

The Calgary Japanese Community Centre Project: A Case Study for Inclusion, Diversity, Equity & Accessibility in Design

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Keywords: Equity, Diversity, inclusion, Accessibility, Sustainability

ABSTRACT

The newly redesigned 15,000 sqf Calgary Japanese Community Centre is a cultural and community hub located in the inner-city community of Killarney in Calgary, Canada. The project replaces their existing building that has been deemed unfit for retrofit due to numerous issues with deterioration, performance and costs of repairs. In addition, due to the aging membership, the Calgary Japanese Community Association (CJCA) has witnessed a steady decline in members which has dire implications for the CJCA's social and cultural sustainability, not to mention its longevity and economic viability. The building is 2.5 stories in height and constructed from renewable heavy timber framing. Taking all this into account, the new Centre's design aims for the highest green, accessible and inclusive design standards, while catering to the broad demographic spectrum of Calgary's ethnic Japanese community (Nikkei) and the broader community of Killarney, serving as a unique backdrop for a case study for Inclusion, Diversity, Equity and Inclusion (IDEA) in design.

BACKGROUND

The new Calgary Japanese Community Centre is a cultural and community hub for the city's ethnic Japanese community, new immigrants, seniors, children and families and residents of the neighbourhood of Killarney in the city of Calgary, Canada. It was designed with concepts of Inclusion, Diversity, Equity and Accessibility (IDEA) at the core of its design, and has been recognized with numerous awards including the 2020 Canadian Architect Award of Excellence. Aiming the Rick Hansen Foundation Accessibility Certification (RFHAC) Gold and Zero-Carbon Building (ZCB) as its design standards, this project presentation will introduce the design process and strategies adopted to achieve targets of Inclusion, Diversity, Equity and Inclusion (IDEA) and sustainability.

The Calgary Japanese Community Association currently resides in two adjacent buildings: an aging four-plex from the 1970s, and a mid-century community centre that has undergone many ad hoc renovations. To optimize the use of its property and reverse its declining membership, the Association's board set out

to create a new contemporary cultural centre and community hub for Japanese immigrants in Calgary.

Through their research, the architects learned about the notion of kakehashi, which translates literally as "bridge" or "bridge-building." They harnessed this concept to develop a widely inclusive program that goes beyond regular cultural, social, and educational functions to also include a daycare and eight affordable senior's housing units.

The building's irregular form and asymmetry invoke the Japanese concepts of "wabi-sabi", or appreciating imperfection, and "ma", the balancing of mass and void. A discontinuous oval volume holds the diverse programs and surrounds a void space. During the schematic design process, the void developed into a contemporary interpretation of the "engawa"—the traditional threshold between structure and garden. This threshold provides an auxiliary space and access point for the various programs. It also frames a traditional Japanese garden that is carefully relocated from the existing complex into the new courtyard.

The massing incorporates passive solar and sustainable design principles. The traveling ridgeline of the structure's Möbius-strip-like roof responds to Calgary's sun path, funneling natural light into the courtyard and interior. Generous overhangs control glare and heat gain. Stormwater collected from the roof surface is used for the building's gray water needs and for garden irrigation.

The entire building will be clad with cedar shingles treated with the Japanese technique of shou-sugi-ban, a charring process that creates natural resistance to weather, fire, rot and insects, avoiding the need for toxic finishes. The project's overall sustainability is enhanced by the use of local wood and mass timber.

DESIGN PROCESS

The Calgary Japanese Community Association has operated out of a 1950's era community hall building that has been added onto in an ad-hoc style almost every decade since its inception in order to keep up with the growing demands and needs of the members, in particular the seniors. Today, the final result is an inefficient building when evaluated against the current metrics



Figure 1. Landscaped courtyard perspective. MoDA.



Figure 2. intergenerational Concept. MoDA.

such as the Building Code, Energy Code and CSA Accessibility Standards. In addition, the current layout of the building lacks any sort of presence or interaction with the street or greater community of Killarney, Calgary, AB. Modern Office of Design & Architecture and Henry Tsang Architect were consulted in July of 2020 to conduct a Feasibility Study in which, due to the amount of new space the CJCA wished to add to their current facilities, the on-going deterioration of the existing roof and envelope, the extent of updates required to conform to the current codes and standards, it was unanimously determined that a new build was both the most practical and economical solution to pursue.

