

WESLEY TURNEY, P.Eng., Principal

BUILDING ENVELOPE/ ENCLOSURE

CONTACT

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EDUCATION

Bachelor of Applied Science,
Honours Chemical Engineering
University of Waterloo
2007

ASSOCIATIONS

- Members Association of Professional Engineers and Geoscientists of Alberta (APEGA)
- Members Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS)
- Engineers & Geoscientists of British Columbia (EGBC)
- National Roofing Contractors Association (NRCA)
- Alberta Building Envelope Council
- International Institute of Building Enclosure Consultants (IIBEC)
- Canadian Green Building Council (CaGBC)

PROFILE

Practicing engineering in western Canada for 12 years, and currently specializing in building envelope design, evaluation and commissioning of envelope systems. Expertise includes flat roofing systems, building assembly thermal performance, whole building energy modelling, cladding systems, and air and vapour transport control systems and the cumulative effect in increasing a buildings performance levels. Experienced investigator, capable of successfully identifying failure mechanisms related to the building envelope system and capable of providing repair design.

RELEVANT PROFESSIONAL EXPERIENCE

Client: Insurance Adjuster

Project Type: Single-Family Residential Sloped Roofing Assembly Failure

Project Summary: Performed an investigation of a sloped roofing assembly to determine the source of water leaking into the home. It was determined that the leak was caused by interior air leaking into the attic space and condensing on roof deck sheathing. This incident occurred in the winter months during a period of warming. Upon determination of the failure mechanism, recommendations for repair were provided.

- Inspected the installed roofing materials and reviewed technical data for the installed products.
- Inspected the attic space, identifying the ventilation strategy and the symptoms of the condensation issue.
- Written report detailing investigation summary and conclusions.

Client: Insurance Adjuster

Project Type: Low-Rise Commercial Cladding System Failure

Project Summary: Performed wall assembly investigation throughout a three-story wood-framed hotel that was suffering from rot. The investigations determined the scope of the damage and root cause.

- Performed inspections of multiple rooms in the hotel.
- Utilized moisture detecting equipment to identify affected wall assemblies as well as visual inspections of the wall cavity where drywall was removed.
- Inspected the building's exterior cladding system to determine whether cladding system performance was an issue.
- Written report detailing investigation summary and conclusions.

RELEVANT PROFESSIONAL EXPERIENCE

Client: Condominium Board

Project Type: Multi-Family Residential Building Condition Assessment & Repairs

Project Summary: Parkade leaks, seasonal building movement, window leaks, brick cladding cracking and delamination, stucco cracking, and deck membrane leaks. A building condition assessment was performed, failure mechanisms identified, and repairs implemented.

- Coordinated geotechnical and structural engineering efforts.
- Managed the building assessment and analysis of available data.
- Designed and implemented repairs for identified issues.
- Provided onsite guidance and design for additional building failures discovered during repairs.
- Managed trades and cost tracking for the repair project.

Client: Canadian Forces Base

Project Type: Low-Rise Commercial Building Re-cladding

Project Summary: New rainscreen cladding system with incorporation of exterior insulation. The building originally had no insulation installed within the wall assemblies and no air or vapour transport control systems.

- Designed window and door installation details providing instruction for fenestration tie-in to the building envelope systems: air barrier, vapour barrier, cladding system, thermal insulation.
- Designed cladding system details for various building features.

Client: Canadian Forces Base

Project Type: Low-Rise Commercial Building Re-roof & HVAC Upgrade

Project Summary: Recreational facility was receiving a new roofing system on three roof areas and having additional rooftop HVAC equipment installed.

- Designed standing seam metal roof installation details for key features of the roof.
- Designed low-slope SBS roofing system installation details for the two flat roof areas.
- Performed ventilation analysis to ensure code compliant performance of vented attic spaces.
- Created commissioning protocol for the new HVAC systems.

Client: Building Owner

Project Type: Low-Rise Commercial Re-Roofing

Project Summary: Worked with the building owner to establish their needs and designed a new low-slope roofing system for the existing building. A Master Format specification was created to accompany the design drawings and these materials were delivered to the client for tendering.

- Performed inspections to generate as-build drawings of the building's ~40,000 ft² roof.
- Prepared a drawing package demonstrating the design of the new 1-ply SBS roofing system.
- Produced a Master Format specification for the re-roofing project.

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VOLUNTEERING / TEACHING

The Enbridge Ride to Conquer Cancer

2016 – Present

Raised funds and took part in the ride to support the Alberta Cancer Foundation.

TECHNICAL TRAINING

- Moisture Control Technician (MCT) CNST 227, (SAIT)
- Thermal Bridging & Envelope Design, GaGBC Alberta Sustainable Building Symposium (ASBS)
- Building Energy Modelling (CAN-QUEST), Canadian Institute for Energy Training (CIET)
- HVAC Design, Level I, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- HVAC Design, Level II, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)