

# California Preservation Foundation

## The California Historical Building Code: An Overview and Application

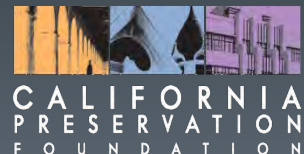
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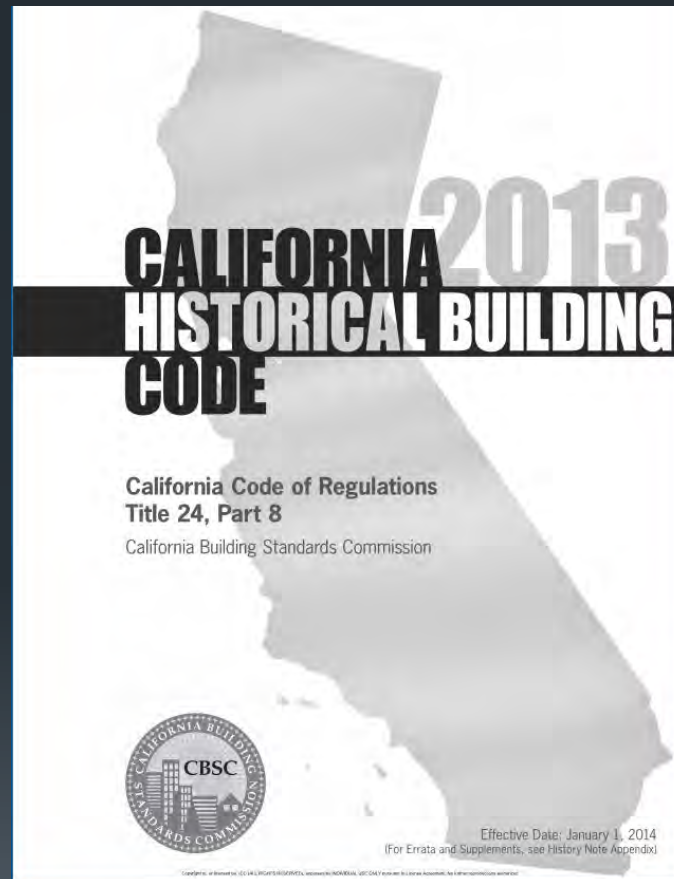


# The California Historical Building Code: An Overview and Application

## *Overview of Presentation*

- Statutory Underpinnings, the Administrative Chapter, Definitions
- Occupancy, Fire/Life Safety, and Egress
- Accessibility
- Structural Provisions
- Districts, Sites and Open Spaces
- Broadway Corridor Reuse Case Study

# Introduction to the California Historical Building Code



# 1973 California History Plan

## Finding 11:

“RESTORATION IS FREQUENTLY MADE  
DIFFICULT BY UNNECESSARILY RIGID  
INTERPRETATION OF BUILDING CODES.”

## Recommendation 11:

THAT A NEW OCCUPANCY SECTION DEALING  
WITH HISTORIC RESTORATION BE ADDED TO  
THE UBC.

# 1975 Senate Bill 927



THE CALIFORNIA LEGISLATURE  
PASSED SENATE BILL 927 IN **1975**

## **HEALTH AND SAFETY CODE**

Penal Code, Vehicle Code, Business and Professions Code, Civil Code, Code of Civil Procedure, Commercial Code, Corporations Code, Education Code, Elections Code, Evidence Code, Family Code, Financial Code, Fish and Game Code, Food and Agricultural Code, Government Code, Harbors and Navigation Code, Health and Safety Code, Insurance Code, Labor Code, Military and Veterans Code, Probate Code, Public Contract Code, Public Resources Code, Public Utilities Code, Revenue and Taxation Code, Streets and Highways Code, Unemployment Insurance Code, and Water Code.

**Discretionary for use by all agencies and jurisdictions**

**Essentially a set of Guidelines**

# 1984 Senate Bill 2321

## State Historical Building Code Statutes and Regulations

“The building department of every city and county **shall apply the provisions of alternative building standards and building regulations adopted by the CHBC Board** pursuant to Section 18959.5 in permitting repairs, alterations and additions necessary to preservation, restoration, rehabilitation, moving or continued use of an historical building or structure.” [Health and Safety Code Section 18954]

# 1984 Senate Bill 2321

No longer discretionary for agencies and jurisdictions

## State Historical Building Code Statutes and Regulations

“The regulations of the CHBC have the same authority as State law and are to be considered as such.”  
[CHBC p. iv]

# Made Mandatory for State Agencies



Proposed addition to the Museum of Science and Industry in Balboa Park in San Diego.

# State Historical Building Safety Board

- Proposes and approves changes to the CHBC
- Provides interpretation of the CHBC to building owners and local agencies
- Acts as a review body to State and Local Agencies for interpretation, administration and enforcement
- Hears appeals from agencies and individuals to Decisions made by local jurisdictions

# State Historical Building Safety Board

Composed of 22 representatives from:

State Architect  
State Fire Marshal  
Historic Resources Commission  
CalOSHA  
California Council AIA  
SEAOC  
CELSOC (electrical)  
CELSOC (mechanical)  
CA Council Landscape Architects  
Housing and Community Development  
State Parks

California Association of Counties  
League of California Cities  
OSHPD  
Department of Rehabilitation  
CA Chapter American Planning Assoc.  
Caltrans  
California Preservation Foundation  
Seismic Safety Commission  
CalBO  
Board-selected contractor  
BOMA



# State Historical Building Safety Board

## Appeals: Wood Roofing

### Section 8-408 – Roof Covering

The original or historic roofing materials may be repaired or reconstructed subject to the following requirements:

- 2) Wooden roof material may be utilized where fire resistance is required provided they are treated with fire-retardant treatments to achieve a Class B...rating (Class A in state designated Urban Wildlife and High Fire Zones)

# State Historical Building Safety Board

## Appeals: Hollywood MTA Station



# State Historical Building Safety Board



# State Historical Building Safety Board



# State Historical Building Safety Board



# State Historical Building Safety Board

## Appeals: Glendale Residence



# State Historical Building Safety Board



# Qualified Historical Building or Property



# Qualified Historical Building or Property

Any building, site structure, object, district or collection of structures, and their associated sites, deemed of importance to the history, architecture or culture of an area by an appropriate local, state or federal governmental jurisdiction. Includes buildings or properties on, or **determined eligible** for listing on the National Register of Historic Places, California Register of Historical Resources, State Historical Landmarks, State Points of Historical Interest, **officially adopted city or county registers, inventories or surveys of historic resources.**

# Overview of CHBC Contents

## Chapter 8-1 Administration

Chapter 8-2 Definitions

Chapter 8-3 Use And Occupancy

Chapter 8-4 Fire Protection

Chapter 8-5 Means of Egress

Chapter 8-6 Accessibility

## Chapter 8-7 Structural Regulations

Chapter 8-8 Archaic Materials and Methods of Construction

Chapter 8-9 Mechanical, Plumbing & Electrical Requirements

Chapter 8-10 Qualified Historical Districts, Sites and Open Spaces

# Chapter 8-1 Administration: Purpose and Intent

## 8-101.3 Intent.

The intent of the CHBC is to facilitate the preservation and continued use of Qualified Historical Buildings (QHBs) or properties while providing **reasonable** safety for the building occupants and access for persons with disabilities.

# Chapter 8-1 Administration: Purpose and Intent

## 8-101.2 Purpose.

The purpose of the CHBC is to provide regulations for the preservation, restoration, rehabilitation, relocation and reconstruction of QHBs.

The CHBC is intended to provide solutions for preservation...promote sustainability...provide access for persons with disabilities...provide a cost-effective approach...provide for *reasonable* safety.

The CHBC requires enforcing agencies to accept solutions that are *reasonably equivalent* to the regular code...

# Chapter 8-1 Administration: Evidence or Proof

Section 8-105: The enforcing agency may request that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding such alternatives

# Chapter 8-1 Administration: Application

## 8-102.1 Application:

The CHBC is ***applicable to all issues*** regarding code compliance for qualified historical buildings.

The CHBC may be used in conjunction with the regular code to provide solutions to facilitate the preservation of QHBs...

# Chapter 8-1 Administration: Application

## 8-102.1 Application.

The state or local enforcing agency **shall** apply the provisions of the CHBC in permitting repairs, alterations, and additions necessary for the preservation, restoration, reconstruction, rehabilitation, relocation or continued use of a qualified historical building or property **when so elected** by the private property owner.

# Chapter 8-1 Administration: Evidence or Proof

## Case Study: Pfeifer-Inman House, Napa



New owner wanted to restore including reconstruction of original porch, guardrails and stairs

Qualified Historical Building:  
Historic Overlay Zoning

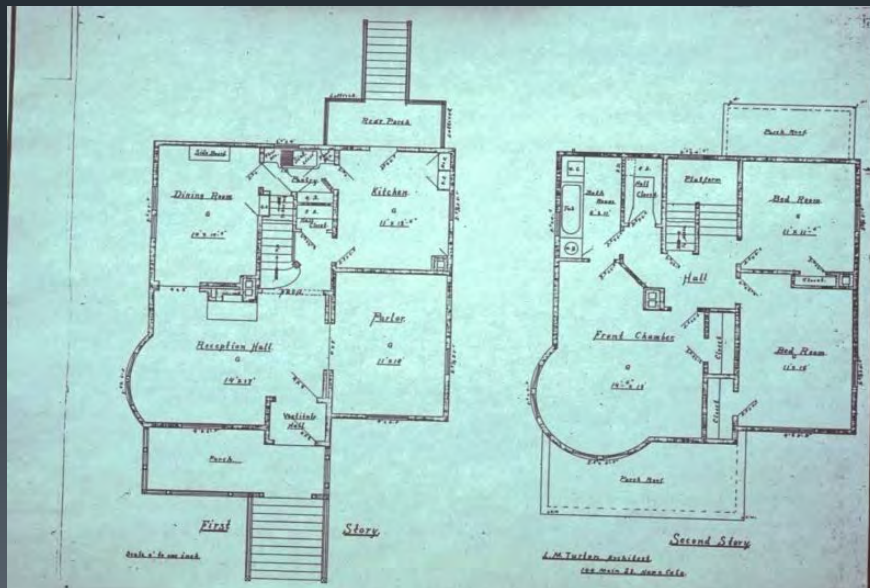
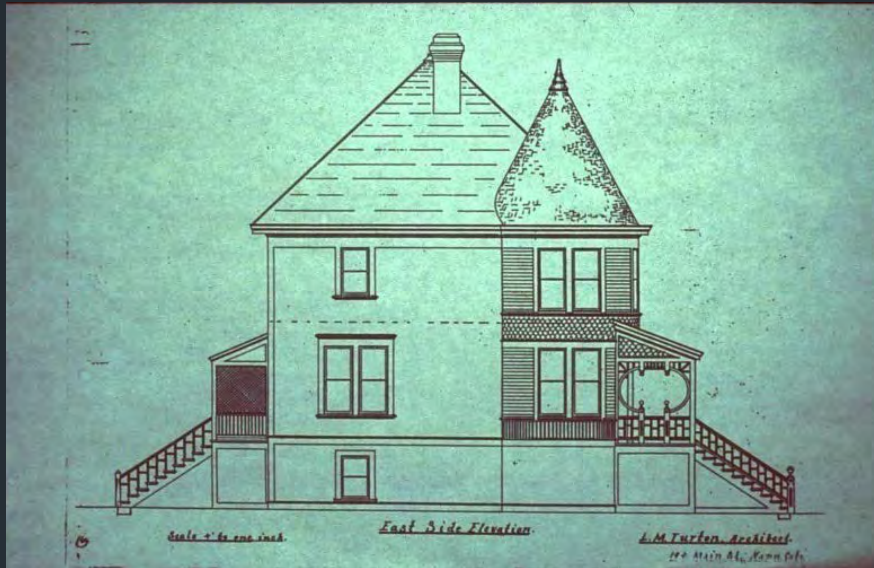
## Issues:

Proposed restored guardrail was less than 36" height, balusters were more than 4" apart, stair handrail would not comply with required gripping surface and diameter requirements



## Owner presented documentation

- Copies of original plan, elevation, floor plans





- Historic photos



- Paint shadows discovered after removal of stucco



## Photos of finished project

C.H.B.C. references:

8-105.2;

8-303.7;

8-502.1, Exc. 3

# Chapter 8-1 Administration: Repairs

## **8-105.1 Repairs.**

Repairs to any portion of a qualified historical building or property may be made in-kind with historical materials and the use of original or existing historical methods of construction, subject to conditions of the CHBC (See Chapter 8-8).

# Chapter 8-1 Administration: Repairs

## Case Study: Riggers Loft, Shipyard No. 3





Shipyard No. 3, Richmond California





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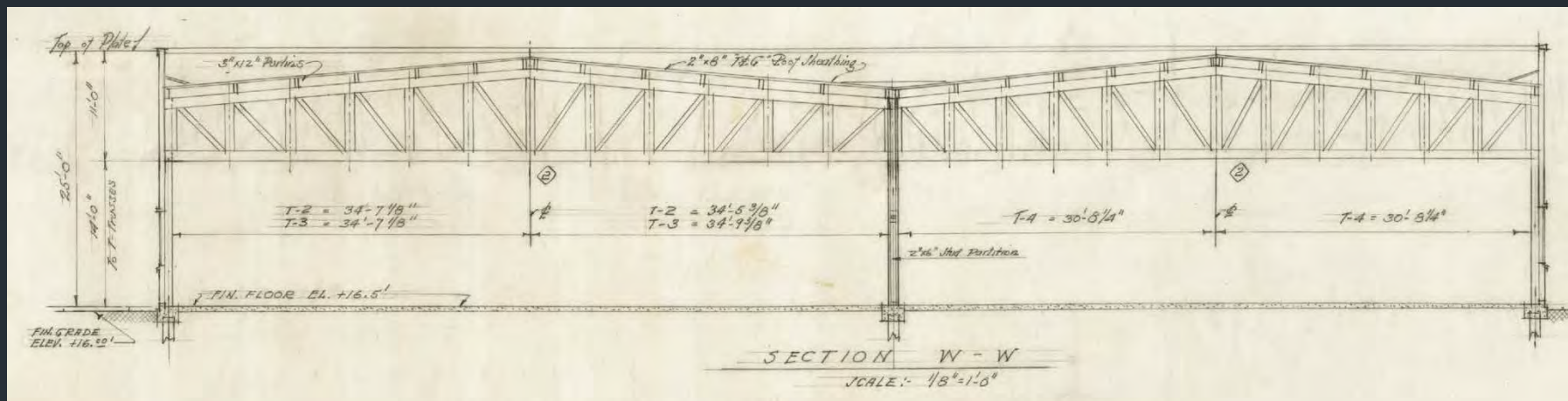


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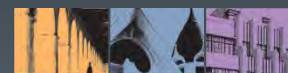


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# Chapter 8-1 Administration: Unsafe Buildings or Properties

## 8-102.1.5 Unsafe Buildings or Properties.

When a qualified historical building or property is determined to be unsafe as defined in the regular code, the requirements of the CHBC are applicable to the work necessary to correct the unsafe conditions.

Work to remediate the building or properties **need only address** the correction of the unsafe conditions, and it shall not be required to bring the entire qualified historical building or property into compliance with regular code.

# Chapter 8-1 Administration: Additional Work

**8-102.1.6 Additional Work:** Qualified historical buildings shall not be subject to additional work required by regular code, regulation, or ordinance beyond that required to complete the work undertaken.

Certain exceptions for **accessibility** and for **distinct hazards** exist by mandate and may require specific action within the parameters of the CHBC.

# Chapter 8-2 Definitions: Distinct Hazard

## Distinct Hazard.

Any clear and evident condition that exists as an immediate danger to the safety of the occupants or the public right of way. Conditions that do not meet the requirements of current regular codes and ordinances **do not**, of themselves, constitute a distinct hazard.

# Chapter 8-2 Definitions: Distinct Hazard



# Chapter 8-2 Definitions: Distinct Hazard



# Chapter 8-6 Accessibility: Americans with Disability Act (ADA)

- The ADA is a Law not a Code. Following any code, including the California Building Code, is not complete protection against a lawsuit
- The latest Edition of CHBC Chapter 8-6 has been Certified by the DOJ as complying with ADA

# Chapter 8-6 Accessibility:

## Sec. 8-601 Purpose, Intent and Scope

- 8-601.1 The local jurisdiction is required to accept reasonably equivalent alternatives to regular code.
- 8-601.2 The intent is to preserve the integrity of QHB while providing access to and use by persons with disabilities.
- 8-601.3 The regulations apply to every QHB that is required to provide access to persons with disabilities.

# Chapter 8-6 Accessibility:

## Sec. 8-601 Purpose, Intent and Scope

8-601.3 The regulations apply to every QHB that is required to provide access to persons with disabilities

1. Provisions of this chapter do not apply to new construction or reconstruction/replicas of historic buildings

## Sec. 8-602.1 Regular Code

- The regular code shall be applied to QHB unless strict compliance will threaten or destroy its historical significance or character defining features.

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

Used when the historical significance or character defining features are threatened by application of regular code.

1. Applied on a case-by-case, item-by-item basis
2. Documentation must be provided stating the reasons for application of the alternative provisions and shall be maintained as part of the public record

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

### 8-603.1 Entry.

Alternatives listed in order of priority are:

1. Access to any entrance used by the general public and no further than 200 feet (60 960 mm) from the primary entrance.
2. Access at any entrance not used by the general public but open and unlocked with directional signs at the primary entrance
3. The Accessible entrance shall have a notification system

