

INTERNATIONAL DESIGN AND ARCHITECTURE IDEAS COMPETITION

Valorization of the Montréal Olympic Stadium roof







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### PART A The eco-creative challenge







### Call for ideas: an olympic ambition for reuse

It is time to take bold collective action in circular architecture to accelerate the socio-ecological transition.

With this goal in mind, the Montréal Olympic Park is launching an international ideas competition, to reuse and valorize the components of the roof of the Olympic Stadium, emblematic building of the Québec metropolis and architectural icon on a Canadian scale.

This competition is part of the Olympic Park's sustainable development action plan, which aims, among other things, to reduce the volume of waste related to construction, renovation and demolition activities.

The design and architecture communities, both professional and student, are invited to propose spaces, objects and processes that will constitute an important legacy for our city and for the Province of Québec, to demonstrate the potential of reusing materials from an urban repository, such as those from the Olympic Stadium roof replacement project.

The Olympic Park is counting on the creativity of designers and architects with varied perspectives and experiences to contribute to the future of Montréal, UNESCO City of Design.

This document presents the eco-creative challenge and the rules.

#### The Olympic Roof Reuse competition:

- // Ideas competition offering high visibility to the laureates through public disclosure of the proposals and a vote for the People's Choice Award;
- // Prizes totaling \$80,000 (eighty thousand dollars) CAD;
- // Proposals judged anonymously in a single step;
- // Open internationally;
- Free registration;
- // For professionals and students in the fields of design and architecture;
- // Ideas presented, at the potential sketch stage, on two 17 in × 11 in posters (432 mm × 279 mm).

#### Key dates:

Submission of proposals: no later than June 11, 2024, 11:59 PM, Eastern Standard Time

Laureates' announcement: Summer 2024

#### People's Choice Award announcement: Fall 2024

Le Parc olympique (Olympic Park) is owned by the Government of Québec and the Société de développement et de mise en valeur du Parc olympique, the trustee of this facility, reports to the Ministère du Tourisme. The Sociétés mission is to develop, manage, promote, and operate the Olympic Park, in particular to allow the holding of sports, cultural and community events, exhibitions, as well as recreational and tourist activities, in conjunction with its partners and the surrounding community. It also has the mission of promoting the Olympic heritage and legacy.





## Competition objectives and vision of the reuse project

"Balance in life is a result, not a goal, a reward, not a quest. It is not achieved by adding up precautions but by alternating efforts."

Pierre de Coubertin<sup>1</sup>

What can be done with the hundreds of tons of materials when the current roof of the Montréal Olympic Stadium is dismantled? Will we be able to take up the challenge of this Olympic Roof Reuse, while being part of a circular architecture approach thus enhancing the quality of life for citizens impacted by climate change?

For several months, the Olympic Park and numerous partners have been joining forces to generate innovative mechanisms to reduce the environmental footprint of the dismantling and increase its social impact. This competition is one of such initiatives, aiming to stimulate debate and interest in the social and circular economy and to generate unique and progressive concepts in the field of design and architecture.

### More specifically, the objectives of the ideas competition are as follows:

- // Provide inputs for the Olympic Park on the possibilities of reusing the materials of the Olympic Stadium roof with the intention of reusing most component parts;
- // Establish connections with the community living near the Stadium, through the creation of new spaces, innovative facilities and socially responsible offerings;
- // Valorize an urban deposit of residual materials by diverting them from landfills and identifying undeveloped opportunities for valorization;
- // Support circular initiatives in design and architecture for sustainable development and selective deconstruction;
- // Encourage and promote excellence among professionals and students in the fields of design and architecture.

### Ingenious valorization that takes into account the condition of the materials

The challenge of reusing roof components at the end of their current life is substantial. Proposals submitted for this competition take into account the state of wear and tear of the materials and their altered properties. The white canvas is an example of the most damaged materials, having been given over 15,000 repairs<sup>2</sup>. The suggested solutions will therefore have to factor in the need to reuse this material with reduced load stress. The other components retain most of their structural properties and could therefore be used for other purposes.

#### Proposals that achieve a high level of social acceptability

To ensure the success of this reuse effort, certain factors must be considered. The expected proposals must demonstrate that they constitute a genuine ecological benefit and must be clearly part of a circular economy approach, through their contribution to the environment and the local community. They must be structured, have an impact in the neighborhoods surrounding the Stadium, meet the existing needs of the population and consider the vulnerabilities of the territory. Proposals involving the sale of roof pieces or production of goods solely for commercial use are prohibited.



<sup>&</sup>lt;sup>1</sup> DE COUBERTIN Pierre, Lettres Olympiques (VII), La Gazette de Lausanne, n° 338 du 11 déc. 1918.

Current situation (French only) | <u>https://parcolympique.qc.ca/toiture/situation-actuelle/</u>



# Competition objectives and vision of the reuse project | cont.

#### Four award categories that steer the creative challenge

The jury will aim to award up to eight prizes in four different categories. In making its selection, the jury will pay particular attention to proposals that use different components of the Olympic Stadium roof. It is up to the competition participants to choose whether to take up the challenge of using all the components in one project or to propose an idea for a partial reuse.

