Canopies and Catwalks:
An Architectural Intervention of the Calgary Stampede Grounds

By

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Fig. 1: Canadian athletes at opening ceremonies of 1988 Winter Olympic Games in Calgary, Alberta.

I. Abstract

Canopies and Catwalks argues that there is a lack of connection between exhibition space and daily life within Calgary, Alberta. The proposed design will be an intervention into Calgary's oldest exhibition space, the Calgary Stampede Grounds. While the site is host to numerous annual events, in its current state it is both uninviting and underutilized considering its proximity to Calgary's downtown core. As an intervention, rather than a redevelopment, the intention of this project is not to disrupt the integral programs of the site. Buildings that include The Saddledome, the home of the Calgary Flames, multiple large event and conference buildings and the Calgary Stampede's Grandstand are important pieces of Calgary's identity. Rather, the intervention will focus on a form of urban densification, which weaves itself into the site, renewing the site and creates an inviting space for Calgarians to enjoy everyday. By attracting visitors to the site on a broader scale, the Calgary Stampede Grounds will become a destination for both daily life and Calgary's largest events.

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Fig. 2: Opening ceremonies at the 1896 Olympic Games in Athens, Greece.

01 / Context

Calgary began as a post for the North-West Mounted Police, now known as the Royal Canadian Mounted Police, in 1875.¹ Colonel James Macleod named the post Fort Calgary after one of his favorite summer homes, Calgary House located in Calgary Bay in the Isle of Mull, Scotland.² Over the past 145 years, Calgary has grown from a small town of 506, to one of Canada's largest cities at 1.2 million residents. While Calgary's population has seen massive change in its brief history, one overriding consistency

¹ City Clerk's Office. "Historical Information." The City of Calgary - Home Page. The City of Calgary, October 7, 2010. <https://www.calgary.ca/CA/city-clerks/Pages/Corporate-records/Archives/Historical-information/Historical-Information.aspx>.

² "Biography – MACLEOD, JAMES FARQUHARSON – Volume XII (1891-1900) – Dictionary of Canadian Biography." Home – Dictionary of Canadian Biography. Accessed April 3, 2020. http://www.biographi.ca/en/bio/macleod_james_farquharson_12E.html.

throughout its history has been the location of its city centre. Since its conception, Calgary's downtown core has been located at the namesake of Elbow River.

In the context of this thesis, these historical facts demonstrate the importance of the chosen site. The origins of the Calgary Stampede Grounds have a history nearly as old as Calgary itself. The grounds have been located directly East of Calgary's city centre, in the crook of the Elbow River, for the past 135 years. Calgarians have been flocking to these grounds to experience the joy and entertainment of the events held on the grounds. The City describes Calgary as "a city rich with beautiful landscapes, picturesque skylines and urban vibrancy, the city has a dynamic array of experiences that allow both visitors and Calgarians endless opportunities for adventure and to live in the moment."³ While a tag line created for the modern City of Calgary, this no doubt could have been used in years past as a call to settlers to come to the newly incorporated City of Calgary.

Today, just as it would have been 125 years ago, the Calgary Stampede Grounds are arguably the hub of Calgary's events and entertainment. The grounds host the annual Calgary Stampede, deemed "The Greatest Outdoor Show on Earth," by event organizers. Additionally, the grounds are home to professional and semi-professional sports teams, and it hosts numerous conferences, shows, concerts, and other various events. The Calgary Stampede Grounds can attract crowds in excess of 100,000 people. In contrast, however, absent events, the grounds lay abandoned with very few visitors.

³ "Who We Are." Tourism Calgary. Accessed April 3, 2020. <https://www.visitcalgary.com/who-we-are>.

The area that constitutes the Calgary Stampede Grounds was holding exhibitions as early as 1886 with the first Calgary Stampede being held in 1912.⁴ During the mid to late 1900's the Calgary Stampede Grounds were highly developed with the construction of several important sporting and event centres.⁵ This period of

Fig. 3: 1912 Calgary Stampede Poster

growth concluded with the construction of the Olympic Saddledome for the 1988 Olympic games. Thereafter, one building has been constructed over the succeeding 20 years with limited renovations thereafter to resolve issues related to ageing buildings on the site.⁶ While over 130 years Calgary expanded from a town of 506 people to a city of over 1.2 million,⁷ the Calgary Stampede Grounds grew from 95 acres to 208 acres.⁸ Throughout the

⁴ "The Early Years." Calgary Stampede. Accessed December 20, 2019.

<https://www.calgarystampede.com/heritage/history/the-early-years>.

⁵ "Building the Stampede." Calgary Stampede. Accessed December 20, 2019.

<https://www.calgarystampede.com/heritage/history/building-the-stampede>.

⁶ Ibid.

⁷ City Clerk's Office. "Historical Information." The City of Calgary - Home Page. The City of Calgary, October 7, 2010. <https://www.calgary.ca/CA/city-clerks/Pages/Corporate-records/Archives/Historical-information/Historical-Information.aspx>.

⁸ "The Next Hundred Years." Calgary Stampede. Accessed December 20, 2019.

<https://www.calgarystampede.com/heritage/history/next-hundred-years>.

sites' history, it has been at the heart of Calgary. Today the Stampede Grounds are located adjacent to Calgary's downtown core. As a site that is occupied primarily when an event is taking place, its size and location is massively under utilized. The majority of the buildings on site are in disrepair and dated, requiring either immense repairs or new constructions. Arguably, it is a derelict site where concrete and asphalt reign supreme, where the car is celebrated and where people are inconsequential. The hardness of the site is uninviting to its visitors, as it lacks color, organic life and any reason to spend time on site outside of events.

