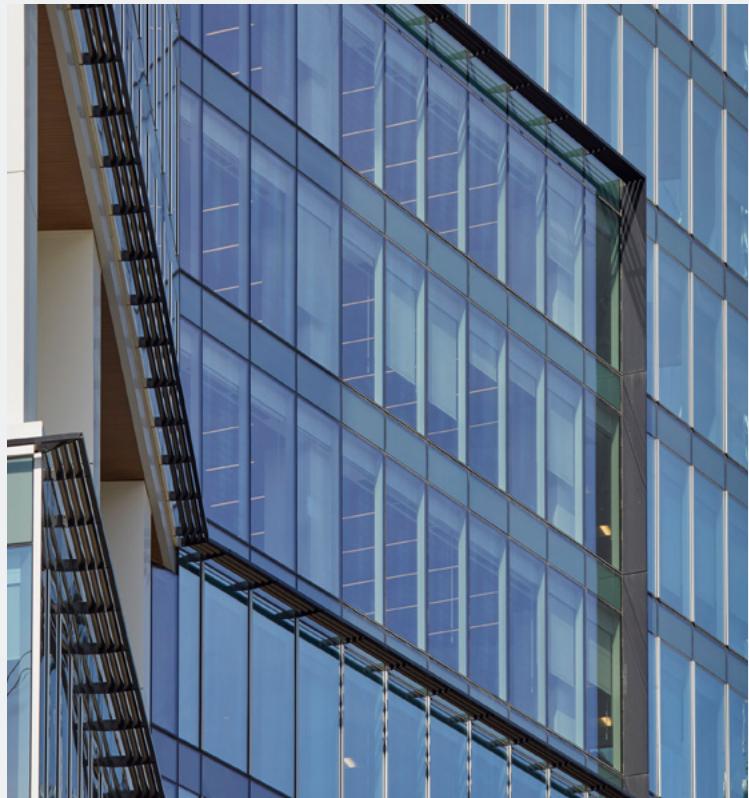
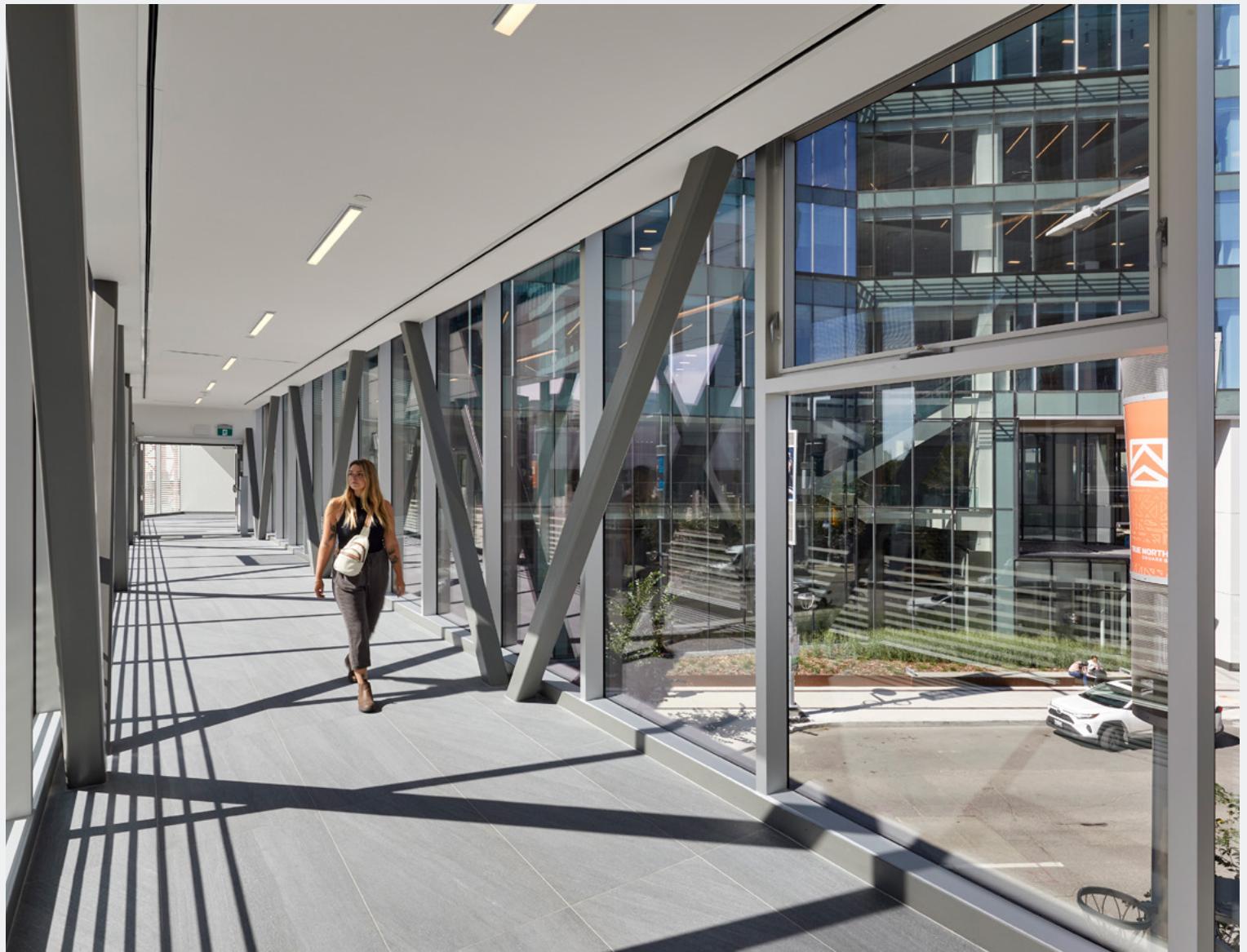