#### Award for full reuse of materials:

The jury will select the best proposals that meet the challenge of reusing the largest quantity of materials. Although some materials can be recycled, reuse is emphasized and constitutes the main component of the proposal.

#### Award in innovation, process and environmental impact:

The jury will select the proposals that stand out for an innovative or efficient reuse or recovery processes from the dismantling stage to a new installation, whether in terms of processes, minimization of environmental impact or any other innovative proposal.

#### Award for space design:

The jury will select the best proposals for the development of collective spaces whether indoor or outdoor. Without being linked to a space design preference will be given to projects that could be implemented within the vicinity of the Stadium, in the nearby borough of Mercier-Hochelaga-Maisonneuve.

#### Award for product development:

The jury will select the best proposals of varying scales, considering social impact and manufactured in small or large series. These may include, but are not limited to utilitarian products, furniture and equipment with social value, with partial or complete reuse of components and may be submitted as proposals.

#### Assessment criteria guiding the jury's choice

- // Ingenuity and relevance of the reuse: optimal use of the roof components, enhancement of the technical properties of the components
- // Contribution to the ecological transition
- // Social impact of the project in the community
- // Formal and perceptual quality
- // Functional quality and usefulness
- // Quality of integration (for design and development proposals)
- // Anticipated technical and economic feasibility
- // Exposure potential





# 2. The Olympic Stadium in its community

From the outset, the Montréal Olympic Stadium project was driven by the ambition to connect with the neighborhood and to contribute to the quality of life of the Montréal community and those living in the vicinity, by making sports facilities available after the 1976 Olympic Games.

Over the years, in addition to the sports facilities, including seven swimming pools, the space adjacent to the Stadium has been complemented by new neighbors. Cultural and environmental spaces such as the Montréal Biodome in the former velodrome, the Planetarium, the Botanical Garden, and the Insectarium make up the Espace pour la vie (Space for Life) complex. Beneath the Tower and its urban Observatory, a conversation has been established on both sides of Sherbrooke Street, between the Botanical Garden to the North and the mineral platform of the Stadium to the South.

With innovative proposals and freedom from operational constraints during a competition, it is to be hoped that the citizens' quality of life could be improved by exploring new ideas for reuse.

#### Some data on the area surrounding the Olympic Park

Although lower than the rest of the CMA (Census Metropolitan Area—Montréal and its major suburbs), a moderate and steady population growth has been observed in Hochelaga-Maisonneuve since the early 2000s. This smaller population can be explained in part by the fact that 50% of households consist of single occupants compared to 33% elsewhere.

The population of the neighborhood is made up of 54% of adults aged 24–54, with a strong representation of young adults (25–34). The average family size is 2.6 people. Of these families, 44.5% are female-led single-parent households. The immigrant population doubled from 1996 to 2016, comprising 16% of residents, but remains lower than the rest of the CMA. More than half of this population is concentrated in the northern part of the neighborhood, near the Pie-IX metro station and the Olympic Park installations<sup>3</sup>.

<sup>3</sup> <u>https://www.ltqhm.org/images/HM\_2019\_Portrait\_de\_quartier\_LTQHM\_2020\_compressed.pdf</u> | (French only)





### 2. The Olympic Stadium in its community | cont.

#### An area facing the challenges of the 21st century

The areas adjacent to the Olympic Stadium, particularly Hochelaga-Maisonneuve, are encountering issues typical of many neighborhoods in 21st century North American metropolises. Many households are vulnerable and face food insecurity and in response to the latter concern, urban greenhouses and affordable public market initiatives are flourishing. However, these urban agriculture initiatives can be hampered by the presence of contaminated soil as a result of the neighborhood's industrial heritage.

Climate change is increasing the frequency of heat waves. Adapting to these extreme weather occurrences is an important public health issue that affects the Montréal agglomeration unevenly. Heat waves are experienced more intensely in Hochelaga-Maisonneuve than in other parts of the city; it's hotter there than in 80% of the neighborhoods in the metropolitan region<sup>4</sup>, partly due to the low vegetation cover and densely built-up area.

Despite its insular character, there are very few public access points to the river in Montréal and none are located in Hochelaga-Maisonneuve The real strength of the area lies in its deep-rooted community involvement, its citizen mobilization and organized leisure activities which are open to all.

#### Proposals to improve the quality of life

The proposals solicited must aim at the resilience and adaptation to climate change, which represents a challenge of real *Olympic* proportions. Consequently, proposals need to target specific outcomes that have the potential to improve residents' living conditions upon deployment, by addressing issues previously raised.

#### For instance, proposals intended for - but not limited to - the following are expected:

- // to strengthen the social and community fabric;
- // to create cool zones;
- // to develop all seasons socializing spaces;
- // to promote soft and active mobility;
- // to encourage urban agriculture;
- // to establish contacts with the surrounding neighborhoods;
- // to foster a connection between residents and the river.

