

PART 1 GENERAL
1.1 Summary

- .1 Unless otherwise indicated, follow the standards below when planning exterior spaces. These standards are not intended to restrict or replace professional judgment.
- .2 This document follows the principles of the “McGill University Physical Master Plan” of 2008.
- .3 These guidelines shall be read with the specific technical sections of McGill’s Building Design and Technical Standards.

1.2 Related Technical Sections

- .1 McGill University
 - .1 Building Design Standards – Landscape

Section Number	Title of Section
09 91 13	Exterior Painting
31 11 00	Clearing and Grubbing
31 35 00	Natural Stone
32 00 00	Exterior Improvements
32 01 90.33	Tree and Shrub Preservation
32 11 23	Aggregate Base Courses
32 12 16	Asphalt Paving
32 14 13	Prefabricated Unit Paving
32 31 00	Fences and Gates
32 37 00	Exterior Site Furnishings
32 37 50	Outdoor Lighting
32 91 19.13	Topsoil Placement and Grading
32 92 23	Sodding
32 93 10	Trees, Shrubs and Ground Cover Planting
32 93 15	Hydraulic Transplanting
32 93 43.01	Tree Pruning

1.3 Vision

- .1 The landscape for the downtown McGill Downtown Campus will enrich and elevate the experience of the historic, environmental and symbolic pre-eminence of the site, highlighting its value and place at the foot of Mount Royal, and affirming its interactions with the city of Montreal.
- .2 The landscape shall be done with high quality, durable and sustainable materials reflecting the heritage components of the campus. Any new major additions to the campus shall be

addressed as adding a new contemporary layer to the site in order to distinguish historic and new elements and to therefore better highlight the heritage value of the campus.

- .3 The scope of the vision extends to all landscape components on campus. It includes site furniture, circulation pavement, entries and site limits, landscaping and art work.
- .4 Any intervention on landscape elements shall be safe, sustainable, durable and financially feasible.

1.4 Maps and Documents

- .1 McGill University Physical Master Plan – 2008.
 - .1 https://www.mcgill.ca/campusplanning/files/campusplanning/2008_master_plan_principles_report_final.pdf
- .2 McGill Maps
 - .1 www.maps.mcgill.ca
- .3 Other Maps
 - .1 Views towards Mount-Royal
 - .1 http://ville.montreal.qc.ca/pls/portal/docs/PAGE/BUREAU_MTROYAL_FR/MEDIA/DOCUMENTS/ANNEXE%20F-CARTE-VUE%20VERS.PDF
 - .2 http://ville.montreal.qc.ca/pls/portal/docs/PAGE/BUREAU_MTROYAL_FR/MEDIA/DOCUMENTS/ANNEXE%20H-COTES%20ALTIM%20C9TRIQUES%20.PDF
 - .2 Map of Mount-Royal
 - .1 http://ville.montreal.qc.ca/pls/portal/docs/PAGE/BUREAU_MTROYAL_FR/MEDIA/DOCUMENTS/CARTE_MONT_ROYAL_2013FR.PDF
 - .3 Boroughs
 - .1 Borough of Ville-Marie
 - .1 http://ville.montreal.qc.ca/pls/portal/docs/page/lib_arr_fr/media/documents/carte_arr_vma.pdf
 - .2 Borough of Plateau-Mont-Royal
 - .1 http://ville.montreal.qc.ca/pls/portal/docs/page/lib_arr_fr/media/documents/carte_arr_pmr.pdf
 - .4 *Arrondissement historique et naturel du Mont-Royal*
 - .1 http://ville.montreal.qc.ca/pls/portal/docs/page/bureau_mtroyal_fr/media/documents/Carre_Territoire_du_decret_mont-Royal.pdf
 - .4 Other Documents
 - .1 *Plan de protection et de mise en valeur du Mont-Royal*
 - .1 http://ville.montreal.qc.ca/pls/portal/docs/PAGE/BUREAU_MTROYAL_FR/MEDIA/DOCUMENTS/PLAN%20DE%20PROTECTION%20ET%20DE%20MISE%20EN%20VALEUR%20DU%20MONT-ROYAL.PDF

