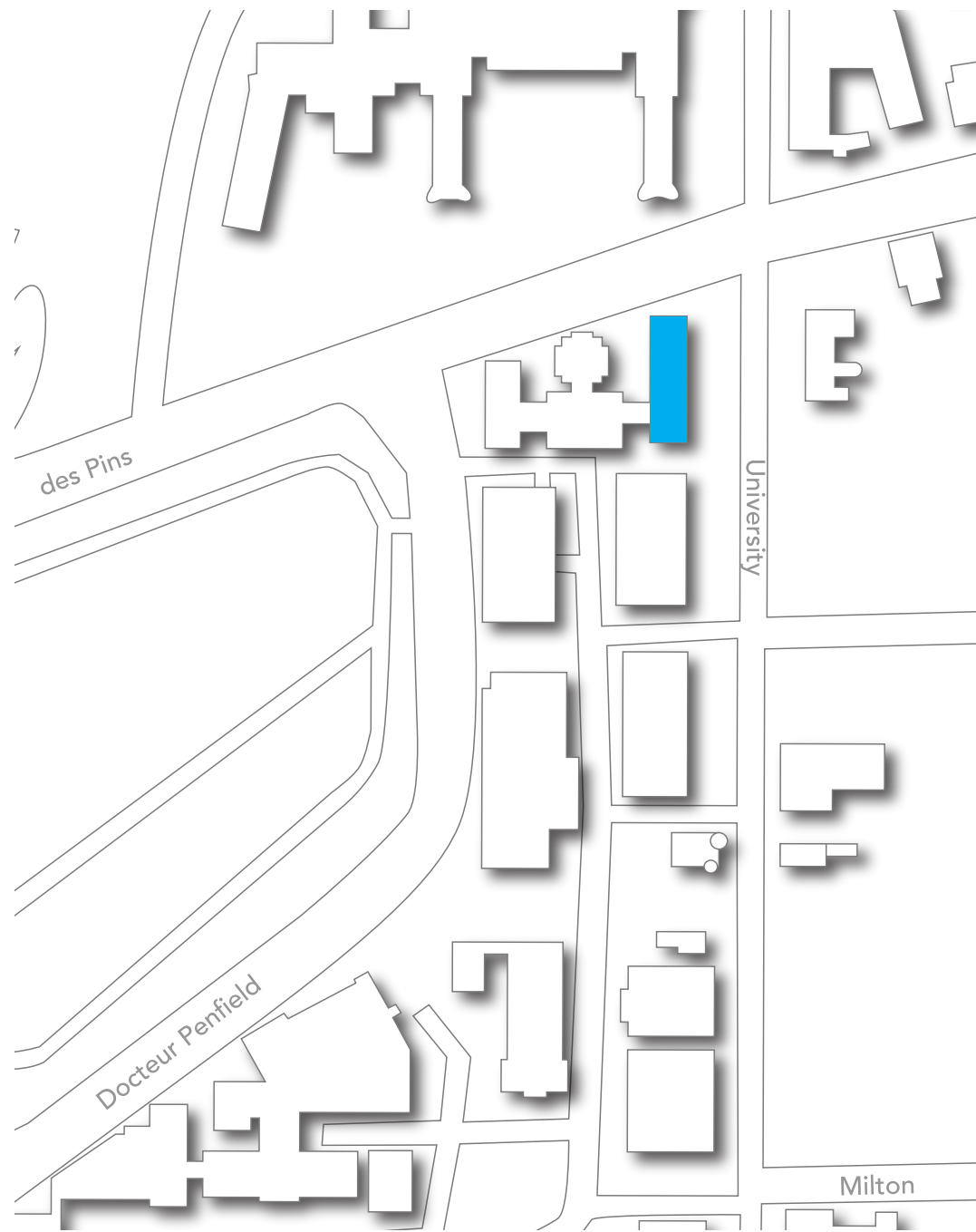
# Anatomy teaching Laboratories

## Strathcona Anatomy and Dentistry

Presentation document

March 2015

# INTRODUCTION | The future Anatomy Lab



Key Plan of McGill campus, Montreal

In a context of complex healthcare delivery, McGill University has pledged to develop the **world's future leaders** and to be at the forefront of modern research and medical education, by nurturing **innovative and collaborative approaches** for health care. This commitment helps the university best serve its community and attract competitive students. To ensure that the Faculty of Medicine fulfills its mission, we must train professionals who are technically competent, as well as emotionally equipped to provide patients with compassionate care. The anatomy laboratory setting is a natural place to **develop and foster some of these professional skills**, as it facilitates the **development of emotional skills** such as empathy and clinical detachment, reflection on death, **team leadership, communication skills, interdisciplinary teamwork** and the fundamental understanding of 3-D relationships within the human body.