If competitors offer solutions for specific sites or for specific groups of residents, this must be done from a perspective demonstrating the broader potential of a proposal that would help solve the challenges of socio-ecological transition.

<sup>4</sup> Data obtained by entering the area's postal code (French only) | <u>Voici qui vit dans les pires îlots de chaleur de votre ville | Radio-Canada.ca</u>





# **3.** The history of Montréal Olympic Stadium...

Situated in the heart of Montréal's Olympic Park, the Stadium is part of a facility complex that includes the iconic Montréal Tower, the Sports Centre and the expansive Esplanade. The latter boasts nine outdoor stages, suitable for public gatherings, including musical performances.

This multi-sport Stadium has a capacity of 56,000 seats, but can also be upgraded to a maximum accommodation of 65,000. Designed by French architect Roger Taillibert, the Stadium was initially commissioned to host the 1976 Summer Olympic Games and subsequently be home of the Montréal Expos baseball team, who remained until 2004.

A landmark building for the city of Montréal, nicknamed the "Big O" in reference to its shape as seen from above, is the largest stadium in Canada. Its 165-meter-high inhabited Tower, largely supporting most of the roof load, is the tallest inclined structure in the world.

For more information on the construction of the Olympic Park and Stadium: https://parcolympique.qc.ca/en/the-olympic-park/montreal-an-olympic-city/the-construction/







## **4** ... and of its roofs

This call for ideas is part of a reflection process for the beneficial reuse of the Stadium's present-day roof components; in parallel with the work preparing for its third generation, the planning of the dismantling of the second roof is underway.

In the context of an ambitious and innovative architectural project, the first roof, made of Kevlar, was retractable (1987). The second and current stationary roof (1998) is made of Teflon-coated fiberglass; the many repairs carried out on this one validate its expected lifespan of 20 to 25 years.

As a symbol of a major historical event, an architectural jewel and recreational and tourist complex in Montréal's East End, its maintenance and that of its roofs require considerable public investments. In this context, the Olympic Park seeks to ensure that ideas proposed in the competition serve to benefit the community and encourage public reappropriation of the Stadium in a positive manner.

For more information on the history of the roofs (French only): https://parcolympique.qc.ca/toiture/historique-des-toits/







## **5.** Description of the components

All components are listed in three groups: membranes (outer and inner), cables (5 cable types, according to function) and connectors (5 types). A complete description of the components can be found in Annex.



Note: No samples will be supplied for this competition. All proposals must be crafted using only the provided material descriptions and in Annex 1; technical drawings and 3D component files should also be used during the creation process.



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## **5.** Description of the components | cont.

How can we prolong the usage of membranes in innovative configurations and installations? Is it possible to restore the traces of time by repurposing?

#### 5.1 Group A: membranes

This group includes the outer and inner fabrics, which together cover a surface area of 42,000  $m^2$ , or approximately 17,000  $m^2$  for the inner sheet and 25,000  $m^2$  for the outer one. That's over 26 hockey rinks worth of surface area!



#### 5.1.1 Outer membrane

The 25,481 m<sup>2</sup> white exterior architectural membrane is SHEERFILL. It is used as a permanent tensioned membrane on large-scale development structures such as sports, transportation, retail, and entertainment fields. The composite materials used in the membrane consist of fiberglass and polytetrafluoroethylene (PTFE).

The outer membrane is made up of 63 mainly triangular panels with surface areas ranging from 286  $m^2$  to 906  $m^2$ ; these panels are created by sewing strips together.

The membrane has reached the end of its 25-year warranty period in its current form of use and numerous spot repairs have already been performed.

It is highly likely that the removal of the outer fabric will be executed by cutting out the triangular section, but competitors may suggest alternative methods that meet the requirements of individual ideas.



#### 5.1.2 Liner membrane

The liner membrane is made of PVC, with a blue Tedlar laminate finish.

This structure is composed of 63 mainly triangular panels, their sizes varying from 23 m<sup>2</sup> to 671 m<sup>2</sup>, for a total area of 16,537 m<sup>2</sup>; these panels are also created by sewing strips together. The inner membrane experiences less stress from the climate and requires fewer repairs, but the same warranty limitations apply.

It is recommended to disassemble the membrane while maintaining the integrity of the panels, with consideration given to the weight and size of the folds for moving purposes.





## **5.** Description of the components | cont.

Can new relationships be built with the community and new collective spaces be connected to new uses?

Will you be able to reunite the connectors in a new setting that will spark the imagination of citizens and visitors alike, or will they be dispersed throughout Montréal, to demonstrate a strong commitment to circular architecture?

(1)	OUTER MEMBRANE
2	LINER MEMBRANE
	NETWORK CABLES
	TOP PANEL CABLES
	FLYING MASTS
	FLYING FORKS
	STRUTS
	BOTTOM PANEL CABLES
	LINER HANGERS
	PERIMETER TRUSS

#### 5.2 Group B: cables

This group consists of stay cables, network cables, panel cables and liner cables. Arranged end to end, they form a 12 km line, nearly the full length of the iconic Saint-Laurent boulevard that traverses the entire Montréal Island.

