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Toronto the Great: Inside the \$824M Revitalization of Union Station





For decades, the Great Hall of Toronto's Union Station was affectionately (and perhaps arguably) known as the grandest hamburger stand on the planet.

Today, following a 14-year, \$824 million comprehensive overhaul, Canada's largest multi-modal transportation hub has officially transformed from a mere pass-through into a world-class civic destination.



Client: City of Toronto

Lead Architect: NORR Architects & Engineers

Heritage Architect: EVOQ Architecture

Train Shed Architect: Zeidler Architecture

Retail Designer: PARTISANS

Structural Engineer: NORR (Dr. Hassan Saffarini)

MEP Engineer: NORR Architects & Engineers

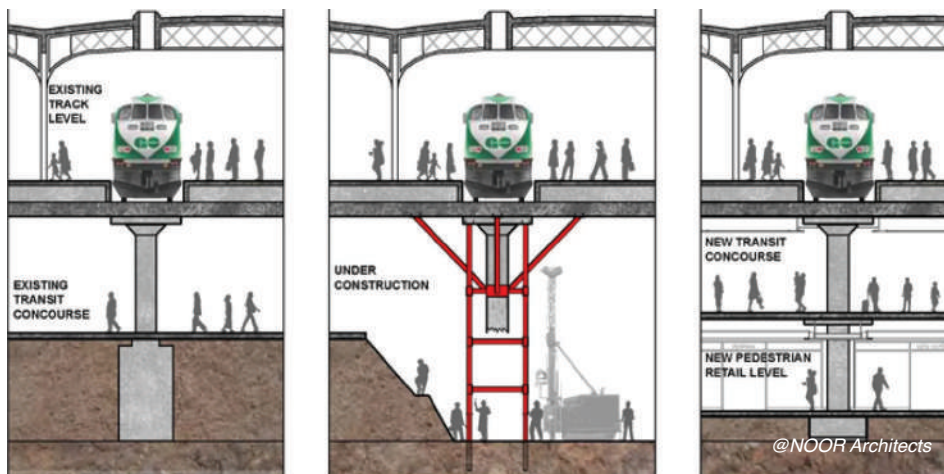
Construction Manager: Carillion / Vanbots

Retail Developer: Osmington Inc.

@NOOR Architects

To accommodate the staggering growth in commuter traffic—currently sitting at 65 million passengers a year—the design team had to get creative. Instead of building up, they dug down.

The ambitious project carved out a 270,000-square-foot expansion four meters below the existing basement level, effectively doubling the size of the previous Bay Street GO concourse and adding a brand-new York Street GO concourse.

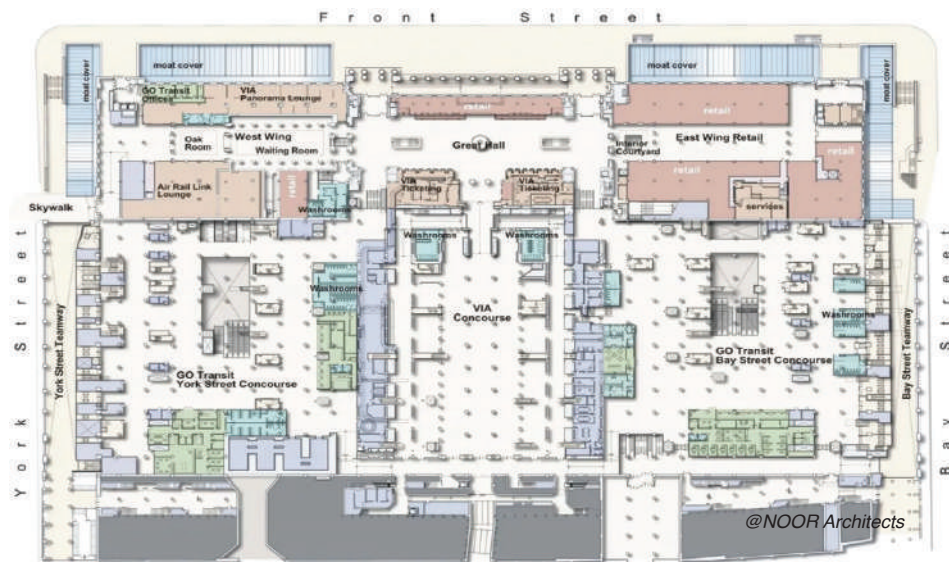


The Union Station Revitalization proves that public infrastructure can still ennoble the fabric of a city.