1.5 Guiding Principles

- .1 Unique Identity

- .1 Spirit of Place
 - .1 Prestigious university campus where excellence, community and education are at the core of campus life.
- .2 Threshold to the Mountain
 - .1 Connectivity with Mount Royal by highlighting its views, encouraging safe pedestrian links and focusing on a landscape which provides a harmonious and smooth contact.
- .3 Threshold to the Downtown Area
 - .1 Ensure the connectivity to downtown area by encouraging the use of urban materials, adding a larger pool of urban furniture and promoting views of the city Centre.
- .2 Education
 - .1 Outdoor Laboratory
 - .1 Extend teaching and learning outside building walls by providing comfortable and adapted spaces to study outside. With Wi-Fi access and exterior charging stations, McGill will promote outside teaching as part of a stimulating teaching practice.
 - .2 Create partnership to create a living lab
 - .1 McGill is a student-centered institution and encourages students to become engaged citizens. Initiatives that endorse partnerships between the university, private sectors and citizens are supported as a means to creating a positive impact on campus life.
 - .3 A model for sustainable design
 - .1 In its Sustainability Policy (2010) and Vision 2020 Sustainability Strategy, McGill aspires to achieve the highest possible standard of sustainability on its campus. Whenever possible, concepts and strategies for sustainability shall be integrated in the campus landscape.
- .3 Respect
 - .1 Preservation
 - .1 Protect and maintain existing key components that are part of the historic value of the site.
 - .2 Restoration
 - .1 Whenever possible, heritage landscape is to be restored. Repair rather than replace and use modern landscape, art and architecture to restore heritage landscape.
 - .3 Rehabilitation
 - .1 Where appropriate, add a layer of subtle and long lasting contemporary designed items to historical places. Never override the character-defining elements of the heritage site.
 - .4 Blending the new
 - .1 Conserve the heritage value and character-defining elements when creating new additions. Preserve the integrity of the historic place by ensuring that if

the contemporary elements are removed, the essential form and value is not impaired.

- .5 Balance between the old and the new
 - .1 When adding new contemporary elements to the landscape, ensure that their presence enhances the heritage value of the site and does not overshadow historic elements.
- .4 Adaptability
 - .1 Landscape Functions and Flexibility
 - .1 The landscape shall maximize the number and types of activities that can take place on campus as well as be sufficiently flexible to allow changes during the evolution of the space.
 - .2 Pedestrian Connections
 - .1 Encourage pedestrian circulation design that takes into account the possibility of being enlarged and that is integrated in a long term vision plan. If new buildings are built, guarantee their connectivity to the rest of the campus path network.
 - .3 Vehicular Access, Circulation and Parking
 - .1 The lower campus is now a pedestrian-zone (with restricted vehicle access and reduced parking), resulting in a safer, more physically-active environment. Occasional vehicular circulation and access shall be made mostly through shared spaces.
 - .4 Cyclist Access, Circulation and Parking
 - .1 McGill's downtown lower campus is a shared space where cycling is permitted. This means mounted cyclists will circulate on the same pathways as pedestrians. Pedestrians will remain the primary users of this shared space and will have the right of way at all times. The new procedure does not affect McTavish Street, which is a public space under the City of Montreal's jurisdiction, where cycling remains prohibited.
 - .5 Public and Private Realms
 - .1 McGill Campus is by definition part of the private realm, however it also acts as a major collective space for passersby, tourists and residents. The landscape shall therefore encourage a smooth cohabitation between public and private realms.
 - .6 Four Seasons
 - .1 Consider the four seasons to increase the campus experience and appropriation. Ensure that a certain level of comfort be obtained at all times, even in extreme climate conditions such as the high temperature of summer and cold of winter. As McGill Campus is mainly used during fall and winter, it is important to grant a great deal of importance to the comfort of users during these seasons. Prioritize landscape elements that require low maintenance in regards to season changes (removal of benches for winter, de-icing salt, etc.).
 - .7 Events, temporary exhibits and installations