In the new design, the consultant team worked with the membership to determine the core objectives of the new project. Sustainability (as it relates to the CJCA's social, cultural and environmental mandates) was front and center as a primary objective. A substantial portion of the current CJCA membership reside within the senior demographics, as such, there was a desire to design an inclusive community centre that catered to the entire spectrum of individuals, both within the Japanese community and residents of the greater community of Killarney, from young children to the elderly. This was accomplished by numerous design strategies, such as incorporating new programmatic elements (e.g., 8 aging-in-place seniors housing, a community daycare, library, tatami room, etc.), as well as designing to meet/exceed the stringent CSA standards, by aiming to achieve the Rick Hansen Foundation Accessibility Certification - Gold. It was agreed upon that attracting younger members will be key to the overall health and longevity of the CJCA. Just as important, was the environmental sustainability of the new build. Instead of 'green washing' the project after the final design has been arrived at, the design team set out from the very beginning with the primary objective of achieving a Net Zero Carbon project. To accomplish this, using sophisticated parametric modelling technology, the entire massing of the building responds to Calgary's unique sun path throughout the year. This passive heating/cooling/shading strategy, together with a low window/wall ratio of 14% provides a low thermal energy demand intensity of 36 kWh/m²/year, and a site energy use intensity 25% better than the NECB, reducing the need to artificially light, as well as cool the

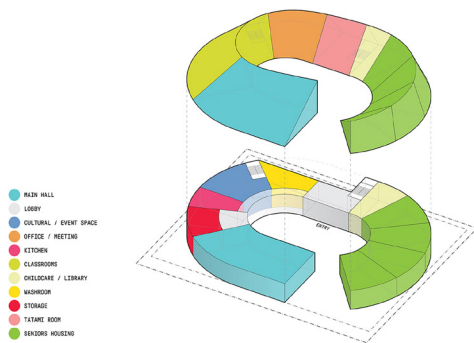


Figure 3. Functional Diagram. MoDA.

building in the summers and heat the building in the winter. As a corollary to this, the massing to the building's roof was structurally designed and oriented to accommodate PV panels and collect rainwater to be used for irrigation. A second objective, the CJCA's mandate to facilitate a broader cultural understanding of Japanese/Nikkei and Asian culture guided the design team's hand with respect to designing a highly 'porous', publicly accessible building that opens up to the street, showcasing the ongoings of the main hall to the greater community. The sanctity of the inner Japanese garden is now on display and accessible to everyone and provides for a spill-out or auxiliary space for the main event hall if needed.

EQUITY, DIVERSITY, INCLUSION & ACCESSIBILITY

The Calgary Japanese Community Centre is and will be offering in the new centre services and programs that cater to members and the general public, centered around interest in Japanese culture, the ethnic Japanese, Nikkei and Asian community, residents of the neighbourhood of Killarney and Calgarians at large. With the aging membership of the CJCA, the new centre will bring an opportunity to rejuvenate the services and programs offered, in order to attract new members. While responding to the needs of the current membership, the CJCA wants to be a more open, intergenerational, accessible and inclusive centre, welcoming newcomer immigrants, international students, women, children and youth, seniors and members with disabilities, as well as be a safe space for racialized minorities and marginalized groups.

Undoubtedly, COVID-19 and its attendant social distancing/lockdown measures, have cast a light on the importance of social interaction and 'togetherness' as it relates to the civic social/cultural health of our urban environments. COVID-19 has also revealed critical 'gaps' in larger societal issues, such as (but not limited to) the ways in which we attend to the elderly and the infirm. It was critical to the CJCA and the design team that not only was the entire demographic spectrum of its members catered to, but also the provision for inclusive, publicly accessible spaces and programs. As such, the new project will provide community daycare services, primary and secondary event halls, other auxiliary spaces (e.g., Kitchen, Tatami Room, etc. that can be rented



Figure 4. Entrance Perspective. MoDA.

out for extraneous social/community events), as well as eight affordable housing units. Four of these units will target the membership's aging seniors and the other four will cater towards new immigrants arriving from Japan.

The Calgary Japanese Community Centre project will be compliant with the highest applicable accessibility standards CSA standards and meet Rick Hansen Foundation Accessibility Certification - RHFAC Gold Certification. The project takes a holistic approach to accessibility, not only to respond to a checklist, but to fully consider the entire experience of the person with disabilities from the parking/dropoff to the entrance of the building to the circulation throughout the building, and back to the dropoff point. Firstly, the design provides sufficient accessible parking spaces, on a level surface to allow for safe exit from vehicles, that are in close proximity to the building's entrance. The parking lot was also designed so that it does not require users to cross vehicular traffic, and is well-illuminated. The exterior pathway is wide, with a firm, stable and slip-resistant surface. The exterior approach to the entrance is a continuous path, with no obstruction. Most importantly, everyone would access the building through the main entrance accessed through the Japanese garden without segregating people with disabilities. Access to key facilities is clear and direct. The whole design of the centre is laid out in a single "ribbon" plan. The path of circulation is wide and bright, naturally lit by openings to the courtyard. The surface is stable and flat, and the second floor is accessible via an easy-to-find elevator, equipped with tactile signs and braille.

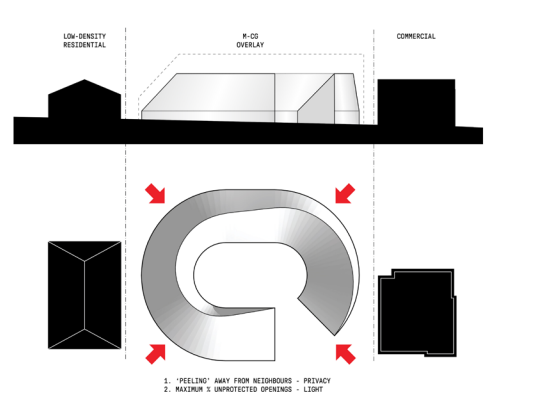


Figure 5. Scale and density study. MoDA.