THESE COMPONENTS WILL BE DISMANTLED PRESERVING THEIR MAXIMUM LENGTH, BASED ON DECONSTRUCTION AND TRANSPORTATION STRATEGIES.

#### 5.3 Group C: connectors

This group consists of steel parts, totaling 434 pieces, which are used to anchor the cables and constitute the roof structure. Reuse of the compression ring is excluded from this challenge competition.

Alternative use and layouts for components like flying masts, flying forks, struts, liner hangers and perimeter truss will be explored.

THESE COMPONENTS WILL BE DISMANTLED PRESERVING THE FORMS, AS DESCRIBED IN ANNEX 1.





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### PART B Regulations

Olivier Bloui







# 6. Definitions

Competitor		An individual or a group of individuals led by professionals or students, who meet the eligibility requirements of the competition and submit a proposal in accordance with the regulations.
Professional		Any member of a professional order or association in the fields of planning and design, including industrial, urban, environmental, interior, graphic, architecture and landscape architecture. For the purposes of this competition, individuals who have graduated from university programs leading to careers in conception or design development projects related to the above fields, may also be considered professionals.
Student		An individual enrolled full-time, at the time of contest launch, in a university program leading to the design or production of various projects, including industrial, urban, environmental, interior, graphic and landscape architecture.
Proposal		All documentation submitted to the jury by a competitor.
Jury	I.	A panel of experts responsible for reviewing and evaluating proposals.
Laureate		A competitor whose proposal is selected by the jury. A maximum of eight laureates will be awarded and divided between professional and student categories.
People's Choice Award	•	The entry receiving the highest number of votes from the public.





## 7. Stakeholders in the competition

#### 7.1 Competition's responsible parties

The Société de développement et de mise en valeur du Parc olympique (Olympic Park), is responsible for the implementation of this competition.

#### 7.2 Jury

#### The jury is tasked with selecting the laureates and is composed as follows:

- // Jean Beaudoin, architect and engineer President, Nomade Aménagements Transitoires, member of the multidisciplinary collective Intégral
- // Rami Bebawi, architect KANVA co-founder
- // Stéphanie Cardinal, architect Vice-president, Humà Architecture, LEED Green Associate
- // Manuel R. Cisneros, architect Director, Stratégies environnementales et régénératives, Sid Lee Architecture
- // Ying Gao, designer Professor at École de design and l'École supérieure de mode, UQAM (Université du Québec à Montréal)
- // Annie Levasseur, Professor, Department of Construction Engineering at École de technologie supérieure (ÉTS) - Holder of the Canada Research Chair in Measuring the Impact of Human Activity on Climate Change - Scientific Director at CERIEC (Centre d'études et de recherches intersectorielles en économie circulaire) and AdapT (Institut de recherche sur les infrastructures résilientes et circulaires) on the circular, climate-resilient built environment
- // Eugénie Manseau, industrial designer Dikini associate
- // A representative for the Société de développement et de mise en valeur du Parc olympique will be nominated shortly

In case of a tie, the jury president holds the deciding vote. If a member of the jury is unable to participate, the responsible parties will appoint a substitute whose skills are equivalent to those of the member being replaced. In such instances, competitors will be promptly notified of these changes via an addendum.

#### 7.3 Professional advisor

The professional advisor oversees the competition process, including document preparation and activity organization relevant to the competition. The professional advisor appointed by the Olympic Park is:

// Véronique Rioux, ADIQ, industrial designer





# **8.** Conditions of eligibility, compliance, and registratrion

#### 8.1 Eligibility

This competition is open to all professionals, students and groups of designers acting under the guidance of a professional or student representative, who serves as coordinator and primary point of contact for each competitor, throughout the duration of the event.

Multidisciplinary team formation is strongly encouraged, with a focus on collaboration between designers from different disciplines or with the inclusion of people with specific expertise, for example in engineering, eco-design, urban planning or social work.

#### A professional may not be part of a team competing in the student category.

However, a student is permitted to join a professional team, but participation in proposals is limited to one per person, regardless of being a professional or student.

Individuals associated in any way with the preparation of the competition or who have had access to related confidential information not available to other competitors, are ineligible to participate.

Anyone with direct family relationship (spouse, parents, siblings, half-siblings, children, stepchildren, grandparents and grandchildren), as well as employment relationship or professional association with a member of the jury, is ineligible to participate in the competition.

Olympic Park employees and individuals with direct family, employment or professional association to any Olympic Park personnel directly involved in the competition are not eligible to participate.

#### 8.2 Compliance

Competition overseers will review proposals for compliance and any non-compliant entry will be rejected and excluded from jury consideration.