Within the context of this thesis the hardness of site refers to the mass amount and the characteristics of the concrete and asphalt existing on site. These materials produce a unique form of sensory deprivation.⁹ Due to the monochromatic colors of concrete and asphalt there is a lack of intellectual stimulation which creates a cold and unwelcoming environment.¹⁰

The Calgary Stampede Grounds needs an intervention. The design proposal argued for in this thesis seeks to revitalize this aging site by using landscape and pavilion design to soften the hardness of the site, creating a space that can stand as a daily destination for Calgarians, while continuing to be capable of hosting large events.

The softening of site, or softness of site, can only be described as the exact opposite in both physical and psychological characteristics to that which were used to describe the hardness of site.

⁹ Ricci, Natali, "The Psychological Impact of Architectural Design" (2018). CMC Senior Theses. 1767.
http://scholarship.claremont.edu/cmc_theses/1767. 24

¹⁰ Ibid.

02 / Calgary and the Olympics

This idea began in 2018 with Calgary's short-lived 2026 Winter Olympic Games bid. Calgary is no stranger to large events on the international level. Two notable examples: the 1988 Olympic Winter Games and the aforementioned Calgary Stampede, which hosts hundreds of thousands of attendees from all over the world during the 10-day annual event. So why did a city, accustomed to large events, have its Olympic dreams cut short? A plebiscite was held to understand public opinion on whether the city should host another Olympic Game. The resulting vote demonstrated that 56.4% of Calgarians did not support the Olympic bid.¹¹ Local news sources cited costs, lack of transparency and misguided intentions as reasons for the negative public response. Looking at the city, this negative narrative may be a subconscious response to the city's physical attributes. Each proposed site of the 2026 Olympic games in Calgary is disconnected from the rest of the city. They are islands of highly specialized programs within the city, hyper focused on their individual role they create spaces failing to draw in Calgarians during their everyday activities.

Montréal 1976

Fig. 4: Montreal 1976 Olympic logo.

Calgary '88

Fig. 5: Calgary 1988 Olympic logo.

Fig. 6: Vancouver 2010 Olympic logo.

¹¹ Strashin, Jamie. "Why Calgary Passed on the 2026 Olympics - and What's next for the Games Nobody Seems to Want | CBC Sports." CBCnews. CBC/Radio Canada, November 14, 2018. <https://www.cbc.ca/sports/olympics/calgary-2026-plebiscite-jamie-strashin-1.4904585>.

In 2018, the City of Calgary began the work to create a new bid to host Canada's fourth Olympiad. The city formed the Calgary 2026 Bid Corporation, also known simply as Calgary 2026, to formulate a bid to be presented to the International Olympic Committee in favor of hosting the 2026 Winter Olympic Games. This bid was heavily rooted in the perceived nostalgia of the 1988 Winter Olympics, which the city hosted 30 years prior.

Fig. 7: Opening ceremonies at the 1988 Olympic Games in Calgary, Alberta.

The 1988 Winter Olympic Games is widely regarded as having been a major success for the City of Calgary.¹² Ralph Klein, the Mayor of Calgary during the 1988 Olympics, spoke of the committee who put together the games highly stating, “they made Calgary an international city ... after the Games, you no longer had to explain where the

¹² Howse, John. “A Legacy of Gold.” *Maclean's*. February 3, 1992, Vol. 105, 54.

city was.”¹³ The legacy that the games left for the city is still felt in the city, over 30 years later. In preparation for the 1988 games there were five primary sporting facilities constructed including the Olympic Saddledome, Olympic Oval, Canada Olympic Park and Ski Jumps, the Canmore Nordic Centre and the Nakiska Alpine Skiing Centre. Each were constructed as permanent facilities and continue to remain available for recreational use and as training facilities for athletes dreaming of competing in future Olympic games.

There are several aspects of the 1988 Games, which had never been done before, in modern Olympic history. One of the most important was that it was a 16-day event, 4 days longer than average previous Olympics games.¹⁴ This helped Calgary acquire a large U.S television contract.¹⁵ This contract contributed, along with other sources of revenue related to the 1988 Games, to an event, which turned a profit totalling \$150 million.¹⁶ This was in dramatic contrast to the 1976 Summer Games in Montreal, which resulted in a \$1 billion deficit.¹⁷ The profit from the 1988 Games was placed into an endowment fund at the close of the 1988 Games.¹⁸ The interest from this fund has endowed athletes and the growth of Canadian excellence in sport.¹⁹ Although 30 years have past since the close of the 1988 Olympic Games in Calgary, the endowment fund continues to financially benefit Canadian athletes. The legacy of the 1988 Olympic games can still be felt in Calgary today. In 2018 as the news of a potential 2026 Olympic Bid began circulating, Calgary 2026 hoped that

¹³ Ibid.

¹⁴ “The Construction Legacy of the 1988 Calgary Winter Olympics.” *Daily Commercial News*. March 4, 2013, Vol. 86. 1.

¹⁵ Ibid.

¹⁶ Howse, John. “A Legacy of Gold.” *Maclean's*. February 3, 1992, Vol. 105, 54.

¹⁷ Ferguson, Eva. “1988 Olympics Transformed Calgary.” *Calgary Herald*. August 2, 2013.
[www.calgaryherald.com/sports/1988 Olympics transformed Calgary/7932680/story.html](http://www.calgaryherald.com/sports/1988_Olympics_transformed_Calgary/7932680/story.html).