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

### Case Study: University of California Men's Faculty Club

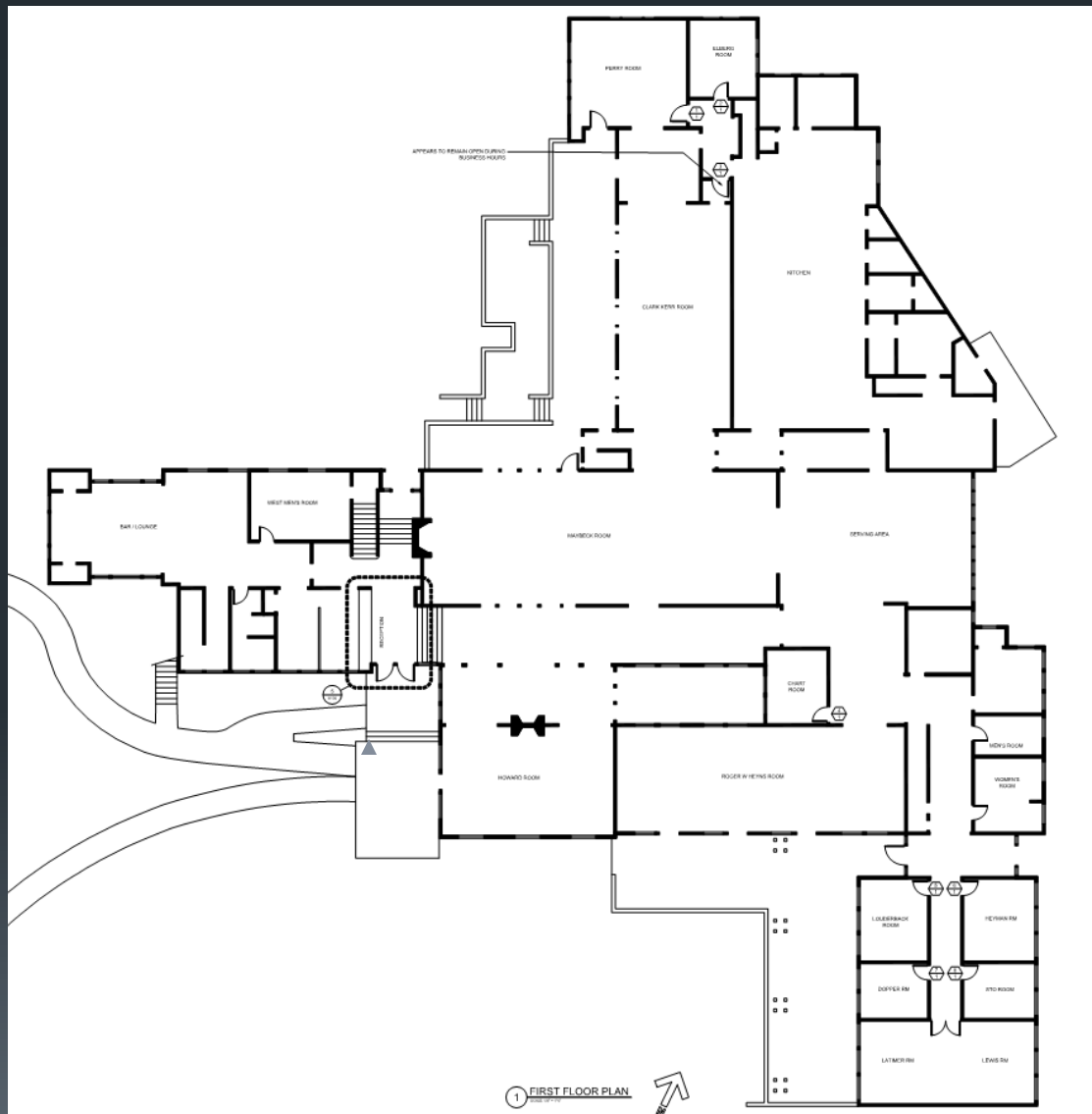


# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions



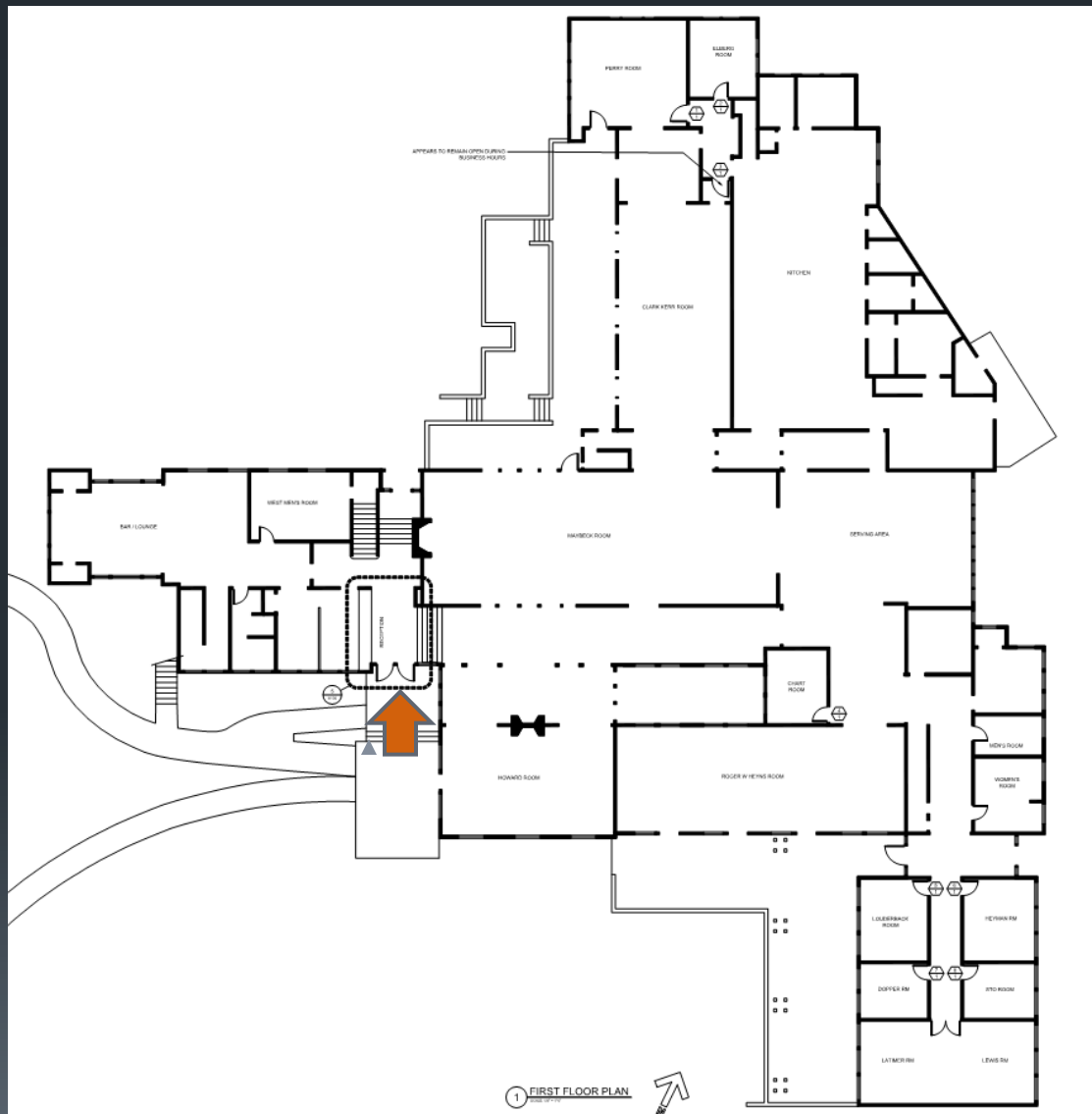
# Chapter 8-6 Accessibility:



## First Floor

- Lunch
- Events
- Meeting rooms
- Hotel

# Chapter 8-6 Accessibility:



Registration

# Chapter 8-6 Accessibility:



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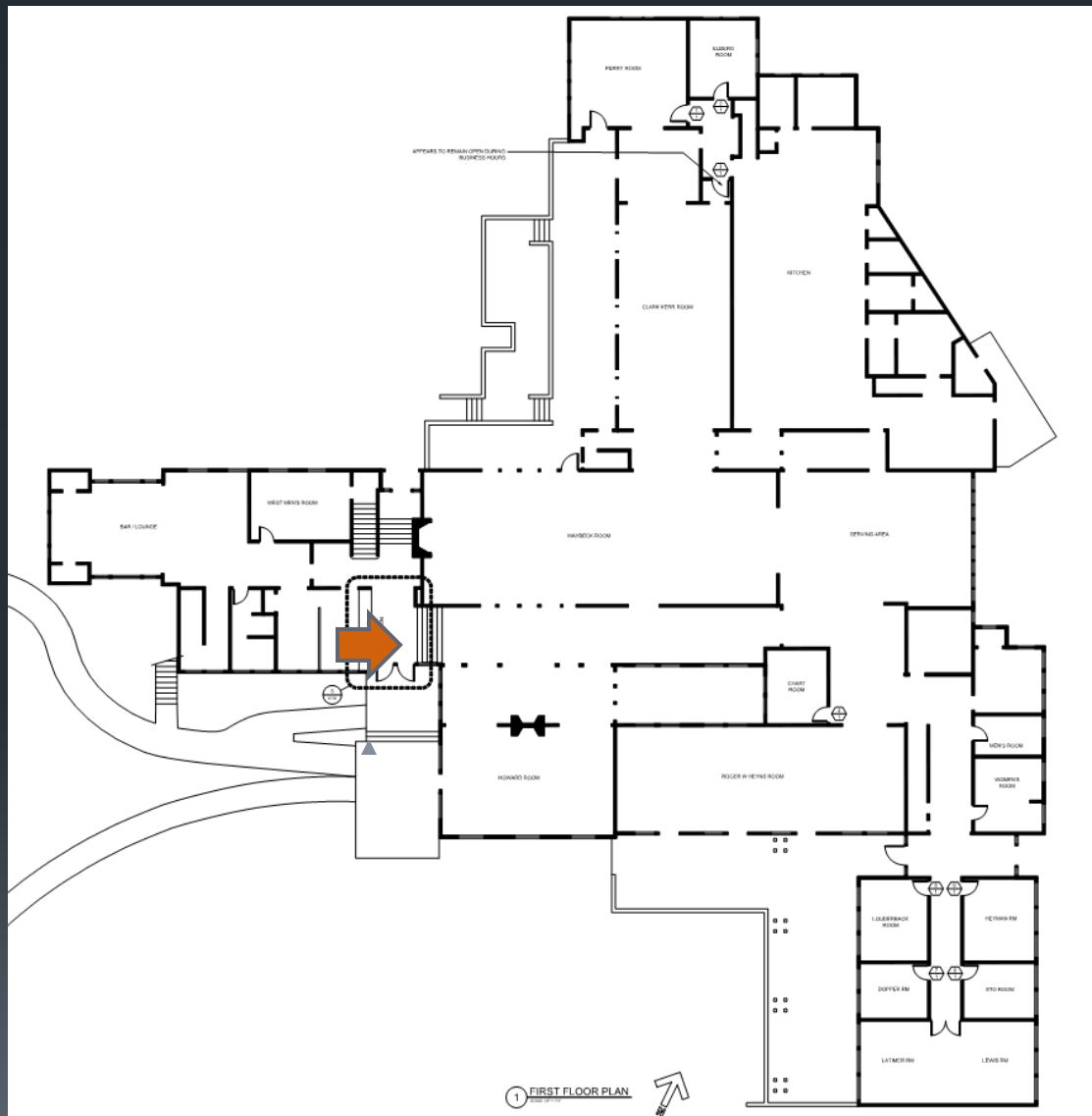
# Chapter 8-6 Accessibility:



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# Chapter 8-6 Accessibility:



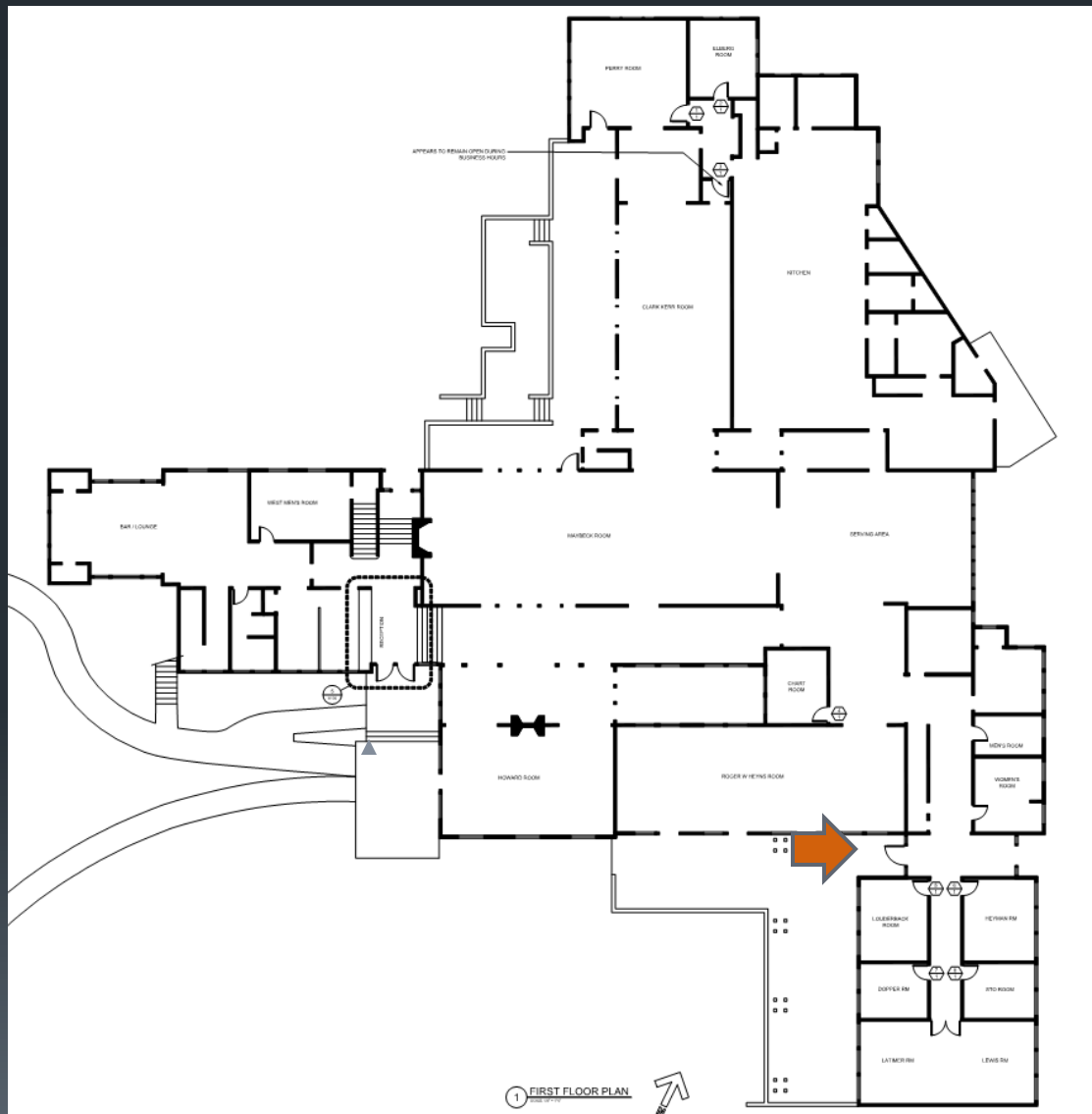
## Interior Stairs in First Floor

# Chapter 8-6 Accessibility:



# Chapter 8-6 Accessibility:

Secondary  
Entrance to  
Upper Level



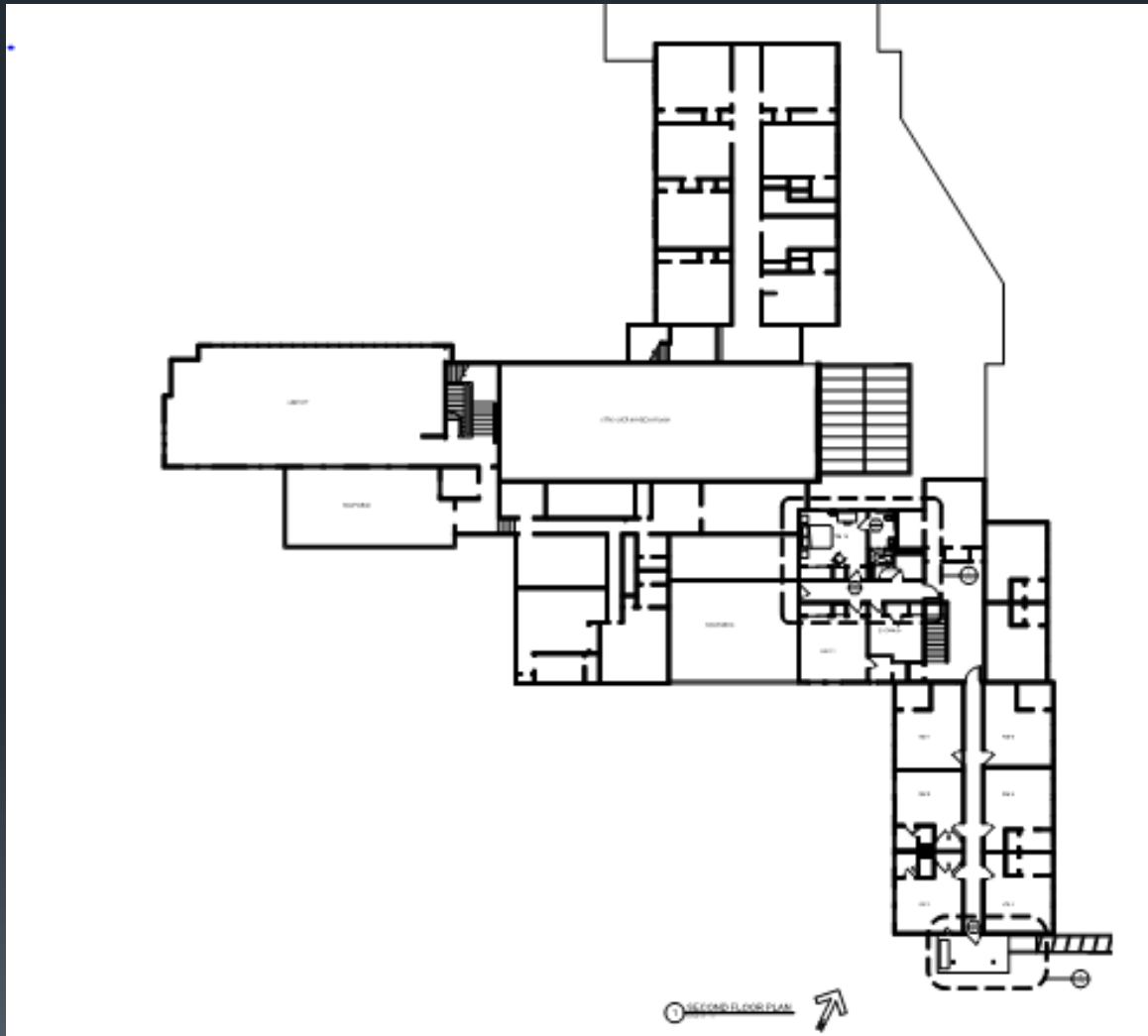
# Chapter 8-6 Accessibility:



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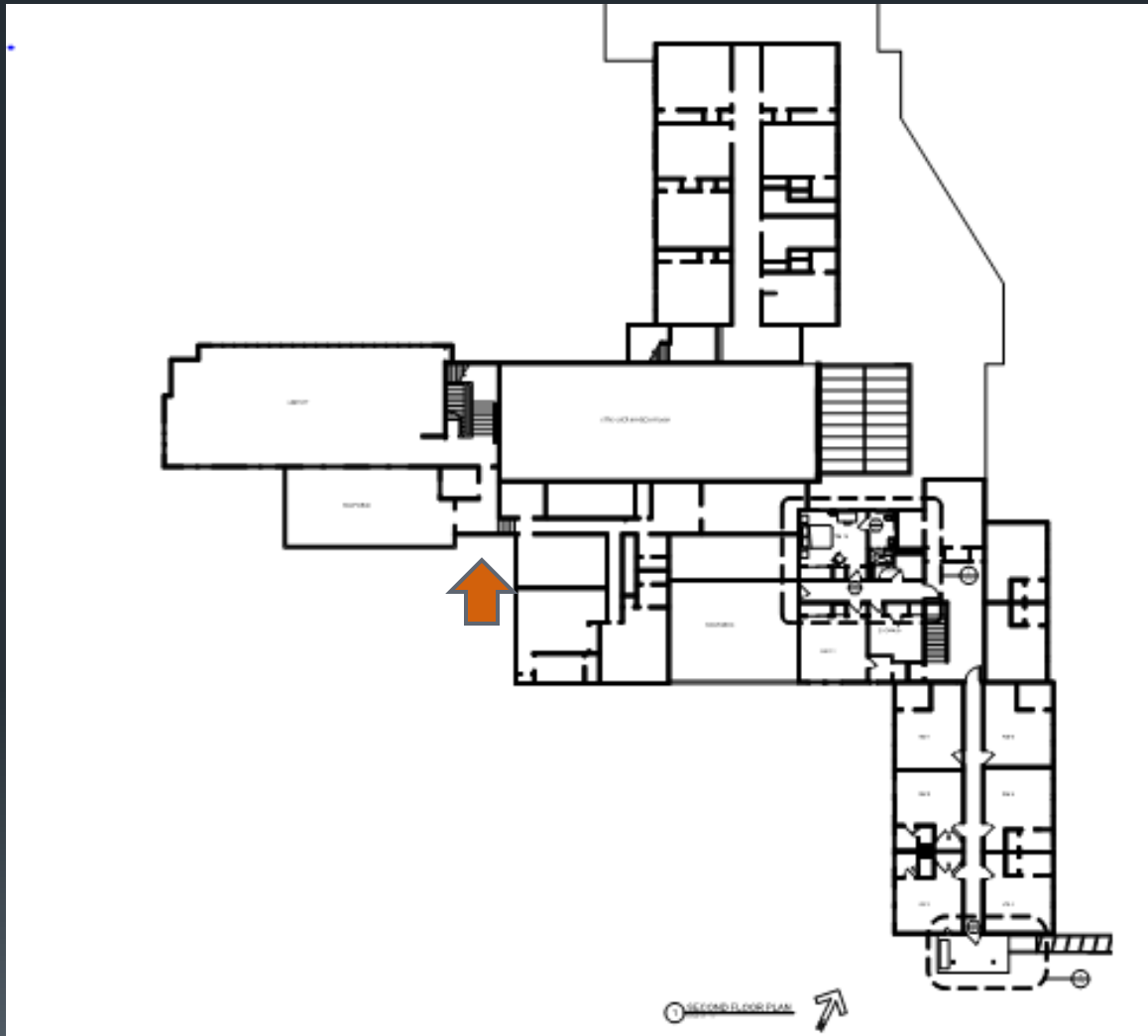


Second Floor

- Hotel Rooms

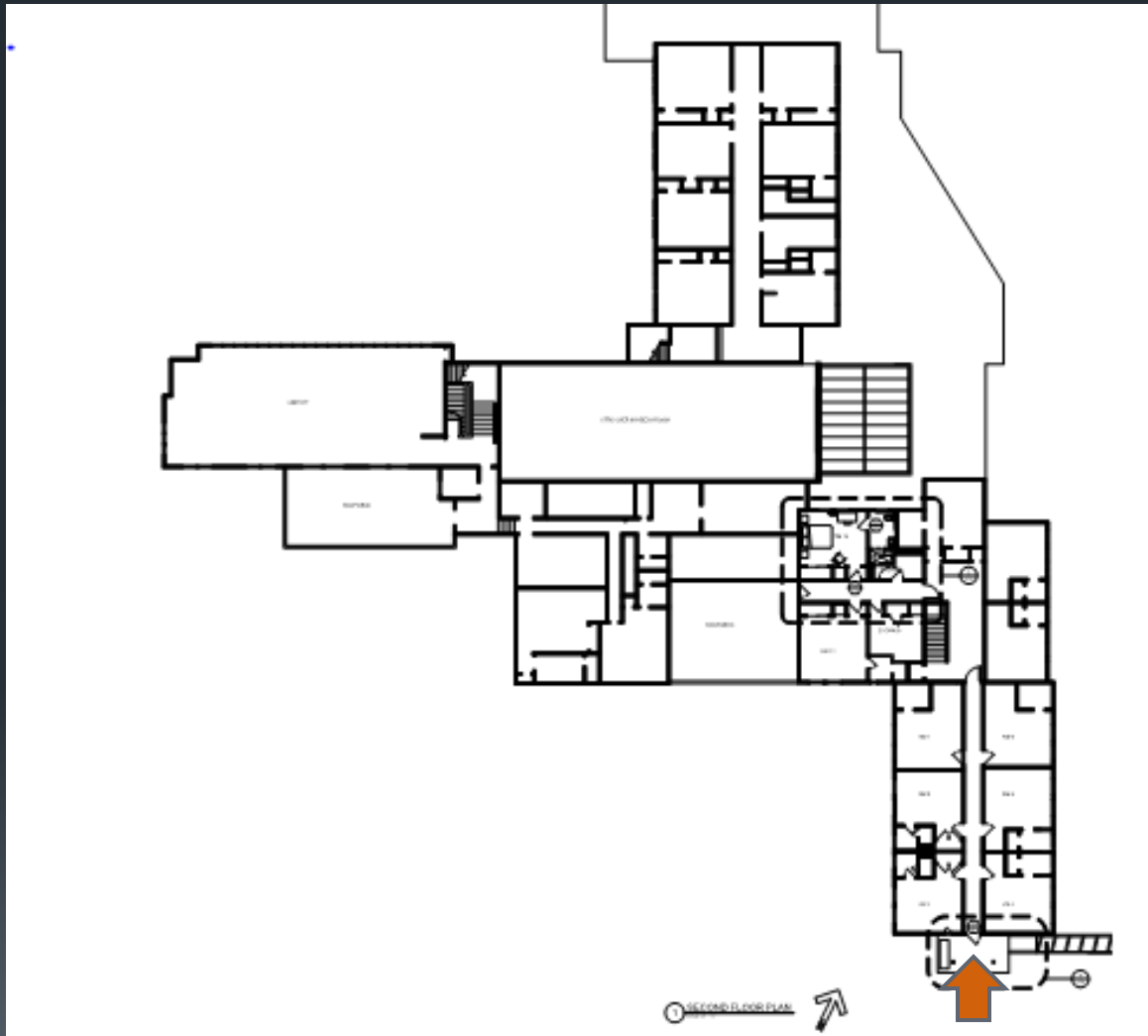
# Chapter 8-6 Accessibility:

Reception at  
First Floor

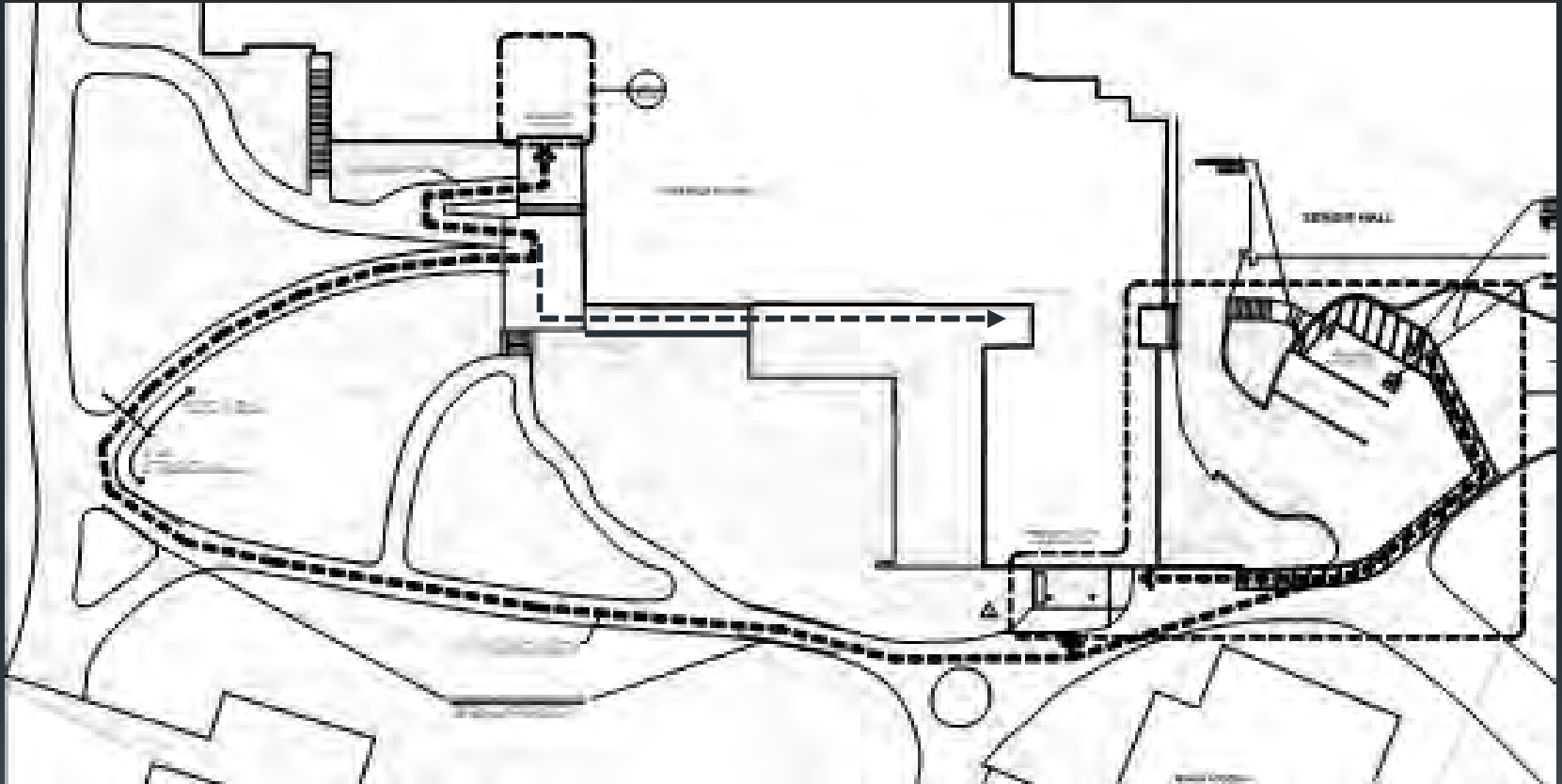


# Chapter 8-6 Accessibility:

## Second Floor Entrance



# Chapter 8-6 Accessibility:



Site Circulation

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

8-603.3 Doors. Alternatives listed in order of priority are:

1. Single-leaf door which provides a minimum 30 inches of clear opening.
2. Single-leaf door which provides a minimum 29 1/2 inches clear opening
3. Double door, one leaf of which provides a minimum 29 1/2 inches clear opening.
4. Double doors operable with a power-assist device to provide a minimum 29 1/2 inches (749 mm) clear opening when both doors are in the open position.

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

### 8-603.3 Power-assisted Doors.

A power-assisted door or doors may be considered an equivalent alternative to level landings, strike-side clearance, and door-opening forces required by the regular code.

### 8-603.4 Toilet Rooms.

In lieu of separate-gender toilet facilities as required in the regular code, an accessible unisex toilet facility may be designated.

:

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

8-603.2 Doors. Alternatives listed in order of priority are:

1. Single-leaf door which provides a minimum 30 inches of clear opening.
2. Single-leaf door which provides a minimum 29 1/2 inches clear opening
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4. Double doors operable with a power-assist device to provide a minimum 29 1/2 inches (749 mm) clear opening when both doors are in the open position.

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

8-603.5 Exterior and Interior Ramps and Lifts.  
Alternatives listed in order of priority are:

1. A lift or a ramp of greater than standard slope but no greater than 1:10, for horizontal distances not to exceed 5 feet. Signs shall be posted at upper and lower levels to indicate steepness of the slope.
2. Access by ramps of 1:6 slope for horizontal distance not to exceed 13 inches (330 mm). Signs shall be posted at upper and lower levels to indicate steepness of the slope.

# Chapter 8-6 Accessibility:

## Sec. 8-603 Alternative Provisions

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2. Access by ramps of 1:6 slope for horizontal distance not to exceed 13 inches (330 mm). Signs shall be posted at upper and lower levels to indicate steepness of the slope.

# Chapter 8-6 Accessibility:

## Section 8-604 Equivalent Facilitation

Use of other designs and technologies, or deviation from particular technical and scoping requirements, are permitted if the application of the alternative provisions contained in Section 8-603 would threaten or destroy the historical significance or character-defining features of the qualified historical building or property.

# Chapter 8-6 Accessibility:

## Section 8-604 Equivalent Facilitation

1. Such alternatives shall be applied only on an item-by-item or case-by-case basis.
2. Access provided by experiences, services, functions, materials and resources through methods including, but not limited to, maps, plans, videos, virtual reality, and related equipment, at accessible levels. The alternative design and/or technologies used will provide substantially equivalent or greater accessibility to, and usability of, the facility.
3. The official charged with the enforcement of the standards shall document the reasons

# Chapter 8-6 Accessibility:

## Section 8-604 Equivalent Facilitation

Equivalent facilitation for an element of a building or property when applied as a waiver of an ADA accessibility requirement will not be entitled to the Federal Department of Justice certification of this code as rebuttable evidence of compliance for that element.

# Chapter 8-6 Accessibility:

## Section 8-604 Equivalent Facilitation

### Case Study: James A. Garfield High School



# Chapter 8-6 Accessibility:

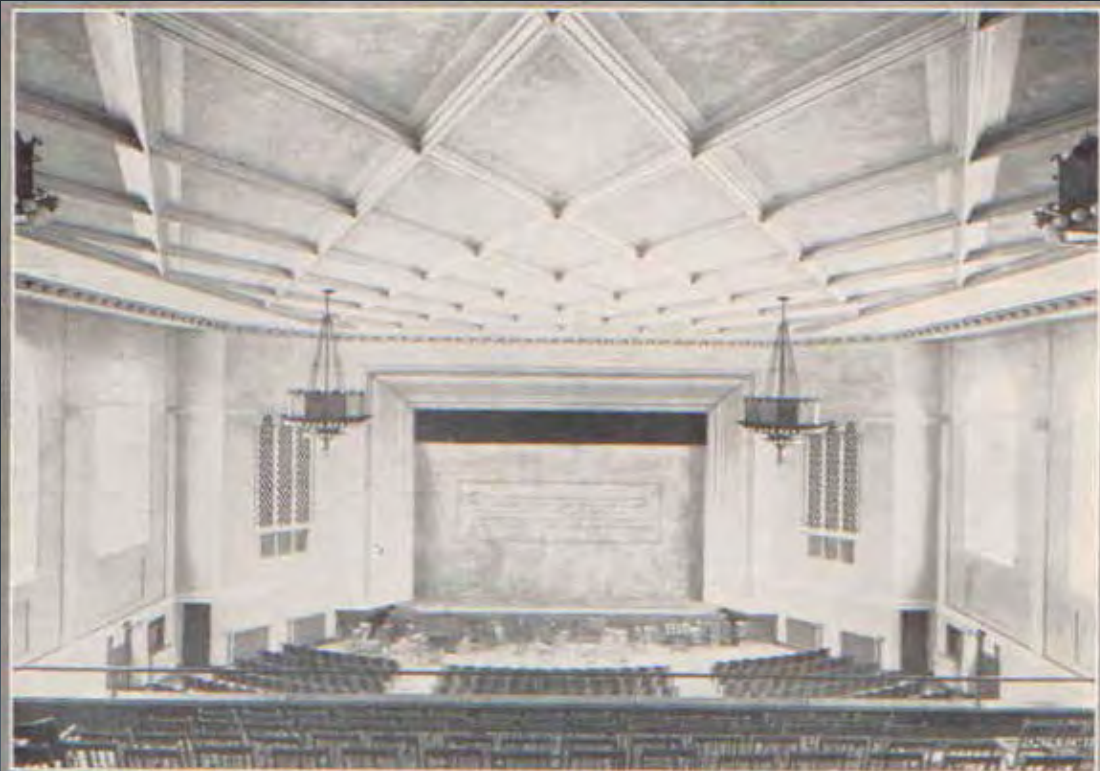
## Section 8-604 Equivalent Facilitation



# Chapter 8-6 Accessibility:

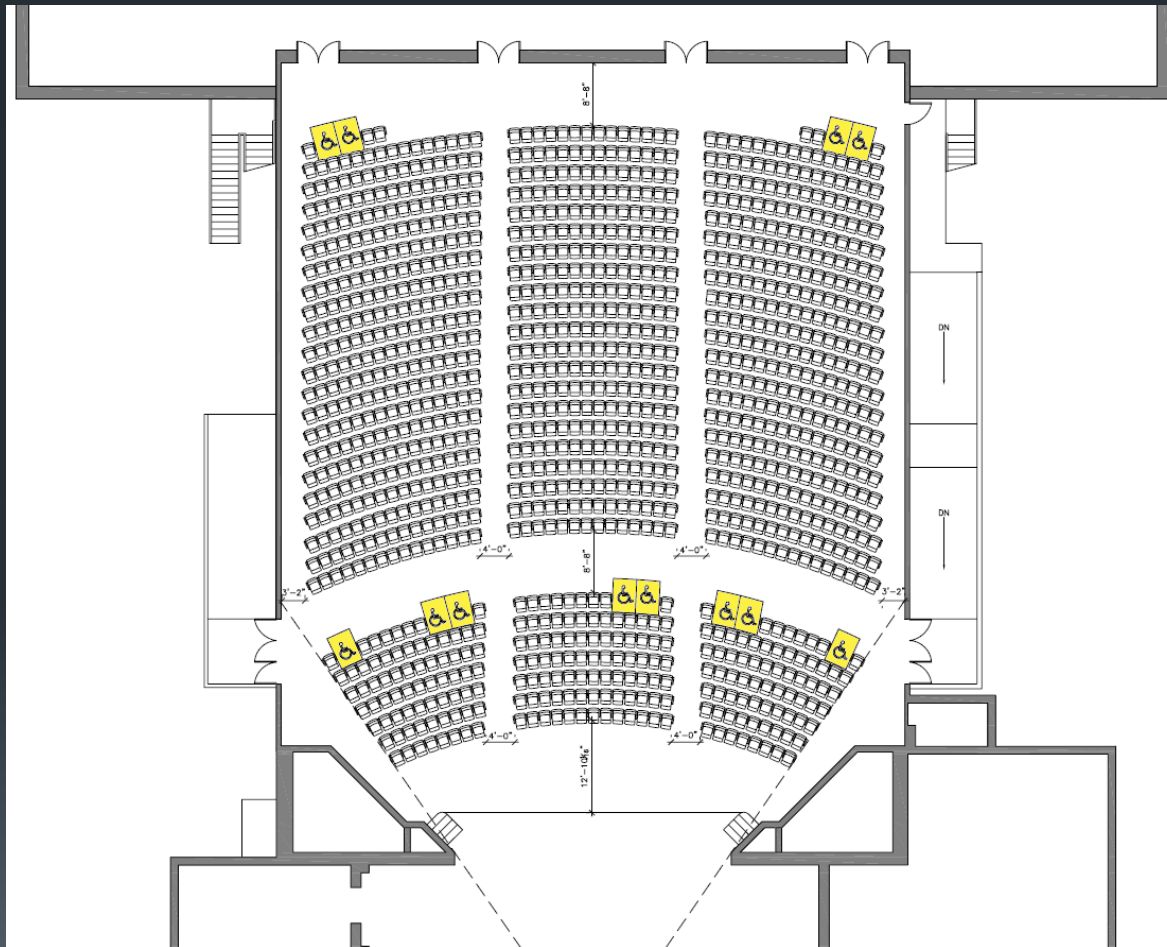
## Section 8-604 Equivalent Facilitation

After fire, Garfield High, and the Auditorium in particular, were found to be a qualified historic building based on architectural and cultural significance



# Chapter 8-6 Accessibility:

## Section 8-604 Equivalent Facilitation



# Chapter 8-6 Accessibility:

## Section 8-604 Equivalent Facilitation

### Case Study: Battery Chamberlin



# Chapter 8-10: Historical Districts, Sites and Open Spaces

8-1001.1 Scope. Applies to associated historical features of historical buildings or districts including:  
Site plan (pedestrian, equestrian and vehicular circulation, topographical grades and drainage)  
Landscape elements (plants, structures, bridges, lighting, water features, ornamentation, circulation surfaces) Other functional elements

# Chapter 8-10: Historical Districts, Sites and Open Spaces

This may include, but will not be limited to:

1. Site plan layout configurations and relationships (pedestrian, equestrian and vehicular site circulation, topographical grades and drainage, and use areas).
2. Landscape elements (plant materials, site structures other than the qualified historical buildings, bridges and their associated lighting, water features, art ornamentation, and pedestrian, equestrian and vehicular surfaces).
3. Functional elements (utility placement, erosion control and environmental mitigation measures).

# Chapter 8-10: Historical Districts, Sites and Open Spaces

8-1002.1. The CHBC shall apply to all sites and their features associated with QHBs or districts

8-1002.2 Where the application of regular code may impact the associated features of qualified historical properties beyond their footprints

# Chapter 8-10: Historical Districts, Sites and Open Spaces

## SECTION 8-1003 SITE RELATIONSHIPS

The relationship between a building or property and its site, or the associated features of a district (including qualified historical landscape), site, objects and their features are critical components that may be one of the criteria for these buildings and properties to be qualified under the CHBC. The CHBC recognizes the importance of these relationships. This Chapter shall be used to provide context sensitive solutions for treatment of qualified historical buildings, properties, district or their associated historical features, or when work to be performed secondarily impacts the associated historical features of a qualified historical building or property.

# Chapter 8-10: Historical Districts, Sites and Open Spaces

8-1001.1 Scope. Applies to associated historical features of historical buildings or districts including:  
Site plan (pedestrian, equestrian and vehicular circulation, topographical grades and drainage)  
Landscape elements (plants, structures, bridges, lighting, water features, ornamentation, circulation surfaces)  
Other functional elements

8-1002.1. The CHBC shall apply to all sites and their features associated with QHBs or districts

# Chapter 8-10: Historical Districts, Sites and Open Spaces

## Case Study – Parking, Cedar Gables Inn



Contributor to  
National Register  
District

On-site parking  
required per use-  
permit conditions for  
B & B

Minimal rear yard;  
parking needed in  
front yard

# Chapter 8-10: Historical Districts, Sites and Open Spaces

Historic semi-circular drive with added turf block used to satisfy the requirement.



# Chapter 8-10: Historical Districts, Sites and Open Spaces Case Study – Tahoe Meadows



Fire  
Department  
required  
compliant  
access

# Chapter 8-10: Historical Districts, Sites and Open Spaces



Narrow tree  
lined roads were  
considered a  
part of the  
historic  
character

# Chapter 8-10: Historical Districts, Sites and Open Spaces



Widening of roads would have required removal trees at the edge and in the middle of the roads

# Chapter 8-10: Historical Districts, Sites and Open Spaces

## Case Study – Aetna Hot Springs



# Chapter 8-10: Historical Districts, Sites and Open Spaces



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# Chapter 8-10: Historical Districts, Sites and Open Spaces



ds

# **THE CALIFORNIA HISTORICAL BUILDING CODE**

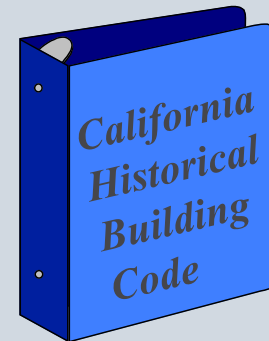
**DAN CHUDY PH.D., CBO, CASP**

**VICE-CHAIRMAN OF THE STATE HISTORICAL  
BUILDING SAFETY BOARD**

# A few facts about the California Historical Building Code

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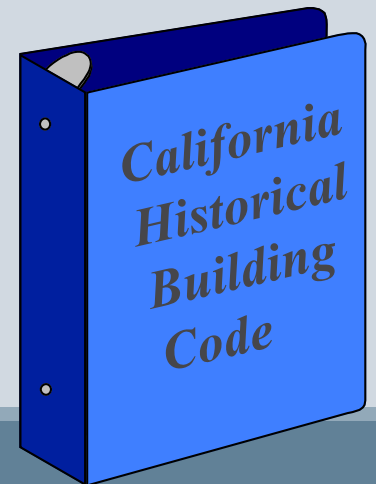
- ❖ Performance based as opposed to a prescriptive approach as in the regular code
- ❖ Applies to all Qualified Historical Buildings
- ❖ Applies to State as well as local buildings and other historic features
- ❖ Ultimate interpretation authority resides with the SHBSB



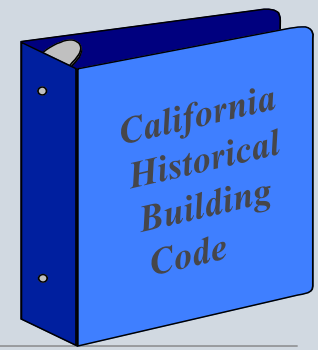
# Repeated over and over throughout the CHBC

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*“These regulations require enforcing agencies to accept any reasonably equivalent alternative to the regular code when dealing with qualified historic buildings or properties.”*



# A few more facts about the CHBC . . .



- ❖ Generally , does **not** require historical buildings to meet the same safety standards as new buildings
- ❖ Does **not** allow unacceptable levels of hazard to exist in historic buildings
- ❖ Recognizes the benefits of **fire sprinklers** and other modern technologies in reducing the level of risk

# ***Examples of Lower safety standards:***

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- ❖ Maximum **occupancy separation** is 1-hour if Fire Sprinklers are provided throughout the building
- ❖ **Fire escapes** are acceptable
- ❖ **Exit ladders** are acceptable if the occupant load is under 10 people (see definitions)
- ❖ **Lateral loads** and wind loads are only required to be 75% of the regular code
- ❖ **Exterior doors and windows** may be on the property line (or where openings are required to be protected) if they are provided with exterior fire sprinkler protection.

# **QUALIFIED HISTORIC BUILDING**





COUNTY OF  
RIVERSIDE  
HISTORICAL MARKER

**FIRST CONGREGATIONAL CHURCH**

RIVERSIDE'S FIRST CHURCH ORGANIZED IN 1872.  
COMBINED COMMUNITY EFFORT BUILT ITS FIRST  
STRUCTURE AT SIXTH AND VINE. OPENED IN 1873  
AND USED ALSO BY COOPERATING FATHERS. A GOTHIC  
STYLE BUILDING WAS OPENED ON THIS SITE IN 1884.  
THIS SPANISH RENAISSANCE STRUCTURE, DESIGNED BY  
LYRON HUNT AND COMPLETED IN 1914, BROADENED  
CALIFORNIA'S MISSION REVIVAL MOVEMENT.











# DEMOLITION

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- ❖ **GENERALLY SPEAKING, DEMOLITION OF A QUALIFIED HISTORIC BUILDING SHOULD BE AVOIDED, IF POSSIBLE.**
- ❖ **AFTER EARTHQUAKES ??**
  - Public Resource Code 5028
- ❖ **CEQA**
- ❖ **PUBLIC SAFETY AND IMMINENT THREAT**











# CHAPTER 3: USE AND OCCUPANCY

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- ❖ Existing Use: (shall be allowed to continue)
- ❖ Change in Occupancy: (new hazards?)
- ❖ Occupancy Separations: (1 hour max)
- ❖ Max. Floor Area: (single vs. multi-floor)
- ❖ Max. Height: (historical design)
- ❖ Light and Ventilation: (safety hazard?)