#### Any of the following situations may result in proposal rejection:

- 1. Absence of required documents as stipulated in Article 10;
- 2. Failure to adhere to formatting and size requirements for electronic document backups, as required under Article 10;
- 3. Submission or participation of two proposals by the same competitor;
- 4. Transmission of a proposal through means other than those allocated for the competition;
- 5. Submission of a proposal with elements that identify its author;
- 6. Non-compliance of deadlines for registration dates, questions and submission of proposals;
- 7. Failure to adhere to the communication rules outlined in section 9;
- 8. Non-compliance of any other condition deemed essential in the present regulations.

Participation in the competition is anonymous. Any indication or information that could compromise this anonymity, transmitted directly or indirectly by any individual to the competition organizers or members of the jury, will result in the rejection of the proposal.

If there is any doubt regarding the interpretation of the exclusion conditions or suspected anomalies during the process, competitors must immediately contact the professional advisor at any time, in accordance with established regulations.





# 8. Conditions of eligibility, compliance, and registratrion | cont.

#### 8.3 Registration

Registration for the competition is free, but mandatory, enabling the competitors to connect with the professional advisor's communication network.

Competitors can register by completing an online form available at the following address: <u>roof-reuse.parcolympique.ca</u>. Please ensure that this form is submitted before the stated deadline, as unregistered or late proposals will be disregarded

Once registration is completed online, each competitor is issued an identification code to ensure the anonymity of their proposal. Competitors must keep this number, as it will be needed for submission purposes.

#### 8.4 Competition documents

This document, including the annex, is only available to registered competitors. These documents are confidential during as well as after the competition and may not be disclosed without prior written consent.

The competition organizers reserve the right to make minor modifications to the competition documents up to two weeks preceding the entry deadline, which might include modifying said deadline, if necessary. All updates to the competition documents will be communicated as addenda through email to registered competitors.

ALL ANNEX AND ADDENDA PUBLISHED BY THE COMPETITION ORGANIZERS ON THE PLATFORM ARE AN INTEGRAL PART OF THESE RULES.





### 9. Communication regulations

#### 9.1 General rules

Following registration, the professional advisor will only use electronic means to communicate information to participants, exclusively at the representative's designated address at time of registration. Competitors must ensure that their email accounts are in proper working order at all times.

The professional advisor will provide an acknowledgement of receipt for all communications, within a reasonable time. The project managers cannot be held responsible for any inconvenience resulting from technical issues related to electronic communications.

#### 9.2. Official language of the competition

French is the official language of the competition and it will prevail in case of conflict of interpretation arising from the English version of the documents.

Questions may be sent in French or English and proposals may also be submitted in either language.

#### 9.3. Questions and Answers

Questions and requests from competitors for clarification regarding the competition, must be sent directly to the professional advisors, via email, at reemploi-toiture@parcolympique.ca. Any other communication will be ignored and may result in immediate disqualification.

The duration of the question and answer period is outlined in the calendar. Answers to questions received will be published on the website roof-reuse.parcolympique.ca. It is the competitor's responsibility to review the answers published.







## **10.** Propositions

By submitting their proposal, competitors acknowledge that they have read and accept all competition rules, clauses, charges, and conditions.

#### 10.1 Content and presentation

The proposal is presented in **TWO POSTERS**, illustrating the concept featuring drawings, sketches and renderings in free expression mode. Eligibility proof is also required for registration.

#### On poster No. 1:

- // identification of the components that the competitor proposes to upgrade, based on the exploded view of the roof (provided in annex 1). This diagram must be positioned on the left of the poster;
- // a descriptive text of no more than 400 words, presenting the attributes of the reuse concept and highlighting its ecological, social, functional (for products) and integration (for developments) qualities;
- // a representative axonometric or perspective view of the proposal is required.

#### On poster No. 2:

- // a plan view, elevation or any other representation that accurately conveys the scale, with overall dimensions;
- // any additional visual material used to assess the proposal (e.g., technical views, sections, diagrams or images illustrating the circularity strategy and response to the ecological transitions challenges).

Posters must measure 17 in × 11 in (tabloid - 432 mm × 279 mm) and displayed horizontally (landscape orientation). They will be printed for the jury's deliberation. The competitor's identification code given at time of registration must appear in the lower right corner in 18-point Arial font style.





## **10.** Propositions | cont.

#### 10.2 Method of transmission

Proposals can be submitted on the website roof-reuse.parcolympique.ca and must be uploaded no later than the specified date and time in the calendar. An acknowledgement of receipt will be sent after submission.

#### At the time of submission, competitors will be required to:

- fill in an entry form with the identification code provided at the time of registration and the full contact details of the competitor's representative;
- 2. upload the two posters in individual JPEG files, at a 300 dpi resolution 3300 × 5400 px;
- 3. copy the descriptive text of no more than 400 words into the box provided;
- upload the most representative image of the proposal in JPEG format, at a 300 dpi resolution - 900 × 900 p;
- 5. upload proof of eligibility in admissible fields (industrial design, urban design, environmental design, interior design, graphic design, architecture, landscape architecture); for the professional category: a certificate of order or professional association OR a university diploma; for the student category: proof of full-time enrollment at a university, at the time of contest launch.