The project has already garnered significant industry acclaim, sweeping recent architectural honours:

- **AIA Canada Society Design Awards 2025** – Merit in Architecture
- **Toronto Urban Design Awards 2025** – Public Buildings in Context
- **Heritage Toronto Awards 2024** – Heritage Planning & Architecture Award in Built Heritage

The "Dig-Down" Feat: To achieve this without halting transit, 185 track-supporting columns were jacked up, transferred onto bedrock-supported micro-piles, and cut away. Remarkably, 11 of the 12 tracks remained fully operational throughout, with track movement kept to less than three millimetres.



The Glass Moat: The previously open-air 'moat' surrounding the station has been levelled for accessibility and enclosed with a sleek, steel-ribbed glass canopy. This giant skylight protects commuters from the elements while offering stunning worm's-eye views of the CN Tower, all while stopping just short of the heritage façade to preserve its structural integrity.

Heritage Restored: The majestic Great Hall underwent a colossal cleaning to remove a century's worth of train exhaust and cigarette smoke, restoring the exquisitely engineered Guastavino tile vault and historic Zumbro stone to their original glory.

The dig-down didn't just create room for commuters; it unlocked 160,000 square feet of brand-new retail space, curated by retail developer Osmington Inc., turning the station into a foodie haven.

Say goodbye to the dead-end fast-food joints and hello to distinctly Torontonain retail neighbourhoods:

The Foodie Aisle: Located near the Scotiabank Arena entrance, this market-style corridor features a diverse selection of local chefs and quick bites, including Mean Bao, Butter Chicken Roti, and Grand Tacos Taqueria.

Union Market & Promenades: The Front and York Street Promenades act as the station's "Main Street," offering everything from fast-casual dining at the Union Food Court to sit-down experiences like Amano Italian Kitchen, WVRST, and the upscale Blue Bovine fine dining in the East Wing.



By leveraging the value of an irreplaceable heritage building and expanding it from within, the City of Toronto and its partners have ensured that Union Station will continue to be the beating heart of the city for generations to come.

Union Station is no longer just a place to catch a train; it is a lively venue for Toronto's arts and culture scene.

As of early 2026, the station is actively programming its spaces to engage the public:

Art Exhibitions: The station is currently hosting Unionnale: Aura by Jason Zante in the Union Market, alongside the A Kind of Order exhibition in the West Wing, which amplifies Black voices and BIPOC creatives.

Live Music & Events: Commuters can regularly catch live DJ sets through the TD Union Beats program, or stumble upon interactive pop-ups like free local food samplings at the Bay Kiosk.





**Where Art Meets Engineering:
The Coldefy x CRA France Pavilion**

The France Pavilion is envisioned as a 'theatre of life', where architecture frames moments of presence, movement and interaction. Inspired by a mise-en-scène, or stage design and arrangement, the Pavilion is designed as a fluid sequence of spaces, guiding visitors through changing perspectives that mirror the rhythms of daily life – the beginning, transition, pause and departure.

