

SADIE BREG, B.A.Sc., P.ENG, CFEI, CCFI-C

FORENSIC CONSULTING ENGINEER

- Structural Assessments – fire, wind, water, impact and vibration damage to structure, renovations and new builds (approximately 246 projects)
- Building Science Assessments – leakage investigation, building envelope failures and design (approximately 89 projects)
- Reserve Fund Studies and Property Condition Assessments (approximately 31 projects)
- Fire & Explosion Cause and Origin Investigation (approximately 60 projects)
- Failure Analysis – product liability and subrogation (approximately 36 projects)
- Personal Injury Accident Investigation – slips, trips, falls (approximately 53 projects)
- Fire Protection Engineering – fire separations, code compliance (approximately 17 projects)

ACADEMIC BACKGROUND

- Bachelor of Applied Science (Systems Design Engineering), University of Waterloo, 2014

EMPLOYMENT BACKGROUND

Caskanette Udall Consulting Engineers

Forensic Consultant, November 2015 – Present

Forensic Engineering Services to Insurance, Property Management and Legal Clientele

WSP Canada Inc. (formerly Halsall Associates)

Building Science Consultant, June 2014 – October 2015, May – Aug 2013

Building envelope and structural investigation, design and construction review
Comprehensive reserve fund studies for condo corporations (both highrises and townhomes)

Property condition assessments for capital planning, pre-purchase or vendor purposes (including a fire station, resort, library, bank, arena, community centers, commercial offices and retail properties).

University of Waterloo

Undergraduate Research Assistant, Sep – Dec 2013, January – Apr 2013

Assisted with lab work for contact lens research and electric vehicle battery modelling

Halsall Associates

Sustainable Buildings Consultant, Sep – Dec 2012

Energy benchmarking analysis to support LEED certification and energy/water audits

Nile Centre for Alternative Technology, Sudan

Sustainable Technology Designer, Jan – Apr 2012

Researched, developed and tested locally-sourced ceramic water filters
Designed and fabricated emergency shut-off and alert system for water pump test station

Hobart Food Equipment Canada

Mechanical Engineering Assistant, May – Aug 2011

Optimized design of industrial dishwasher components using 3D CAD modelling software

Applied Kinetics Inc.

Quality Manager, Aug – Dec 2010

Developed a quality management system and product database for a manufacturing company

ADDITIONAL COURSES AND SEMINARS ATTENDED

- Timber Connections Design Workshop, Canadian Wood Council, Oct 2018
- NFPA 1033 Training, IAAI, May, 2018
- Building Science in Old Buildings, RDH Building Science Laboratories, April 2018.
- Investigation of Gas and Electric Appliance Fires, Fire Findings, Apr 2018
- Investigation and Identification of Incendiary Fires, CAFI Seminar, Apr 2018
- IHSA Working at Heights – Fundamentals of Fall Protection, March 2018
- Marijuana Butane Honey Oil (BHO) Extraction Fire and Explosion Investigation, CAFI Webinar, Jan 2018
- Predicting Wind Loads in Vented Cladding Systems, RDH Building Science Laboratories, Sep 2016
- Canadian National Fire, Arson & Explosion Training Program, Nov 2016
- CAFI Seminar, Ventilation Effect on Fires, Apr 2016
- ACMO/CCI Toronto Condo Conference, Nov 2016
- Certified Fire and Explosion Investigator (CFEI), NAFI, Nov 2016
- The Building Science Top 10 List, RDH Building Science Laboratories, Dec 2015
- BUILD Ideas, Oct 2015
- IHSA Suspended Access Equipment, Jul 2014
- IHSA Working at Heights – Fundamentals of Fall Protection, Jul 2014
- Industrial Training Program, Thapar Institute of Engineering and Technology, Jan – Apr 2010

ARTICLES AND LECTURES

- Building Durability, Willowbank School for the Restoration Arts, Feb 2019
- Drywall Cracks, CCI The Update, Vol.17, May 2018.

PROFESSIONAL SOCIETIES

- Canadian Association of Fire Investigators (CAFI), CCFI-C Designated
- National Association of Fire Investigators (NAFI), CFEI Designated
- Professional Engineers of Ontario (PEO), P.Eng.
- National Fire Protection Association (NFPA)
- Government of Canada Level 2 – Secret Security Clearance (2015)

(Revised Jan 1, 2019)