#### The following four files must be uploaded to the site using the specified nomenclature:

- // Poster no. 1: YOUR NUMBER\_1;
- // Poster no. 2: YOUR-NUMBER\_2;
- // Image: YOUR-NUMBER\_Image;
- // Proof: YOUR NUMBER\_Proof.

In order to maintain anonymity of the proposals, no part of the file titles or content should allow the competitors to be identifiable. Only the entry form, accessible exclusively to the professional advisor, will permit identifying the participants. The Olympic Park cannot be held responsible for any technical difficulties arising from entry uploads.

COMPETITORS MUST ALLOW SUFFICIENT TIME FOR THEIR PROPOSAL SUBMISSION BEFORE THE SPECIFIED COMPETITION CLOSING DATE AND TIME, AS SHOWN ON THE CALENDAR.





### 11. Assessment

#### 11.1 Assessment method

Competitors' proposals will be assessed by the jury provided they comply with competition rules. Any proposal lacking all the required documents (listed in article 10.1), or not conforming to size and electronic backup format will be automatically disqualified.

The jury will evaluate and compare the quality of both professional and student proposals; a maximum of four winners in each category will then be selected, based on their respective merits.

The following prize categories, combined with the judging criteria, serve as a guide for the creative challenge. Based on the quality of the entries, the jury reserves the right to award multiple or no prizes in each category.

- // Prize for complete reuse of materials
- // Prize for innovation, processes, and environmental impact
- // Prize for space design
- // Prize for product development

In making its selection, the jury will give special consideration to the diversity of the proposals and how different components of the Olympic Stadium's roof are integrated.

THE JURY'S DECISION IS FINAL AND WITHOUT APPEAL.

#### 11.2 Assessment criteria

The criteria relate to the issues and challenges specific to the project and are judged accordingly. The jury will evaluate the project using the following standards:

- // Ingenuity and relevance of the reuse: optimal use of roof components, highlighting the technical properties of the components
- // Contribution to the ecological transition
- // Social impact of the project in the community
- // Formal and perceptual quality
- // Quality of integration (for design proposals)
- // Expected technical and economic feasibility
- // Reach potential





## **12.** Prizes and mentions

A maximum of four laureates in the professional category and four in the student category will be chosen by the jury. Each professional winner will receive a prize of fifteen thousand Canadian dollars (\$15,000 CAD), whereas each student winner will receive five thousand Canadian dollars (\$5,000 CAD).

#### In the professional and student categories, the jury would like to award the following prizes:

- // Complete reuse of materials
- // Innovation, process and environmental impact
- // Layout
- // Development of products

The People's Choice Award will be mentioned to promote the winning entries. Members of the public will be invited to vote online via the website roof-reuse.parcolympique.ca for their favorite entry among the eight laureates chosen by the jury in the professional and student categories.

The project managers, based on the jury's recommendation, reserve the right to award fewer than eight prizes or no prizes at all, if the proposals submitted do not meet the desired level of quality.

THE JURY RESERVES THE RIGHT TO AWARD HONORABLE MENTIONS WITHOUT REMUNERATION AS THEY SEE FIT.





# **13.** Announcement, disclosure of results and consent

The laureates of the ideas competition will be notified by email to all the competitors after the jury's deliberations. A press release will be issued to announce the decision. The competition and its winners will also be publicized in other ways.

### The winning proposals will be available for consultation on the website <u>roof-reuse.parcolympique.ca</u>

Consequently, all competitors consent to public disclosure of their identity, their proposal and the jury's comments relating thereto.

Following the announcement of the winning proposals, the public will be invited to vote for their favorite one.

THE COMPETITION ENDS FOLLOWING THE ANNOUNCEMENT OF THE PEOPLE'S CHOICE AWARD, IN THE FALL 2024.





## **14.** Intellectual property rights (IPR)

The participant who submits a proposal as part of the competition retains the copyright (and other intellectual property rights, if applicable) on their proposal. By submitting a proposal, all competitors grant the Olympic Park, free of charge, a non-exclusive license authorizing the broadcast of the competition results, without limit as to the territory of dissemination, in any medium whatsoever, including the Internet, for an indefinite period. This license is granted for non-commercial and archival purposes.

All competitors warrant to the Olympic Park that they are the sole owner or user of all intellectual property rights, including copyright and moral rights appearing in the proposal documents. Each competitor must defend against any claims made regarding these rights and compensate the Olympic Park for judgements related to capital, interest and costs resulting from such proceedings.





# **15.** Possible outcomes of the competition

Following the competition results, the winners will be invited to present their proposals to organizers and selected jurors. These presentations will be held via video conference.

Despite the preceding statement, this ideas competition does not entail a commitment to execute one or more winning projects, but rather serves as a creative and reflective process, The Olympic Park has no obligations to competitors or laureates regarding proposal implementation.