¹⁸ Howse, John. “A Legacy of Gold.” *Maclean's*. February 3, 1992, Vol. 105, 54

¹⁹ “The Construction Legacy of the 1988 Calgary Winter Olympics.” *Daily Commercial News*. March 4, 2013, Vol. 86. 1.

the same Olympic spirit which was present during the 1988 Games would once again sweep up Calgarians to gain support for the bid. Interestingly in a document titled, *Draft Hosting Plan Concept* which was produced by Calgary 2026, it is stated that, “hosting the 2026 Games is not a nostalgic exercise.”²⁰ However, in review of the entire document, the Olympic Hosting Plan is built using the physical legacies of the 1988 Olympic games. The hosting plan proposes renovations to all of the 1988 Olympic venues, “the legacy facilities of 1988 have contributed to over 30 years (to Calgary) ... the Games are a catalyst to ensure that Calgary’s 1988 legacy facilities are fully functioning for another 30 years.”²¹ When the Olympic Hosting Plan was announced, news agencies across Canada did not report about the continuation of the 1988 legacy, but rather that Calgary’s bid was built using nostalgia for the 1988 Games. This resulted in a variety of responses, but the ultimate result was not favourable towards a bid. For Calgary 2026 this was a dilemma. The bid corporation needed the support of Calgarians with \$700 million in provincial funding hinged on public support.²² As a part of the bid process a plebiscite was held on November

²⁰ “Olympic and Paralympic Winter Games Draft Hosting Plan Concept.” Calgary 2026. Calgary 2026 Bid Corporation, September 7, 2018. 5.

²¹ *Ibid*, 2.

²² “The People Have Spoken’: Calgary Mayor Confirms 2026 Olympic Dream Is Dead after Vote.” *CBC*. November 13, 2018.

CANADA

Calgary's 'May As Well' Olympic bid—modest ambition that still costs billions

Jason Markusoff: The value proposition being sold here is not an Olympics that builds new things. So what exactly does Calgary expect to get?

Fig. 8: Maclean's News clipping

CONTRIBUTORS

OPINION

Nostalgia should not be the basis for Calgary's Olympics bid

Fig. 9: The Star News clipping

The Current

'Nostalgia is not a vision': Campaigners lay out risks and rewards of Calgary Olympic bid

Successful bid wouldn't leave the city with 'white elephants,' argues Yes campaigner

Fig. 10: CBC News clipping

13, 2018 to gauge public support on whether Calgary should pursue a bid for the 2026 Olympic Games.²³ The official results of the vote came in; 43.6% were for and 56.4% were against hosting the Olympics.²⁴ On November 19th, 2018 the Calgary City council unanimously voted to no longer continue the 2026 Olympic bid process.²⁵ It was reported that those who voted no cited costs, questionable long-term benefits, transparency of information, and priority spending.²⁶ These residents were concerned about what the

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ "FAQ." nocalgaryolympics.org, July 27, 2018. <http://nocalgaryolympics.org/learn/faq/>.

legacy of a potential 2026 Calgary Olympic Games would be. They believed that they were either not being properly informed or they are being misinformed about the positives and negatives to pursuing an Olympic bid.

The purpose of this thesis is not to redevelop a 2026 Calgary Winter Olympic bid which would appease those who voted no. This would be a task requiring years of development and a team of individuals to complete the plans. Rather the intention of this thesis is to imagine a way to bridge the gap between the spectacle and the everyday. The spectacle in this context is a large event, which requires set infrastructure meant to facilitate events and crowds. The everyday in this context consists of any daily activity an individual can do within the urban setting. Examples of everyday activities include going out to a restaurant, grabbing a coffee at a café, exercising, going for a walk, shopping, meeting up with friends and relaxing.

Reconnecting Calgarians' everyday activities to an exhibition space such as the Calgary Stampede Grounds is crucial for the continual growth of a unified city. Considering the important historical significance of the site, this is a space which should be continued to be celebrated within Calgary. However, its ageing infrastructure and shifts in societal values are causing the site to become isolated at the centre of a modern city. By intervening into the site the proposed design will densify the area with architecture that is sensitive to the renewal of the urban landscape. The renewal of the urban landscape will be complete with creation of simple, intimate spaces, it will help mitigate the flow of water, and it will help refresh the site as a way to celebrate Calgary's modern society.

Fig. 11: The Calgary Stampede Grounds.

Fig. 12: The midway during the Calgary Stampede.

Fig. 13: The Olympic Saddledome at the Calgary Stampede Grounds.

Fig. 14: One of the entrances into Calgary Stampede Grounds during the 2013 floods.

Fig. 15: The Calgary Stampede Grounds during the 2013 floods.

Fig. 16: The flood water peaked over the 10th row within the Olympic Saddledome.

03/ Developing a Methodology and Characteristics

The design process began by performing form-finding studies. These studies then lead into explorations. The aim of these studies was to create parameters, design characteristics and an understanding of space. These studies would eventually help guide design decisions and unify the design over the large site.

The initial studies were basic and abstract. A study of all modern Olympic host cities was conducted, the initial goal being to map Olympic venues to see if an existing organizational pattern would become apparent. These maps were transferred to a clear acetate film and overlapped in a variety of ways with the hope of discovering a clear picture of Olympic urban design. This process, while producing some formal information, became much more useful in abstract ways. The abstract images which this process created produced curiosities and explorations that developed into a form finding study rather than a formal mapping study. The venues were represented by simple dots and when overlapped they began to form point clouds. These point clouds were then transferred into a 3D modeling program. By transforming, connecting and overlaying various lines and geometric shapes, proto understandings of site and form began to emerge. Then by adding various elements of site context, such as topography, transit routs, building footprints, and hydrological mapping, abstraction began to become a design. With each new layer of information, the form finding studies would transform and develop formal design properties, which could be applied to the project.

Through continuously working between form finding studies and model experimentation of those studies, characteristics to define the project began to emerge. Ultimately, four characteristics merged to guide the projects' design. These characteristics

are the intimacy of space, the simplicity of form, the softness of landscape and the control of water.

The first investigated characteristic is the softness of landscape. The Calgary Stampede Grounds is currently a very hard and cold urban landscape. Parking lots dominate the site to accommodate the large crowds the site pulls in for events. It is understood that parking is necessary to allow people to attend events on site. However, this can still be accomplished by encouraging public transit options and pushing the parking underground. Allowing the ground plane to be redeveloped is crucial to creating everyday spaces within the site.