# ADAPTIVE REUSE



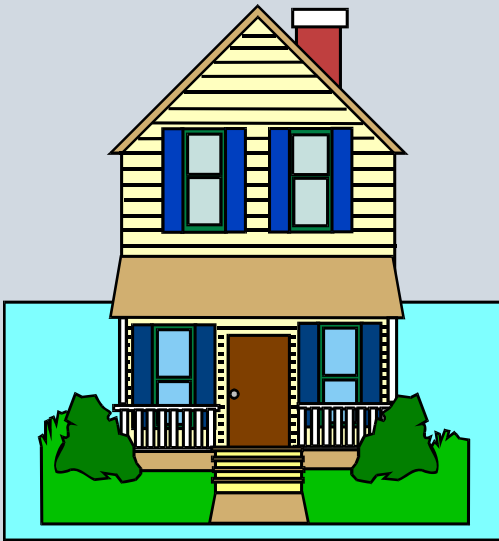






# CHAPTER 3: CONTINUED... RESIDENTIAL OCCUPANCIES

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- ❖ **Habitation vs. Nonhabitation**
  - Display-only exempt (museums)
- ❖ **Room Dimensions smaller**
  - Sleeping rooms (50 sf vs. 70 sf)
- ❖ **Light & Ventilation less**
  - 6% vs. 8%
  - Electric lighting not required...
  - Bedroom windows 3.3 sf vs. 5.7 sf
- ❖ **Alteration & Repair**
  - ❖ Historic materials and methods of construction allowed as long as a life-safety hazard is not created or continued.

# REHABS



# HOUSE MOVES



# BEFORE







**MOVED = SUSTAINABILITY**



# CHAPTER 4 - FIRE PROTECTION

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- ❖ **Fire-resistive Construction**
  - **Exterior wall & openings protection / Use of Fire Sprinklers**
- ❖ **Roof Coverings**
  - **Class B wood or Class A wood in High Fire Zones**
- ❖ **Fire Alarm Systems per Regular Code (A, E, H, I)**
- ❖ **Automatic Fire Extinguishing System Trade-offs**
  - **Not to be used as a substitute for the number of exits required per Chapter 8-5.**

# ***Examples of Trade-offs given for Fire Sprinklers:***

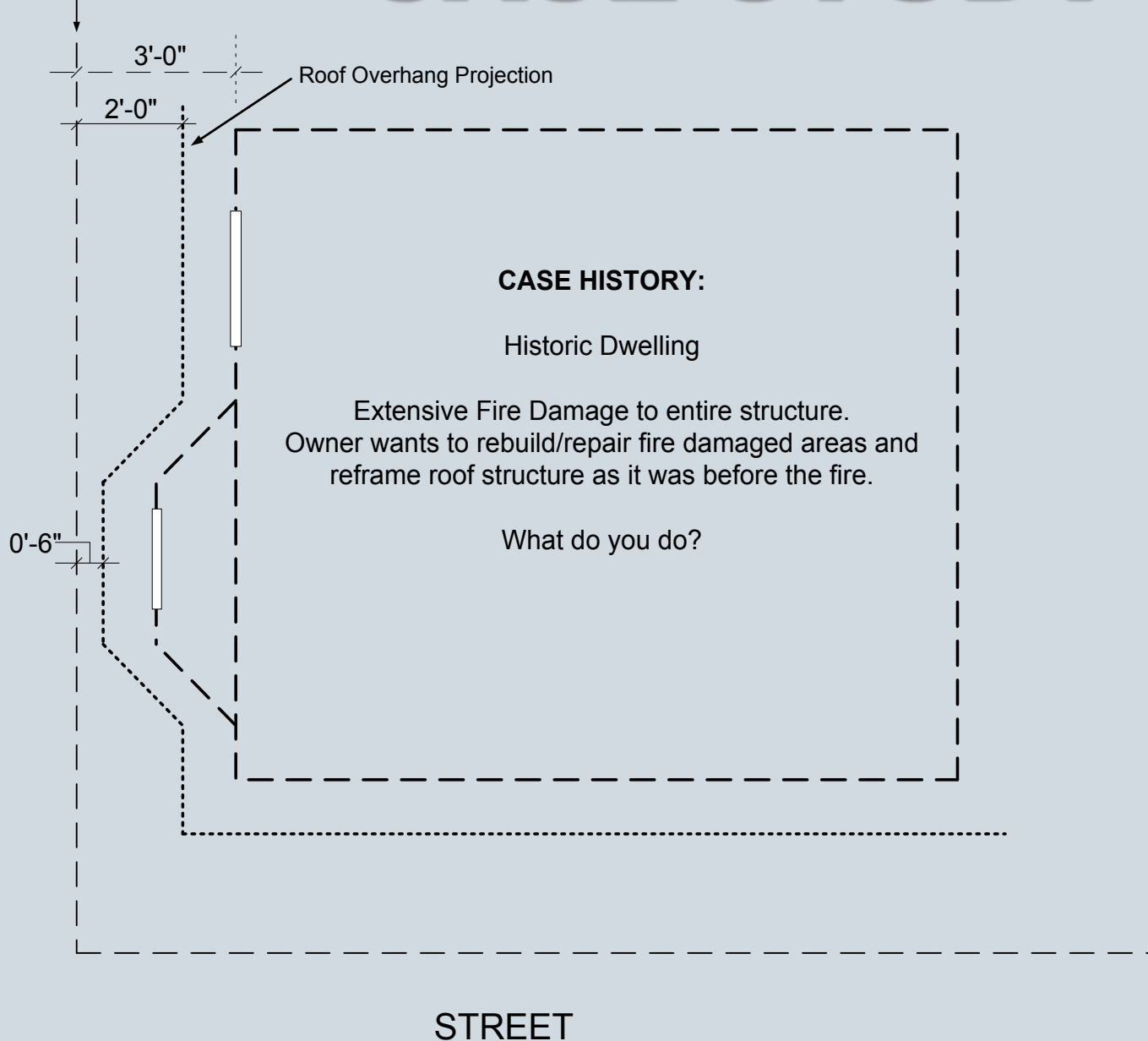
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- ❖ Exterior windows or doors **too close to PL** may remain
- ❖ **Unlimited floor area** provisions may be used
- ❖ No need for **fire retardant finishes**
- ❖ No need to provide 1-hour **rated glass**
- ❖ No 1-hour **corridor** required, no **stair enclosures** required
- ❖ No **shaft enclosures** required
- ❖ Eliminates the **distinct hazard** classification
- ❖ Eliminates **1-hour occupancy separations**
- ❖ Reduces any occupancy separation to **1-hour** maximum
- ❖ No need to **upgrade to Type III or V-1hr** construction



# CASE STUDY

Property Line



A photograph of a residential street scene. In the foreground, a dark asphalt road is visible. A concrete retaining wall runs across the middle ground, separating the road from a grassy area. Behind the wall, there are two houses: a two-story green house with a brown roof on the left, and a white house with a brown roof on the right. Several cars are parked or driving on the street: a white SUV on the left, a red car in the center, and a dark car on the right. A utility pole is visible on the far left. The background is filled with lush green trees under a clear blue sky. The text "EXTERIOR OPENING PROTECTION" is overlaid in large, bold, yellow capital letters at the bottom of the image.

# **EXTERIOR OPENING PROTECTION**

# EXTERIOR SPRINKLERS



# FIRE SPRINKLERS



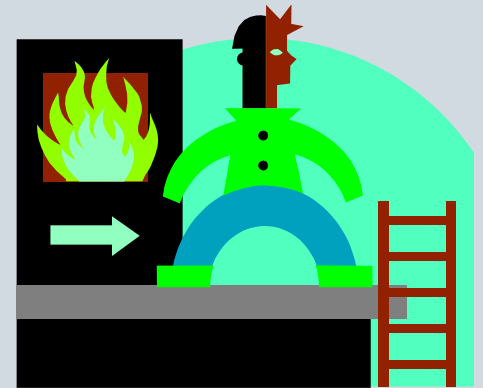
# Chapter 5

## MEANS OF EGRESS (Exits)

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❖ Must provide *“adequate means of egress”*

- New Fire Escapes & Escape Ladders
- Existing Previously Approved Fire Escapes
- Railings and Guardrails
- Reasonable Exceptions



# Means of Egress: Reasonable Exceptions

---

- ❖ **Widths of doorways** and other paths of exit travel that are less than required by the Regular Code but yet provide ample width for a single person to safely utilize.
- ❖ **Stairway** tread and riser dimensions at variance with the Regular Code (doesn't specify how much the variance can be)
- ❖ **Handrails** at variance with the Regular Code (doesn't specify how much the variance can be)
- ❖ **Swing of Doors** - need not rehang existing front or main exit doors to comply with the Regular Code - *this is on a case-by-case basis ("Upon specific case approval")*

# FIRE ESCAPE





**FIRE ESCAPE**

# GUARDRAILS



# STAIRWAYS AND RAILINGS

## WARNING

The staircase and internal railing in the Rotunda is a historical feature of the National Historic Landmark Mission Inn.

The height of this railing does not comply with current safety codes. Alternative access to each floor of the Rotunda is provided by the Rotunda elevator.



# STAIRWAYS AND RAILINGS





**HISTORIC HANDRAILS**

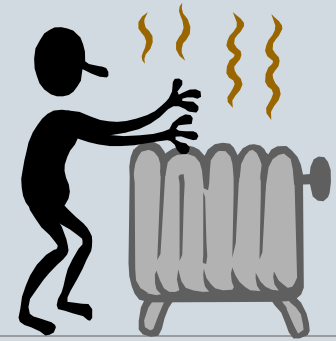
# CHAPTER 9 – MECH, PLUMB & ELEC

---

- ❖ To be used in combination with the regular code to provide a reasonable level of protection from hazards.
- ❖ No person to allow any safety hazard to exist
- ❖ Existing systems which constitute safety hazards when operational may remain in place if completely and permanently rendered inoperative.
- ❖ Safety hazards created by inoperative systems shall not be permitted.
- ❖ Exempted from compliance with energy standards. except that new appliances must comply.

# MECHANICAL

---



- ❖ **Existing systems** may remain if not a safety hazard
- ❖ **Residential Heating Facilities** may include fireplaces or wood stoves
- ❖ **Combustion Air** – all fuel burning appliances to have sufficient air supply
- ❖ **Venting of Appliances** – no single wall vents allowed in concealed spaces.
- ❖ **Ducts**- new ducts to be per the Regular Code
- ❖ **Grease Hoods** to be per the Regular Code
- ❖ **Water Heater** T&P valve to be per the Regular Code

# PLUMBING

---



- ❖ **New nonhistorical mat'ls** per the Regular Code
- ❖ **Adequate** drainage and vent systems required
- ❖ **Vent terminations** don't need to comply with Regular Code as long as no "Safety Hazard" is created
- ❖ **Traps** – S and Drum traps may remain
- ❖ **Water Distribution** must be "adequate" and without any cross connections
- ❖ **Sewage** – new systems to comply with Regular Code
- ❖ **Fuel-gas piping** to comply with Regular Code



# PLUMBING - continued

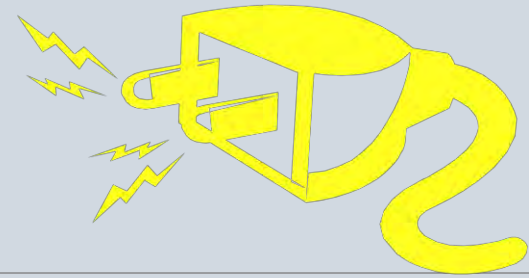
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## ❖ Residential

- **Alternative sewage disposal** requires Health Dept approval
- **Toilet locations in hotels:** 1 Toilet per 15 Rooms
- **Kitchen sink** to be nonabsorbent finish
- **Hand washing facilities:** basin and pitcher are acceptable
- **Hot and Cold running water** is NOT required, but a sufficient amount is required for fixture operation
- **Water-saver toilets** are required IF historically accurate ones are available

# ELECTRICAL

---



- ❖ Existing non-compliant systems may remain and be extended, if safe
- ❖ Non-grounding outlets may remain in use
- ❖ Grounding type outlets must be grounded or GFCI protected
- ❖ Spacing and other distance requirements do not apply if impracticable
- ❖ Electrical Load Calcs
  - Actual loads (*as opposed to prescribed loads in NEC*)
  - Electrical Bills for a 1 year period (*if no change in use*)

# **END**

**(Chapters 3, 4, 5, and 9)**

---

## Structural Provisions of the CHBC

Gwenyth R. Searer, S.E.  
Wiss, Janney, Elstner Associates, Inc.

## The CHBC

- Primary focus of my talk: Structural
- Most engineers are not familiar with the CHBC.
- Even fewer engineers understand how the structural provisions of the CHBC work.
- It seems likely that most architects also do not understand the structural provisions.

## The Basics

## The Basics

- The CHBC is part of state law.
- The CHBC is part of Title 24 (Part 8).

## The Basics

- It is easy to mistakenly equate Part 2 (the CBC) as “regular code” and Part 8 (the CHBC) as something else (irregular??).\*
- The reality is that the CHBC complements Part 2 by dealing with historic buildings.
- The CHBC fills in a gap in the CBC, which does not address historic buildings.

## The Basics

- Section 3409, Historic Buildings, of the CBC:  
“The provisions in this code relating to the construction, repair, alteration, addition, restoration and movement of structures, and change of occupancy shall not be mandatory for historic buildings where such buildings are judged by the building official to not constitute a distinct life safety hazard.”

The term ‘distinct life safety hazard’ is not defined.

## Structural Provisions in the CHBC

- Intent:  
“to encourage the preservation of qualified historical buildings or structures while providing standards for a minimum level of building performance with the objective of preventing partial or total structural collapse such that the overall risk to life-threatening injury as a result of structural collapse is low.”
- All risk is not eliminated.
- The potential for damage is not eliminated.

## Structural Provisions in the CHBC

- Intent:  
“Broad judgment may be exercised regarding the strength and performance of materials not recognized by regular code requirements.”  
(Section 8-706.2)

## Structural Provisions in the CHBC

- Chapters 1, 2, 7, and 8 all contain structural provisions.
- Engineers are often tempted to jump to Chapters 7 and 8 of the CHBC and start there.
  - This is a mistake.
- The CHBC must be read like any other code.
  - Start at the beginning and follow the “charging language”.

## Structural Provisions in the CHBC

- So let’s talk about:
  - Repairs
  - Addressing Unsafe Conditions
  - Voluntary Strengthening / Reconstruction
  - Change of Use
  - Additions
  - Mandatory Strengthening

## Repairs

## Repairs

- Repairs:
  - Governed by Section 8-105:  
“Repairs to any portion of a qualified historical building or property may be made in-kind with historical materials and use of original or existing historical methods of construction, subject to conditions of the CHBC. (See Chapter 8-8).”
  - Chapter 8-7 (Structural Regulations) is not invoked.

## Repairs

- Repairs:
  - Also governed by Section 8-102.1.6, Additional Work:
 

"Qualified historical buildings or properties shall **not** be subject to additional work required by the regular code, regulation or ordinance beyond that required to complete the work undertaken..."

Upgrade triggers of Chapter 34 of the CBC (or the IEBC) do not apply.

## Addressing Unsafe Conditions

## Addressing Unsafe Conditions

- Unsafe:
  - Governed by Section 8-102.1.5:
 

"When a qualified historical building or property is determined to be unsafe as defined in the regular code, the requirements of the CHBC are applicable to the work necessary to correct the unsafe conditions. **Work to remediate the building or properties need only address the correction of the unsafe conditions, and it shall not be required to bring the entire qualified historical building or property into compliance with regular code.**"

## Addressing Unsafe Conditions

- Unsafe:
  - Defined in the CBC:
 

"Structures or existing equipment that are or hereafter become unsafe, insanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance..."

In administrative portion of the code - determined by the Building Official, not the engineer!

## Addressing Unsafe Conditions

- Dangerous:
  - Defined in the CBC:
 

"1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of the ground.  
or  
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads."

## Addressing Unsafe Conditions

- Dangerous:
  - Should be immediately apparent that a building is dangerous (i.e., no need for calculations)
  - Does not include earthquake loads, which are not service loads.
  - Structures are only potentially hazardous in the event of an earthquake.

Potentially hazardous  $\neq$  dangerous

## Addressing Unsafe Conditions

- Unsafe Recap:
  - Governed by Section 8-102.1.5.
  - Address the unsafe conditions and nothing more.
  - “Unsafe” is determined by the Building Official.
  - While “unsafe” includes “dangerous” conditions, it does not include “potentially hazardous” conditions like seismic deficiencies.

## Voluntary Strengthening / Reconstruction

## Voluntary Strengthening / Reconstruction

- Technically, charging language is missing from Chapter 1.
- However, Section 8-701.3 provides guidance: “The alternative structural regulations provided by Section 8-705 are to be applied in conjunction with regular code whenever a structural upgrade or reconstruction is undertaken for qualified historical buildings or properties.”

## Voluntary Strengthening / Reconstruction

- Section 8-702.1:  
Critical facilities (schools, hospitals, police and fire stations, etc.) shall not have a “lower level of safety of structural design and construction than that which is reasonably equivalent to the regular code provisions”

The corollary, of course, is that non-critical facilities may have a lower level of safety than the “regular” code.

## Voluntary Strengthening / Reconstruction

- Section 8-705 refers to Section 8-706, which caps lateral forces at 75 percent of current code design forces of new structures and prescribes further limits.
- Limits are intended to reduce destruction of historic elements from overzealous strengthening.

## Change of Use

## Change of Use

- Technically, charging language is again missing from Chapter 1.
- Change of use/occupancy is often considered to be a reason to upgrade a historic property.
- However, according to the plain wording of the CHBC, no structural upgrades are required.

## Change of Use

- Section 8-302.2:  
Use/occupancy may be changed, "...provided the qualified historical building or property conforms to the requirements applicable to the new use or character of occupancy as set forth in the CHBC. Such change in occupancy shall not mandate conformance with new construction requirements as set forth in regular code."

## Additions

## Additions

- Governed by Section 8-102.1.1:  
"It is the intent of the CHBC to allow nonhistorical expansion or addition to a qualified historical building or property, provided **nonhistorical additions shall conform to the requirements of the regular code.**"

## Additions

- Governed by Section 8-704:  
"New nonhistorical additions and nonhistorical alterations which are structurally separated from an existing historical structure shall comply with regular code requirements."

## Additions

- Governed by Section 8-704:  
...  
"New nonhistorical additions which impose vertical or lateral loads on an existing structure shall not be permitted unless the affected part of the supporting structure is evaluated and strengthened, if necessary, to meet regular code requirements."

## Additions

- So basically, if you want to construct an addition, make it **structurally independent** from the historic structure.

## Mandatory Strengthening

## Mandatory Strengthening

- Chapter 7 governs.
- Upgrade to 75 percent of current code.
- Limits are intended to reduce destruction of historic elements from overzealous strengthening.

## Mandatory Strengthening Example



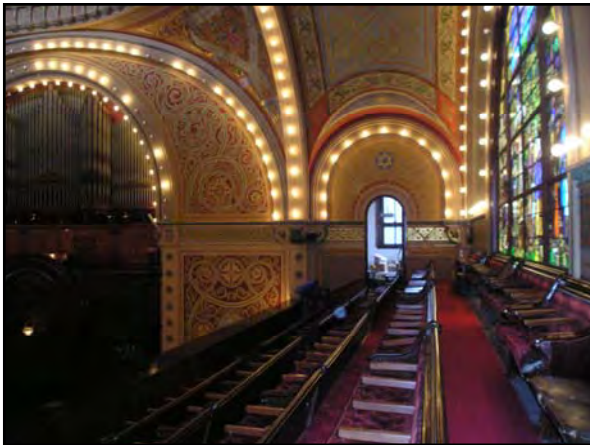
## Congregation Sherith Israel

- 1904 construction, designed by Albert Pissis



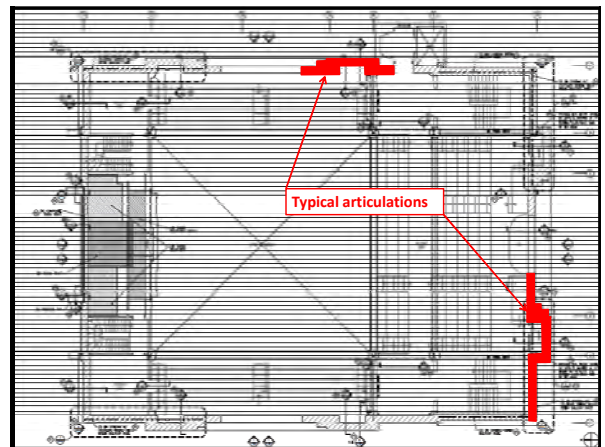
## Congregation Sherith Israel

- Interior murals by Attilio Moretti



## Construction

- Articulated brick masonry exterior walls (pilasters and massive masonry arches)
- Colusa sandstone exterior
- Interior steel framing supports dome, drum, and much of floor area
- Wood floor, roof, and ceiling joists
- Zinc-clad drum
- Slate roof



### URM Ordinance

- Noticed under San Francisco Unreinforced Masonry Building Ordinance (Chapter 16B)

### Proposed Solutions

- Two prescriptive-code solutions proposed by others:

- Add reinforced shotcrete overlay on interior side of masonry walls (destroying interior artwork)

OR

- Add reinforced shotcrete overlay on exterior side of masonry walls (destroying original stonework).

### Proposed Solutions

- Both solutions were too costly
- *Both would have destroyed the historic fabric of the structure they were intended to protect.*

### CHBC to the Rescue

- Fortunately, the building clearly falls under the provisions of the CHBC.
- Time for some “broad discretion”...