Alumni testimony often mentions that the level of kinesthetic learning gained by **dissecting the body has supported a better spatial appreciation** and **understanding of anatomy**. This is also reflected in public surveys that have shown that the general population prefers their physician to have experience with dissection with an extended knowledge of anatomy. However, McGill's Anatomy Laboratory has changed very little since its initial construction in the 1900s and is in great need of renovation and expansion. More than 1100 students, spanning 4 Faculties and 19 courses/ workshops use the laboratory every year. The protection of patients and provision of safe and optimal healthcare must be held as the highest priority. To better support this provision, we propose a renovation of our Anatomy Laboratory to meet new environmental safety standards and better support student learning to **best serve our current and future students and post-graduate learners**.

Similar to the recent Arnold and Blema Steinberg Medical Simulation Center, the remodeled lab will create **authentic learning environments** that recreate surgical suite and procedure room environments in order to support learning across the continuum of medical education and to aid in transfer from dissection to more context realistic situations. The renovation will preserve a dissection-based curriculum with a low student-to-cadaver ratio, which has made McGill University so successful in the past, while facilitating **enhanced multimedia experiences**. The new facility will be designed to enhance interaction amongst learners and health professionals, providing networked capability to dynamically share and manipulate media such as imaging and pathology reports. Lastly, the renovated laboratory will also offer the **state-of-the art working environment** to continue carrying out research projects to **develop innovative biomedical technologies** and **test new medical and surgical procedures**.

*Dr. Geoffroy Noel, Director of Division of Anatomical Sciences*

# | HISTORY | The building

The project location



Stathcona Anatomy and Dentistry Building, East wing

Built in 1909, and designed by David Robertson Brown et Hugh Vallance architects, the original building was dedicated to Medecine teaching and the lab 2/ 49 was designed as an anatomy lab.

## History of a first donor

The building is associated with [Lord Strathcona](#), who was its original principal donor. It is also intimately connected to the history of the Faculty of Medicine. Its conception is a direct result of a fire that destroyed the original medical building (currently the site of the James Administration Building) in 1907. At its opening, the building housed two important and unique collections: the Osler Library of the History of Medicine (now relocated to the McIntyre Medical Sciences Building); and the [Anatomy Medical Collections](#).

## Significant architecture

The Strathcona Anatomy and Dentistry Building is one of the only examples of [neo-Tudor architecture style](#) on the McGill campus. Its style, layout, and interior spaces with their predominance of terracotta, are [unique among the campus](#) buildings. As well, its footprint was deliberately made to model that of the Royal Victoria Hospital, which is located across the street on the north side. Thus, the design of the building reinforces the history of the area and acknowledges its context.

The halls of the purpose-built building are decorated with glazed terracotta plaques that contain the names of all faculty and professors who have taught at the school since its opening; these plaques are an integral component of the interior architecture.