The second characteristic developed is the control of water. In June 2013 Southern Alberta experienced a catastrophic flood, the most destructive flood in the province's history.²⁷ 100,000 people were forced to evacuate their homes and there was over \$6 billion in damages.²⁸ The Calgary Stampede Grounds were almost completely submerged in water. While this project does not intend to act like it will fix or prevent future flooding, how water enters and exits the site and how to control that water is a necessary consideration when considering the site's geographic qualities. The reality of the site is not whether a flooding event will happen again; it is a question of when it happens and how it will be managed.

The third and fourth characteristics discovered are the simplicity of form and the intimacy of space. These two characteristics work closely together because they will inform the everyday activities, which will be present on the site. With these characteristics in mind

²⁷ "Calgary's Most Damaging Flood." Calgary's Most Damaging Flood - Calgary Flood Story. Accessed April 3, 2020. <https://floodstory.com/floods/2013-flood>.

²⁸ Services, Water. "The Flood of 2013." The City of Calgary - Home Page. The City of Calgary, October 4, 2017. <https://www.calgary.ca/UEP/Water/Pages/Flood-Info/Flooding-History-Calgary.aspx>.

the thesis' intervention into the Calgary Stampede Grounds will remain on the human scale, focusing on interactions, landscape, and community.

04/ Form Finding Studies

Figures 17: Hand drawn form finding studies. Created using markers, trace paper and light.

Data points were created by plotting various city's Olympic venues to create point clouds. These point clouds then influenced simple geometric shapes. Three different approaches were taken while performing this exercise. This resulted in unique form finding studies which were used to create a catalogue of forms.

Fig. 18A: Form finding studies created by personally manipulating geometric forms in a 3D modeling software. Created using Rhinoceros 5.

Fig. 18B: Form finding studies created by personally manipulating geometric forms in a 3D modeling software. Created using Rhinoceros 5.

Fig. 19A: Form finding studies created by automating the manipulation of geometric forms in a 3D modeling software. Created using Rhinoceros 5 with a Grasshopper plug-in.

Fig. 19B: Form finding studies created by automating the manipulation of geometric forms in a 3D modeling software. Created using Rhinoceros 5 with a Grasshopper plug-in.

Fig. 20: Catalogue of forms.

A catalogue of forms was created using primarily the circular forms created in the form finding studies. These forms were chosen to create the catalogue for their organic shapes. It was decided that these forms would serve as the origination for the future design. A methodology of how to treat linear lines is beginning to be discovered through the following explorations.

05/ Form Explorations

Fig. 21: Evolution of Exploration.

The desired methodology and characteristics of design evolved through continuous model making. With each model created, an aspect of the design was being studied. At the early stages of the thesis the design was focusing on design that felt to be at the large or urban scale, however as more explorations were performed the scale of the project moved to pavilion design.

Fig. 22: Mid-review Working Presentation Models

Fig. 23: Mid-review Working Presentation Models

For mid-review there were three models produced to exemplify the exploration of design for the intervention at the Calgary Stampede Ground. While they were produced understanding they would be used for presentation, they were still working models and are explorations of ideas.

06/ Design Concept

Within the context of this paper, the topic is clearly understood as an architectural intervention into the chosen site, the Calgary Stampede Grounds. These interventions will focus on a form of urban densification which will renew the site and create an inviting space for Calgarians to enjoy everyday.

To begin to understand the meaning of urban densification one must look at the words individually. Urban – of, relating to, characteristic of, or constituting a city.²⁹ Densify or dense – marked by compactness or crowding together of parts.³⁰ Together the two words create a statement about a city. As a framework urban densification aims to enhance the quality of the built environment by integrating a mix of programs into a city neighbourhood.³¹ Urban densification often leads to mixed-use communities where residential, commercial and leisure spaces are found tight knit together.³²

By consisting of such a large plot of land on the east end of Calgary's downtown core, it becomes apparent that the site requires these interventions to provide people a reason to frequent the area outside the periodic grand event. Within this project the intervention of programed pavilions densifies the Calgary Stampede Grounds by adding program, which will attract Calgarians to the site outside of event hours. By creating connections both inside and outside of the site, it will guide people in and through the site, allowing them to discover the totality of its offerings. This is not a new idea in Calgary. In

²⁹ "Urban." Merriam-Webster. Merriam-Webster. Accessed April 3, 2020. <https://www.merriam-webster.com/dictionary/urban>.

³⁰ "Dense." Merriam-Webster. Merriam-Webster. Accessed April 3, 2020. <https://www.merriam-webster.com/dictionary/denser>.

³¹ "Urban Densification." Smarter Growth Initiative YYC. Accessed April 3, 2020. <https://www.smartergrowth.ca/urban-densification>.

³² Ibid.

2019, the Calgary Municipal Land Corporation (CMLC) published a 50-year master plan for Rivers District of Calgary. In this extensive, 244-page document, one of CMLC's main design principals speaks of creating a district, which both connects and invites everyone to the district.³³ Several quotations from CMLC's promotional video helps give an understanding of how important this site could be for Calgarians.³⁴

"Calgarians find ways to gather when the space that are created welcome them"

"Not just about music, sport, beverage and food, its about everything"

"Its just as much about being an attendee as it is being a participant"

"Help create that everything experience"

The CMLC master plans focus on a redevelopment approach to creating a mixed-use space for Calgarians to enjoy all the time. While this approach has merit and seems to promise for a successful project, it is my belief that the project lacks the softness and intimacy, which this thesis hopes to achieve.

08/ Applying Methodology and Characteristics

The proposed architectural intervention in the Calgary Stampede Grounds hopes to achieve four key characteristics: the simplicity of form, the control of water, the intimacy of space and the softness of landscape.

In the most basic of ideas, the primary geometric shapes, the circle, square and triangle define the characteristic labeled as the simplicity of form. Within the design this

³³ "Rivers District Master Plan." CMLC. Accessed April 3, 2020.
<https://www.calgarymlc.ca/riversdistrictmasterplan#rivers-district-intro>.