### San Francisco URM Ordinance

- Options:
  - Demolition
  - Building already complies
  - Retrofit using “Bolts-plus”
  - Strengthen to comply with CHBC

### San Francisco URM Ordinance

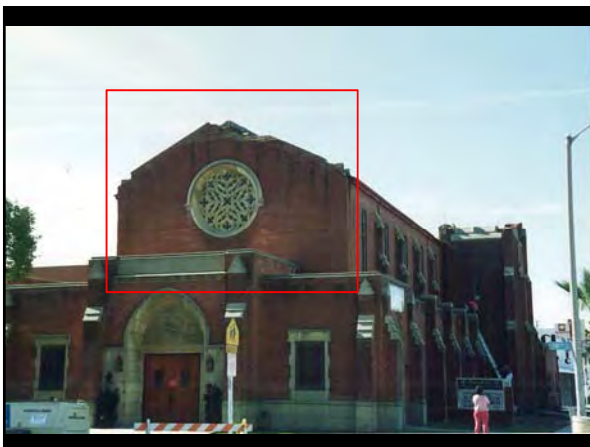
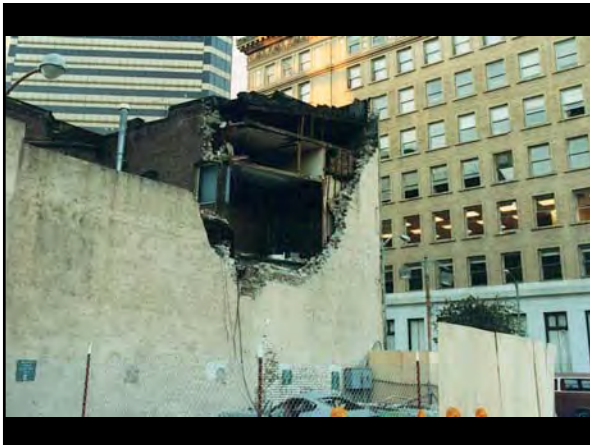
- Permits “bolts-plus” for most typical occupancies  
(tie-it-together philosophy: roof- and floor-to-wall ties and h/t compliance)
- Sherith Israel is a high occupancy facility\*  
 (“Bolts plus” not permitted)
- Sherith Israel is also a qualified historic structure.

## California Historical Building Code

- CHBC has prescriptive measures but permits/encourages rational alternative methods to be used.

Section 8-703.3: "Past historical records of the structure or similar structures may be used in the evaluation, including the effects of subsequent alterations."

## Response of Typical Unreinforced Masonry Bearing Wall Buildings to Earthquake Shaking (Generally)



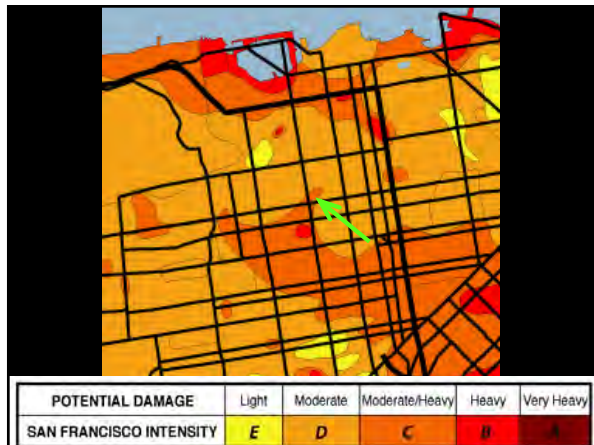
## California Historical Building Code

- So, one of the first questions we asked:

How did Sherith Israel perform during the 1906 earthquake?

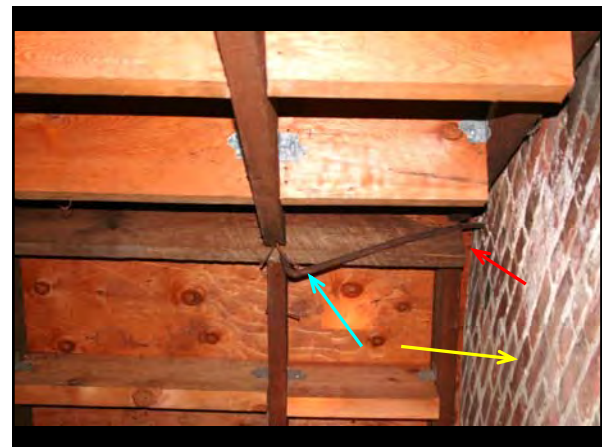
Section 8-703.3 (past historical records)

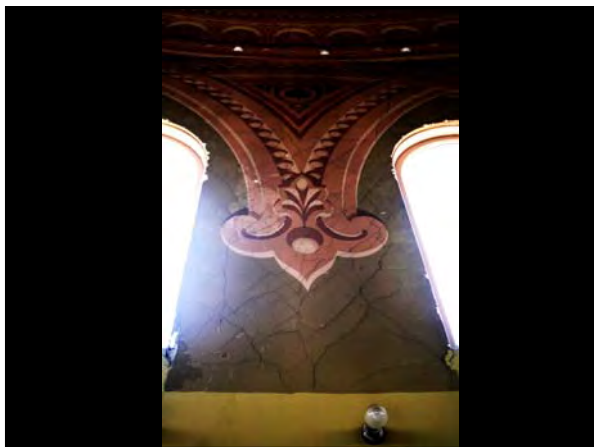
Section 8-705.1 (test of time)



## California Historical Building Code

- So damage potential from the 1906 earthquake was moderate to heavy at the site...
- How did the structure perform during this earthquake?





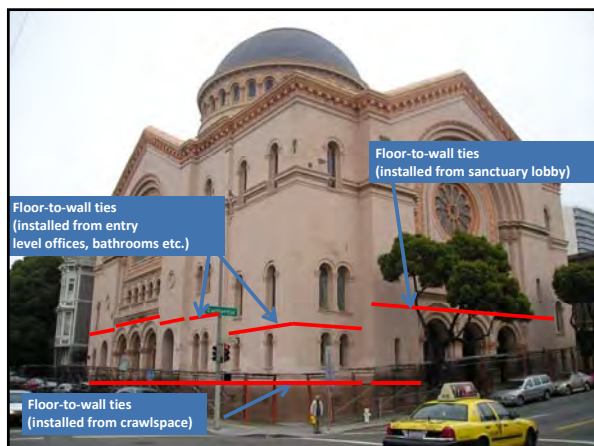
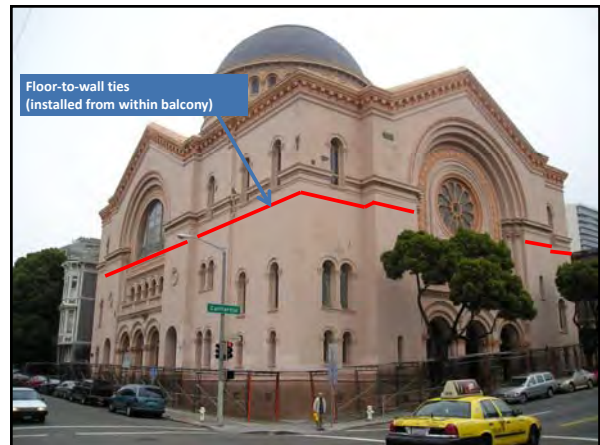
### California Historical Building Code

- Sherith Israel survived the 1906 earthquake with relatively minor damage.
- Fairly convincing evidence that the building is not as vulnerable as a lot of other unreinforced masonry buildings.
- Possible to leverage (not discount) building's strengths...

## Project Goals

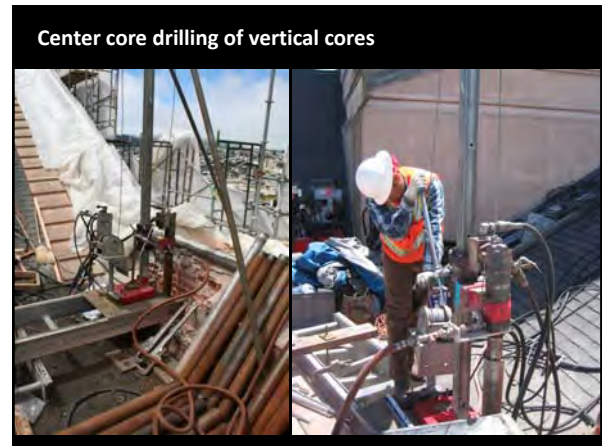
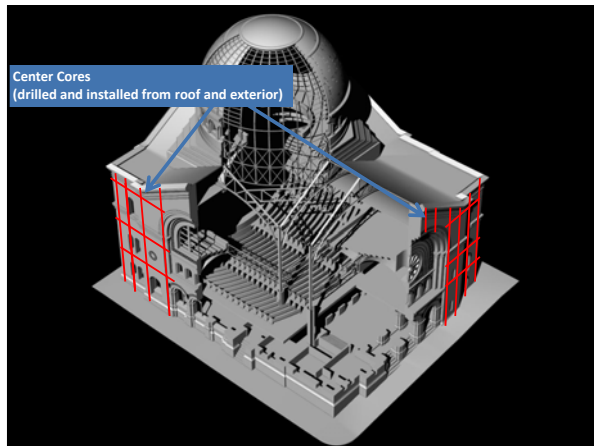
- Minimize impact to historic finishes
- Preserve and leverage original beneficial structural characteristics
- Comply with intent of URM Ordinance
- Comply with the CHBC
- Reasonable protection of life safety, not protection against damage
- To our knowledge, this was the first time the CHBC had been used to comply with SF's URM Ordinance.

## Recommended Improvements to Sherith Israel



## Center Cores

- Dry-cored holes (3-inch and 4-inch diameter) and polyester resin-based grout
- ~8,000 feet of cores, vertical and horizontal
- Typical core height: 60 to 75 feet
- Custom grout design to optimize performance and cost



### URM Ordinance vs. CHBC

- Ordinance was largely prescriptive.
- CHBC allowed "broad discretion".
- Eliminated overlay of shotcrete that would have destroyed either interior finishes or exterior stonework (i.e., prescriptive approach).
- Structure was tied together and reinforced to mitigate weaknesses.

### URM Ordinance v. CHBC

- Robustness of structure is markedly improved.
  - If it withstood 1906 earthquake unmodified...
- Risk to life-safety is dramatically improved without destruction of historic features.

### URM Ordinance v. CHBC

- Cost was affordable (shotcrete solutions were infeasible as well as unacceptable).
- City accepted the CHBC as a viable means of achieving the intent of and complying with the URM ordinance.

### Change in Use and SHBSB Interpretation Example

### Scribe Hacienda



### Scribe Hacienda

- Built 150 years ago
- Part of one of the first vineyards in the region
- Abandoned for years



### Scribe Hacienda

- Determined “eligible for the National Register of Historic Places” by Sonoma County
- Therefore, eligible for use of CHBC.



### Scribe Hacienda

- Restoration costs were excessive.
- We were asked to assist with use of CHBC to help reduce scope and cost of the project.



## Scribe Hacienda

- Basement walls
  - Soft, lime-based mortar
  - In generally good condition.
  - Calculated out as okay using presumptive minimums in the CHBC
  - Had withstood the “test of time”



CHBC Section 8-705.1 (Test of time)  
CHBC Section 8-703.3 (Historical records)

## Scribe Hacienda

- Building official requested load testing to verify that the presumptive minimum shear capacity allowed by the CHBC was appropriate
- And questioned whether the 9 psi capacity was even allowed to resist earthquake loads.



CHBC Section 8-805.1 (No testing req'd)

## Scribe Hacienda

- We asked the SHBSB to issue a written opinion confirming that:
  - The presumptive minimum shear capacity does not require testing.
  - This minimum is allowed to resist earthquake loads.

## Scribe Hacienda



## Scribe Hacienda

- Request for testing was withdrawn.
- CHBC helped keep foundation work to a minimum level, and helped keep the project within financial reach of the owners.



## Voluntary Alteration and Operational Controls Example

## Antelope Valley Indian Museum



## Antelope Valley Indian Museum

- Historic wood-framed structure, used as a museum
  - Built by H. Arden Edwards in the 1920s through 1930s
- Not engineered



## Antelope Valley Indian Museum

- Built in several phases, with absolute minimum of structural framing components and connections.
  - Mr. Edwards was a set-designer in Hollywood.
- Located in the Mojave Desert with no insulation.



## Antelope Valley Indian Museum

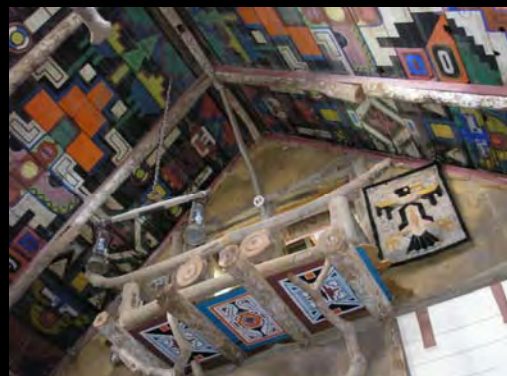
- Acquired by California Department of Parks and Recreation in 1979
  - Operated as a museum dedicated to preserving the Native American artifacts and unique folk art.
- Large temperature swings were causing deterioration in the collection.



## Antelope Valley Indian Museum



## Antelope Valley Indian Museum



## Antelope Valley Indian Museum

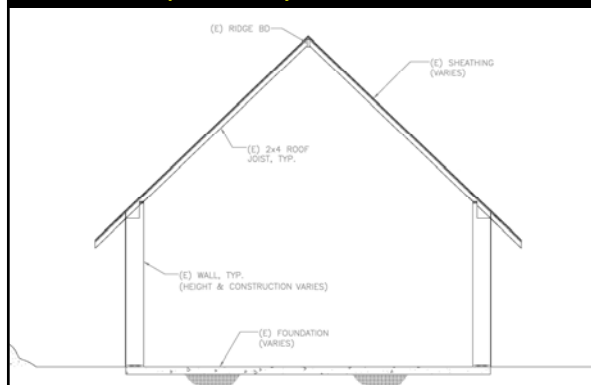


## Antelope Valley Indian Museum

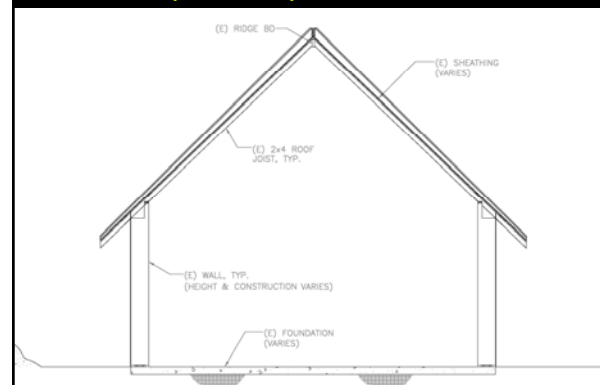
- Needed to be insulated.
  - Wall insulation added in stud cavities.
  - Artwork on underside of structural framing typically precluded addition of interior insulation.
  - Decision made to insulate roof on exterior.
    - Add tapered studs, tapered insulation, and new roof sheathing above existing framing and sheathing.



## Antelope Valley Indian Museum



## Antelope Valley Indian Museum



## Antelope Valley Indian Museum

- However, addition of new framing, sheathing, and insulation doubled the weight of the roof.
- Structure needed to be strengthened vertically and laterally.
- Used CHBC philosophy of doing as little damage as possible.



## Antelope Valley Indian Museum

- Operation controls

### DESIGN LOADS

ROOF LIVE LOAD: 12 PSF (MAXIMUM LOAD FOR ANY MEMBER)

11. DO NOT PLACE OR STORE CONSTRUCTION MATERIALS OR EQUIPMENT ON THE STRUCTURE THAT MAY DAMAGE FINISHES AND/OR OVERLOAD STRUCTURAL ELEMENTS. STRENGTHEN EXISTING STRUCTURAL ELEMENTS (VIA ADDITION OF STRAPS, CLIPS, CABLE TIE WIRES, AND CABLE GUY WIRES) PRIOR TO INSTALLING NEW TAPERED 2X8 JOISTS FOR INSULATION. EVEN AFTER STRENGTHENING, ROOF WILL NOT BE ABLE TO WITHSTAND THE FULL 20 PSF CODE DESIGN LIVE LOAD. CONTRACTOR MUST TAKE PRECAUTIONS TO DISTRIBUTE LIVE LOAD OVER ROOF AND NOT EXCEED THE CAPACITY OF THE ROOF FRAMING MEMBERS.

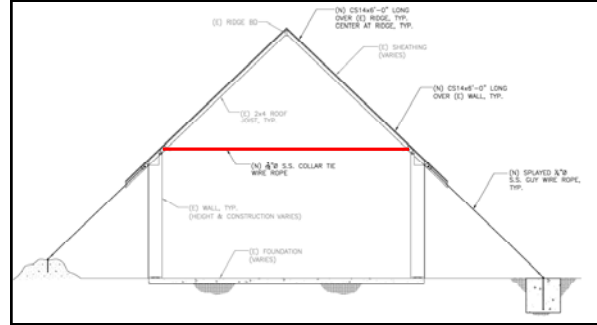
## Antelope Valley Indian Museum

- Worked with building official (DPR) to come up with a reasonable solution.
- Operational controls
  - Opted to design roof for 12 psf in lieu of 20 psf required for new construction.



## Antelope Valley Indian Museum

- Addition of wire rope collar ties



## Antelope Valley Indian Museum

- Addition of wire rope collar ties



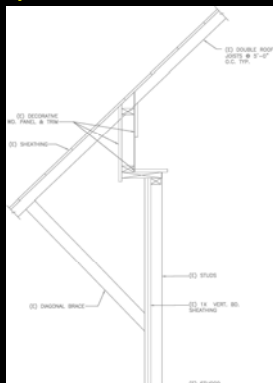
## Antelope Valley Indian Museum

- Addition of wire rope collar ties



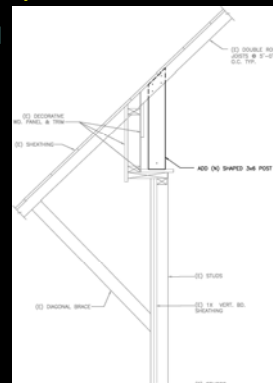
## Antelope Valley Indian Museum

- Address jog in wall



## Antelope Valley Indian Museum

- Address jog in wall



## Antelope Valley Indian Museum

- Address jog in wall



## Antelope Valley Indian Museum

- Address jog in wall



## Antelope Valley Indian Museum

- State wanted to improve seismic safety of building and increase in weight was significant.
- Area of high seismicity
  - $PGA_{475} = 0.42g$
  - $PGA_{2475} = 0.67g$



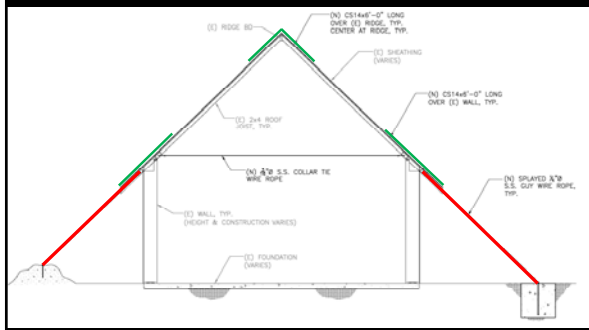
## Antelope Valley Indian Museum

- Considered addition of small steel moment frames
  - Disruptive and expensive
- Considered adding structural wood shear walls
  - Many locations where addition was not feasible



## Antelope Valley Indian Museum

- Addition of splayed wire ropes



## Antelope Valley Indian Museum

- Addition of splayed guy wire ropes



## Antelope Valley Indian Museum

- Addition of splayed wire ropes



## Antelope Valley Indian Museum

- Addition of splayed wire ropes



## Antelope Valley Indian Museum

- Addition of splayed wire ropes



## Antelope Valley Indian Museum

- Several advantages
  - Not intrusive
  - Reversible
  - Relatively inexpensive
  - Take both seismic and wind loads out at roof level



## AVIM Conclusions

- Philosophy of the CHBC was useful to limit the necessary strengthening.
  - Allowed use of judgment and broad discretion
  - Allowed development of creative solution
    - Within budget
    - Reasonable level of safety

## Repair Example

### James A. Garfield High School

- The CHBC can dramatically limit the amount of upgrades that are triggered as part of a repair.

### James A. Garfield High School



### Is Garfield High School Historic?

- cursory study prior to the fire.
- Was subjected to greater scrutiny after the fire.

### Is Garfield High School Historic?

- After fire, was found to be culturally significant.
  - Historic and cultural uses



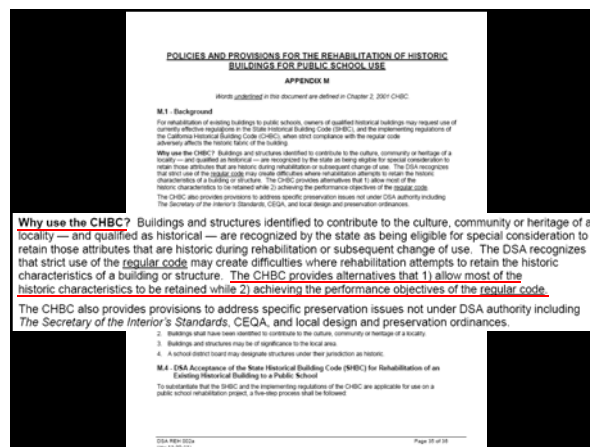
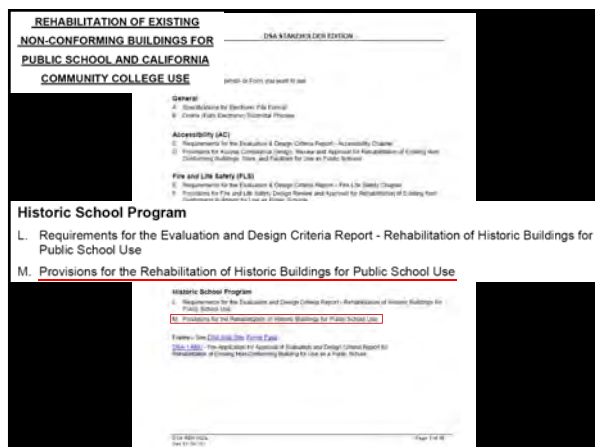
- Pre-fire auditorium architecture was also historic.

