

**RIWG Response to
2024 Construction Safety Report
UPE01993**

Speaker 1 – Jan Hardstaff

RIWG's Objective –Infill Construction Safety

RIWG formed in 2019 to advocate for infill construction that complies with the National Building Code – Alberta to ensure positive outcomes for neighbours, builders, infill owners & the city.

The Building Code applies to “safety during construction of a project, including protection of the public and neighbouring properties.” (2023 NBC-AE, 1.1.1.1, (o))

Is safety overshadowed by goals for growth?

RIWG supports the city's densification goals through compliant infill construction practice that protects public safety and adjacent homes from structural damage.

Reducing red tape and barriers to increase development flexibility must not compromise construction compliance with the Building Code or other regulatory requirements.

Compliance is important to avoid negative impacts, such as. . .

2019 Parkallen Excavation Failure



Movement retaining material toward excavation



Impact to adjacent structure & side yard

2021 Strathearn Excavation Failure



Impacts to mature development



Impacts to adjacent structure



Settlement piles for addition

2023 McKernan Excavation Failure

Impact to Adjacent Infill



Impact to Adjacent infill



2023 Westmount Excavation Failure



Excavation failure & heavy rain

2023 Westmount Failure



Failure next to mature development



Water accumulation & impacts to new infill home

2024 Westbrook Estates Excavation Failure



Achieving Infill Construction Safety

The NBC-AE is an “*objective-based and risk-based model intended to protect the safety of the public and adjacent buildings during design, construction, alteration, change of use, or demolition.*” The intent of the Code is to **limit the probability** that as a result of construction or demolition of the building:

OS5: *the public adjacent to a construction or demolition site will be exposed to an **unacceptable risk of injury due to hazards.***

OP4: *adjacent buildings will be exposed to an **unacceptable risk of structural damage.***

The Addendum provides greater detail that includes risk from hazards related to varying degrees of excavation failure.

What is Acceptable Risk?

The 2023 National Building Code – Alberta Edition defines *acceptable risk* as, “*the risk remaining once compliance with the Code has been achieved.*”



Achieving Sustainable Development Outcomes

Economic risk to the builder and infill owner must be balanced with:

- **protecting public safety** including the neighbours and the community.
- **protecting** the structure of adjacent **mature and new infill homes.**

The city must foster a safety culture and support sustainable development outcomes.

This will support safer communities and increase trust and acceptance of infill.



Data requires some clarification

Administration reported a reduction of complaints in 2023.

The Infill Compliance Team Data Dashboard for Safety Codes indicates there were 27 excavation & backfilling complaints.

Of these excavation & backfilling complaints, 14 (about 50%) were verified infractions.

In 2023, there were 20 Safety Codes Orders issued. Of these 4 (or 20%) were orders to resolve excavation and backfilling infractions.

Other reasons for downward trend in complaints

- There were fewer permit applications for infill construction in 2023 compared to 2022 while many waited for the new Zoning Bylaw.

This data is bound to increase as new infill construction permits increase to build 50% of new dwellings as infill.

311 Reporting & Referrals

- 311 continues to refuse to provide reference numbers and referrals related to property damage because the city continues to consider to be a civil matter between property owners.
- The city encourages 311 complainants to report possible Building Code infractions to Occupational Health & Safety, which may impact the data. It is unclear how many OHS referrals may also represent Building Code non-compliance.
- There continues to be a lag time between reporting and investigation. Infractions may not be verified if failed excavations are backfilled before response by Safety Codes.

RIWG – Speaker 2, Beverly Zubot

RIWG Key Recommendation

That small scale building permit applicants with excavations deeper than 1.5 m be given two options for professional involvement at the excavation stage:

1. Submit an excavation plan with engineered shoring,

OR

2. Get professionals involved in assessing conditions on the construction site and adjacent properties (via soil samples and field assessment) and submit the assessment with a plan to mitigate the risk conditions – for example, extreme weather, such as heavy rain events or freeze-thaw conditions.