³⁴ River District Master Plan: The East Is Rising. Youtube.com. CMLC, 2019.
https://www.youtube.com/watch?v=iibDguVLJ6o&feature=emb_logo.

basic idea has been adopted and it became a parameter of the design. The decisions to give each geometric shape a specific role began to influence how the form finding studies and explorations translated into design. A circle was ruled as a canopy acting as a primary pavilion form. A rectangle became a secondary pavilion form, a floor panel, or furniture. A triangle became a way to address structure throughout the intervention.

While these shapes are the building blocks of the intervention of this design, this characteristic has been taken further than just geometric shapes. By creating a catalogue of parts based off similar dimensions and shapes there is a simplification of form. While there are still components, which require customization, much of the design is based off three components: a rectangular floor panel, an angled structural arm, and a circular canopy. By using these three main components, and a set number of variations of these components, aspects of the projects such as construction costs and construction time can be simplified. This also allows the project to be scaled to any size as required. Each new organization of these components will create unique experiences and spaces for occupants.

The second key characteristic is the control of water. This is essential for the site as it is in the floodplain of Calgary's Elbow River. Evidenced by the above-mentioned 2013 floods, the Stampede Grounds are a high-risk area for flooding as the Elbow River borders two sides of the site. By no means will this project be able to prevent a future flood similar to that, which was experienced in 2013. However, the fact that this site is at risk to the powers of water highlights the importance to consider the control of waterflow.

Within the proposed design there are two major aspects of the design which intend to help mitigate the flow of water on site. The first aspect of water control is found within the structure of the canopies. The canopies are designed to act as a great water catch during

any level of precipitation. The ribbing that connects the canopy to the support arm is exposed to the sky rather than to the ground. This allows water to pool inside the canopy. This water is allowed to flow down the structural arm and into a basin, a very intentional control of water celebrated in the design of the structural arm. By using an I-beam to create the structural strength of the arm allows a customized steel tubing to be welded into place around the I-beam to simultaneously finish the I-beam and create the channel for water to run down and into the basin. To celebrate this moment, a perforated sheet of steel finishes the channel to allow occupants to see and experience the water as it flows down the arm, into the basin before it drains away.

The second aspect of the design where the control of water has been considered is within the landscape design of the proposed urban park. With a site which has very little elevation change, in order to control the flow of water the design would include both the addition of berms and carving of earth. This would create channels and borders for potential flood water to adhere to, controlling where water flows. By creating these berms and channels into the landscape, it creates unique opportunities where the proposed pathways can become platforms and allow occupants new experiences of the site.

By capturing the moment where running water travels from channel to air as it is caught by a basin and providing new ways for people to occupy the site, the design places an importance on how an occupant may experience the renewed site and its proposed architecture. The Calgary Stampede Grounds currently places importance on the grand event with large buildings and spaces of spectacle. This contributes to the disconnection the site has with the rest of Calgary, regardless of its proximity to the downtown core.

This disconnect leads to the proposed intervention's third characteristic: the intimacy of space. Within the mindset of this characteristic, the design intentions of the intervention are to focus on smaller group settings and small details only appreciated as occupants interact with the design. With this focus the intervention favors the interactions of people on a one on one level or at the level of small groups. This invites programs such as cafés, restaurants, lookout points, meeting spaces and small recreational activities to thrive in a new densified Stampede Grounds. One way in which the design favors these personal interactions is by creating set rules, which the design must follow. The first rule is that the canopy structures have a 10-foot head height. In cases where there is additional structure being placed under the canopies, another rule has been set to restrict structures to leave headspace between their walls and the canopy. This physically tightens the space while leaving space to avoid feeling confined, creating an intimate space for personal interactions. As the site is already home to large structures, which will tower over the proposed canopies, even in large clusters the lightness and simplicity of the proposed pavilions will create pockets of intimacy on a large site.

The final characteristic, which this intervention hopes to achieve, is softness of landscape. The Calgary Stampede Grounds' current landscape lacks the care and attention, which a site of its size and importance deserves. Currently the dominant use of the site is to facilitate the large events which are being held within the many sporting facilities and conference centres on site. Therefore, parking for the attendees of these events has taken over the available open space. This has created a very hard and cold urban landscape. The first step to soften this landscape is to remove the overbearing grade level parking by pushing it below grade. There is also an established system of public transportation which

can be better utilized to bring attendees to site. This opens the site to allow for careful consideration of landscape design. The new design combines careful pavilion design with thoughtful landscape design to create a modern urban park where Calgarians can come to relax, enjoy and enrich themselves. The canopies act as nodes of interactions and the urban park acts as the vehicle of those interactions. The design of the canopy is meant to produce a sense of lightness and play. This idea of lightness continues structurally as the canopy balances on a single support arm. Finally, the canopy is finished with only a 2-inch thickness around its edge, enforcing this perceived notion of weightlessness and play. Accents of wood are also used to add softness to the design. This is most notably visible within the handrails used in the design. By using abundant softwood, such as the Lodgepole Pine a local Albertan tree species, the design is softened visually through the warm color tones and physically through the softness of the wood. By incorporating softness in material choice, symbolism, and organization within the design the urban landscape that is the Calgary Stampede Grounds softens and becomes much more inviting to Calgarians.

As previously quoted, “Calgarians find ways to gather when the spaces that are created welcome them.”³⁵ The intention of this intervention is to create a space, which welcomes Calgarians. By creating this space on the Calgary Stampede Grounds, it elevates the new everyday activities and interactions, which will call this intervention home. Once everyday activities are being celebrated with greater respect, large events hosted within Calgary will become less daunting to Calgarians. Therefore, bridging the gap, first

³⁵ River District Master Plan: The East Is Rising. Youtube.com. CMLC, 2019.
https://www.youtube.com/watch?v=iibDguVLJ6o&feature=emb_logo.

mentioned at the beginning of this thesis, and reconnecting Calgarians to these sites. Maybe then we can see a successful 2030 Olympic Bid.

