



High-Rise Non-Ductile Concrete Building Retrofit Ordinance Update

Equitable Earthquake Resilience in Los Angeles County

High-Rise Non-Ductile Concrete Building Retrofit Ordinance

Welcome

Presenters:

- Juan Madrigal, SE, Los Angeles County Public Works
- Kristin Norman, PE, Los Angeles County Public Works
- Erik Rodriguez, PE, Los Angeles County Public Works

High-Rise Non-Ductile Concrete Building Retrofit Ordinance

Purpose

- To provide updates on significant changes to the proposed ordinance's requirements
- To answer questions, and solicit comments and feedback on the proposed ordinance

High-Rise Non-Ductile Concrete Building Retrofit Ordinance

What is a High-Rise Non-Ductile Concrete Building?

- **Concrete Building:** Building with roofs, floors, and a lateral resisting system composed of concrete
- **Non-Ductile:** Material that lacks the ability to bend without breaking
- **High-Rise:** Building with an occupied floor located more than 75 feet above the lowest level of access

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What is a High-Rise Non-Ductile Concrete Building?

- High-Rise Non-Ductile Concrete Buildings: Concrete, high-rise buildings constructed using designs that lack the ability to deform during seismic events
 - Concrete buildings designed under building codes prior to the 1977 Los Angeles County Building Code (1976 Uniform Building Code)
 - Prior codes lacked requirements for adequate reinforcing (rebar), connections details, and system irregularities

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Why is Retrofitting Necessary?

- Non-Ductile Concrete Buildings (NDCB) may be vulnerable to damage and potential collapse under seismic activity. High-Rise NDCBs have greater vulnerability.
- Retrofitting these buildings can increase their strength and ability to withstand earthquakes.
- Retrofitting these buildings will improve public safety and the region's earthquake resilience.

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To Whom/Where will this apply?

- Owners of High-Rise NDCBs located within unincorporated areas of Los Angeles County
- County of Los Angeles-owned High-Rise NDCBs, in any jurisdiction

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How will owners comply with the ordinance?

- Public Works shall issue an order to owners of potential High-Rise NDCBs, informing them of the requirement to meet the ordinance.
- The order will include a form/checklist to obtain building information
- Service of the order begins the timeline for compliance
- *Public Works will file a certificate with the County Recorder stating that the building appears to be subject to this ordinance.*

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How will owners comply with the ordinance?

- Former timeline for compliance:
 - 3 years – Submit a completed form/checklist (provided by Public Works) containing building information, along with any supporting documentation
 - ~~5 years~~ – Submit structural analysis and plans for retrofit, or demolition of building.
 - ~~10 years~~ – *Complete all retrofit or demolition work*

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How will owners comply with the ordinance?

- Updated timeline for compliance:
 - 3 years – Submit a completed form/checklist (provided by Public Works) containing building information, along with any supporting documentation
 - ~~5 years~~ 7 years – Submit structural analysis and plans for retrofit, or demolition of building.
 - 9 years – *Obtain plan approval and issue retrofit permits (or if choosing to demolish, demolition permit)*

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How will owners comply with the ordinance?

- Updated timeline for compliance (continued):
 - *10 years – If opting to demolish the building, complete demolition work*
 - ~~10 years~~ 20 years – Complete all retrofit work

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How will owners comply with the ordinance?

- Structural Analysis, Design, and Evaluation Requirements
 - Buildings subject to this Chapter shall meet or exceed the requirements specified for the “Structural Performance Levels” of the “Basic Performance Objective for Existing Buildings” of ASCE 41-17, Section 2.2.1.
 - Non-structural provisions of ASCE 41-17 are not mandatory.

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When will the ordinance apply?

- The proposed High-Rise Non-Ductile Concrete Building Retrofit Ordinance is currently under development and being reviewed by Public Works and other County departments.
- The ordinance is expected to be presented to the Board of Supervisors in late Spring 2024.

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Questions?

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Please send in your comments by 2/2/2024