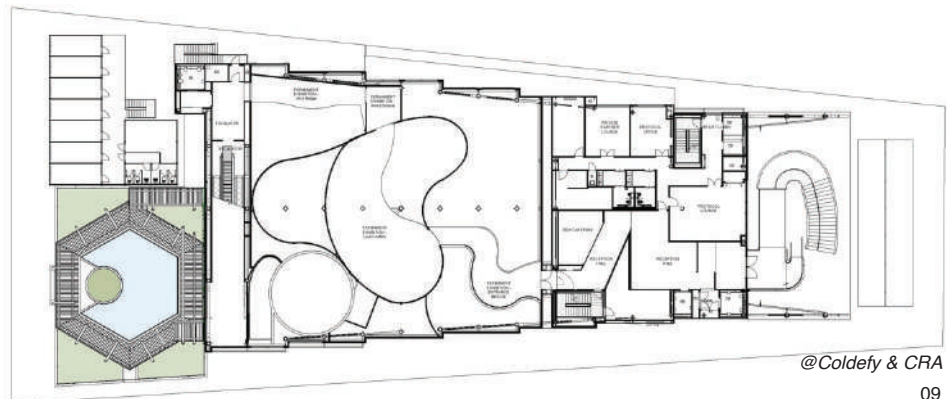
The design draws inspiration from the Japanese legend of Akai Ito, the invisible red thread connecting destined souls. A quiet inner garden offers refuge, emphasizing that encounters with nature are just as vital as those with one another.

Its shifting façade, with 17-metre-high fabric veils resembling theatre curtains suspended down two sides, is in contact with the elements and responds to light and wind. The pathway through the Pavilion follows a carefully choreographed progression – ascending towards an exhibition displayed inside, alternating between enclosed and open-air spaces, and concluding with a return to the wider Expo site.



"The France Pavilion invites visitors to enter the theatre of life. Both actors and spectators in this production, visitors traverse a path through the Pavilion that is an expression of the symbiosis between humanity and its environment. It's an honour to have been chosen to design the France Pavilion, and we truly believe that the World Expo has the potential to create a moment of reflection – about how we live, what we value, and how design can shape better futures. Even a brief experience –whether it's a spatial gesture, a surprising material, or a shared moment – can resonate deeply"

Thomas Coldefy, founding partner of Coldefy



The Pavilion is designed with a circular approach, embracing modularity and material reuse. Its movable curtain façade, beyond being a dynamic aesthetic element, is also designed for disassembly and repurposing after the event. The Pavilion integrates as many prefabricated and temporary components as possible to facilitate future disassembly. These design choices ensure reduced environmental impact, ease of reconfiguration, and adaptability beyond the Expo. Rather than being a static monument, the Pavilion is an adaptive structure, reflecting the evolving nature of architecture and exhibition spaces in response to contemporary challenges.



"Infused with a spirit of play, the France Pavilion is a dynamic, flexible space that sparks unexpected encounters. In an era of increasing polarization, physical space offers a much-needed antidote. Unlike the digital realm, it forces us to confront diversity and engage with perspectives that might challenge our preconceptions. This mirrors the mission of today's World Expos as vibrant hubs for open dialogue and discovery. It's an honour to bring CRA's ongoing research to Osaka and contribute to France's part in this global dialogue – a place that has shaped so much of my thinking, from studying at the École des Ponts to this moment"

Carlo Ratti, founding partner of CRA and Curator of the 19th International Architecture Exhibition of La Biennale di Venezia (2025)

Constructed with prefabricated and modular elements, the Pavilion embraces a circular approach, ensuring its materials can be disassembled and repurposed, reflecting a vision of architecture as adaptable as life itself.

The Pavilion's architectural concept is rooted in theatricality and sensory experience. The entrance stairway and balcony form a stage, welcoming visitors into an unfolding journey. Forming part of the building's façade, the sinuous staircase creates a dialogue between the inside of the Pavilion and the plaza outside, blurring the boundaries between inside and out and providing a sense of welcome and openness to all.

Visitors follow a looping path that takes them through the heart of the exhibition, crossing through different thematic spaces, then stepping outside into a small garden, before reentering the Pavilion and concluding the journey with another outdoor moment. Unlike traditional linear experiences, this journey, which highlights French savoir-faire or know-how, reflects cycles and pulsations, echoing the broader themes of the Pavilion.



Visitors experience the Pavilion through three 'acts':

1. Ascent – A sensual staircase winds up to an observation balcony.

2. Exhibition Journey – Moving inside, they navigate a series of curated spaces, encountering installations and scenographic elements tied to the Pavilion's themes. Garden Interlude – Stepping outside, visitors enter a sensorial landscaped area, offering a moment of reflection before rejoining the interior spaces.