At the competition's conclusion, the competitors' and laureates' proposals, as well as the jury's discussions and report, should provide a starting point for organizers and experts for consideration regarding optimal ways in which roofing materials can be put to use effectively.

The Olympic Park could implement additional processes related to roofing material recovery, such as, but not limited to, calls for tender, qualification and interest.

If a proposal submitted as part of the competition shows potential for implementation or merits additional analysis, the Olympic Park may contract the services of one or more of the prizewinning authors of the proposals, while upholding the tendering rules established by the Government of Québec, to which the Olympic Park is subject.





## 16. Calendar

### Key dates

**Competition launch** April 11, 2024

Mandatory registration close May 31, 2024, 11:59 PM, Eastern Standard Time

Questions submissions close May 31, 2024, 11:59 PM, Eastern Standard Time

Proposals submissions close June 11, 2024, 11:59 PM, Eastern Standard Time

Jury deliberations and meetings June 2024

Laureates' announcement Summer 2024

Public voting period Summer and Fall 2024

People's Choice Award announcement Fall 2024







# **17.** Miscellaneous and final provisions

#### Liability

These rules shall be governed and construed in accordance with the laws applicable in the province of Québec. Any legal action regarding violation or interpretation of these rules must be submitted to courts having jurisdiction in the judicial district of Montréal.

#### Brand image and conflicts of interest

All proposals and participants in this competition must uphold the Olympic Park and Stadium's brand image, integrity and reputation, avoiding any situation that could create conflicts of interest.

#### **Liability waiver**

No appeal can be made against the competition organizers, members of the jury or the professional advisor for any reason whatsoever arising from proposal preparation, reception or analysis.

No appeal is allowed against those in charge of the competition due to unforeseen circumstances beyond their control, such as a fortuitous event or force majeure, that prevent the competition from being held or completed. By registering for the competition, participants exempt those responsible from any liability in case of cancellation.





## **ANNEX 1**







### Roof Components Exploded view of the roof

### THE DISASSEMBLY DETAILS WE HAVE SUPPLIED ARE NOT DEFINITIVE AND MAY REQUIRE FURTHER UPDATES.



**Note:** No samples will be supplied for this competition. All proposals must be crafted using only the provided material descriptions and in Annex, technical drawings and 3D component files should also be used during the creation process.









Count: 26	Weight: 139 t	
Length: 3,282 m	Minimum: 95.8 m	Maximum: 174.9 m

Diameter (mm): 61, 64, 70, 79, 86, 114 et 124

 ${\bf Post-dismantling\ details:}$  each unit measures 6m in length and weighs 310 Kg, with a total of 540 units.



TYPE B ANCHOR SOCKET - MODIFIEG REF HSI DWG NO. 12597 TYPE 6 ANCHOR SOCKET - MODIFIED Ref HSI DWG ND. 12497







## 2. Outer Membrane

#### Count: 63

Area: 25,481 m <sup>2</sup>	Minimum: 286.4 m <sup>2</sup>	Maximum: 906.4 m²	
Weight: 33.3 t	Minimum: 0.4 m	Maximum: 1.2 m	
Material specification: Sheerfill II (see table on next page)			

**Post-dismantling details:** each unit measures  $10m^2$  and weighs 73 kg, with a total of 2546 units.







2. Outer Membrane Sheerfill II

PROPERTY	VALUE	METHOD
Coated Fabric Weight (oz/yd²)	38.5 nominal	ASTM D4851-88
Thickness (mm)	0.762	ASTM D4851-88
Breaking Strength (Ib/in)	Warp: 825 min. average	
(Strain Rate: 2 in/min)	Fill: 600 min. average	ASTM D4851-88
Résistance à la rupture après pliage	Warp: 680 min. average	
en accordéon (lb/pouce)	Fill: 415 min. average	ASTM D4851-88
Déchinement transfereïdel (h)	Warp: 75 min. average	
	Fill: 70 min. average	ASTIM D4851-88
Transmission solaire (%)	12 nominal	ASTM E424
Réflectance solaire (%)	73 nominal	ASTM E424
	Flame spread: 5 max	ASTM E84
Caracteristiques de combustion	Smoke generation: 10 max	Tunnel test
Incombustibilité des substrats	Pass	ASTM E136
	Spread of Flame & Intermittent Flame	
Resistance au feu des revetements de toiture	Class A	ASTME108
Résistance à la flamme	Pass	NFPA 701, Smale Scale
	Warp: ß150 4/2	Count W24 x
Keinforcement Construction	Fill: ß150 4/2	F19.5

Color

White (after exposure to sunlight)





## **3.** Network Cables





Count: 98	Weight: 76 t	
Lenght: 2,771 m	Minimum: 16 m	Maximum: 35.3 m

Diametre (in): 1.875; 2.125; 2.25; 2.5; 2.875; 3.25; 3.5; 4 and 4.5

**Material specification:** ASTM A586 zinc-coated parallel and helical steel wire structural strand, high strength. Speltered sockets hot dip galvanized per ASTM A153.