- .1 Identify strategic spaces where events, as well as temporary installations and exhibitions, should take place. Allow for flexibility since activities, interventions, scope and scale of events will vary. Events on campus are dedicated to students, faculty members and teachers and should be in close relation with McGill properties. For activities on campus, furniture such as benches, tables and garbage bins shall be located nearby. Lighting and temporary signage shall be considered when planning these events.
 - .2 It is important to mention that McTavish Street is on the public realm and is part of the city of Montreal's "Promenade urbaine" project.
- .5 Creativity & Innovation
- .1 Landscape
 - .1 The landscape of McGill Campus shall showcase the University's excellence with high quality materials, workmanship, space design and good practices in landscape architecture.
 - .2 Landscape Experience
 - .1 The landscape experience has a great role to play in campus appreciation, appropriation and retention. The landscape shall therefore put emphasis on the wellbeing of students, faculty, staff and visitors by creating a stimulating environment.
 - .3 Public Arts and Sculpture
 - .1 Permanent public art and sculptures need to be integrated respectfully to their context. Statues, commemorative plaques and other heritage elements shall be located near historic buildings and places. Contemporary public art shall, however, be located near new buildings and contemporary places. Public art must not be installed in areas dedicated for free play.
- .6 Stewardship
- .1 Environmental Protection
 - .1 All projects must meet or exceed the Environmental Policy for McGill University and balance environmentally suitable objectives. The campus should be considered as an extension of Mount Royal , therefore actions and new additions to the campus must be made in respect of the *Plan de protection et de mise en valeur de Mont-Royal* and encourage connection with the mountain.
 - .2 Social Sustainability
 - .1 Meet the definition of sustainable development from the Brundtland Commission in its 1987 report "*Our Common Future*": development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Sustainable development incorporates issues associated with human development such as education, public health, and living standards.
 - .3 Cost Efficiency
 - .1 When adding new or replacing old elements on campus, a cost-effectiveness analysis should be integrated in the decision-making process. The lifecycle cost of materials, site-furniture and landscaping elements

should be studied with regard to not only actual cost, but also long-term fees such as maintenance, lifetime of product, durability and replacement.

.4 Urban Agriculture

.1 Urban agriculture is encouraged on campus, to bring together several communities while addressing its insertion with the natural settings. Define permanent zones for urban agriculture and identify strategic spaces to install temporary growing pots. Roofs could also be used.

.2 For more information: www.mcgill.ca/sustainability/topics/urban-agriculture

.5 Biodiversity

.1 The landscape environment has a crucial role to play in supporting and enhancing biodiversity on campus, especially in the urban context in which the site is located. The landscape elements shall aim to increase biodiversity throughout campus.



.7 Sustainability

.1 Refer to McGill's General Standards.

.2 These standards are derived from the following considerations based on the LEED® rating system, as it relates to sustainable aspects of landscape projects:

.1 Storm water design

.1 Manage storm water on site to favour infiltration and by incorporating water accumulation areas.

.2 The intent is to limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from storm water runoff and eliminating contaminants.

.1 Use natural, soil and vegetation based approaches to manage runoff, such as low-impact development (LID) and green infrastructure.

.2 Plan to manage on site runoff for the 95th percentile of local rainfall.

.3 Refer to McGill's Rainwater Management Plan

.1 *Plan forthcoming.*

.2 Heat island effect

.1 The intent is to reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat. Consider the following measures:

.1 Use existing vegetation, or plant new vegetation to shade paved areas within 10 years of planting.

.2 Install vegetated planters.

.3 Provide shade with vegetated structures.

.4 Any paving and architectural shading devices/structures should use materials with a three-year aged solar