CASE STUDY

# WAWANESA MUTUAL INSURANCE COMPANY HEADQUARTERS WINNIPEG, MANITOBA, CANADA





The Wawanesa Mutual Insurance Company headquarters has become an integral part of the True North Square development in the heart of Winnipeg and features a variety of high-performing and customized Kawneer systems. The distinctive, 19-story headquarters' groundbreaking architectural solutions make the building a distinctive, central component of downtown Winnipeg in Manitoba. From the project's inception, Kawneer Collaborative worked closely with the glazing contractor, architects and general contractors to provide design assistance and specialized product knowledge, helping to bring the innovative project to life.

Inspired by the Souris River that runs through the Manitoba province, the Kawneer Collaborative team created a custom-built architectural 'fin' to flow along the building's exterior representing the meandering route of the river, capturing the water's essence and making a distinctive visual statement. The utilization of Kawneer's triple-glazed, unitized 2500 UT Unitwall® System and 1600UT System™1 Curtain Wall along with a custom fin allowed the Kawneer Collaborative team to actualize the architect's vision within the building owner's budget. The project prioritized sustainability and thermal performance, aiming for LEED Gold® certification.

Architect: Architecture49, Winnipeg, Manitoba  
General Contractor: PCL Construction, Winnipeg, Manitoba  
Glazing Contractor: Border Glass & Aluminum, Winnipeg, Manitoba

