

# **Sections 17 and 112 of Building Act & Strengthening/repairing existing commercial buildings**

**CTF 5 December 2012**



# **Section 17: All building work must comply with the building code**

**All building work must comply with the building code** to the extent required by this Act, whether or not a building consent is required in respect of that building work.



# Section 112: Alterations to existing buildings

... after the alteration, the building will—

(a) comply, as nearly as is reasonably practicable, with the provisions of the building code that relate to—

(i) means of escape from fire; and

(ii) access and facilities for persons with disabilities (if this is a requirement in terms of [section 118](#)); and

(b) continue to comply with the other provisions of the building code **to at least the same extent as before the alteration.**

etc.



# Common Question

- A new lateral load resisting element (additional or replacement) is to be added
- What level of lateral force should it be designed to?



# Comply with the building code

- Code clauses apply to:
  - A building or household unit
  - Building elements
  - Building systems within a building
  - Building facilities
- Clause B1 Structure
  - Buildings, building elements .. low probability of rupture, becoming unstable .. collapsing



# 1. Consider the Building as a Whole

- What is the level of force that the building as a whole must resist?
- Is the driver Earthquake Prone (s122) or Change of Use (s115), or does it just involve alterations (s112)?
- Apply the target overall building force to an appropriate structural model, and determine the actions on the new elements and the existing elements



## 2. Check Existing Elements

- Check that the existing elements can take their share of the overall new load
  - Using probable strength

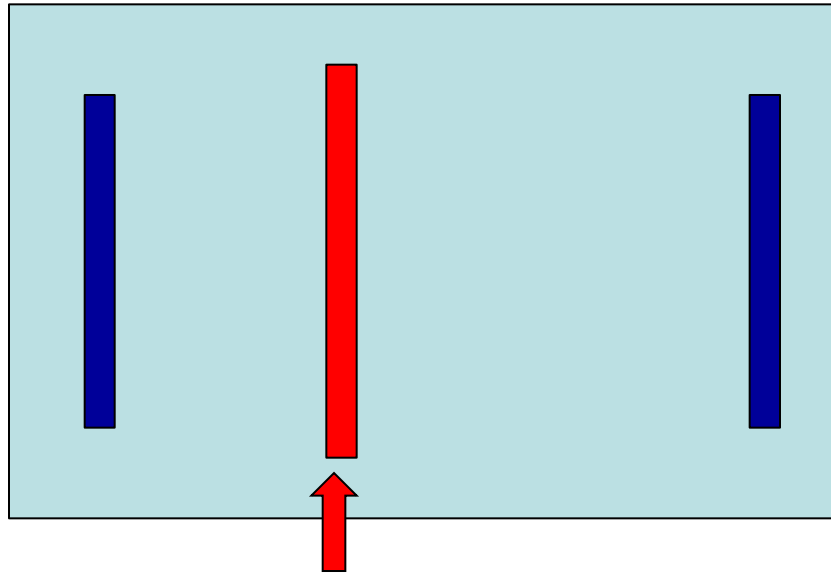


# 3. Design the New Elements

- **Design the new element(s) for their share of the overall load**
  - Using dependable strength, meeting relevant code provisions for detailing, etc
- **This meets the s17 requirement**
  - Provided the new element will not fail before other existing elements (therefore new building work has a low probability of rupture/collapse – B1 requirement)







From building  
analysis (not  
necessarily  
100%NBS)

From s122 (EQP),  
s115 (Change of  
Use) or s112  
(owner choice)