- reflectance (SR) value of at least 0.28. If the three-year aged SR information is unavailable, use materials with an initial SR value of at least 0.33.
- .5 These measures should be considered in conjunction with a high reflectance roof and/or vegetated roofing in order to earn LEED® credits, see sections Special Building Areas 12 Roof and 07 52 00 Roofing.
- .3 Water efficient landscaping
 - .1 The intent is to limit or eliminate the use of potable water or other natural surface or subsurface water resources available on or near the project site for landscape irrigation. Ensure one of the following measures are followed, both can be achieved through the use of local and adapted plant selection:
 - .1 Demonstrate that a permanent irrigation system is not required beyond a maximum two-year establishment period for maintenance of the landscape.
 - .2 Or, reduce the landscape's water requirements by 30% from the requirements calculated at the peak month.
 - .4 Material selection
 - .1 The intent is to address the environmental concerns related to material selection, waste disposal, and waste reduction.
- .8 Safety and Security
 - .1 Emergency Call Devices
 - .1 All emergency call devices on Campus shall be well integrated in their context but, above all, be easily recognizable and accessible.
 - .2 Security Cameras
 - .1 All security cameras on Campus shall be totally integrated in the building architecture and landscape elements to avoid visual pollution so the users' experience is not affected.
 - .3 Dead Zones
 - .1 Identify 'dead zones' on campus, such as hidden, remote or less accessible areas that could present a threat to security. Bring pathways closer to those areas or install lighting elements to ensure the security of users.
 - .4 Visually Impaired and Universal Accessibility
 - .1 Adopt a universal design approach in regards to landscape design in order to provide an environment that is easy to navigate, can be clearly understood and efficiently used by people with a wide range of disabilities in a wide range of situations.
 - .9 Universal Accessibility
 - .1 The university is committed to creating a fully accessible and welcoming environment for all visitors to campus, in both open spaces and buildings.

- .2 The principle of universal design should be applied to the design of all landscape, including finding buildings, entering them and connecting from one building to another.
- .3 Consider accessibility issues when designing future connections between buildings.
- .4 Arrangement of spaces should be simple and logical to facilitate wayfinding by people of all abilities.
- .5 Paving materials should be selected to accommodate people who use mobility devices.

PART 2 DESIGN STANDARDS

2.1 Entries and Site Limits

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **05 50 00** Metal Fabrication.
 - .2 Section **32 31 00** Fences and Gates.
- .2 All gates, portals and fences on campus located at the entries and site limits of the campus.
- .3 Style and Materiality
 - .1 The decision making process regarding the replacement or repairs of these elements shall be based on the following factors:
 - .1 If its value is **heritage**, restoration shall be prioritized, even if the cost is higher. If it can't be restored, it shall be rebuilt with identical design and construction.
 - .2 If its value is **non heritage**, either repaired, rebuilt identically or with a brand new design.
 - .3 If a **new** gate, portal or fence needs to be installed, its style and materiality shall be in relation to its context: either with a contemporary style or a more heritage approach.

2.2 Vehicular Circulation & Infrastructure

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **03 05 10** Concrete.
 - .2 Section **32 12 16** Asphalt Paving.
 - .3 Section **32 14 15** Prefabricated Unit Paving.
 - .4 Section **32 15 40** Crushed Stone Surfacing. – *Section Forthcoming.*
 - .5 Section **32 50 25** Reinforced Turf. – *Section Forthcoming.*
- .2 Downtown Campus
 - .1 Lower Campus
 - .1 Lower campus is mixed use, pedestrians and cyclists share the space. Vehicular circulation is allowed only for deliveries between 7:00 and 11:00 AM.
 - .2 Upper Campus

- .1 Upper campus is mixed use. Vehicular circulation is not segregated.
- .3 MacDonald campus
 - .1 Circulation Standards
 - .1 *Standards forthcoming.*
- .4 Parking Standards:
 - .1 The design of parking areas should not degrade the landscape of the campus. The minimum standards should be followed in order to minimize the impact of the parking areas. For example, the downtown borough of Ville-Marie reduced its minimum standards by 50% for buildings within 500m of a metro station for all categories of use. Consequently, the management of parking lots must comply with the standards required by Quebec's *Ministère des Transports, de la Mobilité durable et de l'Électrification des transports*.
 - .2 Visibility/Safety
 - .1 Standards forthcoming.
 - .3 Line types/Colour
 - .1 Standards forthcoming.
 - .4 Charging stations (electric cars)
 - .1 Designate 5% of all parking spaces as preferred parking for green vehicles, distributed proportionally.
 - .2 Supply 2% of all parking spaces with Type 2 electrical charging station.
 - .5 Signage
 - .1 Use simple signage, and minimize the number of signs to improve visibility.
 - .2 Ensure the signs are aligned with the applicable standards of the McGill Parking Services and McGill's Exterior Signage Standards.
 - .1 *McGill Parking Services standards forthcoming.*
 - .2 <https://mcgill.ca/buildings/signage-standards>
 - .6 Heat island effect
 - .1 Refer to article 1.5.7.2.2 above, Heat island effect.
 - .2 At least 50% of the total parking surface should be under vegetated shade. Calculate using the noon sun exposure on June 21st, and assume 10-year canopy width.
 - .7 Vegetation
 - .1 Refer to article 2.5 below, Green Spaces and Vegetation.
 - .2 Include 5% green space within parking areas of 20 spots or more.
 - .1 Roadway leading exclusively to parking included within parking area, for calculation purposes.
 - .2 Green space area excluded from parking area, for calculation purposes.
 - .8 Reduced parking