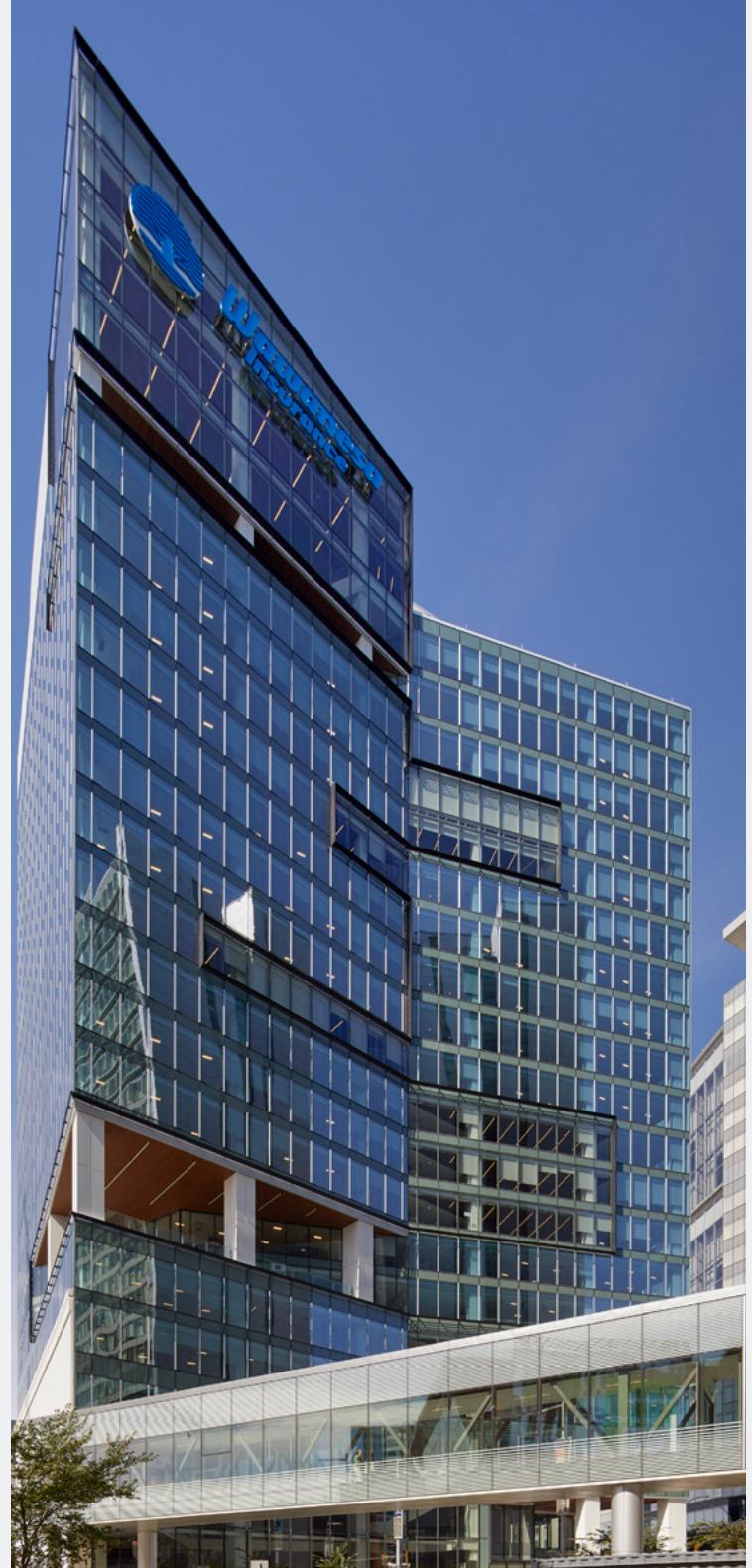
Photography: © Jason O'Rear

## COMMUNICATION, COOPERATION, COLLABORATION

The Kawneer Collaborative team began its participation with active listening and in-depth conversations around the project requirements through a series of organized and planned design sessions with the architect, building designers and contractors. The key to the project's success was getting the right people involved at every step.

Kawneer Collaborative created a personalized ACC (Autodesk Construction Cloud) site for the project and scheduled

weekly meetings with the architects at Architecture49 and the general contractor at PCL Construction to provide them with a highly detailed interactive view of the project. This facilitated collaboration across the multiple teams involved, helped detect potential system conflicts and ensured project deliverables would be completed on time and on budget. Further, Kawneer Collaborative's 3D team modeled the entire job through Autodesk Revit to share with all key stakeholders.



