

## Meeting Notes

### Building Research Council (BRC)

Wednesday November 7, 2018 8:30 a.m. to 12:00 p.m.

#### The Italian Cultural Centre Society

3075 Slocan Street

Vancouver, BC

#### In Attendance:

Denisa Ionescu, BC Housing (Chair)  
Albert Lam, Brantwood Consulting  
Amy Fernandes, Engineers and Geoscientists BC  
Andrew Pape-Salmon, Building and Safety Standards Branch  
Andy Chase, Building and Safety Standards Branch  
Antje Wahl, Forestry Innovation Investment  
Bob Sloat, Surety Association of Canada  
Brian Maher, Dryvit  
David Bruce, Pacific Energy Innovation Association  
Douglas Bennion, ICFMA  
Elizabeth Tang, CMHC  
Farshid Borjian, Canadian Masonry Contractors Associations  
Fred Tai, Simpson Strong  
Hamid Ghanbari, EduBuild Solutions  
James Higgins, RDH Building Science

Jason Teetaert, SMT Research  
Jieying Wang, FP Innovations  
Krista De Groot, Canadian Wildlife Service  
Laurence Matzek, RCABC  
Lorne Ricketts, RDH Building Science  
Mark Lawton, Morrison Hershfield  
Michael Lemm, Busque Engineering  
Nicole Brackett, Sense Engineering  
Omid Tamanna, BCIT  
Patrick Roppel, Morrison Hershfield  
Richard Kadulski, Richard Kadulski Architect  
Robert Marshall, CertainTeed Saint-Gobain  
Tim Cameron, Dryvit Systems Canada  
Cindy Moran, BC Housing (recording)  
Malamarie Sinha, BC Housing

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#### 1. Approval of Agenda/Additional Items

The meeting was called to order at 8:30 a.m. D. Ionescu welcomed everyone to the meeting on behalf of the BRC followed by a roundtable introduction. The meeting agenda was approved.

#### 2. Approval of April 18, 2018 Meeting Minutes

The minutes from the April 18, 2018 BRC meeting were approved.

#### 3. Bird Friendly Solutions for Glass

Krista De Groot presented on glass structures and the hazards their reflective properties pose to birds. A recent study estimates 42 million birds perish each year, due to collisions with glass structures in Canada alone. This presentation encouraged bird friendly designs, that took bird safety into consideration starting at preconstruction, and provided solutions to mitigate the threat post construction.

- Jason Teetaert asked if structures with glass at different elevations have an effect, and if visual markers are required throughout the whole height of the building.

- Krista De Groot responded that while buildings with glass at different elevations have an impact, visual markers are still required, but should be prioritized to cover up to the maximum height of surrounding trees. The only caveat to keep in mind is the potential growth of surrounding trees.
- An attendee asked if vertical solar panels will become an issue.
- Krista De Groot replied they would and that bird safety should be taken into consideration when installing them.

#### **4. National Housing Strategy Innovation and Research Program**

Elizabeth Tang presented on the National Housing Strategy, which has been designed as a toolkit to bring the public, private and non-profit sector, together to address challenges across the housing continuum. The toolkit includes a 10-year investment that will provide funding, grants and loans to qualifying recipients, to conduct research for the development of new housing, modernizing resources for housing providers and highlight best practises. Research should focus on resolving obstacles affecting those in greatest need and applicants are encouraged to use this platform to showcase innovative technology, best practices, and propose new polices and strategies, which support the improvement of current initiatives and performance.

#### **5. BCBEC Foundation – Research Funding Opportunities**

Nicole Brackett provided a brief outline of BCBEC and its objectives, as well as an update on available funds. With a current surplus in funding, BCBEC is seeking additional scholarship opportunities and input on how to allocate future research funds.