## Heritage value

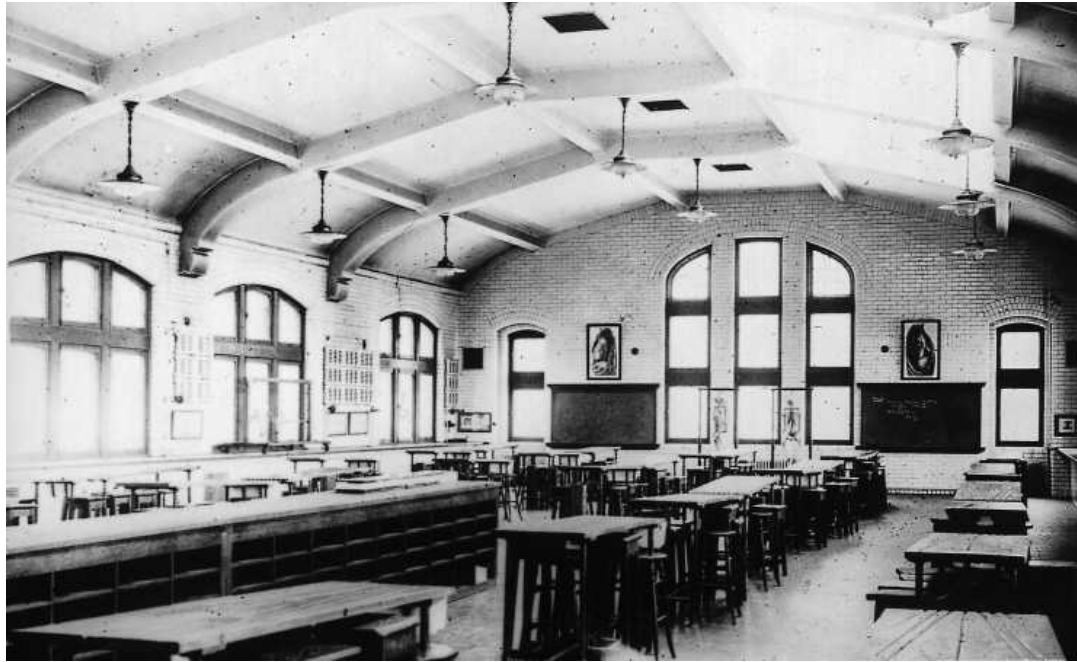
The Strathcona Anatomy and Dentistry Building is designated by the university, the city and the government, to be of a [high heritage value](#). In addition, the building is part of protected areas, designated:

- Declared heritage site of Mont Royal (2012, provincial)
- Historic and natural borough of Mont-Royal (2005, provincial)
- Heritage Mont-Royal site (1987, municipal)
- Sector of exceptional heritage value of the Royal Victoria Hospital (municipal)

*reference: Cultural Heritage Ressources Assessment, Strathcone Anatomy and Dentistry Building (154), Fournier Gersovitz Moss Drolet Architects, 2015*



# | HISTORY | Significant interiors



Room 49 - original photograph 1920

## Spaces and Finishes

- The symmetries and axialities organize the circulation within the building and the architecture of each space.
- The main circulation spaces, include vaulted ceilings, terrazzo and marble flooring, glazed terracotta finishes and commemorative plaques.
- The main stairwells include marble finishes, wood bannisters, and stained-glass windows.
- All original interior finishes include the glazed terracotta, plasterwork, and wood paneling. The use of glazed terracotta provides a sanitized environment, emphasizing the medical nature of the building. The light grey colour resembles the colour of the human skeleton. Terracotta allows an inexpensive means of delivering custom-designed detailing and ornamentation, and this opportunity is vigorously and inventively exploited.

*reference: Cultural Heritage Ressources Assessment, Strathcove Anatomy and Dentistry Building (154), Fournier Gersovitz Moss Drolet Architects, 2015*

## Natural light

Located in a building wing, rooms 45 and 49 were designed to provide generous natural lighting thanks to this unique architecture that put a great emphasis on this feature. Majestic windows surround the rooms and a grandiose skylight of 20m long complement the windows in room 49. The quality of **natural light is optimal for the laboratories activities.**

## Past and future

This project addresses the conservation of the original architectural integrity. The encounter of **old and new** in these spaces will create a unique environment for teaching and learning.