Post-dismantling details: each unit measures 6 m in length maximum.



OPEN SPELTERED SOCKET

OPEN SPELTERED SOCKET













Count: 1 172	Weight: 36 t	
Length: 9,389 m	Minimum: 2.1 m	Maximum: 20.6 m

Diameter: 28.6 mm

**Material specification:** ASTM A586 zinc-coated parallel and helical steel wire structural strand. Swaged end fittings, pins, nuts and washers electrogalvanized.

**Post-dismantling details:** each unit is 6 m long and weighs 36 kg; with a total of 2 335 units (including component  $n^{\circ}$ 8).





PARC OLYMPIQUE



## **5.** Flying Masts



FLYING MASTS

Count: 103	Weight: 30 t	
Length: 719 m	Minimum: 6.5 m	Maximum: 7.5 m
		_

Material specification: pipe: ASTM A500 Grade C/B; plate: CAN/CSA G40.21 - Grade 44.

Post-dismantling details: each piece is 5.8 m long.















A



**Spécification du matériau :** pipe: ASTM A500 Grade C/B; plate: CAN/CSA G40.21 - Grade 44W; rod: ASTM A193 B7 hot dip galvanized.

Post-dismantling details: each piece is 5.8 m long.











STRUTS

Count: 90	Weight: 377 t	
Length: 1 554 m	Minimum: 11.7 m	Maximum: 26.6 m

**Material specification:** ASTM A252 Grade C with .22% max carbon, 0.5-1.5% manganese, .04% max phosphorus and .05% max sulfur.

**Post-dismantling details:** each unit measures 6 m in length and weighs 1.5 tons, with a total of 280 units.







**8** Bottom Panel Cables



BOTTOM PANEL CABLES

Count: 478	Weight: 48.1 t	
Length: 4 686.5 m	Minimum: 4 m	Maximum: 16.9 m

Diameter: 38.1 mm et 50 mm

**Material specification:** ASTM A586 zinc-coated parallel and helical steel wire structural strand, high strength. Speltered sockets hot dip galvanized per ASTM A153.

**Post-dismantling details:** each unit is 6m long and weighs 36 kg; with a total of 2 335 units (including component n°4).









## **9.** Liner Hangers









## **10.** Liner Cables



Count: 76	Weight: 9.6 t	
Length: 2 109 m	Minimum: 16 m	Maximum: 35.1 m
Diameter: 32 mm et 35 mm		

**Material specification:** ASTM A586 zinc-coated parallel and helical steel wire structural strand. Swaged end fittings, pins, nuts and washers electro-galvanized.

#### Post-dismantling details:

**32 mm:** each unit is 5.6m long and weighs 37 kg, with a total of 295 units **35 mm:** each unit is 5.4m long and weighs 41 kg, with a total of 145 units







## **11.** Liner Membrane



2 LINER MENBRANE

# Count: 63 Weight: 16 t Area: 16,538 m² Minimum: 23.7 m² Maximum: 671 m²

 $\begin{array}{l} \textbf{Material specification: } Shelter-Rite \ \texttt{8028} \ (see \ table \ on \ next \ page); \\ \mathsf{PVC} \ with \ Tedlar \ finish. \end{array}$ 

**Post-dismantling details:** each unit measures 10  $m^2$  and weighs 25 kg, with a total of 1 583 units.





### 11. Liner Membrane Shelter-Rite 8028



PROPERTY	VALUE	
Base Fabric Type	Polyester	
Base Fabric Weight (nominal)	250 g/m <sup>2</sup>	
	950 g/m² (+70/-35 g/m²)	
Finished Coated Weight	ASTM D751	
Trapezoid Tear	380/380 N	
	ASTM D4533	
Grab Tensile	3115/3115 N	
	ASTM D751	
	4500/4500 N/50 mm	
Strip lensile	ASTM D751	
	90 N/50 mm	
Adhesion	ASTM D751	
	3.45 Mpa	
Hydrostatic Kesistance	ASTM D751	
Dead Load Seam Strength	50 mm de couture, 4 h, bande de 25 mm - ASTM D751 1180 N @ 21° C, 590 N @ 71° C	
Low Temperature	1/8" mandrel, 4 hr - <i>ASTM D2136</i>	
	LTC: pass @ -40° C ; LTA: pass @ -55°	
	Meets NFPA 701 ; ULC-S109 - <i>ASTM 6413</i>	
	2 second flameout - ASTM E84 & ULC-S102	
Flame Resistance	Flame spread index ≤25	
	Smoke development rating ≤450	







## **12.** Perimeter Truss



PERIMETER TRUSS

Count:	Truss sections: 38 Wide flange: 946 Angles: 1 512	
Length:	Truss sections: 10 m-16.7 m Wide flange: 0.8 m-27.8 m Angles: 1.2 m-3.4 m	Total: 561.4 m Total: 2764.7 m Total: 2981.4 m

#### Weight: 112 t

#### Material specification: ASTM A572 Grade 50

#### Post-dismantling details: to specify







