



Constructing a community *Capital Park now complete*

By Melanie Franner

Looking at Capital Park today, one would be hard pressed to remember how it used to look: a parking lot, several low-rises, and 50-year-old office blocks. These days, Capital Park stands as a testament to the ability to transform and rejuvenate a neighbourhood. The new development, which complements the historic Victoria James Bay area and nearby Legislature, is now a mixed-use, “master-planned community” that delivers to all Victorians alike.

The big picture

The new pedestrian-only community offers a variety of courtyards and pathways to provide easy access to various amenities. Joint venture partners Jawl Properties and Concert Properties spearheaded the drive to build over 235,000 square feet of office space, 155,000 square feet of residential space (rental and condominium), and over 20,000 square feet of street-front retail space. Construction on the \$250 million multi-phase development began in 2015.

Capital Park comprises two office buildings at five storeys, with commercial space at street level, a mixed-use residential

building along Menzies Street, and three dedicated residential buildings (including seven townhomes) fronting Michigan Street, known as Capital Park Residence. Additionally, three heritage homes were fully restored and renovated during the revitalization and have been relocated and transformed into 13 residential suites.

A large amount of green space in the form of community gardens, rooftop terraces, and pedestrian greenways further complements the neighbourhood. At the same time, additional amenities such as the Victoria Public Library branch, Red Barn Market, and Good Earth Coffeehouse can be found in a stand-alone, purpose-built building.

“This is a very significant project for Victoria,” says Clint Plett, Associate, Structural Engineering, RJC Engineers (RJC). “Not many of these large sites are left in Victoria for a single project. Adding a mixed-use component with significant residential density to an office development meant it had to be well-planned and executed.”

RJC was the structural engineer of record for all project phases, including base-building structural design, retrofitting and

relocating the heritage buildings, design of all structural steel components such as mechanical penthouse and canopies, landscape design services, water features, and suspended radiant ceiling support. Additionally, RJC assisted with numerous tenant improvements in the commercial spaces.

Although the multi-phased approach posed some difficulties in sequencing, it also unearthed some exciting challenges.

“All the buildings were concrete construction, with a one-level connected parkade under all of this massive site,” says Plett. “But the foundation proved to be a mix of elements. You had rock, clay, and even a bit of till in certain areas of the site, which all required a different foundation system. That added some time and challenges. Secondly, the diverse bearing conditions meant that the buildings had different seismic risks. All of this needed to be taken into account.”

The result is a variety of foundation systems that include deep-drilled rock socketed caissons, rock-bearing caissons or pad footings, trenched bar foundations, large pad foundations, and some significant raft slabs.



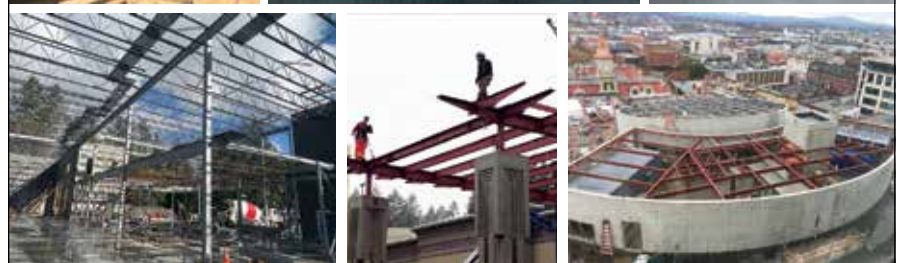
“The variation of bearing conditions meant we needed flexibility in foundation system to incorporate into our design,” says Plett. He adds that RJC worked closely during all phases with its geotechnical engineer, Ryzuk Geotechnical Engineers, and the project’s construction manager and contractor Campbell Construction Ltd. “This collaboration proved essential to our success, as we were collectively able to make decisions considering construction time and cost as a team.”

Other issues for the RJC structural engineering team included the need to design a large cistern for water retention, accommodating the higher loads produced by having multiple green roofs, significant landscape loads and water features over the parkade, and the consideration for the future installation of solar panels.

Solar power was proposed as a future addition during the project’s design phase. The solar panel installation was completed in late 2022 atop the two office towers. The 251-panel system is anticipated to generate 114,000-kilowatt hours of electricity per year.

Wrapping it up

The RJC Building Enclosure Engineering team was also involved in the Capital Park project, responsible for determining the best choices for the building and parkade shell, cladding systems, fenestration, and roofing systems as they relate to the buildings construction and ongoing operational, maintenance, and repair functions.



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“A designer put a superior concept on paper; we made it a reality. In particular, the waterfall feature along the retail pavilion required significant coordination during construction, as the cascading waterfall was assembled along the sloped exterior wall of the pavilion. Once in operation, it was quite dramatic to see the water rippling down the stepped basalt stone.”

The project also needed to focus on sustainability throughout the design and building process. “This was a LEED-Platinum/Gold certified project, so it required a lot of consideration for durable envelope assemblies that complied with LEED requirements and checklists,” says Hasham.

New purpose

In the end, RJC hit the mark in all engineering disciplines, and Capital Park is now open for business – to residents, workers, and visitors alike.

“A project of this size needs a developer with an attitude that encourages communication and collaboration among the entire team,” says Plett. “Fortunately, Jawl and Concert had that. They were crucial to this project’s success.”

The multi-phase, multi-year project required a lot of resources, experience, and expertise from all segments of the construction industry. The result is a new city block for the thriving James Bay community. ■

“We worked very closely with the architect and owner to determine the best materials and sequencing of the assemblies to optimize the performance of the buildings,” says Sameer Hasham, Project Engineer, RJC.

Determining the best choice of materials and products is not a simple task and requires an experienced team to establish how and where those materials should be

used, along with how to best sequence and connect them.

“The various water features and terraced green spaces around the site proved to be an interesting element on this project,” says Hasham. “We collaborated with the architect and owner during the design and construction phase to determine how to best deliver the desired aesthetics while ensuring the structure was well protected.



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