- .1 Reduce the amount of devoted parking areas (including the number and size of parking).
- .2 Reduce the parking capacity by 40% from the base ratio. Base ratio recommended: 0.4/school population, including student, faculty and staff).

2.3 Pedestrian Circulation & Infrastructure

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **03 05 10** Concrete.
 - .2 Section **32 12 16** Asphalt Paving.
 - .3 Section **32 14 15** Prefabricated Unit Paving.
 - .4 Section **32 15 40** Crushed Stone Surfacing. – *Section Forthcoming.*
 - .5 Section **32 50 25** Reinforced Turf. – *Section Forthcoming.*




2.4 Cyclist Circulation & Infrastructure

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **03 05 10** Concrete.
 - .2 Section **32 12 16** Asphalt Paving.
 - .3 Section **32 14 15** Prefabricated Unit Paving.
 - .4 Section **32 15 40** Crushed Stone Surfacing. – *Section Forthcoming.*
 - .5 Section **32 37 00** Exterior Site Furnishings.
- .2 Bicycle Parking Stations (Short-term parking)
 - .1 Areas designated for use as short-term bicycle parking facility.
 - .2 For at least 2.5% of peak building occupants.
 - .3 A minimum of four spaces per building.
 - .1 Do not double count storage spaces.
 - .4 Bicycle parking stations shall also include repair stations.
- .3 Cyclist Circulation
 - .1 Downtown Campus
 - .1 Lower Campus
 - .1 Lower campus is mixed use. Bike circulation is not segregated.
 - .2 Upper Campus
 - .1 Upper campus is mixed use. Bike circulation is not segregated.
 - .2 MacDonald campus
 - .1 Cycling infrastructure consisting of marked lanes, tracks, shoulders and paths designated for cyclists and from which motorized and pedestrian traffic is excluded.
 - .2 Bike lanes shall be segregated from pedestrian paths.

- .3 Bike lanes shall be made with stabilized stone dust surface and be 3 meters wide. See section **32 15 40** Crushed Stone Surfacing – *Standard forthcoming*.

2.5 Green Spaces and Vegetation

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **32 50 25** Reinforced Turf – *Section Forthcoming*.
 - .2 Section **32 92 23** Sodding.
 - .3 Section **32 93 10** Trees, Shrubs, and Ground Cover Planting.
 - .4 Section **32 93 15** Hydraulic Transplanting.
 - .5 Section **32 93 43.10** Tree Pruning.
- .2 McGill's green spaces are located primarily near buildings, athletic facilities or student services. They are central, open, and easily accessible, with high pedestrian traffic.
- .3 These outdoor areas provide space for formal group events and informal socializing and gathering year-round, while supporting McGill's educational mission. These spaces will help establish a unique identity to the Campus and will reinforce a sense of community
- .4 They must provide ease of maintenance and universal access. Required elements are: paving for furniture installation, furniture, planting, seating options (shade and sun), lighting, trash bins and bicycle racks.
-  .5 In order to meet LEED® credit requirements for new construction projects, the outdoor space provided must be at least 30% of the total site area, including new building footprint. Additionally, at least 25% of the outdoor space must be vegetated (not including turf grass).

