

» **GOLD** PRESIDENT'S TRADE AWARD  
Keith Panel Systems — Millennium Water Olympic Village Parcel 4

# Technically Demanding

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IMAGINE A GIANT DECK OF CARDS spiralling skyward, frozen in time and space as a luxury condo development. How would you create a functional skin for that building? Since each floor plate — or “card” — would be slightly offset from those above, how would you interface between the floor plates and the walls? This was the challenge facing architects Arthur Erickson and Nick Milkovich on Parcel 4 of the Millennium Water development.

Enter Keith Panel Systems (KPS), the exterior metal panel system trade contractor. “We were involved from the beginning in a design assist role because we had the [building envelope] expertise,” says Garry Wong, the senior operations manager.

The solution: 7,000 custom-fabricated Alucobond panels in KPS System A-Plus. “Each [panel] was designed in CAD and site-verified prior to fabrication,” he explains.

Involved in the design process as early as the summer of 2006, KPS reduced costs by simplifying the design. A five-piece approach to the fascia between windows became “three pieces without affecting the design intent.”

KPS also addressed insulation issues at the design stage. Irregularly shaped steel projections on every slab had to be covered with head and sill panels, and insulated without disrupting the continuity of the insulation. To achieve the required R-value, the fascias contain five inches of semi-rigid mineral wool

and the projecting steel was wrapped with a nominal two inches of the insulation.

Given the depth and texture of most of the building’s exterior, one wall on the south elevation stood out. It was the only flat wall on the structure. To create an illusion of depth, “we made a custom adaptation of the system, creating wedge-shaped panels, like fish scales... the same design method that was used for the fascia panels,” says Wong.

The extensive planning helped the actual construction run smoothly. In November 2008, work began on KPS’s biggest project ever. Wong credits Doug Dalzell, the general manager, with overseeing the entire project from design to completion. Project manager Craig Cocker and field superintendent Grant Detta kept communication lines open and addressed issues quickly.

All frames and connecting mechanisms were cut and assembled in the controlled environment of the KPS facility in North Vancouver.

“We don’t do any cutting or modifying of panels on site,” says Wong, who was responsible for ensuring labour and materials were in place. “That could compromise performance.”

With two and sometimes three shifts running per day locally, KPS “could measure in the morning and provide [panels] in the afternoon,” says Wong.

He takes tremendous satisfaction in how KPS completed, in October 2009, such a technically

demanding project during the busiest time in the contractor’s history. Amid a severe labour shortage in the industry, KPS completed this and several other large projects — including Parcels 2, 3 and 6 of Millennium, the Coast Hotel, Fairmont Hotel, UBC Wesbrook, Espana, Concord 1K, YMCA and Northgate Mall — on time.

However, business development manager Carlo Gatti is quick to point out, “We weren’t irresponsible in taking on more work than we could handle.”

Wong agrees that KPS looked after its key customers, including ITC Construction Group, the general contractor for Millennium. “They had a lot riding on it and we wanted it to look good on them.”

Adds Wong, “We were able to meet all the keys to success: coming in under our original budget, solving the technical challenges while maintaining the design intent, and completing two weeks ahead of schedule.”

While pleased to receive the VRCA Trade Contractor President’s Award for Millennium Water (Olympic Village Parcel 4), Gatti notes that the legacy of KPS is what matters. “The real test is the performance of a building in the long term.”

“We’ve never had a project fail,” adds Wong. “We take [our responsibility] seriously. Our reputation is at stake.”

Not surprisingly, that reputation is highly respected.