## Is Garfield High School Historic?

- Answer: **YES!**
- Although the school district had not designated the building as historic, it is eligible.

## What Code Governs Repairs?

- The Division of the State Architect (DSA) has jurisdiction over schools.
- The DSA is *legally required* to accept the use of the CHBC for qualified historic buildings, even for schools.



## What Code Governs Repairs?

- The school district reached out to the SHBSB to ask their opinion regarding code issues.

## What Code Governs Repairs?

- The school district reached out to the SHBSB to ask their opinion regarding code issues.
- Board's response:
  - Yes, the school district may designate the building as historic.
  - Yes, if the school district asks, the DSA can decide whether the building is historic and the CHBC applies.
  - No, if the district does not designate the building as a Qualified Historical Building, that does not remove architectural, cultural or other historical significance of the building.

## What Code Governs Repairs?

- CHBC:
  - Section 8-102.1.6: No additional work required beyond that needed to repair the building
  - Section 8-105.1: Repairs may be made in-kind with historical materials and methods
  - Section 8-801.3: Archaic materials and methods of construction may remain or be reinstalled
- In other words: Put it back the way it was.

## What Code Governs Repairs?

- In the case of fire damage to a school, repairs are also governed by other DSA rules that allow repair in like-kind.

## What Code Governs Repairs?

- Even with the considerable damage, both the CHBC and the DSA rules allow the building's structural system to be restored to its pre-fire condition.

## James A. Garfield High School

- District wanted newer and larger building.
- Demolished the structure.



## Repairs and the CHBC

- Lesson:
  - The CHBC cannot protect against an owner electing to destroy their building.
  - However, for those who are willing, it can eliminate some upgrade triggers and soften others.

## Conclusions

## Conclusions

- The CHBC is designed to preserve historic structures and limit the amount of structural intervention.
- The CHBC encourages giving credit to existing historic materials, grants broad discretion to the engineer and rarely, if ever, triggers wholesale upgrades of historic structures.

## Conclusions

- Use of the CHBC– particularly structural provisions – is not always straightforward.
- Most engineers are not familiar with the CHBC and are likely to screw it up if given free rein.
- The CHBC could use an overhaul to make its use and its intent more clear.

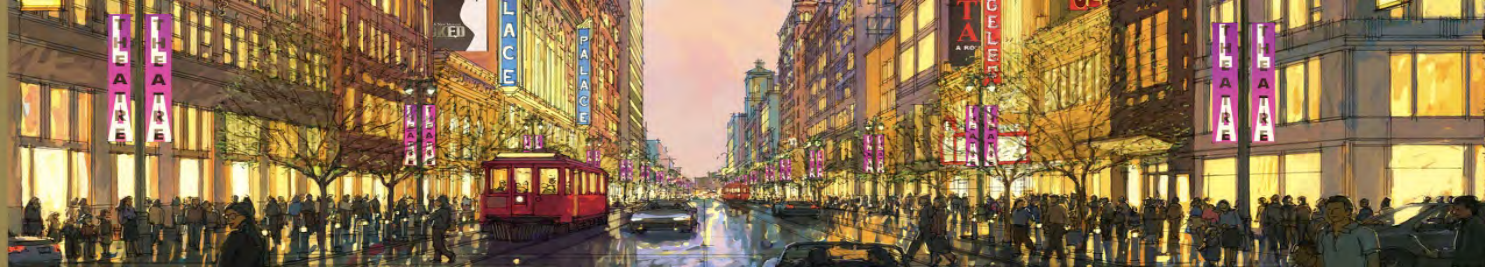
## Any Questions?



Los Angeles City Councilmember  
José Huizar

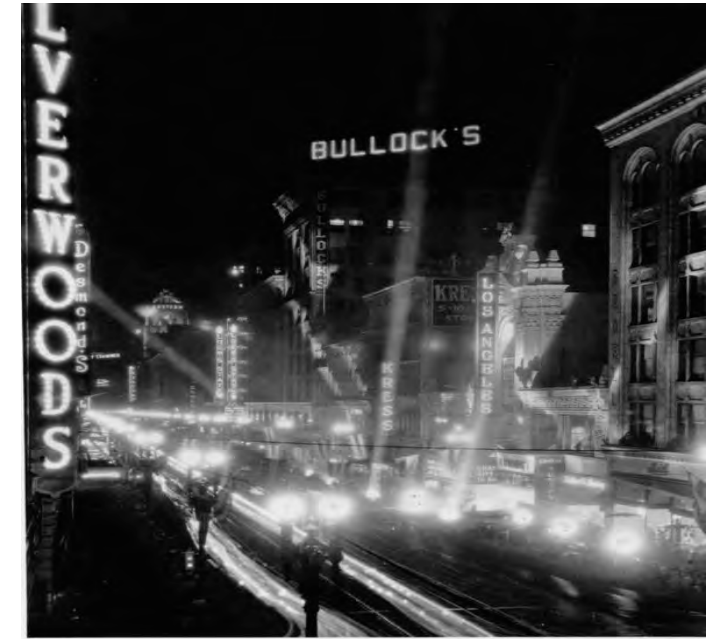
# BRINGING BACK BROADWAY™

# BRINGING BACK BROADWAY™

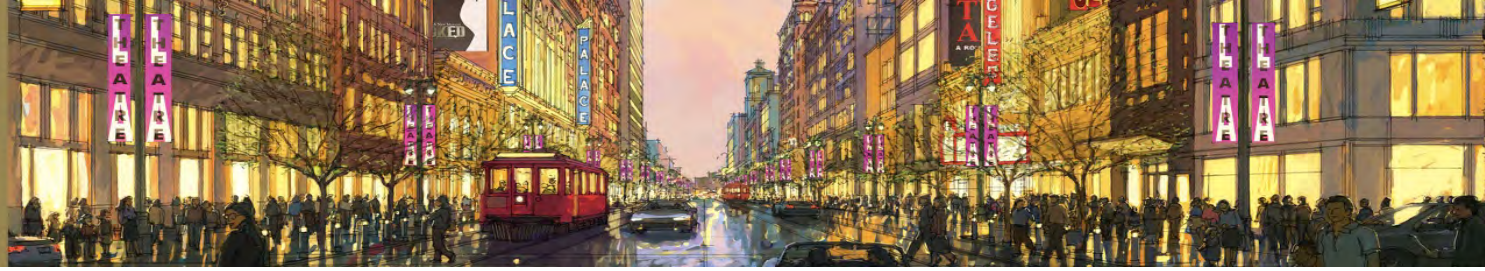


## BROADWAY THEN

- Birthplace of vaudeville and entertainment in L.A.
  - Marx Brothers, Bob Hope, Houdini, Bing Crosby, Jack Benny, Will Rogers, Charlie Chaplin, Eddie Cantor, Lena Horne, George Burns & Gracie Allen, Duke Ellington, Judy Garland, and W.C. Fields
- 12 historic theatres in 9 blocks / National Register historic district
- Former commercial capital of the U.S.
  - First Broadway Department Store (3rd / Bway)
  - Flagship stores for Bullocks, May Company, Fifth Street Store & others
- Terminus for Route 66 & hub of world-renowned streetcar system



# BRINGING BACK BROADWAY™

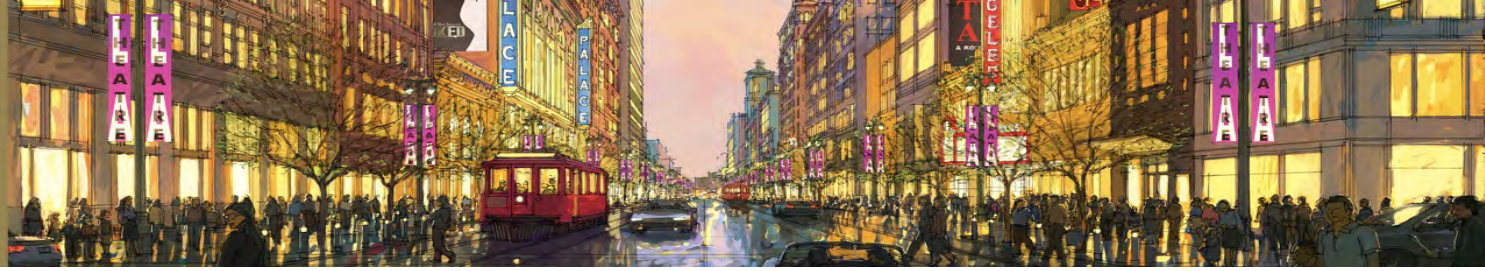


## BROADWAY – NEED FOR THE INITIATIVE

- Steady decline over several decades
  - Upper floors emptied out
  - Sidewalk infrastructure in great disrepair
  - Ground floor slowly lost anchors, retail @20% vacancy
  - Shoppers attracted to other areas, for ease and convenience
  - Can't support a district with ground floor only
  - Only two theatres open for regular programming
- 1,395 housing units in or going in on Broadway
- More than 1M square feet vacant in upper floors
  - No jobs, no revenue, no support for revitalization
- Not connected to the rest of Downtown – “invisible line”

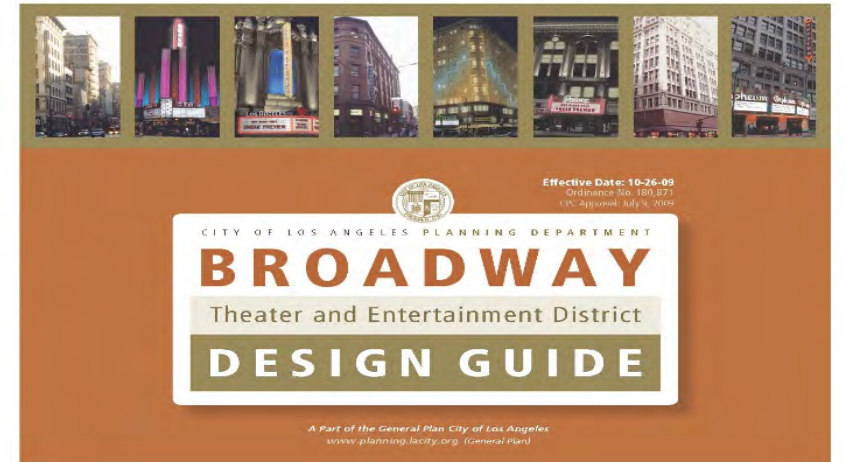


# BRINGING BACK BROADWAY™



## ENTERTAINMENT OVERLAY & DESIGN GUIDE

- Incorporates Urban Design Guidelines & the Historic Lighting Element developed previously, but which were not made city policy.
- Public-Private working group developed and drafted
- Numerous public workshops and outreach
- Ordinance adopted by City Council Sept. 2009
- Guides private development – new and existing:
  - Prioritizes historic preservation and pedestrian experience
  - Develops cohesive look for design, lighting, signage, and the appearance of buildings, storefronts and facades
  - Supports entertainment / cultural uses
  - Encourages neon & historic materials
  - Grandfathers in any permitted, non-compliant conditions

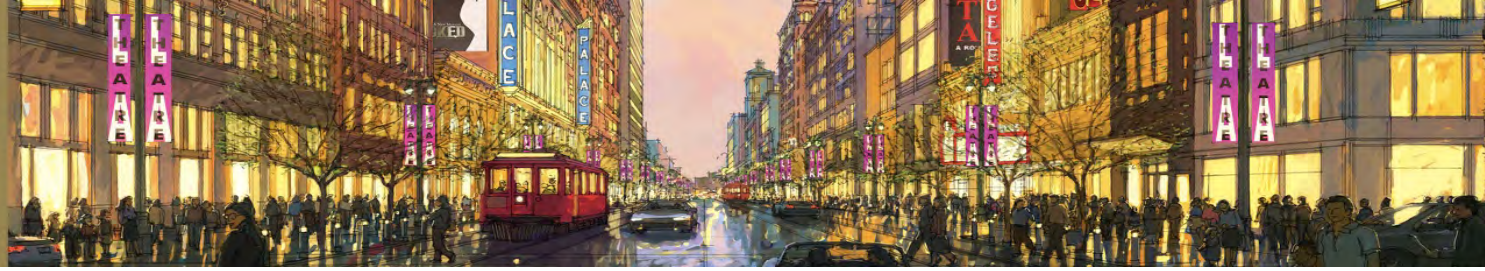


# BRINGING BACK BROADWAY™

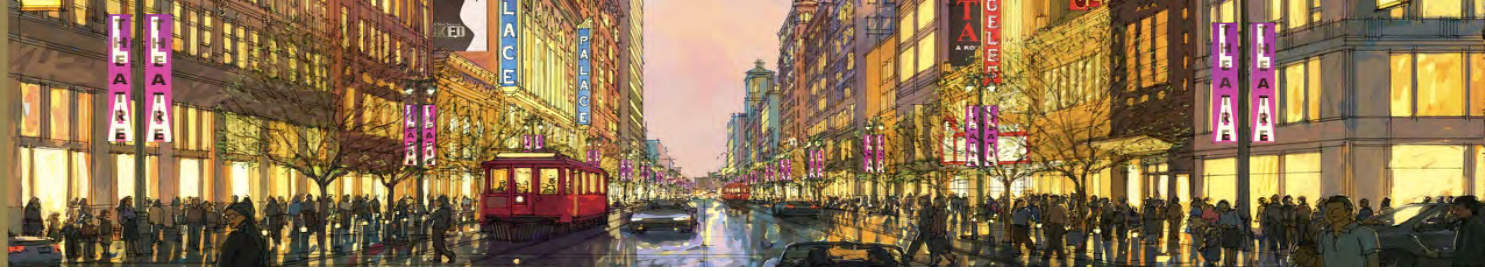
## ENTERTAINMENT OVERLAY & DESIGN GUIDE



## TWO BOOTS PIZZA



# BRINGING BACK BROADWAY™



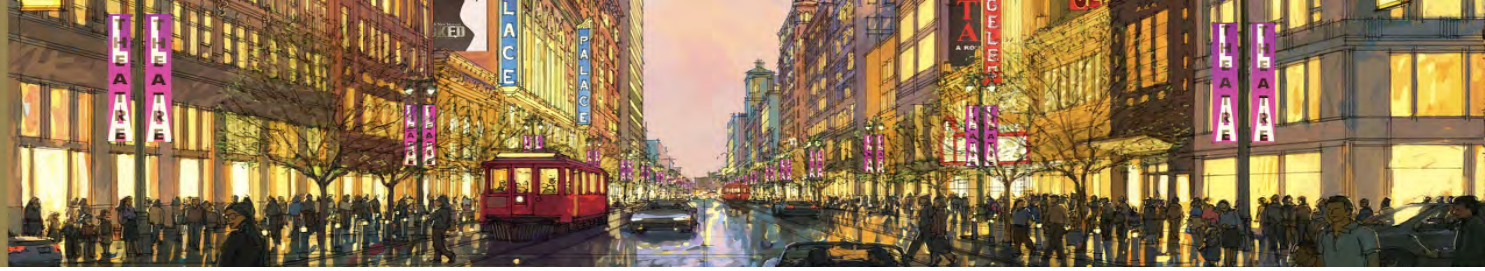
## ENTERTAINMENT OVERLAY & DESIGN GUIDE



**The Chapman Building**

# BRINGING BACK BROADWAY™

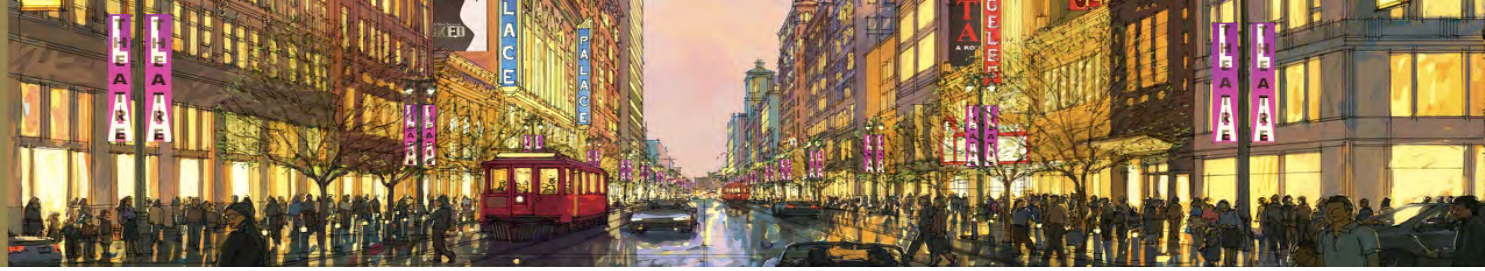
## ENTERTAINMENT OVERLAY & DESIGN GUIDE



**Ross Dress for Less**  
Now open



# BRINGING BACK BROADWAY™



## STREETSCAPE MASTER PLAN

### *Putting Broadway on a “Road Diet”*

Prioritizes people over cars with a reduction in traffic lanes with sidewalk extensions & 24-hour parking/loading to support Broadway businesses.

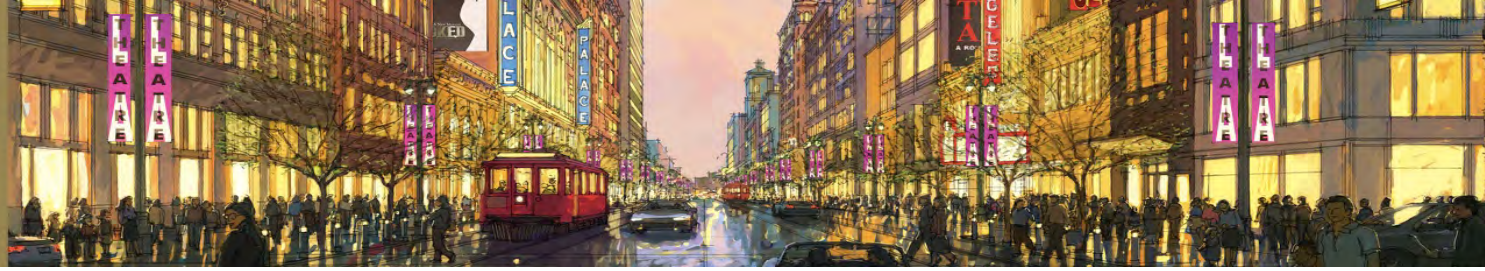
- Promotes calmer traffic flow and increased pedestrian activity – good for business
- Plan developed 2009-2010 with environmental cleared in 2012
- Phase 1 funding approved by Council in 2013
- “Dress Rehearsal” now completed
- Permanent construction as funding is available



*— Los Angeles —*  
**STREETCAR!**  
MOVING L.A. FORWARD



# BRINGING BACK BROADWAY™

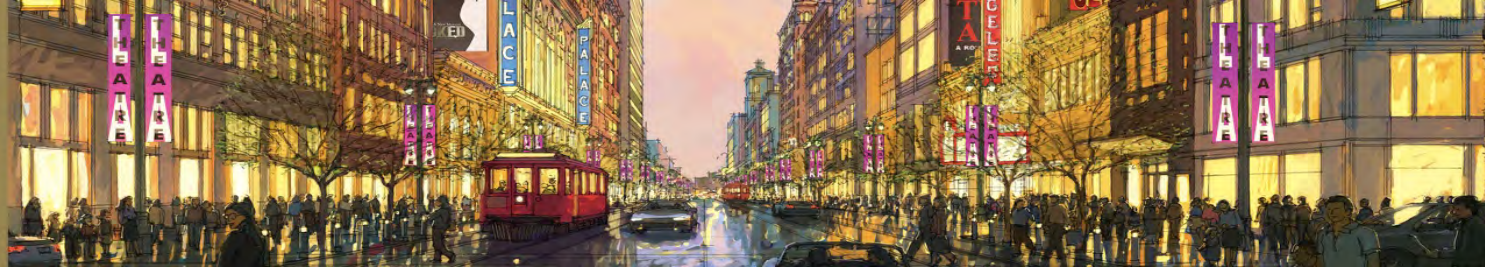


## BROADWAY SIGN DISTRICT – CURRENTLY BEING DRAFTED

- Will allow replacement of signs which were historically present, but are no longer allowed by current code
- Rights for revenue-generating signs will be used as an economic incentive to reward already completed reactivation of buildings and discourage vacancy and blight, so we can achieve an active district from storefront to rooftop once again.
- Public meetings to discuss draft ideas coming soon.