2.6 Site Lighting

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **26 50 00** Éclairage.
 - .2 Section **32 37 00** Outdoor lighting.

2.7 Hard Surfaces

- .1 Refer to 1.5.7.2.2 above, Heat island effect.
- .2 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **32 12 16** Asphalt Paving.
 - .2 Section **32 13 15** Prefabricated Unit Paving.

2.8 Exterior Site Furnishings

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **32 37 00** Exterior Site Furnishings.

2.9 Sport Fields Furnishings

- .1 Refer to the following section(s) of McGill's Building Design Standards.
 - .1 Section **32 37 10** Sport Fields Furnishings. – *Section Forthcoming*.

2.10 Wood products

.1 Wood products shall be certified by one of the following standards to ensure they are issued from sustainable forests (contractor shall submit proof to this effect):

- .1 FSC (Forest Stewardship Council). Refer to the FSC website to find FSC certified companies (<http://info.fsc.org/certificate.php>).

2.11 Signage

.1 Refer to the McGill Exterior Signage Standards, at the following web link, for all information on exterior signage: <http://www.mcgill.ca/buildings/signage-standards>

- .1 *McGill Exterior Signage Standards forthcoming.*

2.12 Steps, Railings and Site Walls

.1 Steps:

- .1 The use of ramps instead of steps is preferred, wherever possible, for best universal access design;
- .2 Steps should be built into the slopes and have a foundation below frost level. Risers shall have a back slope and treads shall have a 6mm wash.
- .3 A general design formula for establishing size of risers and treads shall be twice the riser plus the tread = 660mm. Preferred riser dimensions are 127mm minimum and 152mm maximum.
- .4 Foundation wall at top and bottom of steps shall have a projecting ledge to support pavements.
- .5 Where feasible, there shall be no fewer than 3 steps and no more than 10 steps per set.
- .6 Maintain 75mm minimum clearance from edge of steps to outside of drilled hole for handrail installation where required.
- .7 Handrails, tread, and riser design shall meet required Codes.
- .8 Treads shall have a non-slip finish.
- .9 Nosing bars shall not be used in step construction.
- .10 Tactile indicators shall be integrated on every landing, follow "Stairs and ramps" of Special building areas of the Building Design Standards.

.2 Handrails and Guardrails:

- .1 *Standards forthcoming.*

.3 Site walls:

- .1 *Standards forthcoming.*

2.13 Art and Culture

.1 Permanent art work: All commemorative installations such as monuments, historical plaques and statues.

- .1 All permanent works of art, monuments, historical plaques, and statues must respect the heritage of the campus and be professionally sited and installed.

- .2 Art work tending more towards a historical style, carrying a strong commemoration component (monuments, historical plaques and statues) may be installed near the heritage buildings however will need to ensure to respect of the heritage value of the area.
- .3 Contemporary art work shall be located near contemporary buildings and plazas in order to respect the genius loci of the site.
- .4 Ultimately, the selection of art work shall be determined with input from the Visual Arts Collection staff and the location of any new elements shall be determined with input from the Architecture & Planning Advisory Committee.
- .5 Art work signage shall be well integrated in its context and adapted to the installation.
- .6 Where public art is planned, coordination between architect and artist is required.
- .2 Temporary art work: All types of temporary art work such as ephemeral installations and temporary exhibits.
 - .1 All temporary art work shall also respect the heritage value of the landscape and views toward and from heritage buildings. The location of any temporary installations shall also be determined with input from the Architecture & Planning Advisory Committee and the Visual Arts Collection staff.

2.14 Special Events and Temporary Installations

- .1 Standards forthcoming.
- .2 Provide supplementary lighting for safety and security.
 - .1 *Standards forthcoming.*
- .3 Temporary / movable landscape displays / planters / furniture / water / electricity.
 - .1 *Standards forthcoming.*

2.15 Smart City

- .1 Standards forthcoming.
- .2 Support the live, work, play concept by encouraging a diversity of uses for balanced communities.
 - .1 *Standards forthcoming.*
- .3 Promote the development of communities with a high degree of internal connectivity.
 - .1 *Standards forthcoming.*

END OF SECTION