07/ The Defence

The following script was prepared and presented in conjunction to site drawings and renderings for a virtual presentation on April 15th, 2020.

Fig. 24: Title page of presentation slides.

Good afternoon, my name is Jason Vandenberg and I would like to begin by welcoming you and introducing you to my thesis, Canopies and Catwalks: An Architectural Intervention of the Calgary Stampede Grounds.

For those who may not be familiar with my chosen site, the Calgary Stampede Grounds, let me orient you.

To visit my site, we must travel over 3000km to the western side of Canada.

Calgary is located in Southern Alberta and at the heart of this young and vibrant city you will find the Calgary Stampede Grounds.

The land, located directly east of Calgary's downtown core has been a part of Calgary's identity for as long as Calgary has been on a map.

These grounds are aptly named after Calgary's largest annual event – the Calgary Stampede.

Fig. 25: Page 5 of presentation slides highlighting the Calgary Stampede Grounds.

The Stampede which officially began in 1912, brings in hundreds of thousands of people every year. Since its start it has influenced the development of the grounds.

CALGARY STAMPEDE GROUNDS | PAGE 7

Fig. 26: Page 7 of presentation slides showing a historical photograph from the first Calgary Stampede in 1912.

As the Calgary stampede grew in popularity and grandeur the grounds became a successful exhibition space.

By viewing photos of the site, one can see how the site has grown throughout the 20th century.

In the second half of the 20th century the grounds expanded its program past the stampede to host multiple large exhibition spaces and sporting facilities. In this image you can see what is now known as the Corral building. A hockey arena and event space.

Nearing the end of the 20th century, this would also include a professional sports facility for Calgary's NHL team, the Calgary Flames.

CIRCA 1926

CALGARY STAMPEDE GROUNDS | PAGE 9

Fig. 27: Page 9 of presentation slides showing a historical aerial photograph of the Calgary Stampede Grounds from 1926.

CIRCA 1956

CALGARY STAMPEDE GROUNDS | PAGE 10

Fig. 28: Page 10 of presentation slides showing a historical aerial photograph of the Calgary Stampede Grounds from 1956.

CIRCA 1970

CALGARY STAMPEDE GROUNDS | PAGE 11

Fig. 29: Page 11 of presentation slides showing a historical aerial photograph of the Calgary Stampede Grounds from 1970.

I grew up in a small town just 20 minutes south of Calgary. To me Calgary was the big city, full of anything and everything exciting. I grew up going to the Calgary Stampede whether it be for car shows, dog shows, concerts, art shows. Or the Stampede itself which is always hosted the first week of Julyz. Here's an image of the rodeo, specifically a moment after Bull riding.

Here is a concert being performed at the Coke Cola Stage.

And finally, the midway, back when social distancing was obviously not an issue. Stepping back into the history of the site, there is one large international event which is important in the context of this thesis.

This event is the 1988 Olympic Winter Games. Calgary hosted Canada's first winter games that year. This event has a long-lasting legacy within Calgary. Much of the infrastructure at the Stampede Grounds was put into place for these games. It has now been 32 years since those games have closed and since then the grounds have seen very little large-scale refurbishment despite Calgary's explosion of global business and modern growth.

When the Stampede Grounds were prepared for the 1988 games, it was done so with consideration to the societal values present during the 1980s. One of the most influential advancements of technology in the twentieth century was the popularization of the motorized vehicle. Within the discourse of twentieth century public architecture, it is virtually

impossible to ignore the effects the car had on the built environment. The Calgary Stampede Grounds are no exception to this. As we near the completion of the first quarter of the twenty-first century, we are beginning to see societal values shift. No longer are the days where cars are celebrated on mass.

These outdated ideas combined with the sites lack of programmatic variation has caused the Stampede Grounds to become an island within Calgary. The site 208-acre site is virtually abandoned outside of hosted events. I argue that it is a derelict site where concrete and asphalt reign supreme, where the car is celebrated and where people are inconsequential. The hardness of the site is uninviting to its visitors, as it lacks color, organic life and any reason to spend time on site outside of events.

My thesis proposes architectural pieces which reconnect the site to the city.

My design will densify the site with programmatic elements that cater to individuals' everyday activities such as restaurants, cafés, recreation, walking, shopping, and meeting up with friends.

My design will revitalize the site by using landscape and pavilion design to soften the hardness of the site.

This will create a space that can stand as a daily destination for Calgarians, while continuing to be capable of hosting large events.

My proposed design achieves this through Canopies and Catwalks, benches and bleachers, restaurants, and runners.

DESIGN | PAGE 23

Fig. 30: Page 23 of presentation slides showing several renders of the proposed design.

Today there is often a growing consensus around alternative forms of urban development. This includes alternative modes of transportation such as the use of buses and light rail systems. By utilizing the two light

rail stations and multiple bus stations already in place on site I can minimize the need for parking on site.

This has allowed me to convert the grounds into an urban park with primary and secondary architectural pieces. The space created invites Calgarians to enjoy a site which already holds considerable significance and importance to Calgary's identity.

Through the development of my design I was able to develop four characteristics which played key roles in influencing design decisions. These characteristics are the simplicity of form, the control of water, the softness of landscape and the intimacy of space. Before moving into the complete designs, I wish to speak about the first two characteristics in order to help you understand how and where they are a part of the design. Then I will move to drawings and renderings where I will explain the last two characteristics.

The first characteristic, the simplicity of form in its most state consists of the primary geometric shapes, the circle, square and triangle. Within the design this basic idea has been adopted and it became a parameter of the design. The circle was ruled as a canopy acting as a primary pavilion form. A rectangle became a secondary pavilion form, a floor panel, or furniture. A triangle became a way to address structure throughout the intervention. is created by using a catalogue of parts based of similar dimensions and shapes. This allows for a catalogue of forms to emerge. By having a

catalogue of forms it allows the design to remain uniform and connected throughout such a large site.

