

PIONEERING BUSINESS PARK

The final phases will complete the build out of Burnaby's Willingdon Business Park. By Cheryl Mah

Opened in 1985, Willingdon Business Park is a premier business complex located in a beautifully landscaped setting in Burnaby. Largely occupied with a mix of office and high-tech uses, the park is comprised of seven existing buildings totalling more than 765,000 square feet of space. The final phases 8 & 9, currently under construction, will add another 185,000 sq. ft. of office space to complete the build out of the business park. Each phase totals 92,500 sq. ft. on four floors. Surface and one level of underground secured parking will provide a combined 485 parking stalls.

Construction manager Stuart Olson broke ground on the twin reinforced concrete buildings in the summer of 2008. As of the end of January, project manager Geoff Watson reports that construction is 84 per cent complete with the project on schedule to culminate at the end of April.

"The east building is completely enclosed with crews working on the interior finishes. The west building is lagging by about three weeks," he says. "Depending on the weather, we'll be focusing on landscaping and exterior paving going into March."





Involvement in the early stages of the design phase, Stuart Olson helped to achieve cost efficiency and certainty for the \$52 million project.

“From the very beginning to today, the Willingdon Park development has been about a team effort and an intense commitment from everyone involved towards excellence,” says John Scott, lead architect and a partner at CEI Architecture. “The integrated design approach is at the root of its overall success and longevity.”

Designed by CEI Architecture, the 28 acre development has been a long standing project for the firm. Bought on board in the early 1980s, the firm helped master plan the park

with schematic building designs for each of the sites.

“It’s been a 25 year legacy for us,” says Scott. “With this final phase, we wanted to stay and hold true to the original concept plan. The buildings are quite similar in many respects in its basic form (to the others) but many of the treatments, details, geometry of the building and finishes were changed at the request of the owners.”

According to Scott, the design result is “diametrically opposed pair of mirror imaged buildings” set on a central axis (with one to the left and one to the right) with a formal pedestrian plaza in the middle.

“They really are like book ends with unique architectural expression and these tall spire lights,” he says. “We’ve taken an extremely responsive approach architecturally to the form of the building in relation to the site and exposure. Each building is appropriate to its site by virtue of its shape.”

Construction of the project has gone fairly smoothly with the biggest challenges all in the ground. The site, although well known for its difficult soil conditions, threw the team a curveball during the initial excavation stages.

“The biggest challenge on this site was getting it out of the ground,” says Watson. “The water levels there come extremely high during rain

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events so we actually saw two floods through the excavation last winter. At one point, our site was under up to six feet of water.”

Another challenge arose when it came time to do the piling. Unpredictable soil conditions required significant modifications to the piling system.

“We ended up having to completely modify the piling system for over half of the site, which accounted for in excess of 500 piles,” recalls Watson. “Each pile had to be individually pre-augered before the pile could be driven.”

Once the project was out of the ground, the team was able to gain back more than two weeks of the loss time from the ground issues.

The site’s proximity to Still Creek and the environmental sensitivity of the area also required careful monitoring. To minimize the environmental impact of the work being done, a bio pond was constructed.

“The bio pond helps to contain some of the stormwater runoff created by the new development and allows it to filter more gradually back into the stream system,” says Watson. “It will be landscaped back to support the ecosystem of the creek.”

Environmental mitigation was important for this last phase as it has been throughout the development.

“With every development adjacent to the creek, we’ve had to leave very large setbacks to satisfy all the provincial and federal environmental requirements,” notes Scott. “In order to accommodate the underground parking, we had to relocate (re-culvert) Sumner Creek and had to do it in an environmentally appropriate window. Another challenge was managing the berm and planting adjacent to the highway.”

Targeting a LEED Gold certification, the project incorporates a number of sustainable initiatives. Features include a high efficient glazed curtain-wall, energy efficient mechanical system, and LED lighting with a target of achieving more than 20 per cent reduction in energy consumption. Water conservation measures include dual flush water closets, low flow urinals, showers and lavatories. Use of potable water is expected to be reduced by more than 40 per cent.

“The building also uses solar hot water panels,” adds Scott. “Interior daylighting is maximized with 75 per cent of spaces with access to daylight and 90 per cent have views to the outdoors.”

The building’s main structural system uses a high fly ash concrete mix. Nearly 100 per cent of the concrete used for the project was Agilia.

Approximately 20,000 cubic metres of concrete was poured for this project which went well according to Watson, “due to the extensive sequencing and preplanning done by our site personnel.”

“As well we had our steel supplied through Heritage Steel. They sourced a lot of steel (5,000,000 lbs) out of Seattle where as much as 98 per cent came from post industrial waste,” he says.

Through their construction waste management efforts, Watson reports they are successfully achieving more than 80 per cent diversion from landfill.

“We’re looking to target a minimum 10 per cent on both recycled and regional materials and it’s looking like 20 per cent may be achievable,” he says. “We’re also using FSC certified wood.”

A first in Burnaby is the use of innovative piping for the potable water system. Aquatherm is an environmentally-friendly piping system that is designed for maximum efficiency.

Another unique design feature is the “light spires” created with the use of Insight Illusions technology. Located on the plaza elevation for each building the 60 foot spires provide a strong architectural statement and act as a visually pleasing marker for the business park.

“The spires are a structural steel framework clad in a combination of architectural precast panels and composite metal panels,” describes Watson. “Inserted into a u-shaped channel is this light pipe. They’re quite a unique feature to the building. There are also shorter ones about 30 feet at the front as well.”

Existing and planned amenities include retail, food services, meeting and conference facilities, a fitness centre with lockers and showers and secure bicycle storage. The “Willingdon Mile” is a natural soft-surface one mile jogging trail surrounding the entire property.

“The owners were looking to have signature buildings for closing out the final development and I think they’ve done that,” says Watson. “It’s an exceptional building with a clean architectural design and sustainable features that address the comfort and health of the occupants.” **CB**




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