# BRINGING BACK BROADWAY™



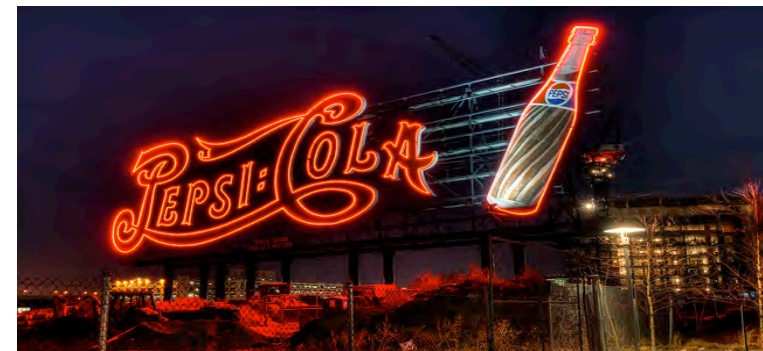
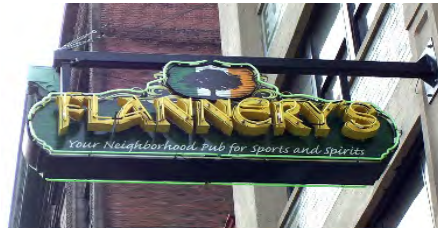
## BROADWAY SIGN DISTRICT – CURRENTLY BEING DRAFTED

### ENCOURAGES

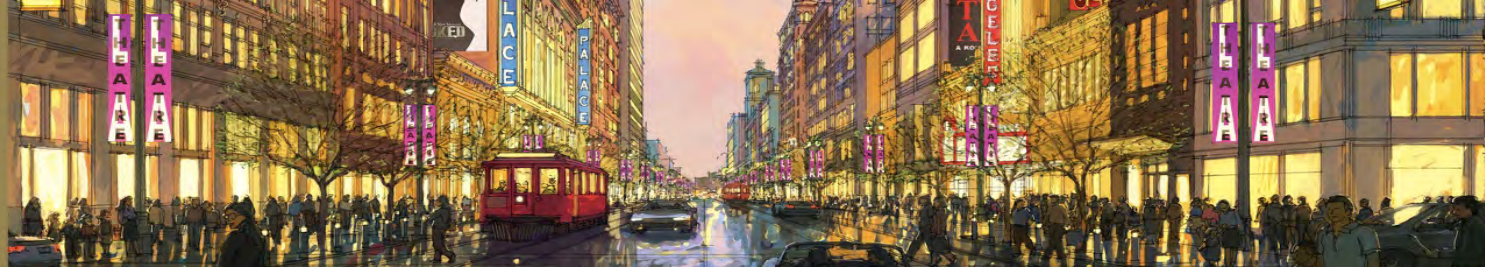
- Blade Signs
- Neon
- Painted Wall Signs
- Open Panel Roof Signs
- Pedestrian Signs
- Sequential Lighting Elements
- Sculptural elements

### PRESERVES

- Ghost Signs
- Murals



# BRINGING BACK BROADWAY™



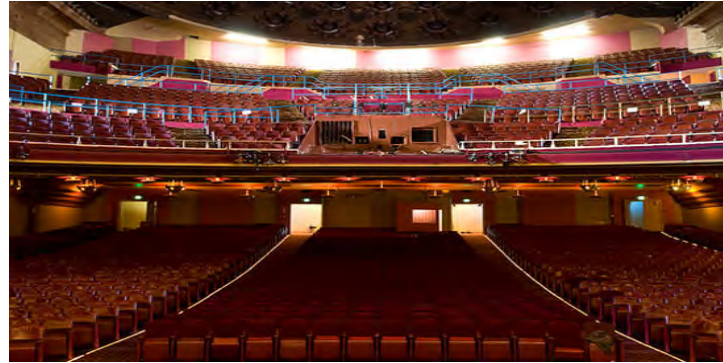
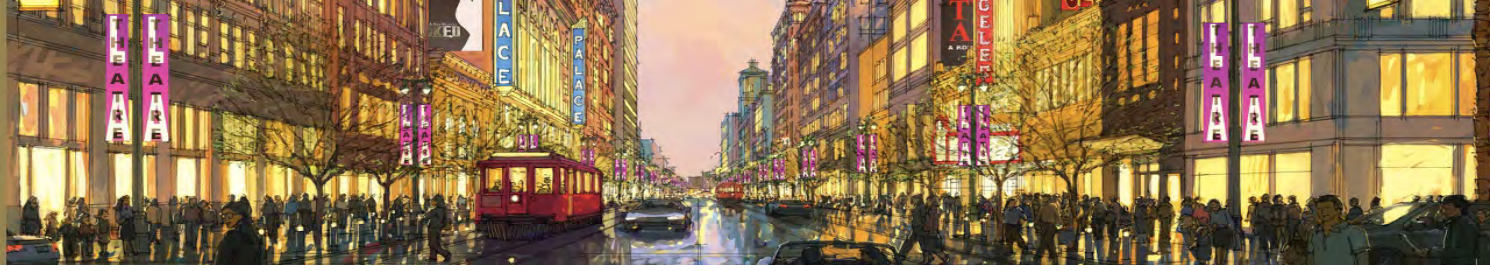
## BUSINESS SUPPORT & JOB CREATION

- 15-20% vacancy rate on Broadway is decreasing.
- Recruiting new businesses and offering support for those who are already here
- Supporting existing economic engines – including fashion, retail, restaurants
- Cutting red tape with departments
- More than 500 new jobs. Thousands more to come!



# BRINGING BACK BROADWAY™

## BUSINESS SUPPORT & JOB CREATION



BRINGING BACK  
**BROADWAY**™



NIGHT ON  
**BROADWAY**

JANUARY 31, 2015  
*from 5PM to 10PM*

*Food, Entertainment, Culture, Arts.  
Celebrating 7 Years of Councilmember Huizar's  
Bringing Back Broadway*

**BROADWAY, 3<sup>RD</sup> St. to 11<sup>TH</sup> St. — DTLA**  
**FREE EVENT — ALL AGES**

# BRINGING BACK BROADWAY™



© Herb West



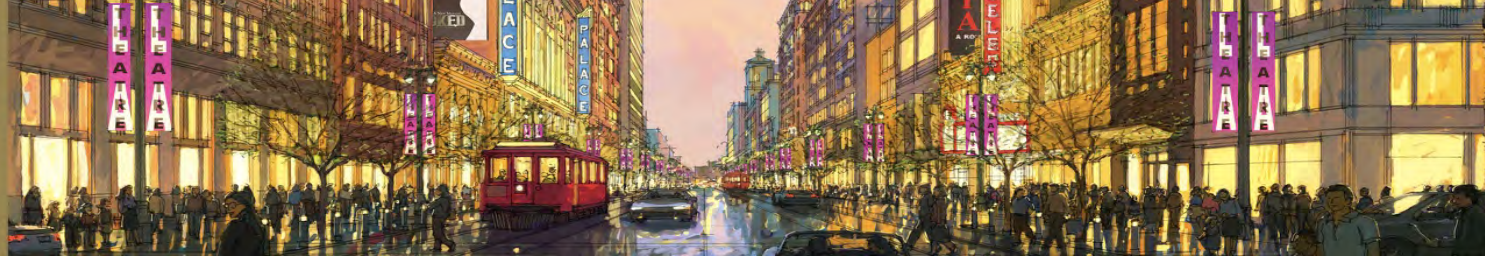
© Stephen Russo



© Stephen Russo



# BRINGING BACK BROADWAY™



## COMMERCIAL REUSE – UPPER FLOOR REACTIVATION



- 1 million sq. ft. Vacant in upper floors
- No jobs, no support for ground floor retail. Not sustainable.
- Caused by City's own laws decades ago (high rise retrofit agreements)
- Motion introduced Nov. 2008
- Worked with private sector code experts, LAFD and LADBS
- Guidelines now provide a roadmap for implementation of CA Historical Building Code, providing flexibility, certainty and collaboration.
- Specific Plan Checkers in LAFD & LADBS for these projects.

# 430 BROADWAY BUILDING

## Existing 58,000 sqft. 6-Story Building

Originally constructed in 1906 - contributor to historic district

- Ground floor currently used as retail, basement used for parking
- Upper floors vacant (assume expired C of O for office)

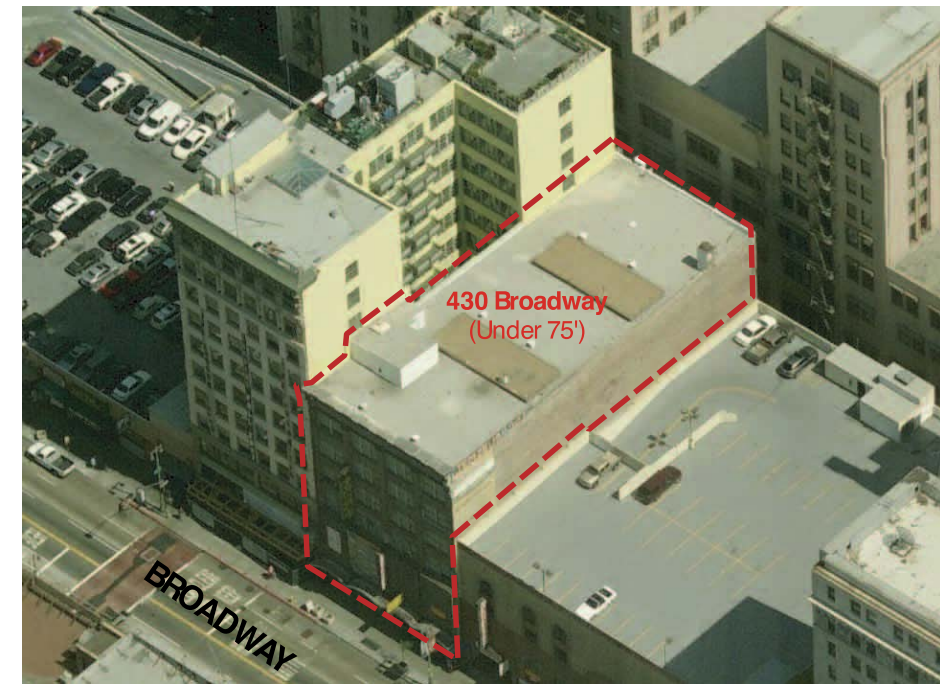
## Proposed Program:

**Option 1:** Re-occupy second floor only as a creative office space.

- Does not meet ADA, 2 existing elevators are non-operational

**Option 2:** Renovate entire building per Secretary of Interior Standards

- Art gallery on 2nd Floor (A-occupancy w/ only 1 stairwell)
- Creative office space on floors 3-6
- Parking in basement to remain.

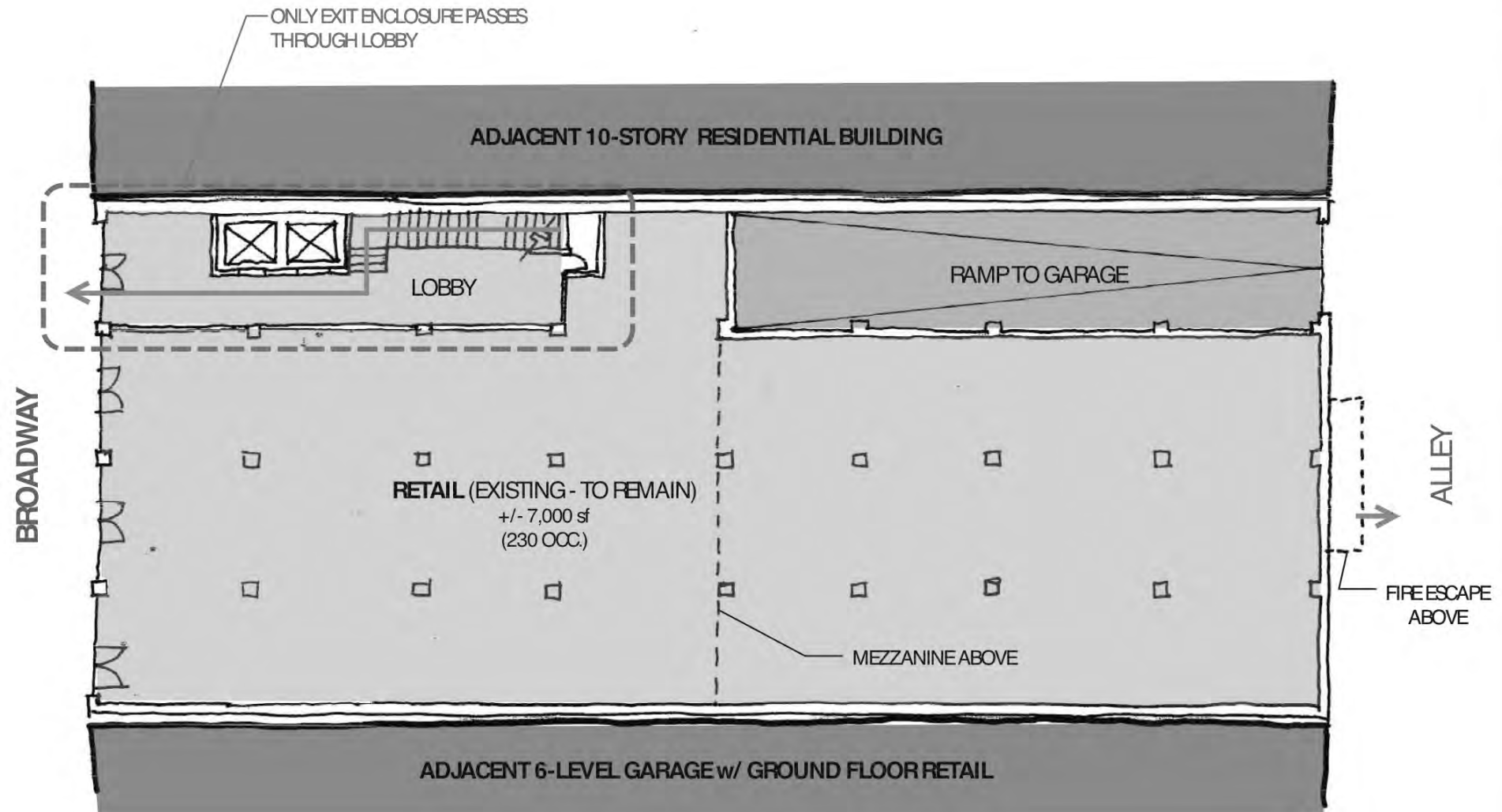


## Commercial Re-Use Ordinance - Case Studies

Prepared by: Tom Steidl, AIA

Initial Draft

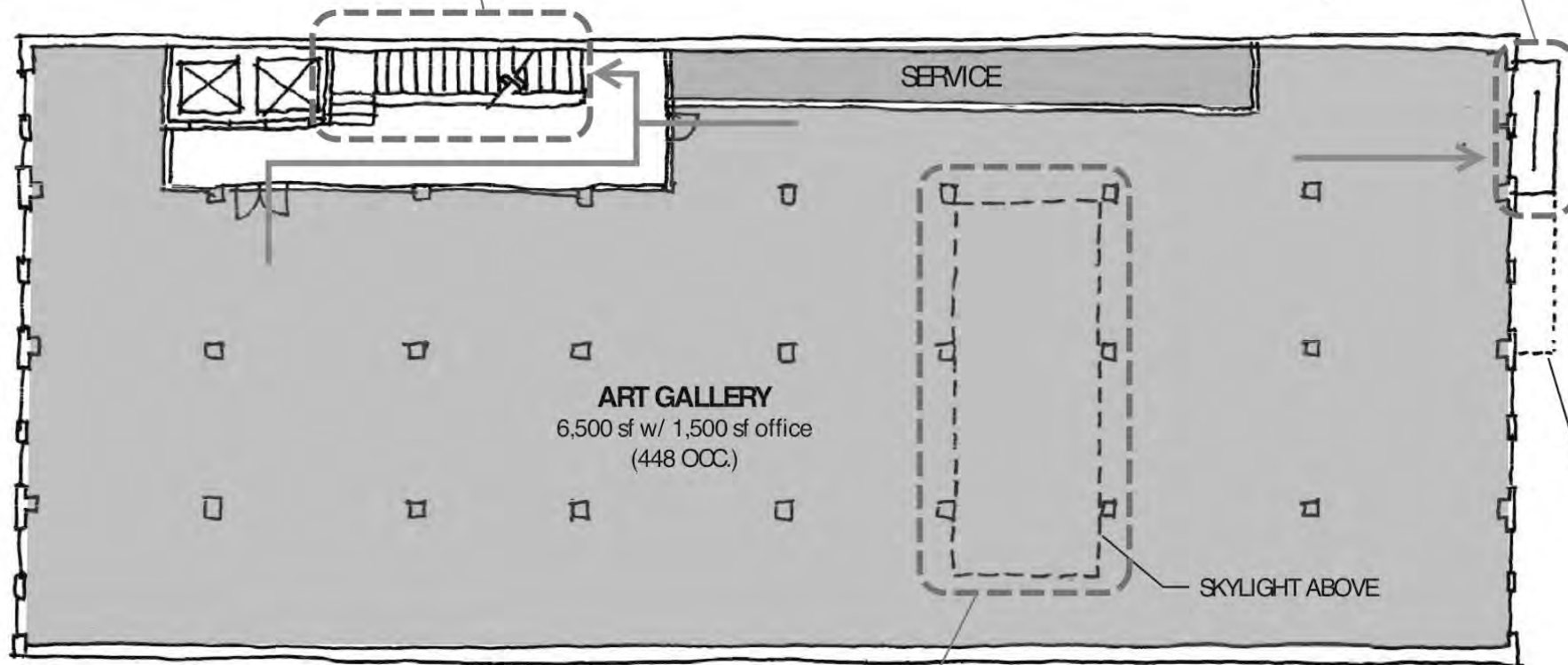
March 31, 2009



BROADWAY

STAIRWELL OPEN BETWEEN FLOORS &  
TO ELEVATOR LOBBY

ASSEMBLY USE w/ FIRE ESCAPE AS  
2ND MEANS OF EGRESS



SERVICE

**ART GALLERY**

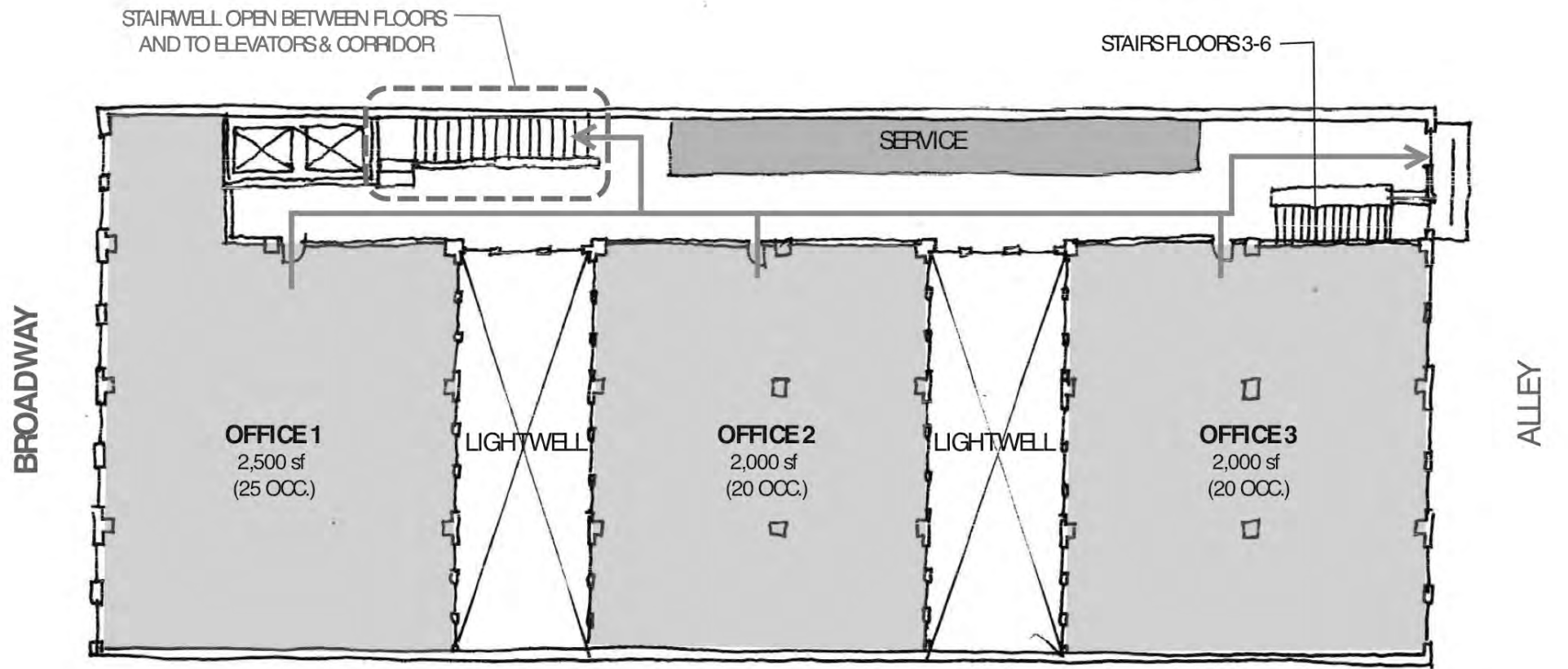
6,500 sf w/ 1,500 sf office  
(448 OCC.)

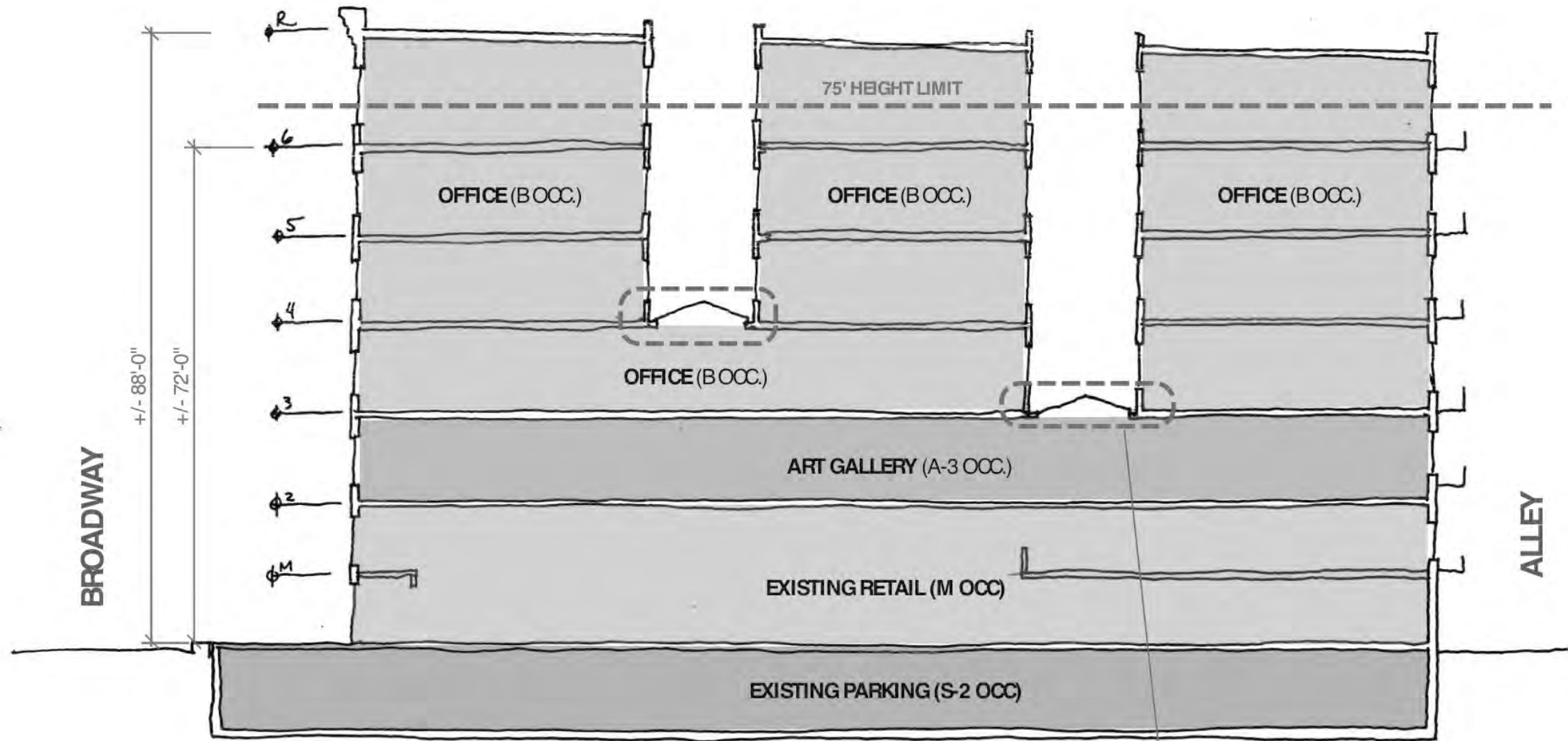
SKYLIGHT ABOVE

ALLEY

DIFFICULT TO PROVIDE AIR INTAKE  
AT BOTTOM OF LIGHTWELL

FIRE ESCAPE SHIFTS  
@MEZZ





DIFFICULT TO PROVIDE AIR INTAKE  
AT BOTTOM OF LIGHTWELL PER 1206.3.2.