Fig. 31: A drawing to show the catalogue of forms which the proposed design utilizes to create uniformity throughout the Calgary Stampede Grounds.

Much of the design is based off three components: a rectangular floor panel, an angled structural arm, and a circular canopy. By using these three main components, and a set number of variations of these components, aspects of the projects such as construction costs and construction time can be simplified. This also allows the project to be scaled to any size as required. Each new organization of these components will create unique experiences and spaces for occupants.

The second characteristic, the control of water is essential for the site as it is in the floodplain of Calgary's Elbow River. Evidenced by the above-mentioned 2013 floods, the Stampede Grounds are a high-risk area for flooding as the Elbow River borders two sides of the site. By no means will this project be able to prevent a future flood similar to that, which was experienced in 2013. However, the fact that this site is at risk to the powers of water highlights the importance to consider the control of waterflow.

The most active controlling of water within this project would be found within the structure of the canopies. This water is allowed to flow down the structural arm and into a basin, a very intentional control of water celebrated in the design of the structural arm. By using an I-beam to create the structural strength of the arm, it allows a customized steel tubing to be welded into place around the I-beam to simultaneously finish the I-beam and create the channel for water to run down and into the basin. To celebrate this moment, a perforated sheet of steel finishes the channel to allow occupants to see and experience the water as it flows down the arm, into the basin before it drains away.

Fig. 32: Site map of proposed design from presentation slides.

As you can see the Calgary Stampede Grounds is a very large site with 208 acres of land. The organization of a site plan of this size is very difficult, therefore rather than tackling the entire site at once I imagined 13 separate sectors which may become nodes of interaction for my design. Of

Simply labeled M1, M2 and M3, within each sector I have imaged different programmatic elements, and this has resulted in a variety of designs which all use the same components and language.

*The first sector, M1, is located just north of the site. I have chosen to
outside of the site as a way to invite you to the site. By placing a sector
outside of the traditional site and by using the same architectural*

components and language, it creates a connection between the site and the city. For this first sector I have decided to break it up into 4 levels which create the design.

The ground, which represents the stripping of the parking lots to create the urban park which begins to address the softening of the landscape. In this drawing you can see the reintroduction of plant life which will brighten the site.

The pavers, which represents that there is still a need for paved areas on site, but it is reintroduced to the site with more care and consideration for the landscape in which it sits.

The secondary architectural components. This includes furniture and pavilions. This is the spaces which people will interact with the most. They will touch and feel these aspects of the design the most. Whether it be sitting on a bench, smelling the flowers in a planter, walking into a café like the one exemplified in this design. These aspects begin to create the intimacy of the space. It encourages people to stop, sit and enjoy the space and those that they are with.

Lastly, there is the primary architectural component which is the canopies and catwalks. These are what define the spaces. The canopies define the head height of the space people occupy, they offer opportunities of views of the surrounding urban landscape, and they effect the light which shines on the open site. The catwalks bring a sense of warm naturally found

within the wood which creates their railings and it allows you to gently change elevation unlike anything currently available on site.

Combined these four levels of the design create a space which I argue is inviting, intimate, enjoyable and unique.

Fig. 34: Plan drawings of the ground (top left), the pavers (top right), the secondary components (bottom left), and the primary components (bottom right).

Within the renders of this design you can see how the characteristics come together, how the shadows begin to play with the landscape, and areas define themselves. The canopies and catwalks can combine to create occupiable roof spaces where soft and hard materials meet. Where you can overlook the city or simply talk to someone across canopies and levels.

Fig. 35: A render which shows the interaction of occupants of the proposed pavilions from the occupiable roof spaces within sector M1.

Fig. 36: A render which shows the interaction of occupants of the proposed pavilions from ground level within sector M1.

As a part of the intimacy of space characteristic, I have set the canopies to a strict 10 ft headspace. This creates small spaces for people to interact in, emphasising and encouraging individual and small group interactions. As shown by this render, the pavilion which acts as a café here, also have been given a strict height. Pavilions which exist underneath the canopies are set at a maximum of 8 ft in height in order to create enough occupiable space for activities to occur. This physically tightens the space while leaving space to avoid feeling confined and maintains a open feeling.

As a part of the softening of the urban landscape, along with the integration of the urban park. The canopies have been designed in order to seem light and playful. This is emphasised by supporting the canopies with a single structural arm and having the canopies coming to a 2-inch thickness around its edge.

Fig. 37: A render which shows the various elements of the pavilion design within sector M1.

Fig. 38: A render which shows the various elements of the pavilion design within sector M1.

Fig. 39: A render which shows the various elements of the pavilion design within sector M1.

Moving onwards to M2, we are now within the site. In this sector I imagined a recreational area, where kids can run around, and adults can relax while they look over a green space.

Fig. 40: Plan drawing of sector M2.

The accompanying renders for M2 are meant to give a sense of the material feel of the design. Rust will form over time. Wood may grey over time. Benches will become rough and worn. However, the spaces and the language remain the same. There will still be a softness to the landscape, and intimacy of the spaces. It will still invite people to site to play, to meet to enjoy.

Fig. 41: A render which shows an example of the effect of time on the pavilion within sector M2.

Fig. 42: A render which shows an example of the effect of time on the pavilion within sector M2.

Fig. 43: A render which shows an example of the effect of time on the pavilion within sector M2.

Fig. 44: A render which shows the softened landscape and proposed pavilions of sector M2.

The final sector which I wish to show brings us to the southern end of the site

I imagined this sector as an entrance to the site as a welcome centre and park entrance.

Looking back towards the downtown core, one is reminded of the sites proximity to Calgary's downtown core and the importance this site plays.

Fig. 45: Plan drawing of sector M3.

Fig. 46: A project render which shows the proximity of the renewed Calgary Stampede Grounds to the high-rise buildings of Calgary's downtown core.

