REACHING FOR THE STARS – FILLING SECOND STORIES ON MAIN STREET

CHERRY/SEE/REAMES, ARCHITECTS, PC
A Quick Look at 2nd Floor Requirements in Historic Building

- We’ll discuss only 2 story buildings (codes are different for higher structures)
- Type of occupancy (by function) matters
- Numbers of occupants matters
- Historic buildings can get exceptions….it depends....
- Talk with your building official and the SHPO early and often
Basic Principles

• Buildings need to be safe for the people that use them.
• Buildings need to be available to everybody, regardless of physical or mental abilities.
• Codes are developed to accomplish the above principles.
• From an economic standpoint, an owner wants as many people as possible to use all floors of the building.
## Occupant Load Varies with Function

<table>
<thead>
<tr>
<th>Function of Space</th>
<th>Floor Area in SF/Occupant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly w/o fixed seats</td>
<td>7</td>
</tr>
<tr>
<td>Business areas</td>
<td>100</td>
</tr>
<tr>
<td>Day Care</td>
<td>50</td>
</tr>
<tr>
<td>Educational CR</td>
<td>20</td>
</tr>
<tr>
<td>Mercantile (grade floor)</td>
<td>30</td>
</tr>
<tr>
<td>(upper floors)</td>
<td>60</td>
</tr>
<tr>
<td>Residential</td>
<td>200</td>
</tr>
</tbody>
</table>
**Example of a 2000 sf 2\textsuperscript{nd} Floor**

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<tr>
<th>Function of Space</th>
<th>SF/Occupant</th>
<th>Occupants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly w/o fixed seats</td>
<td>7</td>
<td>288</td>
</tr>
<tr>
<td>Business areas</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Day Care</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>Educational CR</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Mercantile (grade floor) (upper floors)</td>
<td>30</td>
<td>67</td>
</tr>
<tr>
<td>Residential</td>
<td>200</td>
<td>10</td>
</tr>
</tbody>
</table>
Does This 2 Story Rehab Require a 2\textsuperscript{nd} Exit Stair?

• Yes, if 2\textsuperscript{nd} floor has more than 49 occupants AND the functions are: Assembly, Business, Classrooms, Fabrication (non-hazardous), Mercantile (Retail), and a few others

Does it Require a 3\textsuperscript{rd} Exit Stair?
Yes, if it had an Occupant loads of 501 to 1,000.

There are exceptions. Ex. Big breaks if building is sprinkled.
Does This Building Reutilization Require an Elevator?

- An elevator will make your 2nd story space more attractive to tenants and customers.
- “Alterations: Elevator exemption: ….elevators are not required to be installed during alterations in facilities under three stories or with fewer than 3,000 sf per floor, unless it is a shopping center; professional office of a health care provider…..”

Section III-6-3000, “ADA Title III Technical Assistance Manual.”

[www.ada.gov/rechingout/title313.html](http://www.ada.gov/rechingout/title313.html)
• “3411.9 Historic buildings ..................................................
Where compliance with the requirements for accessible routes, entrances or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the applicable governing authority, the alternative requirements of (it lists sections) for that element shall be permitted.”

- 2009 International Building Code, chapter on existing structures
Considerations for Exceptions to Accessibility and Safety Codes

Exceptions can be granted for eligible and registered historic building renovations by building officials.

- Will the alteration for accessibility damage the historic significance?
- Can alternative methods be used to achieve accessibility and safety?
- How many occupants are impacted?
- Are equal accommodations offered on the ground floor? (especially useful for offices)
- Is it “technically infeasible” to install an elevator?
- Can a LULA elevator be used?
- Can’t make building less safe nor less accessible. Duh!
PROJECT PROCESS

WHAT ARE THE OPTIONS FOR BUILDING USE?
WHAT IS THE ZONING? (ASK THE BLDG. PERMIT OFFICE)
WHAT WILL THE LOCAL MARKET SUPPORT? (STUDY YOUR COMMUNITY; TALK TO REALTORS)
IS THE PROPOSED FUNCTION A CHANGE OF OCCUPANCY? (KICKS OFF SOME CODE REQUIREMENTS)

HIRE A PRESERVATION ARCHITECT
DISCUSS OPTIONS TO REFINE LIST OF FUNCTIONS
ARCH. DOES CODE ANALYSIS TO REFINE LIST FURTHER BASED ON EXISTING BUILDING
ARCH. DETERMINES IF CODE EXCEPTIONS ARE NEEDED FOR CERTAIN FUNCTIONS
WHAT ARE THE CHARACTER DEFINING FEATURES? (ASK THE SHPO)

MEET W/ BUILDING OFFICIAL
IS THE CODE OFFICIAL COMFORTABLE WITH PROPOSED CODE EXCEPTIONS? DOCUMENT OUTCOME.
FINALIZE FUNCTIONS TO BE DESIGNED IN THE RENOVATION

TYPICAL PRESERVATION ARCHITECTURE DESIGN PROCESS
Schematic Design
Design Development
Construction Documents
Bidding or Negotiation
Construction

DESIGN PROCESS
PRE-DESIGN PROCESS
Area of Refuge

• “An area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation.” Section 1002, Definitions, 2009 IBC.

• Fire-rated walls, floors, & roof, plus telephone

• Discuss with Building Official
Limited Use/Limited Application (LULA) Elevators

• 25 feet maximum travel
• 18 square feet maximum car size
• 35 feet per minute maximum speed
• 1400 lb. maximum load capacity

• Lula Elevators
  - Lula Nationwide Lifts: lula-elevators.com
  - Garaventalift: garaventalift.com
  - Able Access Lifts, Inc: www.ableaccesslifts.com
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