Room 45

# CURRENT SITUATION



Existing Anatomy Laboratory, room 49



Existing Museum, room 45

## GENERAL INFORMATION :

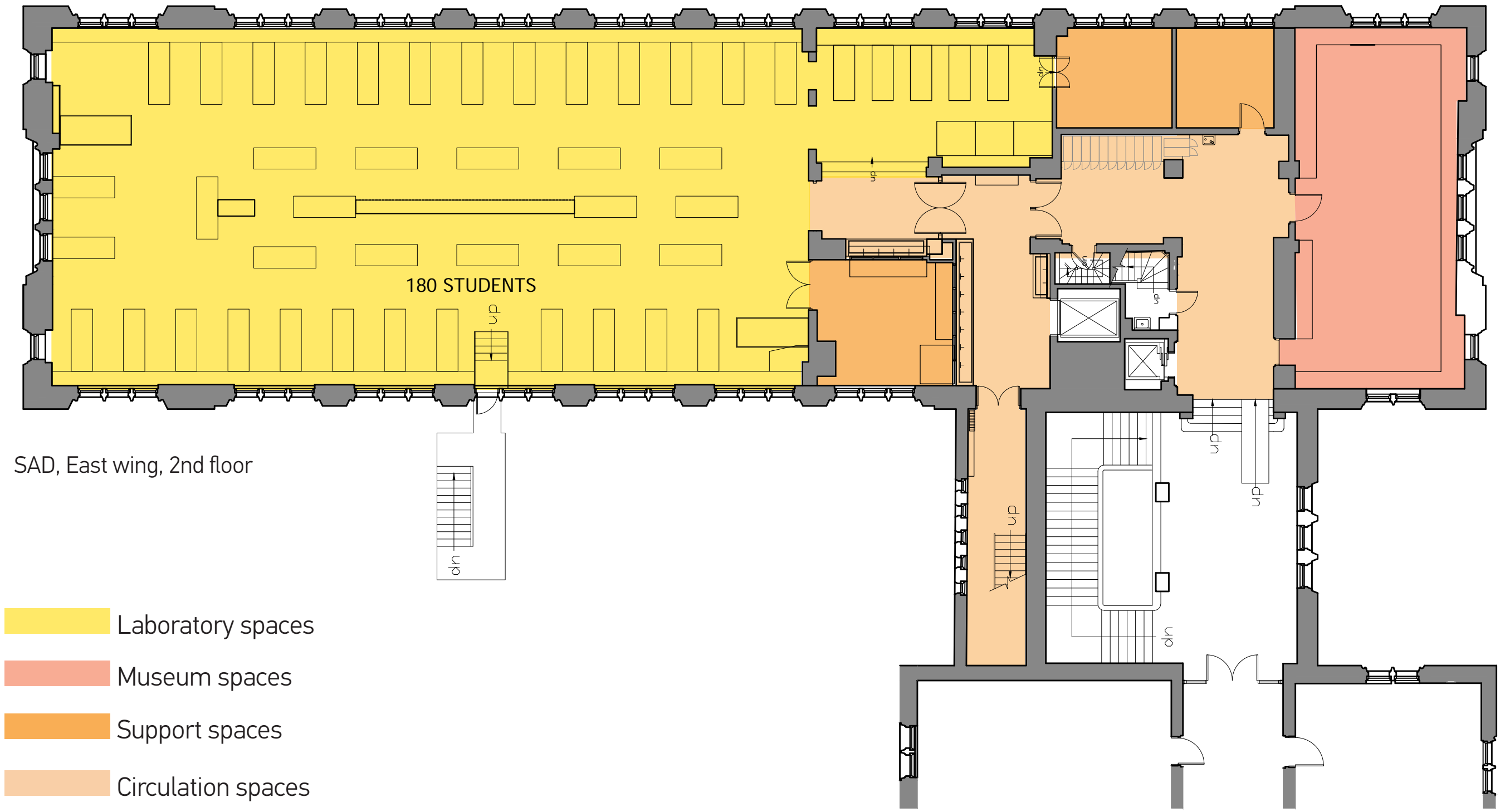
- Building envelope repairs, including the windows and masonry, are projected to proceed in the near future.
- Health and safety code conformity requirements for the building were addressed in a previous project (2010-2012). As part of that project, a new sprinkler pipes network was installed.
- The “Anatomy teaching laboratories” project will address other aspects of code conformity for laboratories and supporting spaces.
- HVAC infrastructure has exceeded its life expectancy and desperately needs to be replaced. This project will correct that situation.
- Plaster containing asbestos in the ceiling has been removed (2012), but the ceiling reconstruction will only be done once all mechanical and electrical work is completed.
- The current space of laboratory, room 49, is not optimal:
  - lack of proper mec./electr. equipment, including inadequate artificial lighting
  - lack of proper teaching equipment
  - lack of effective furniture
  - lack of storage space
  - lack of space flexibility

## ROOM 2/45 :

In addition, Room 2/45 which currently houses numerous anatomical models will be refurbished to become a secondary laboratory for smaller, more specialized groups of student from various parts of the world.

