

# Member's Spotlight: RJC Engineers

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Just under 40 RJC employees are also Passive House Canada members

This month, we spotlight a group of [RJC Engineers](#) employees and Passive House Canada members who are passionately committed to high performance buildings.

- Terry Bergen, Managing Principal: 27 + years with RJC, Passive House Canada member for 5 years
- Tiffany Sun Dela Cruz, Project Engineer: 4.5 years with RJC; PHC member for 4 months
- Brandon Gemme, Project Engineer: 4 years with RJC; received CPHD designation in April 2021

- Sameer Hasham, Project Engineer: 12+ years with RJC, PHC member for 3 years
- Leslie Peer, Principal: 24 years with RJC; PHC member since 2017
- Maddie Reid, Project Engineer: 5 years with RJC; PHC member for 2 years
- Duncan Rowe, Principal: 15 years with RJC; PHC member since 2018

## What makes RJC a unique firm?

*Maddie:* A very unique thing that I've noticed about the culture at RJC is that there's a celebrated entrepreneurial mindset – if you can dream it, you can do it. It sounds cheesy but it allows RJC to offer solutions to challenges that clients wouldn't know where else to go to solve. As the PH standard is adopted across Canada, especially in colder climate zones, we will be able to keep up with all the new and unique challenges that are sure to arise.

*Samir:* We have a vast technical experience and expertise with all facets of buildings be it from new construction to existing buildings, or single family homes to large institutional buildings. Our technical teams on structural, building science and building performance work in harmony to deliver high performance buildings

*Terry:* Our building science/enclosure and structural practices are ideally aligned with Passive House principles. High performance enclosures with negligible thermal bridging are our DNA. When considering the overwhelming importance of the embodied carbon footprint of a high performance building, our expertise in designing efficient structures is the foundation of a holistic approach to low kW·h/yr + kg CO<sub>2</sub>/m<sup>2</sup> buildings.

## In this age of climate change, simpler solutions will be easier and faster to roll out than more complicated ones.

*Duncan:* I think RJC has a unique blend of approach, people, and business practices that let us really help our clients deliver some truly innovative work.

*Brandon:* RJC's dedication to excellence and practical solutions makes it stand out from other firms. The level of knowledge held by the building enclosure, restoration, and structural engineering professionals across the country has been an indispensable resource in my own professional development.

## What drew you to Passive House?

*Maddie:* It's simplicity – in this age of climate change, simpler solutions will be easier and faster to roll out than more complicated ones. PH brings us back to some of the most basic and ancient building design concepts which we've gotten away from over time.

*Leslie:* Mandatory efficiency, clear design methods, proven results

*Tiffany:* The performance-based energy standards and the growing need to have more sustainable buildings.

*Brandon:* The reason I became an engineer was to help create infrastructure that would improve people's lives and standard of living. Passive House design accomplishes this by reducing our environmental impact and improving the health and comfort of building occupants.

*Duncan:* The part I enjoy about Passive House is the freedom to do a great design focusing on a fantastic building envelope. The system stresses the importance of creating a very good exterior envelope to better control and manage the mechanical loads on the building. The best part is there exists a great deal of choice and opportunities for creative designs and building retrofits. Another feature I love is the ability to do EnerPHit retrofits in a step-wise manner allowing building owners to steadily work towards a better building while respecting their budget constraints and minimizing impacts on the building users.

### **Favourite Passive House project?**

*Leslie:* Saskatchewan Energy House 1977. Imagine where we would be today if we had put that innovation into practise 40 years ago.

*Duncan:* One I am excited about now is a new retrofit we have planned in Toronto. We are using pre-fabricated panels to completed overclad an existing 2 storey complex while keeping all the tenants inside. One of the great features of the design is that the interior work will only involve removing and replacing the window while in actuality the whole exterior is being upgraded to reach EnerPHit standards. This is a great showcase of how we can adapt existing techniques to really accelerate retrofit development across Canada and we are hoping this approach will turn out to be widely adopted so we can improve more buildings faster and economically.

*Brandon:* One of my favorite projects would have to be the Ken Soble Tower retrofit in Hamilton, Ontario. Not only was this the largest EnerPHit-certified MURB at the time of certification, but this high rise tower is a great case study and proof of concept for the many tower retrofits that need to occur in downtown Toronto.

*Terry:* The North Park Passive House in Victoria BC (alas, not an RJC project) because it opened a lot of people's eyes to the cost-effective MURB potential of Passive House. Highlighting an RJC project... Firehall 17 in Vancouver because it further demonstrated that Passive House principles can be applied across all types of public sector and service buildings.

*Sameer:* 1400 Alberni Street in Vancouver is one that I'm intrigued with as it shows there are no limits to building high performance buildings on a large scale.

*Tiffany:* 575 Danforth Avenue (still in design phase) is an existing Toronto Community Housing Corporation building targeting EnerPHit certification, making the building more sustainable while still providing affordable housing.

*Maddie:* Any social housing project that chooses to adopt the PH standard is special in my mind. Depending on where you live, it can be expensive or impossible to draw "clean energy." Reducing or maybe even eliminating the cost for heating and cooling will have a huge impact on the residents' monthly bills as well as their carbon footprints and those are two big wins for anyone. I'm currently working as the BE Consultant on a social housing project which is targeting the PH standard in Vancouver and am super proud to be working on this type of project – it's actually in my neighbourhood, which makes it even more awesome to be a part of.