3. Final Transition – The journey concludes with a transition back to the open air and the Expo site, reinforcing the rhythmic flow between inside and outside.



Living Small, Dreaming Big: Modern Bunkie

@THE BUNKIE CO.

From prefabricated capsules that can be shipped anywhere in the world to micro-apartments in dense cities and even igloo-shaped residences, this year's selection of tiny homes has it all. But what does it actually mean to live in an era of "housing compression"?

If you aren't ready for an igloo but need extra space, The Bunkie is the perfect solution! Whether for your cottage or your backyard, the bunkies provide between 84 and 200 square feet of extra living space.



@THE BUNKIE CO.

In the past, we saw a surge in designs for mini city apartments. These are entire residential developments packed into less than 40 square metres—often created by subdividing homes that were originally much more spacious.

In these interiors, we witnessed the sheer ingenuity of designers. Faced with tight constraints, they made these spaces not just livable, but genuinely pleasant, employing either very bold statements or strictly understated solutions to maximize every inch.

Remarkable examples of the contemporary existenzminimum (subsistence dwelling) are not just found in cities. We are seeing a rise in prefabricated houses that can be shipped and installed anywhere. Usually crafted from wood, these structures often boast ultra-luxurious interiors that look as if they've come straight from the space age. For a moment, we even thought you could order them on Amazon, though it seems that service still has some geographical limitations.

Mobile homes were also well represented this year. Standouts included a trailer inspired by Frank Lloyd Wright's Usonian house—created in collaboration with the FLW Foundation—as well as historic curiosities like Mario Cavallé's famous igloo houses in Milan. Designed after World War II, one was recently restored, though the renovation has sparked debate among purists.

We even wondered what the absolute smallest house in the world might be. If we are ready to accept that a person could live in just one square meter, then 2025 gave us our answer. Between experimentation, nostalgia, and "non-human" projects, these are the concepts that defined the year. While living in one square meter is an extreme experiment, many of us need a little more room to breathe.



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As 2025 draws to a close, the architectural visualization (ArchViz) industry stands at a pivotal crossroads. For the last decade, rendering has been viewed primarily as a marketing necessity—a "pretty picture" created to sell a concept or satisfy a planning board.

However, the landscape has fundamentally shifted. As we enter 2026, rendering is no longer just about aesthetics; it has evolved into a critical tool for risk mitigation, construction accuracy, and investment security.

The "pretty picture" era IS OVER. As we move through 2026, architectural visualization is establishing itself as a pillar of the construction and design process. Whether through the immersion of VR, the precision of cloud computing, or the honesty of hyper-realistic lighting, the goal remains the same: to bridge the gap between a technical drawing and a human experience. The firms that succeed in 2026 will be those that use visualization not just to impress, but to instill absolute confidence in their clients.



**ArchViz in 2026:
From Aesthetic Approval to Strategic Confidence**

Virtual Reality (VR) Becomes Standard Practice

Virtual Reality (VR) and Augmented Reality (AR) are moving past their "novelty" phase to become essential communication tools. In 2026, VR will not just be for wowing clients; it will be for spatial validation.

Clients often struggle to understand scale and flow from 2D floor plans. VR bridges this gap, allowing stakeholders to "walk" through a structure before ground is broken.

The Impact: This reduces costly change orders during construction because the client has already "experienced" the room and signed off on the spatial dynamics.



The Democratization of Cloud Rendering

High-end rendering previously required massive in-house server rooms and constant hardware upgrades. Cloud rendering has changed the equation.

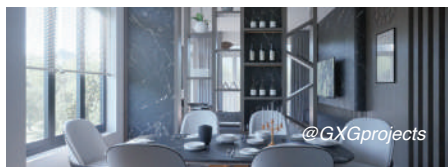
Scalability: By offloading processing power to the cloud, even boutique firms can produce cinema-quality visuals without investing in enterprise hardware.

Collaboration: Cloud-based workflows break down geographical barriers, allowing teams to collaborate on heavy 3D files in real-time, regardless of their physical location. This is making the industry faster and more agile.