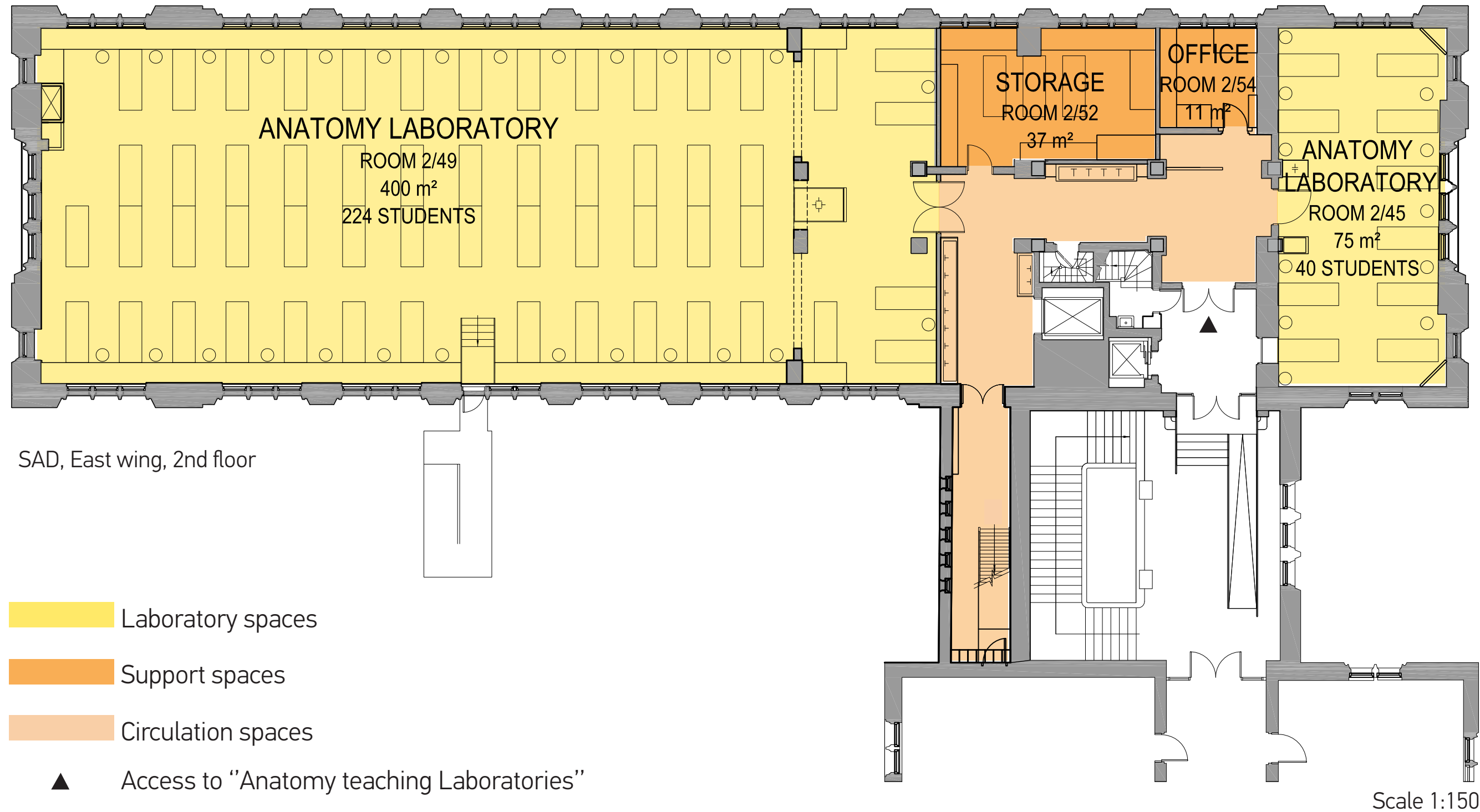
The wax, clay, plastic and human anatomical collection on display in room 2/45 will be re-joining the pathological specimen collection which is displayed in the Pathological Institute Museum, located in the Duff Pathological Building. The newly inaugurated McGill Maude Abbott Medical Museum, located in the rotunda of the Strathcona Anatomy and Dentistry Building, will host both anatomy and pathology collections to strengthen the relationship between these two disciplines, as first intended in 1909.