This thesis proposes a design, which comes together through the ideation of the simplicity of form, control of water, intimacy of space and the softness of landscape. By introducing the proposed intervention into the site this project breathes new life and reconnects it to the growing city. It has been over 100 years since the first official Calgary Stampede was held on the same site it calls home today. In those 100 years the site has undergone a great deal of changes. This change inevitable as it must continue. Without change the places become left in the past. As I have argued, this is already starting to happen at the Stampede Grounds. It is disconnected from the city which grows around it. With the integration of my design the site can be renewed and reconnect itself to the city.

Through Canopies and Catwalks the Calgary stampede will become an engaging and enjoyable space which will invite Calgarians for more than just events. As described by the city itself, "Calgary is a city rich with beautiful landscapes, picturesque skylines, and urban vibrancy, the city has a dynamic array of experiences that allow both visitors and Calgarians opportunity for adventure and to live in the moment." With Canopies and Catwalks, the Calgary Stampede Grounds will allow everyone to do just that.

Thank you for your time.

08/ Conclusion

This thesis proposes a design, which comes together through the ideation of the aforementioned four characteristics. By introducing the proposed intervention into the site this project breathes new life and reconnects it to the growing modern city. It has been over 100 years since the first official Calgary Stampede was held on the same site it calls home today. In those 100 years the site has undergone a great amount of changes. These changes were all completed in the styles and societal values of their time. This is obvious by the complete coverage of paved parking that sits on the site. One of the most influential advancements of technology in the twentieth century was the popularization of the motorized vehicle. Within the discourse of twentieth century public architecture, it is virtually impossible to ignore the effects the car had on the built environment. The Calgary Stampede Grounds are no exception to this. As we near the completion of the first quarter of the twenty-first century, we are beginning to see societal values shift. No longer are the

days where cars are celebrated on mass. Trends in the built environment seem to be trying to reverse the work, which those before us have completed. There is an increased desire to be sustainable, environmentally friendly and connected to nature. Sites such as the Calgary Stampede Grounds remain as relics of a bygone era. As time marches further into the twenty-first century these sites, if unchanged, will become forgotten. The splendor of the spectacles that were once held on sites, such as the Calgary Stampede Grounds, would disappear. Unlike a city, which organically modernizes itself everyday, a public site needs intervention or redevelopment in order to remain at par with societal values. As a relic of the past a public site will be disconnected from the city, which it serves, by renewing the site it will be come reconnected to the city and thrive once again.

Fig. 47: The River District Master Plan as produced by Calgary Municipal Land Corporation.

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10/ Appendix

10.1 History of Olympics

The idea of the Olympics has a long and complicated history which dates as far back as the 12th century B.C. Historical evidence suggests that prior to the very first Olympiad, the ideas which would eventually become the Olympiad began in Olympia, Greece during the 12th century B.C.³⁶ During the century's prior to the first Olympiad, which was held in 776 B.C., Olympia, Greece, was home to the Festival of Zeus.³⁷ The festival celebrated the Greek God, Zeus, which included worship, celebration, games and contests. This festival would be held until local disputes disrupted celebrations at Olympia.³⁸ It was not until 884 B.C. that the festival would revive when a truce was called between the authoritative figures of the nearby areas.³⁹ Over the next hundred years, the festival would transform into the Ancient Olympic Games with the first Olympiad being held in 776 B.C. In this very first Olympiad there was only one event.⁴⁰ A race called the Stade. It was a race, which was approximately 192m, the length of one stadium.⁴¹ There is evidence that the Stade consisted of competitors racing a torch to the alter of Zeus which was then used to burn a sacrifice and mark the beginning of the Festival of Zeus.⁴² Olympiads would be held at Olympia every 4 years up until the 4th century A.D.⁴³ After

³⁶ Parry, Jim, and Girginov, Vassil. *The Olympic Games Explained: A Student Guide to the Evolution of the Modern Olympic Games*. London: Routledge, 2004. 14.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Young, David C.. *A Brief History of the Olympic Games*. Chichester: John Wiley & Sons, Incorporated, 2004.16.

⁴¹ Ibid, 20.

⁴² Parry, Jim, and Girginov, Vassil. *The Olympic Games Explained: A Student Guide to the Evolution of the Modern Olympic Games*. London: Routledge, 2004. 14.

⁴³ Ibid, 15.

the 4th century, the idea of the Olympics seemed to fade from existence and our ideas of the Ancient Greek Olympics ends.

The idea of the Olympics would once again find itself in what we know as the modern Olympic movement. For nearly 1500 years, the Olympics disappeared from world history. It wasn't until the second half of the 19th century that the idea of the Olympics would return. In a world which was now much vaster and more connected than it was 1500 years prior, individuals from three different countries contributed to the modern Olympic movement. Officially, the first International Olympic Games were held in 1896 in Athens, Greece.⁴⁴ Since 1896, the Olympics have once again been a part of our world history. One of the traits of the modern Olympic games is that every edition of the games is hosted by a different country than the Olympiad before. Today we look towards the 32nd modern Olympiad being hosted by Tokyo for the winter edition of the Olympic Games.⁴⁵ Over the past 120-years, there have been many countries, which have hosted the games, including several who have hosted multiple times. Italy, the United States of America, the United Kingdom and China are all countries, which have hosted the games several times. Canada is also on this list as we have hosted the games three separate times: 1976 Summer Games in Montreal, Quebec, 1988 Winter Games in Calgary, Alberta, and 2010 Winter Games in Vancouver, British Columbia.

⁴⁴ Young, David C.. A Brief History of the Olympic Games. Chichester: John Wiley & Sons, Incorporated, 2004.152.

⁴⁵ "Games Plan | The Tokyo Organising Committee of the Olympic and Paralympic Games." The Tokyo Organising Committee of the Olympic and Paralympic Games. Accessed December 20, 2019. <https://tokyo2020.org/en/games/plan/>.