AI: The Co-Pilot, Not the Captain. AI is settling into its role as a powerful assistant rather than a replacement.

Automation: AI is excellent at handling repetitive tasks—generating textures, populating scenes with foliage, or denoising images.

Ideation: It serves as a brainstorming partner, allowing designers to iterate through dozens of mood, lighting, and style concepts in minutes. However, the "human touch"—the ability to curate, correct, and inject emotion into a narrative—remains the domain of the professional.



Technological tools are useless without a strategy

In 2025, the industry focused on using renderings to gain Approvals. In 2026, the focus shifts to Assurance.

De-Risking the Investment. With construction costs rising and timelines tightening, ambiguity is expensive. "Artistic" renderings that fudge the details are losing favour. Stakeholders need to see exactly what will be built. Accurate lighting simulations, true-to-life material representations, and precise context help investors and developers feel secure in their financial commitments.

Integration with BIM

Renderings are no longer just paintings; they are data visualizations. In 2026, we will see a deeper integration between BIM data and visual output. When a rendering is derived directly from the construction documentation, it ensures that the "pretty picture" matches the "buildable reality."

Visualizing Sustainability

As global design influences shift toward climate resilience, rendering plays a crucial role in communicating performance. It is no longer enough to show a building; designers must visualize how the building performs. This includes visualizing solar passive design, biophilic elements, and the use of sustainable materials like terracotta or reclaimed timber. In 2026, a rendering must communicate not just how a building looks, but how it lives and breathes within its environment.



The Great Green Flush: Turning Wastewater into Ottawa's Cleanest Energy

"This partnership demonstrates how we can use existing infrastructure in new and innovative ways to reduce emissions and support sustainable growth in our communities of the future. By turning wastewater into clean, efficient energy, we're taking a practical step that shows what's possible when innovation meets sustainability in city building. This is great for the environment and for a clean future in Ottawa"

Mayor Mark Sutcliffe, City of Ottawa



A landmark transformation is underway at Ottawa's LeBreton Flats, where a groundbreaking energy project is turning the city's wastewater into a primary power source.

Through a partnership between the City of Ottawa, Hydro Ottawa (via Envari Holding Inc.), and Theia Partners, the new LeBreton Community Utility is set to implement an advanced Sewage Energy Exchange System (SEES).

This system will provide carbon-free heating and cooling for Odenak, a flagship 600-unit residential development that serves as a model for the future of sustainable, inclusive urban living.

Client: Dream

Location: Ottawa, Ontario

Architects:

- KPMB Architects
- Perkins&Will
- Two Row Architect

Size: 706,108 ft² / 65,600 m²

Sustainability: Zero Carbon Building—Design
Standard™; LEED Gold certification

Project Type: Mixed-use, Residential

Powered by SHARC Energy's Canadian innovation, the SEES technology diverts raw sewage into a wet well, where it is filtered. High-efficiency heat pumps then extract thermal energy for building temperature control before discharging the wastewater back into the municipal system to ensure a sustainable and highly efficient urban future while reducing overall carbon footprints.