# | EXISTING | Space hierarchy

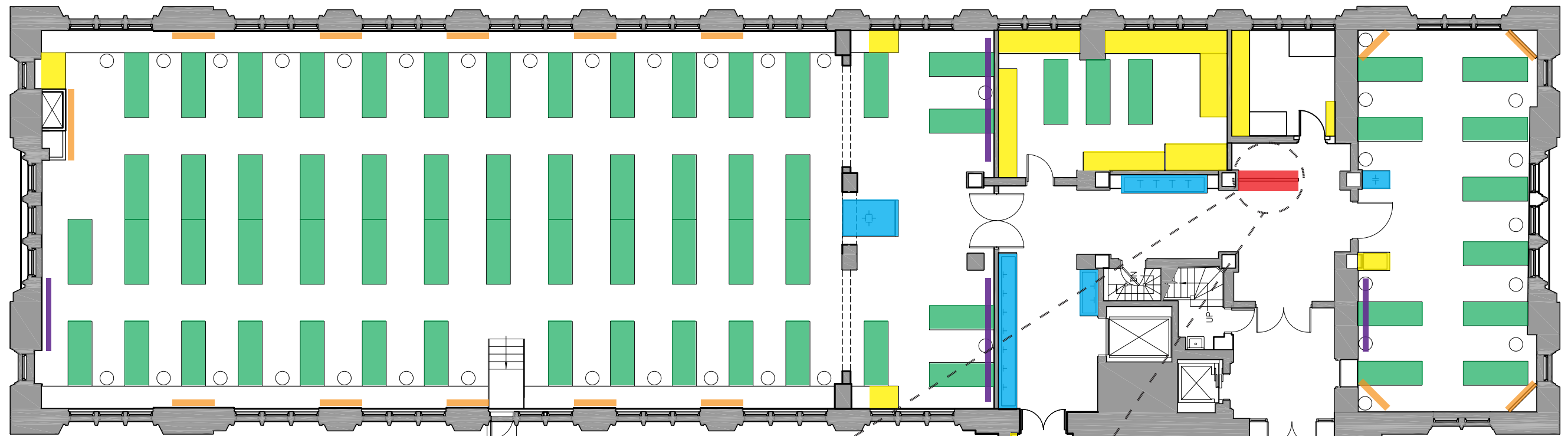




# PROPOSAL | Space hierarchy



# PROPOSAL | Supporting elements



SAD, East wing, 2nd floor

- Donor wall
- Tables dissection/prosection
- Audio-visual screens
- Sinks
- Blackboards
- Storage



Inspiration :  
Donor Wall  
McGill's Faculty of Dentistry  
2001 McGill College Avenue

Scale 1:150



# | FEATURES | New state-of-the art gross anatomy lab

## UNIQUE DESIGN :

- **Teaching lab facilities for 264 students**
- **Create teaching lab “showcase” for the university preserving architectural heritage while modernizing the space**
- **Provide comfort with “cutting edge” infrastructure such as :**
  - High performance ventilation
  - High level of lighting and ideal daylight conditions
  - Temperature and humidity controls
  - Specific acoustic response for working, collaborating and teaching conditions
- **Provide modern and high quality laboratory equipment:**
  - Dual functions of tables: dissection/prosection
  - Optimized storage
- **Create an optimal learning and teaching environment\***
  - Students will be able to actively engage with their own learning and provide a range of technologies to support multiple modes of teaching and learning (including better demonstrations and the ability to view and record different pathologies)
  - Overall flexibility of space usage with movable furniture
  - Active and collaborative learning supported by audiovisual and interactive walls
  - Possible simultaneous teaching in both laboratories (Room 2/49 & 2/45)
  - Possible simultaneous teaching to other locations across the world (with videoconference bridging)
  - Improved circulation to promote student-faculty interaction

\* This renovation will support McGill University's Principles for Designing Teaching and Learning Spaces

# RENDERING



New Anatomy Laboratory, room 49



# | RENDERING



New Anatomy Laboratory, room 45