

THE NEW CANADIAN HOUSING CRISIS: SHODDY HOME RENOVATIONS

YASSER KORANY: FORENSIC STRUCTURAL ENGINEER

The blazing hot real estate markets of Ontario and British Columbia have many Canadians looking to renovate their existing homes rather than looking for a new place to live. Home renovations and building additions may seem like an economical solution to upsizing in such an expensive market, but they present their own set of challenges for homeowners if not done correctly. >>>

Over the past two years, we have witnessed a sharp increase in the number of insurance claims arising from renovation projects that have gone bad. Most of these losses stem from renovations requiring alterations to the foundation and/or load-bearing walls. The two most common examples are the lowering of the foundation to increase basement headroom and the expansion of existing floor plans to add living space. Recently, Origin and Cause has been called upon to investigate the probable cause of many local and total collapse incidents that took place during renovation projects. In some cases the damage to the property is neither immediate nor structural in nature. Rather, poor detailing of the exterior walls and the roofs of new additions, or improper connections between new and existing sections, over time result in serious building envelope failures, such as water leakage and mould growth. Claims for losses resulting from renovation projects are rarely simple to resolve, often ending up in litigation, leaving homeowners in uncertainty for years and costing insurers significantly.

One of the main concerns is the number of qualified, experienced contractors, and their ability to meet the rising demand for such projects. Because the size and value of construction is relatively small, the market is filled with professionals who are willing to take on projects – projects that are perhaps too complex – without the necessary experience. A thorough assessment of the condition of the property and its foundation is often overlooked or deemed unnecessary. And in an effort to cut cost, many homeowners prefer to engage a contractor on a turnkey basis (design and build). As a result, there is frequently a lack of adequate engineering and third party oversight.

1. Ensure that the contractor you hire for the job has the necessary experience and ask them to produce references for similar projects they have completed.
2. Prior to renovating, engage the services of a licensed professional Structural Engineer to assess the structural condition of your property.
3. Have the design of your renovation performed by a qualified professional engineer. Request that the designer takes responsibility for the review of construction (regular site inspections during construction).
4. If your renovation project involves altering existing or constructing new foundations, retain a licensed professional Geotechnical Engineer to assess soil conditions and offer recommendations for foundation design.
5. Always verify the area of expertise of any professionals you retain by contacting their regulatory bodies.
6. Obtain the proper building permits and ensure the contractor schedules the necessary inspections detailed on the permits.
7. Take photographs before, during, and after construction.

PRECAUTIONS

Based on our experience, we strongly recommend homeowners take the following measures to minimize risk and ensure renovations go as planned.



Basement renovation project resulted in partial foundation collapse
(Photo credit A. Lohonyai)

CONSEQUENCES

Cutting corners to save time and money can put your family in real physical danger and can put you in a difficult financial situation. Structural collapses can add up to tens of thousands of dollars to remediate and to repair, costing you more in the end. Renovating can be a great way to get the dream home you always wanted – especially in the current housing market. We just want to ensure that work is done properly and safely.



YASSER KORANY,

Ph.D., P.E., P.Eng., LEED AP
Forensic Structural Engineer



Yasser specializes in structural forensic investigation and construction litigation support. His engineering practice spans more than 25 years, and he is a licensed professional engineer in Ontario, Alberta, British Columbia and the State of Michigan. Throughout his career, Yasser has applied his unique combination of laboratory and field experience to identify the cause of structural distress and failures for institutional and commercial facilities, residential buildings and parking garages. Yasser is also an LEED® Accredited Professional. This accreditation signifies Yasser's expertise in providing sustainable engineering solutions that minimally impact the environment. Prior to joining Origin and Cause, he was a Professor of Structural Engineering at the University of Alberta where he taught structural analysis and mechanics courses, and provided forensic engineering consultancy services in Alberta.



1 888 624 3473



INFO@ORIGIN-AND-CAUSE.COM