## CUSTOMIZED SYSTEMS TO DELIVER CREATIVE SOLUTIONS

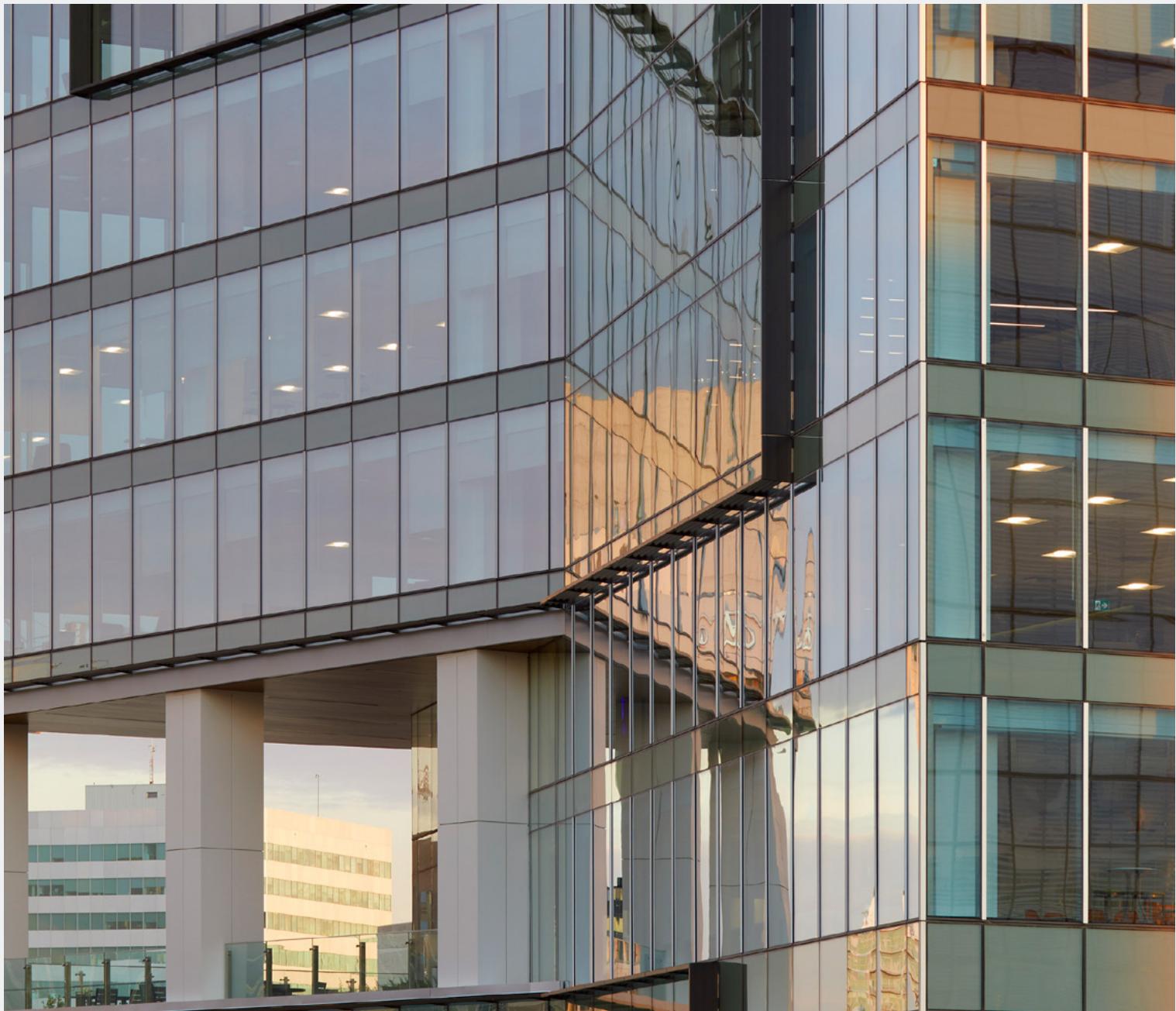
The river fin was a prominent design feature of the building. However, during the project's design assist phase, it was discovered that the initial design of the river fin attachment did not address the limitation of thermal transfer to the building's interior, which was a significant concern due to the building's geographical location.

The team needed a way to anchor the fin to the building without compromising the thermal integrity of the system. Through creative thinking, investigation and collaboration, Kawneer Collaborative created an inventive, resourceful solution to use customized stainless-steel sunshade brackets coated in plastics. The use of stainless-steel brackets to support the river fin was necessary to reduce thermal transfer using a metal that had a low thermal conductivity while being strong enough to handle the loads imposed on the river fin. Plastic shielding was added to help limit direct metal-to-metal contact, which reduced thermal transfer at the bracket attachment points.