# Commercial Reuse Ordinance Response from LADBS and LAFD rev. 6/16/09

Problem	Proposed Solution(s) Per Industry	Low-Rise		High-Rise		Other Possible Options
		Similar Use other than A occupancy	Change Use to A, E and R	Similar Use other than A occupancy	Change Use to A, E and R	
1	Exit Stairways w/o Enclosure for more than 2 stories	- Adopt IEBC	CBSC <sup>2</sup>	CBSC <sup>2</sup>	CBSC <sup>2</sup>	1. Apply "Compliance Alternatives" approach <sup>1</sup> per Section 3410 or in lieu of Ordinance to adopt Section 3410, apply for a Modification per a case by case basis from
		- Sprinkler Building Throughout	OK	Ordinance <sup>1</sup>	Ordinance <sup>1</sup>	
		- 1-Hour Doors	OK	Ordinance <sup>1</sup>	Ordinance <sup>1</sup>	
		- Allow 1 existing Stairwell, in lieu of providing required number of stairwells				
2a	Substitute Fire Escapes for Required Second Stairwells	- Allow				
2b	Stairwells Not Continuous to Public Way	- Enclose stairwell & no mingling of path of travel				
		- Fire sprinkler throughout				
3	Assembly Occupancies on Upper Floor w/1 Stairwell & 1 Fire Escape	- Increase allowable square footage beyond 750 square feet for certain limited uses: art galleries, yoga studios, roof decks, and consider as "B" occupancies				
		- Set maximum occupancy limits based on specific uses (art gallery, yoga studio, roof deck, etc.)				
4	Partial Change of Use to a Less or Equivalent Occupancy to Not Trigger Change of Use Provisions of Code	- Follow IEBC				
		- Determine that historic theaters returned to use as either a performing arts or movie theater is not a change of use.				

Problem	Proposed Solution(s) Per Industry	Low-Rise		High-Rise		Other Possible Options
		Similar Use other than A occupancy	Change Use to A, E and R	Similar Use other than A occupancy	Change Use to A, E and R	
5	Waive accessibility requirements to unused upper floors not serviced by a functional elevator	- Ground existing elevators	Ordinance <sup>1</sup> ??	Ordinance <sup>1</sup> ??	Ordinance <sup>1</sup> ??	
		- Re-occupied floors to otherwise meet accessibility requirements	Ordinance <sup>1</sup> ??	Ordinance <sup>1</sup> ??	Ordinance <sup>1</sup> ??	
6	Allow Existing Openings at Property Lines	- Follow ARO guidelines for existing buildings	OK by Right	Ordinance <sup>1</sup>	OK by Right	
7	Approach to high-rise buildings with theaters attached (To not apply high rise code package to the Theater portion)	- Allow openings to be used for light & ventilation if easement is granted from adjacent property owner.	OK			
		- Consider as two separate buildings if separated by 2-hour rated assembly horizontal and vertical if building is fully fire sprinklered.	NA			
8	Smoke Control (added LADBS and LAFD)	- Determine that basements are part of low-rise building if no assembly use	???			
9	Fire Control Room (added by LADBS and LAFD)		???			
10	Dead End Corridor (added by LADBS and LAFD)		???			
11	Combining Residential with Jewelry Manufacturing in the Same Building (610 Broadway, KL)		Not Allowed per the Current Code. See At			

Problem	Proposed Solution(s) Per Industry	Low-Rise		High-Rise		Other Possible Options
		Similar Use other than A occupancy	Change Use to A, E and R	Similar Use other than A occupancy	Change Use to A, E and R	
12	Stair is unenclosed at Ground Floor through the elevator lobby (610 Broadway and Issue #2 for 722 Broadway, KL)	???				1. Max 50% of Exits may go through an Elevator Lobby provided the other required exit is fully enclosed (not a fire escape) 2. If 2nd Exit is a fire escape, then all openings into the elevator lobby must be rated and smoke-sealed. 3. If it code.
13	Exit Separation (Issue 4, 722 Broadway, KL)	See Plan				Ordin
14	Dead End Corridor (Issue 4, 722 Broadway, KL)	See Plan				OK pr occup otherw Ordin
15	DWP Vault (Issue #3 for 722 Broadway, KL)	See Plan				NA for LAFD, for Po
16	Grease Interceptor (Issue 7 for 722 Broadway, KL)	See Plan				Sanita
17	Grease Exhaust (Issue #6 for 722 Broadway, KL)	See Plan				Ordina Revok over th
18	New Openings at Property Line for Light and Ventilation (Issue #8 for 722 Broadway, KL)	Allow without Easement				Ordina
19	Roof Exiting (Issue #9 722 Broadway, KL)	Keep as B occupancy (under 750 sf), allow Fire Escape and 1 complying stairway				See 2s

Problem	Proposed Solution(s) Per Industry	Low-Rise		High-Rise		Other Possible Options
		Similar Use other than A occupancy	Change Use to A, E and R	Similar Use other than A occupancy	Change Use to A, E and R	
20	Roof Exiting - Accessibility (Issue #9 722 Broadway, KL)	See DAD	See DAD	See DAD	See DAD	
21	Accessibility - (Issues #9, 10 and 11, 722 Broadway, KL)	See DAD	See DAD	See DAD	See DAD	
22	Wood in High Rise Buildings (Issues 12 for 722 Broadway, KL)	NA	NA	Allowed provided it complies with High Rise Requirements	Allowed provided it complies with High Rise Requirements	
23	Structural Upgrades (Issue 13 for 722 Broadway, KL)	Clarification Requested: evaluate for structural code issues when Type III is not allowable				
24	Issue #14 for 722 Broadway, KL - several building/fire guidelines	Pattern after Div 85	Ordinance <sup>1</sup>	Ordinance <sup>1</sup>	Ordinance <sup>1</sup>	

FOOTNOTES:

1. California Health and Safety Code may be required to be amended as a condition precedent this ordinance for any code provisions less stringent than the California Building Code.
2. California Building Standards Commission
3. Provided compliance with High Rise Retrofit Ordinance
4. Unless each assembly area occupancy is less than 50 occupants

# BRINGING BACK BROADWAY™



## COMMERCIAL REUSE – UPPER FLOOR REACTIVATION

### 5 YEAR PROCESS



Motion  
Introduced

Technical Working  
Groups Convened

Regular meetings,  
but little progress



Reconvened focused on  
implementing CA State  
Historic Building Code

**SUCCESS!**  
Bulletin completed  
Dec. 2013  
Press Conference  
to Celebrate

Late 2008

2009

2010

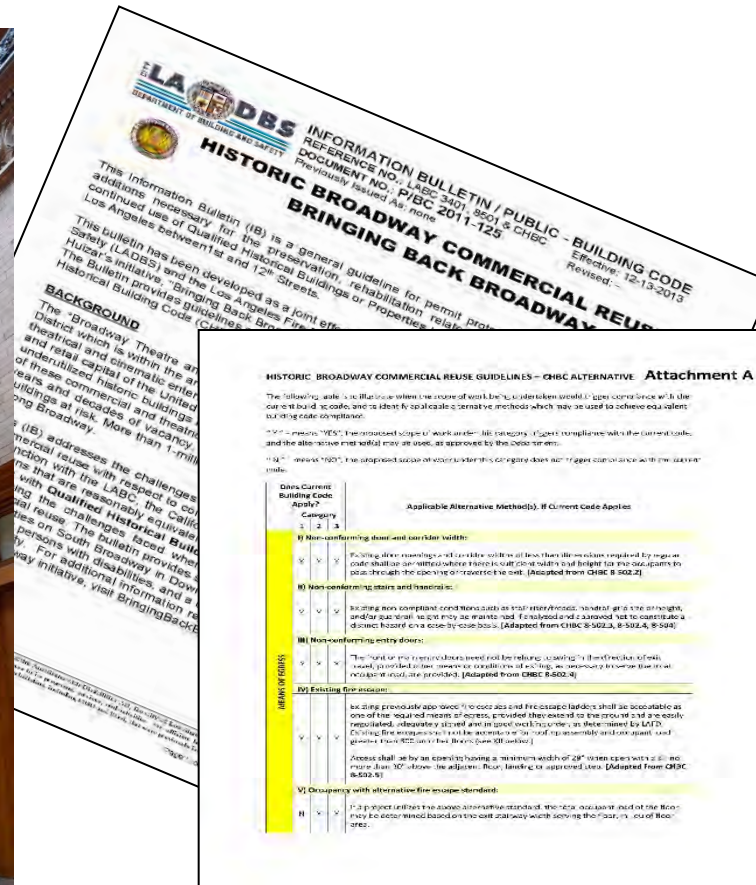
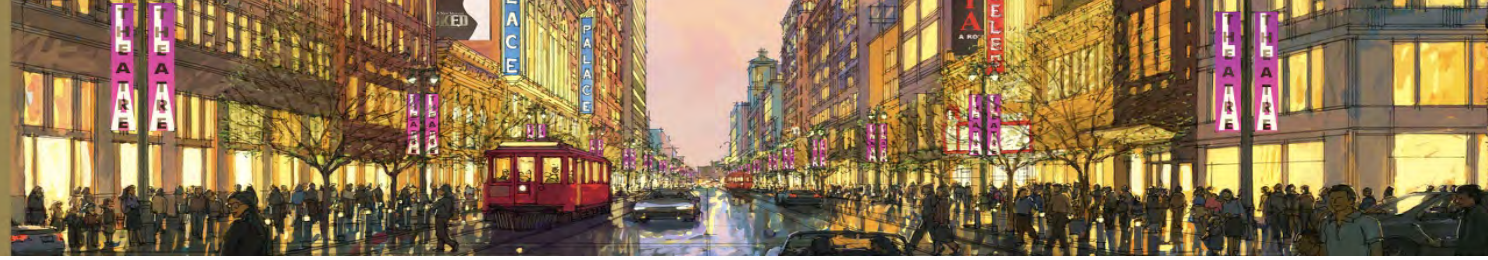
2011

2012

2013

# BRINGING BACK BROADWAY™

## COMMERCIAL REUSE – UPPER FLOOR REACTIVATION



### KEYS TO SUCCESS

- Deciding not to recreate the wheel – Ordinance vs. Bulletin
- City Attorney interpretation – we needed a roadmap
- Buy-In from Departments
- Applying common sense
  - Law is law
  - Determine requirements based on existing situation
  - Departmental training and developer outreach necessary



## **HISTORIC BROADWAY COMMERCIAL REUSE BRINGING BACK BROADWAY**

This Information Bulletin (IB) is a general guideline for permit protocol on repairs, alterations and additions necessary for the preservation, rehabilitation related construction, change of use or continued use of Qualified Historical Buildings or Properties located on South Broadway in Downtown Los Angeles between 1st and 12<sup>th</sup> Streets.

This bulletin has been developed as a joint effort of the Los Angeles Department of Building and Safety (LADBS) and the Los Angeles Fire Department (LAFD), in response to Councilmember José Huizar's initiative, "Bringing Back Broadway," to encourage the reactivation of Broadway's buildings. The Bulletin provides guidelines and assistance related to the implementation of the California State Historical Building Code (CHBC).

### **BACKGROUND**

The "Broadway Theatre and Entertainment District" (ZI No. 2408) is a National Register Historic District which is within the area covered by these guidelines. Broadway is known as the birthplace of theatrical and cinematic entertainment in Los Angeles and previously was considered the commercial and retail capital of the United States. Today, Broadway suffers from one of the largest inventories of underutilized historic buildings in the nation. Due to their 19th century design and functionality, many of these commercial and theatrical buildings have fallen to substandard levels of fire/life safety during years and decades of vacancy, and many can no longer be legally occupied, putting neighboring buildings at risk. More than 1-million square feet of commercial space remains vacant in upper floors along Broadway.

This (IB) addresses the challenges when historical buildings are undergoing change of use and/or commercial reuse with respect to compliance with the current Los Angeles Building Code (LABC). In conjunction with the LABC, the California Historical Building Code (CHBC) may be used to provide solutions that are reasonably equivalent to the regular code (as defined in CHBC Chapter 8-2) when dealing with **Qualified Historical Buildings or Properties**, and can be used to provide flexibility in addressing the challenges faced when historic buildings are undergoing change of use and/or commercial reuse. The bulletin provides solutions for the preservation of Qualified Historical Buildings or Properties on South Broadway in Downtown Los Angeles, and provides guidelines for life-safety, access for persons with disabilities, and a cost-effective approach to preservation, and also promotes sustainability. For additional information regarding efforts of Councilmember José Huizar's Bringing Back Broadway initiative, visit [BringingBackBroadway.com](http://BringingBackBroadway.com).

- iv. Verification of plan check comments:
  - a) For the Over-the-Counter Plan Check, return to one of the LADBS Construction Service counters to obtain the building permit.
  - b) For the Regular Plan Check, schedule an appointment with the designated Plan Check Engineer to address corrections and obtain a building permit.

Note: Separate Mechanical and/or Electrical permits may also be required for the project. Additional permitting procedures and code requirements on mechanical, electrical, plumbing, elevator and fire sprinkler permits may be obtained at the LADBS Construction Services Center counters.

#### **HISTORIC BROADWAY COMMERCIAL REUSE GUIDELINES**

Attachment A of this IB, "Historic Broadway Commercial Reuse Guidelines", may be used to provide guidance to determine fire/life safety and building code. This document provides guidance on how to apply alternative methods of the CHBC for the commercial reuse of historical buildings. These Guidelines interpret some of the requirements for each category to utilize alternative methods per the CHBC, so that if compliance with the current code is triggered by the project, a set of applicable alternative methods may be used. The commercial reuse of historic buildings has been categorized as listed below:

#### **Categories:**

- Category 1. This is the least intensive category of commercial reuse project.  
Reactivation of the historical use or change of use to a less hazardous group shall not mandate conformance with the new construction requirements as set forth in the current code, provided the qualified historic building or property conforms to the requirements applicable to the new reactivated use or character of occupancy as set forth in the CHBC.  
Category 1 projects are:
  - Reactivation of any previously permitted use, AND/OR
  - Change of use to a less hazardous occupancy group.
- Category 2. Category 2 projects are :
  - Alteration to existing building resulting in an increase of occupant load, OR
  - Change of use to a more hazardous group.
- Category 3. Category 3 projects are:
  - Alteration to existing building resulting in an increase of occupant load, AND
  - Change of use to a more hazardous group.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities. For efficient handling of information internally and in the internet, conversion to this new format of code related and administrative information, bulletins including MGD and RGA that were previously issued will allow flexibility and timely distribution of information to the public.

## **SECTION A: BASIC GUIDELINES FOR EXISTING BUILDINGS:**

The following basic guidelines shall be applied to each category of commercial reuse projects covered in these guidelines.

### **I. Helipad:**

New helipads are not required for existing buildings.

### **II. Rooftop Egress:**

Any new assembly use on a rooftop will require at least 2 means of egress which are not fire escapes. New occupied roofs shall be provided with exits in compliance with the current code [LABC Sec.1021].

### **III. Fire Alarm Systems:**

Every qualified historic building or property shall be provided with fire alarm systems as required for the occupancy by the current Building Code [CHBC 8-409]. Other technologies including fire alarm systems, smoke and heat detection systems, occupant notification and annunciation systems, smoke control systems and fire modeling, timed egress analysis and modeling, as well as other engineering methods and technologies may be accepted by the enforcing agency to address areas of non-conformance on a case-by-case basis [CHBC 8-411].

### **IV. High Rise Retrofit Ordinance:**

High rise buildings cited as part of Ordinance Nos. 163836 and 165319 must meet the City's High Rise Retrofit Ordinance or may comply with the current Plumbing Code, when floors above the ground floor are to be occupied.

### **V. Green Building Code Compliance:**

Additions of any size and/or alterations more than \$200,000 shall be subjected to the green building code requirements. If the historical significance or character defining features are threatened, alternative provisions for access may be applied and will be considered on a case by case basis.

### **VI. Disabled Access Compliance:**

Section 1134B of the LABC shall be used in conjunction with Section 8-6 of the CHBC to achieve access for people with disabilities.

### **VII. Rooftop Garden:**

Rooftop gardens for the purposes of urban farming shall not be considered an assembly use or occupancy. Rooftop gardens shall be made accessible to persons with disabilities.

## HISTORIC BROADWAY COMMERCIAL REUSE GUIDELINES – CHBC ALTERNATIVE Attachment A

The following table is to illustrate when the scope of work being undertaken would trigger compliance with the current building code, and to identify applicable alternative methods which may be used to achieve equivalent building code compliance.

“ Y ” – means “YES”, the proposed scope of work under this category triggers compliance with the current code, and the alternative method(s) may be used, as approved by the Department.

“ N ” – means “NO”, the proposed scope of work under this category does not trigger compliance with the current code.

Does Current Building Code Apply?				Applicable Alternative Method(s), If Current Code Applies
Category				
1	2	3		
MEANS OF EGRESS	I) Non-conforming door and corridor width:			
	Y	Y	Y	Existing door openings and corridor widths of less than dimensions required by regular code shall be permitted where there is sufficient width and height for the occupants to pass through the opening or traverse the exit. <b>[Adapted from CHBC 8-502.2]</b>
	II) Non-conforming stairs and handrails:			
	Y	Y	Y	Existing non-compliant conditions such as stair riser/treads, handrail grip size or height, and/or guardrail height may be maintained if analyzed and approved not to constitute a distinct hazard on a case-by-case basis. <b>[Adapted from CHBC 8-502.3, 8-502.4, 8-504]</b>
	III) Non-conforming entry doors:			
	Y	Y	Y	The front or main entry doors need not be rehung to swing in the direction of exit travel, provided other means or conditions of exiting, as necessary to serve the total occupant load, are provided. <b>[Adapted from CHBC 8-502.4]</b>
	IV) Existing fire escape:			
	Y	Y	Y	Existing previously approved fire escapes and fire escape ladders shall be acceptable as one of the required means of egress, provided they extend to the ground and are easily negotiated, adequately signed and in good working order, as determined by LAFD. Existing fire escapes shall not be acceptable for rooftop assembly and occupant load greater than 300 on other floors (see XII below.)  Access shall be by an opening having a minimum width of 29" when open with a sill no more than 30" above the adjacent floor, landing or approved step. <b>[Adapted from CHBC 8-502.5]</b>
	V) Occupancy with alternative fire escape standard:			
	N	Y	Y	If a project utilizes the above alternative standard, the total occupant load of the floor may be determined based on the exit stairway width serving the floor, in lieu of floor area.

's modern systems for new construction that require separate vestibules for positive and negative pressure throughout the entire building.





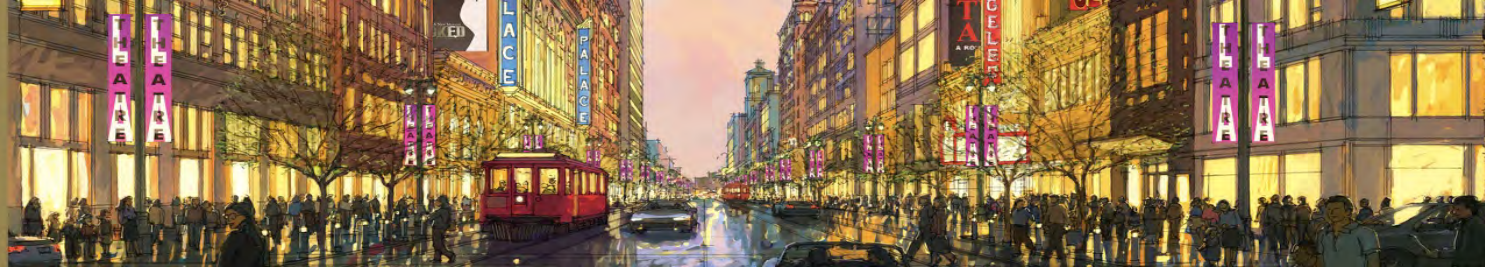








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## COMMERCIAL REUSE – UPPER FLOOR REACTIVATION