Accessible counters and seating are provided where needed, and consideration for the location, space and clearance is considered throughout. Spaces are well illuminated (avoiding glare), and acoustic performance is also considered in the design and material selection. In the sanitary facilities, barrier-free washrooms are designed for the protection of the member's privacy, dignity, and security in mind. No-touch features are considered in the design where possible. As for wayfinding and signage, the building was designed to be extremely clear for wayfinding, as there is only one path of circulation surrounding the Japanese garden. Additional signage will be provided where necessary, and braille will be included on the room signage.



Figure 6. Bird's eye perspective. MoDA.

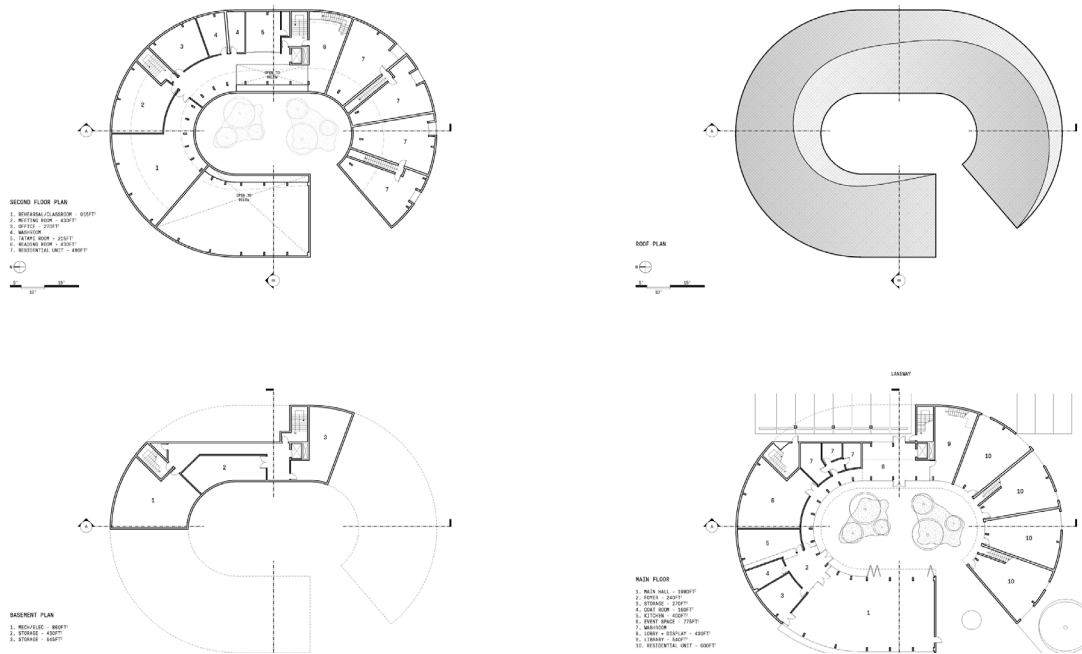


Figure 7. Floor Plans. MoDA.



Figure 8. Interior Perspective. MoDA.

Emergency and alarm systems are in place to accommodate people who are deaf, such as visual alarms. Within the residential units, the four affordable housing units designed for seniors and persons with disabilities are designed to be on a flat and stable surface, and will be equipped with accessible details such as counters, grab bars, handles, hardware and accommodated illumination.

The above project description summarizes the strategies adopted to achieve targets of Inclusion, Diversity, Equity and Inclusion (IDEA) and posits the Calgary Japanese Community Centre Project as a prime case study for IDEA in design.

ENDNOTES

1. Canadian Architect, Calgary Japanese Community Centre, Canadian Architect, December 2020, Vol. 65, No. 09, p. 23-24.
2. Parker, D., Japanese Community Association Plans Grand New Home, Calgary Herald, June 20, 2021.
3. Tsang, H., Designing Japanese Identity and Culture in Canadian Architecture: Study of the Architectural Design of Asian Cultural Centres in Canada, Japan Studies Association of Canada 2020 Conference Proceedings, 2020.

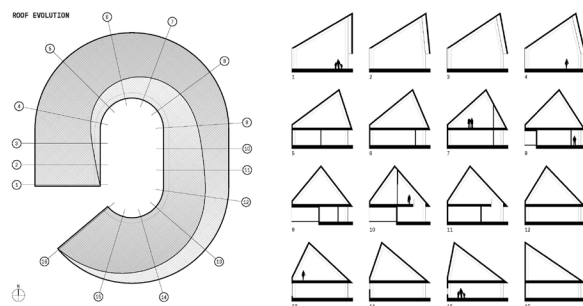


Figure 9. Sectional diagram of roof evolution. MoDA.