The Kawneer Collaborative team then modified the fully vented 2500UT Unitwall® System to accept the fin to ensure snow passes through and that the fin does not fall, sag or break under snow loads.

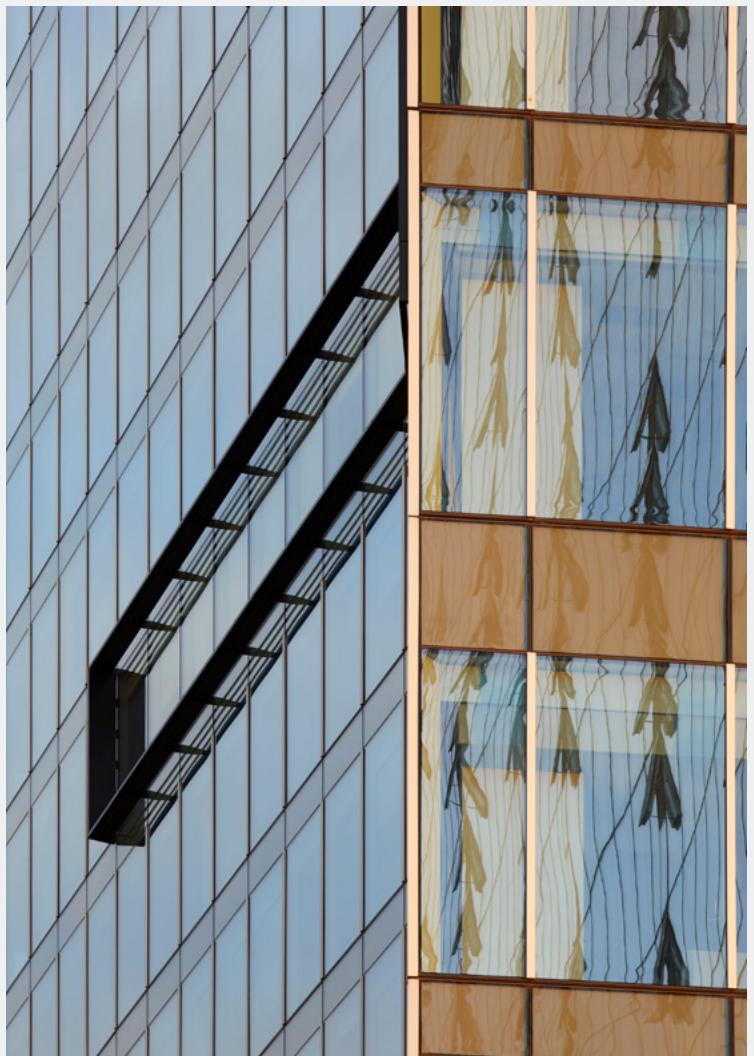
To accommodate the building's complex geometry, all corners of the 2500UT Unitwall® System were custom designed using dart snap corners, allowing for seamless integration across a variety of angles. Significant attention was also given to transition details to ensure aesthetic and functional continuity throughout the facade.

