



New Zealand Society for Earthquake Engineering Inc

Building Safety Evaluation During a State of Emergency

Implications for Lifeline Utilities

National Lifelines Forum October 2009







SecuritEase

Fish & Chips
Fresh Whole

83
MOTOR
LODGE
ENTRANCE

Fish & Chips
Fresh Whole



ART GALLERY

Fuji FILM SERVICE
Gladstone Rd
Mitchells Grey St

Health2000

HEALTH & SPORTS NUTRITION

Health2000

MEAT PIES

MEAT PIES



No Go



00:27

NOTICE

BSL

BSL



YII



*Draft for Comment
December 2008*

Building Safety Evaluation

During a Declared State of Emergency

Guidelines for Territorial Authorities



Prepared by the

**New Zealand Society for
Earthquake Engineering**

With support from



Department of
Building and Housing
Te Tari Kaupapa Whare



Purpose



The Building Safety Evaluation process seeks to:

- Confirm where damage is concentrated to assist response and recovery decision making
- Indicate whether physical action to be taken to *enable*, *restrict* or *prevent* access
- Gather information for a database of damaged buildings that will assist the longer term Recovery actions

Responsibility



- **Territorial Authorities have the responsibility of planning for and co-ordinating post-disaster building safety evaluations**
- **The Department of Building and Housing is the lead government agency for post-disaster building processes**

Key Features



- **Led and co-ordinated by Territorial Authority Building Control units**
- **During a state of emergency, the line of reporting is to the CDEM Controller**
- **Experienced structural engineers will play a significant role, assisted by architects and builders**
 - **Working in a voluntary capacity for 2-3 days.**

Rapid Evaluation of Building Safety

The Posting System



Based on ATC-20

INSPECTED
NO RESTRICTION ON USE OR OCCUPANCY

WARNING
This building has been inspected and is safe for occupancy. No restrictions on use or occupancy are in effect. The damage observed has not caused structural damage to the building.

Facility Tenancy Name and Address: _____
City: _____
State: _____
Zip: _____

Do Not Remove This Posting. Placed on Behalf of the Civil Defense Emergency Management Committee Under the Authority of the Civil Defense Emergency Management Act 2002.

RESTRICTED USE
NO ENTRY EXCEPT ON ESSENTIAL BUSINESS

WARNING
This building has been damaged and its structural safety is questionable. Entry only for essential business. Subsequent aftershocks or other events may result in increased damage and danger. The damage observed from external inspection is as described below.

Restrictions on use:
• No public entry or residential occupation.
• Entry for:
 - Emergency personnel
 - Damage assessments, making safe
 - Removal of essential business records
 - Removal of utilities only
 - Removal of property
 - Conducting essential business with minimum staff

Facility Tenancy Name and Address: _____
City: _____
State: _____
Zip: _____

Do Not Remove This Posting. Placed on Behalf of the Civil Defense Emergency Management Committee Under the Authority of the Civil Defense Emergency Management Act 2002.

UNSAFE
DO NOT ENTER OR OCCUPY

WARNING
This building has been damaged and is unsafe for occupancy. Entry only for essential business. The damage observed has caused structural damage to the building.

Facility Tenancy Name and Address: _____
City: _____
State: _____
Zip: _____

Do Not Remove This Posting. Placed on Behalf of the Civil Defense Emergency Management Committee Under the Authority of the Civil Defense Emergency Management Act 2002.