- Mark Walters suggested the creation of a core house of student lead projects.
- Jason Teetaert suggested returning to BCBEC roots when potential research topics were selected by committee, to work in collaborations with students.
- Andrew Pape-Salmon mentioned university grants and scholarship programs award a total of \$7,500.00 in private funding to graduate students, which is matched by BCBEC.
- CMHC offered to help distribute information on scholarship opportunities.

#### **6. R30+ Roofs Guide**

James Higgins provided an overview of the upcoming R30 Roofs Guide, developed in collaboration with BC Housing and RDH. The guide includes R-value calculations, effective R-value of tapered insulation, vaulted and flat roof assemblies, spray foam insulation and roof decks. James also made quick reference to the R22 guide which includes non-combustible buildings and combustible buildings requiring engineers.

- Douglas Bennion mentioned the R22 guide has been well received, and appreciates it includes concrete considerations, however, he is concerned that concrete assemblies were not included in the R30 guide.
- James Higgins replied R30 guide was developed with the most common assemblies in mind and will be updated to include new assemblies as feedback is received. Additionally, there are too many assemblies beyond wood frame to include in the guide.
- Richard Kadulski requested clarification on whether the guide focused on Part 9 or Part 3
- James Higgins responded, the guide focused on Part 9 construction, however it also includes some considerations for Part 3 construction.

- Patrick Roppel mentioned this guide is intended to be prescriptive path and provides simple solutions to achieving guidelines.
- Nicole Brackett asked how the suggested assemblies perform in the event of a leak, and if considerations for durability were included.
- James Higgins responded, that airtightness is based around durability.
- Lorne Ricketts, responded durability, key points and considerations are included for each insulation type.
- Jieying Wang, asked if the guide includes recommendations for retrofits.
- James Higgins clarified the guide only focused on new construction.
- Lorne Ricketts mentioned the guide tries to be equitable with considerations, to insure developers and builders do not believe recommendations are requirements, instead it provides key considerations.

## **7. Cladding Design/Cladding Attachments**

Patrick Roppel presented on the market shift to exterior insulation and intermittent attachment systems. With cladding designs being more complicated, there is an increased need to objectively evaluate intermittent cladding attachments. Increased awareness of thermal performance has lead various parties to conduct research, however not all the results are equally presented making the recommendations harder to compare. The need for more industry education on the effects of cladding selection, thermal performance, options for insulation and thickness, as well as, constructability are highlighted; and questions how to properly assess the effectiveness during the design phase.

## **8. Forum Discussion:**

- Patrick Roppel provided an update on a prototype Building Energy Performance map; the online tool will facilitate exploring all structural and thermal combinations available.
- Denisa Ionescu, opened the forum discussion with a review of upcoming research and welcomed attendees to share any projects or research they were working on or could suggest for future research projects.
- The following research projects were suggested by attendees: projects related to effective fasteners, gas and effective insulation, protective roof materials in-particular those for green roofs, architectural building acoustics, steel room vaults and performance, adaptive building envelopes and a review on energy producing glass.
- An attendee suggested research on how the industry should be measuring good performance and identifying options that would allow each layer to perform an additional purpose. Also, research innovation in other sectors that help reduce the cost of building and increase the potential for more affordable housing. They mentioned the need to achieve affordability through efficiency and rationalize solutions to help Canada become a leader in the construction industry.
- An attendee suggested producing a market scan to evaluate what is happening around the globe, and to research solutions to build more quickly, to build more affordably and asses if and what changes can be implemented in B.C.

- An attendee mentioned, the building industry in B.C. is evolving, and that currently a portion of a building's efficiency is lost because of how we build. In Europe, construction costs and time are decrease using prefab construction.
- An attendee suggested researching the possibility of having pre-approved assemblies, as the go-to for a quick and efficient option to speed-up permit process, although this may not be feasible. Also mentioned was the need to evaluate where the industry is headed in the next ten years. How are we going to prepare? How will trades be trained? Do we have all the required trades?

**9. Next BRC Meeting:**

Meeting Scheduled for April 9, 2019