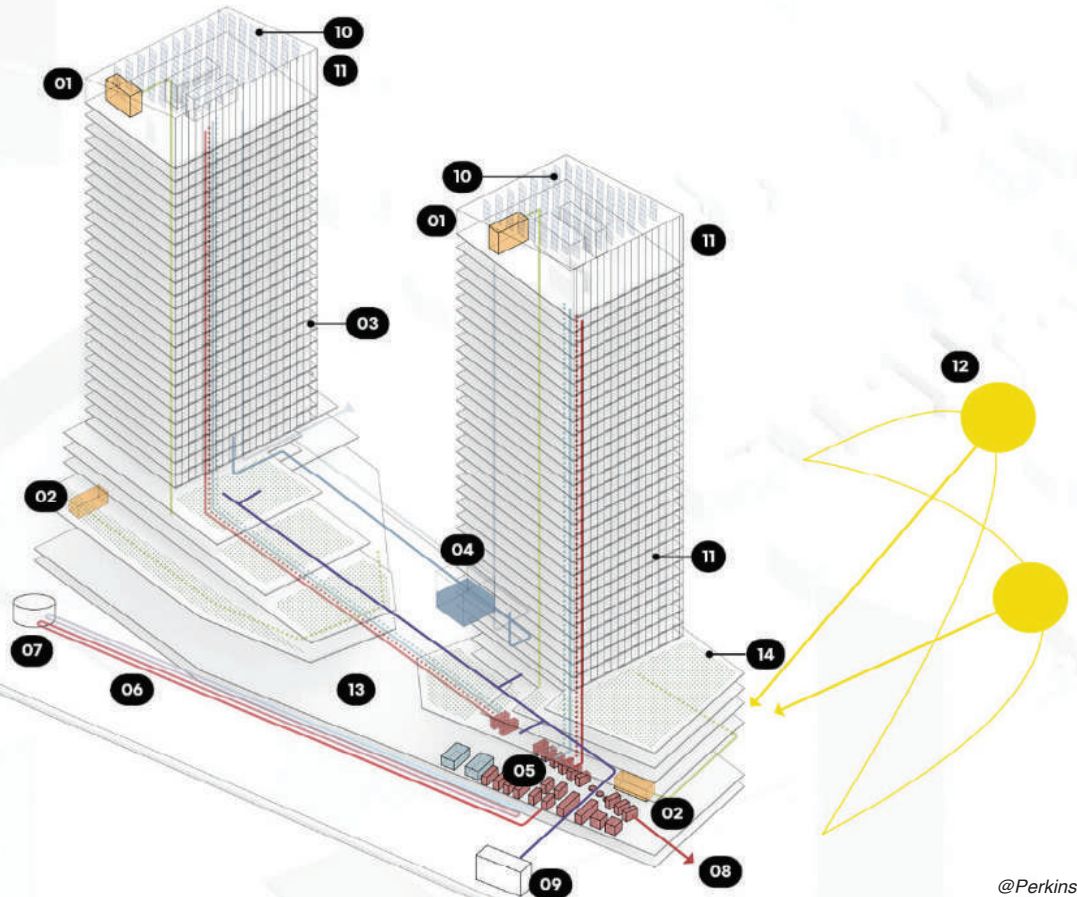
This "circular" approach offers several staggering benefits:

Massive Scale: The system will provide 9 megawatts of thermal capacity, enough to support approximately 2.4 million square feet of development.

Carbon Reduction: It is estimated to reduce greenhouse gas emissions by 5,066 tonnes annually—the equivalent of the electricity used by over 3,300 homes.

Fossil-Fuel Free: In a first for the nation's capital, the system operates entirely without the use of boilers or traditional chillers.

- 01 Corridor Make Up Air Unit
- 02 Ground Floor Make Up Air Unit
- 03 Incoming Potable Water
- 04 Rainwater Cistern and Filtration for Non-potable Re-use
- 05 Waste Water Energy Facility
- 06 Heat Exchange Loop Connected to Sewer
- 07 Wet Well at Sewer Heat Exchanger
- 08 Potential Future Connection to Supply ZIBI and LeBreton Flats
- 09 Emergency Generator
- 10 Rooftop Photovoltaics
- 11 Building Integrated Photovoltaics
- 12 Daylight Harvesting in Areas with Natural Light
- 13 High SRI Paving and Roofing
- 14 Native and drought tolerant plantings to reduce outdoor water use consumption and promote site biodiversity



While the energy technology is impressive, the project's social architecture is equally ambitious. Odenak is designed to be one of Canada's largest Zero Carbon Building residential projects, with a core focus on affordability:

Inclusionary Housing: 41% of the 600 units (247 units) are designated as affordable housing.

Diverse Support: Through a partnership with the Multifaith Housing Initiative (MHI), 133 units are specifically earmarked for Indigenous peoples, veterans, newcomers, and adults with cognitive disabilities.

Universal Design: Over 30% of the units and all amenity spaces are designed to be barrier-free and fully accessible.