INSPECTED: No restriction on Use or Occupancy

RESTRICTED USE: No entry except on essential business

UNSAFE: Do Not enter or occupy

Restricted Use

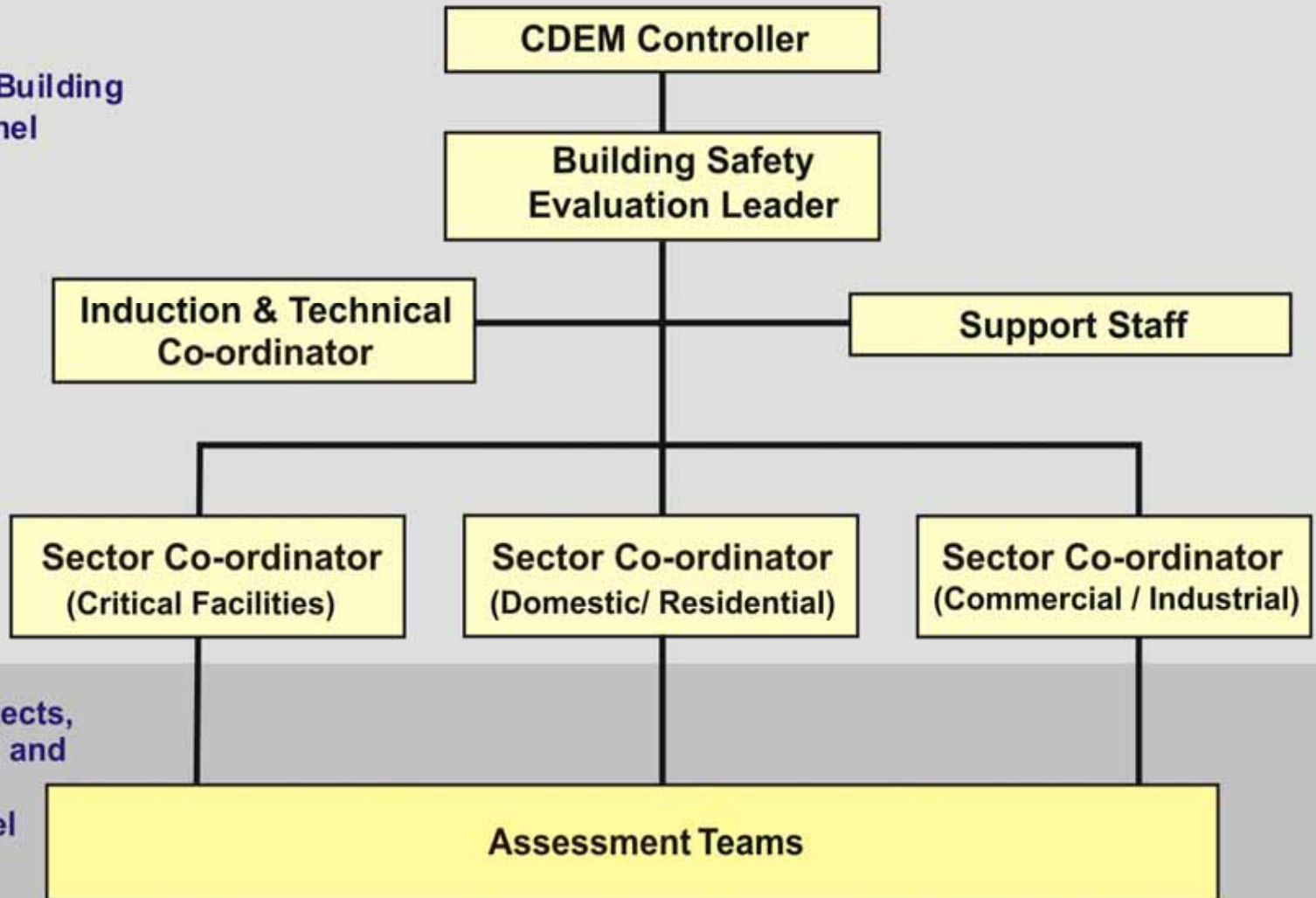


- No public entry or residential occupation
- Entry for
 - Emergency purposes
 - Damage assessments, making safe
 - Removal of essential business records
 - Removal of valuables only
 - Removal of property
 - Conducting essential business with minimum staff

Operating Structure



Senior Council Building
Control Personnel



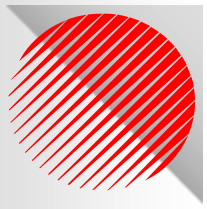
Engineers, architects,
other volunteers, and
Council Building
Control personnel

What Does This Mean for Critical Facilities?



Local Authorities and Lifeline Utilities must ensure that they are able to function to the fullest possible extent ...

- **Should have arrangements with an identified inspection resource**
 - **eg. Priority Response Agreement with a consulting engineering practice**



The Opus / Telecom Post Earthquake Response Plan

- Opus has an on going contract with Telecom NZ where Opus provides post-disaster (earthquake) inspections of key Telecom buildings sited throughout the country
- Details of the plan and all relevant information are provided in a webpage developed specifically for the project
- The purpose of the plan is to allow rapid assessment of key Telecom exchange buildings to confirm whether they are safe to enter or not
- Confirmation of this is provided by mounting appropriately coloured placards in a clearly visible place near all entrances to the building

Current Status of Arrangements



- **Guidelines issued**
- **TAs encouraged to develop their own specific arrangements**
- **Two training modules have been developed - for Building Control Managers and CDEM EMOs; and Bldg Officials and Engineers**
- **Encouragement for Critical Facilities operators and Lifeline Utilities to make their own arrangements**

Contact Details



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Department of
Building and Housing
Te Tari Kaupapa Whare



Te Rākau
Whakamarumaru

Ministry of Civil Defence
& Emergency Management