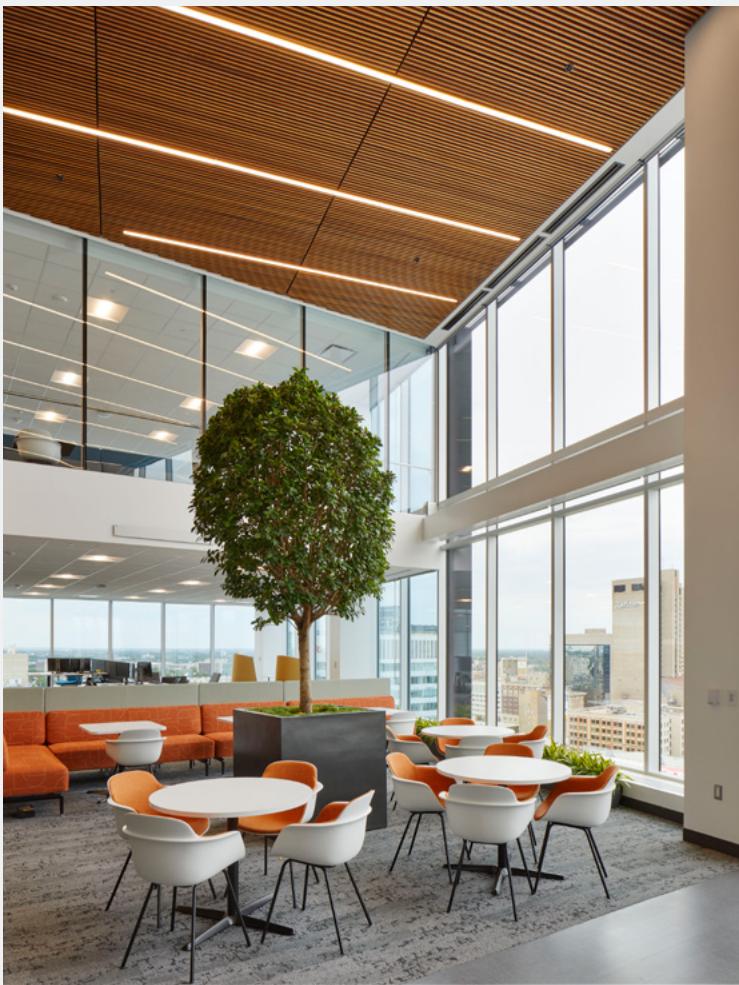
Once the design and modeling portion was approved, the team began working on the installation strategy. To maintain control and delivery of the project's vision, a significant portion of the facade was prefabricated off-site. Kawneer Collaborative ensured our curtain wall systems optimally coordinated with key functional building features, such as the plumbing and HVAC infrastructure.



## STATE-OF-THE-ART URBAN TRANSFORMATION

Advanced digital tools played a key role in the project's success. The Kawneer Collaborative team extended the capabilities of Revit beyond standard modelling to generate detailed takeoff data and unit counts. Autodesk Inventor was used to create comprehensive 3D fabrication models, which were directly translated into CNC-ready STEP files to help streamline the manufacturing process and enhance overall efficiency.





## CHALLENGES

- The interdisciplinary teams were based in multiple locations, which required clear, constant communication from the architect, general contractor, glazing contractor and the Kawneer Collaborative team.
- The architect's vision included a representation of the Souris River on the building's exterior.
- It was discovered during the project's design assist phase that the river fin's initial attachment design did not attempt to limit thermal transfer to the interior of the system.
- The building required high thermal performance to avoid issues such as condensation and frost.

## SOLUTIONS

- The Kawneer Collaborative team utilized ACC (Autodesk Construction Cloud) to create specific installation instructions and provide necessary information for the unique aspects of the project, from 3D modeling to assembly instructions, for complete, step-by-step guidelines on how to bring the project from ideation to completion. To maintain strong communication throughout the project, weekly meetings with Architecture49 and PCL Construction were coordinated using ACC.
- A bespoke fin was designed and constructed to run along the building's exterior to represent the route of the Souris River, realizing the architect's vision of a unique statement on the facade that does not compromise performance.
- The Kawneer Collaborative team utilized stainless-steel brackets to support the river fin and reduce thermal transfer. Using a metal that had a low thermal conductivity while being strong enough to handle the loads imposed on the river fin was necessary, along with plastic shielding to help limit direct metal-to-metal contact, which reduced thermal transfer at the bracket attachment points.
- High thermal performing solutions were used to help avoid condensation and frost on the building, including the use of stainless-steel brackets to support the river fin as well as a modified version of Kawneer's 2500UT Unitwall® System.

## PRODUCTS USED

- 2500UT Unitwall® System
- 1600UT System™1 Curtain Wall
- Custom River Fin Attachment

To discuss your next project and discover the unlimited possibilities with Kawneer Collaborative, visit: [kawneer.us/collaborative](http://kawneer.us/collaborative)



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