The LeBreton Flats transformation represents a rare alignment where cutting-edge engineering meets a profound social conscience. By literally finding "hidden treasure" in the city's wastewater, Ottawa is proving that the path to a net-zero future doesn't have to be a choice between environmental stewardship and urban growth.

As the project moves toward its 2027 completion, it stands as a living laboratory for the "post-pandemic" city—one that is resilient, carbon-neutral, and, most importantly, accessible to everyone. In a world where urban infrastructure is often invisible and impersonal, the SEES technology and the Odenak development bring it to the forefront, reminding us that even our most basic municipal systems can be reimagined to protect the planet.



"We are honoured to contribute to such an innovative solution that not only pushes the boundaries of technology but also fosters a more sustainable future. This project reflects our commitment to advancing environmentally responsible practices and delivering the most advanced HVAC solutions."

Wael Khalaf, HTS Engineering and SHARC Energy's Ontario representative.

The SEES project is not just a one-off installation; it is a proof-of-concept for the rest of North America. The National Capital Commission (NCC) is already in talks to expand the network to other land parcels at LeBreton Flats.

The design of Odenak is a tribute to the Algonquin Anishinàbe people and the natural history of the Ottawa River site. The building's podium mirrors the escarpment of the Gatineau Hills, while the vibrant red cladding of the towers—designed in collaboration with artist Margaret Priest—evokes the autumn colours of the Laurentian Forest.

Odenak is more than a pair of towers; it is a promise kept to the community. By blending Indigenous values of stewardship with Canadian-made innovation, Ottawa isn't just building apartments—it is building a "village" that honours its past while securing its future. This is the new blueprint for the Canadian capital: a city that is warm, inclusive, and powered by the very resources we used to throw away.





With construction on the sewer infrastructure connection slated to begin later this year, and SHARC Energy set to deliver the system throughout 2026, Ottawa is positioning itself as a leader in the global shift toward smart, equitable, and carbon-neutral energy.



A central "gathering circle" between the towers provides a public social space, reinforcing the Indigenous principles of connectivity and stewardship.



Weaving Tradition into the Skyline: Toronto's New Indigenous Hub





A landmark development in the Canary District creates a precedent-setting ecosystem for healing, education, and reconciliation.

Integrating health services, housing, childcare, and employment training, the Hub stands as a blueprint for how architecture can foster reconciliation and build a future rooted in cultural pride.

Client:

- Anishnawbe Health Toronto (AHT)
- Dream
- Kilmer Group
- Tricon Residential

Location: Toronto, Ontario

Architects:

- Two Row Architect (Indigenous Design Lead)
- Stantec (Prime Consultant / Architect of Record)
- BDP Quadrangle (Master Planner, Residential, TEEC Interiors)
- ERA Architects (Heritage)
- NAK Design Strategies (Landscape)

Size: 440,000 sq. ft. (approx. 40,000 m²)

Construction: EllisDon

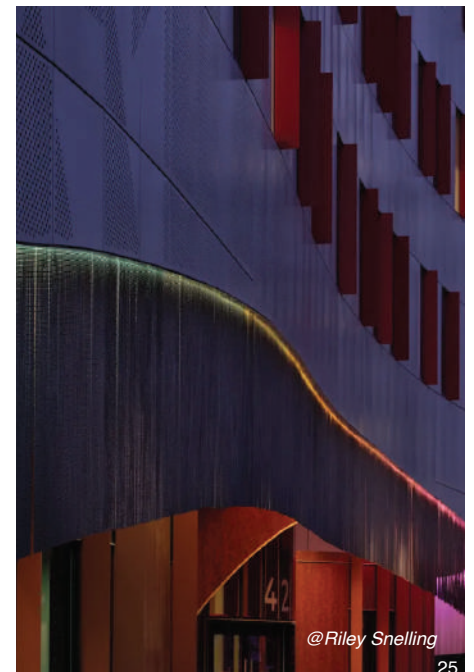


In the heart of Toronto's Canary District, a transformation is underway that is more than just construction; it is an act of restitution and cultural resurgence. The Indigenous Hub is a 440,000-square-foot mixed-use development that spans an entire city block. It is the first of its kind in Canada—a unified, culturally grounded campus designed to serve Toronto's Indigenous community of approximately 70,000 people.

The design process was guided by the principle of Two-Eyed Seeing: the integration of Indigenous ancestral knowledge and Western perspectives as complementary viewpoints. This collaboration brought together Indigenous and non-Indigenous design teams, including Two Row Architect, Stantec, BDP Quadrangle, and ERA Architects, to ensure that Indigenous knowledge systems and symbolism were embedded at every scale—from site planning to material expression.

"Our goal was to create a community of inclusiveness. This project is not symbolic, it is structural; not a gesture, but a grounded return. It is a space of healing, a platform for community-led growth and a new urban typology born of Indigenous values"

**Les Klein, Principal, Co-founder and Studio Head,
BDP Quadrangle**





@Riley Snelling

The centrepiece of the development is the new Anishnawbe Health Toronto Indigenous Community Health Centre (ICHC). The building's design is a direct translation of comfort and protection.

The Shawl Metaphor: The building's exterior curves and folds like a traditional Indigenous woven shawl, offering care to its users. The façade combines cast-in-place concrete and lightweight metal panels to create a soft, flowing aesthetic.

Connection to Light: The atrium opens to the east, aligning with the sunrise to reflect the spiritual importance of rebirth and renewal.

The Red Road: Inside, a prominent red staircase serves as a metaphor for "the red road," representing wise and spiritual choices in life.



@Riley Snelling



@Riley Snelling

Pebbles in the Stream: On the ground floor, key programs like the ceremonial space, traditional healer's room, and community kitchen are housed in standalone pavilions inspired by pebbles in the Don River delta.

The exterior features prefabricated panels that mimic the texture of birch bark, while the windows symbolize the various stages of a tree's life. The interior design ties each floor to natural elements—water, delta, earth, and sky—reflecting Indigenous teachings through custom finishes and symbolic motifs.

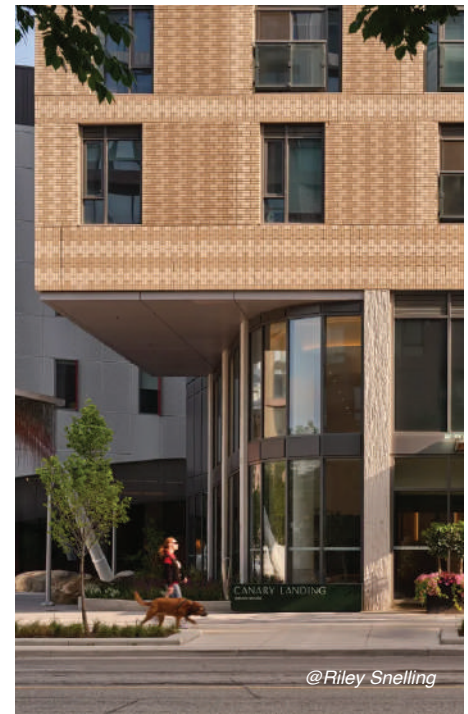
The Hub is a true mixed-use ecosystem, integrating two residential buildings: the 13-storey Canary House (condominiums) and the 11-storey Birch House (rentals). These buildings reinterpret traditional materials to honour the site's intent. Woven brickwork wraps the podium levels like a blanket or basket, while curved balcony rails evoke the clouds.

Tying the campus together is a thoughtful landscape strategy led by NAK Design Strategies:

The Indigenous Peoples Garden Patio: Elevated 6.5 meters above the street, this space includes medicinal gardens where sacred plants like sage and sweetgrass are cultivated.

The Plaza: A flexible hardscape featuring large granite pebbles arranged in a circle, referencing stones smoothed by water. The design ensures that specific ceremonial spaces connect directly to the earth, bypassing underground parking to maintain a spiritual link to the land.

The Indigenous Hub is more than a collection of buildings. It is a powerful statement of Indigenous self-determination and inclusive urbanism. By reclaiming a long-vacant site for healing, ceremony, and community, the Hub redefines how a city can build community from the land toward the future.



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