

# State Requirements for a S.E. to Design Structures

Structural Engineering Licensing Summit

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# Requirements for SE to Design Structures

## *Oregon* (Significant Structures)

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### ➤ Essential Facilities:

Ground area > 4,000 SF, or > 20' in height including:

- Hospitals and other medical facilities having surgery and emergency treatment areas;
- Fire and police stations
- Tanks or other structures containing, housing or supporting water or fire-suppression materials or equipment required for the protection of essential or hazardous facilities or special occupancy structures;
- Emergency vehicle shelters and garages;
- Structures and equipment in emergency-preparedness centers;
- Standby power generating equipment for essential facilities; and
- Structures and equipment in government communication centers and other facilities required for emergency response.

# Requirements for SE to Design Structures

## *Oregon* – cont'd

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### ➤ Special Occupancy Structures:

- Covered structures whose primary occupancy is public assembly with a capacity greater than 300 persons
- Buildings with a capacity greater than 250 individuals for every public, private or parochial school through secondary level or child care centers
- Buildings for colleges or adult education schools with a capacity greater than 500 persons
- Medical facilities with 50 or more incapacitated resident patients
- Jails and detention facilities
- All structures and occupancies with a capacity greater than 5,000 persons

# Requirements for SE to Design Structures

## *Oregon* – cont'd

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- Hazardous Facilities:  
Structures housing, supporting or containing sufficient quantities of toxic or explosive substances to be of danger to the safety of the public if released
- Buildings Customarily Occupied by Human Beings:  
> 4 stories, or 45' above average ground level
- Structures with Irregular Features:  
As determined by the Director of the Dept. of Consumer and Business Services

# Requirements for SE to Design Structures

## ***California***

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- Public Schools
- Hospitals

# Requirements for SE to Design Structures

## *Nevada*

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### ➤ Essential Facilities:

- Buildings > 3 stories in height
- Buildings > 45' in height (measured from bottom of lowest footing)

### ➤ Structures Requiring Special Expertise:

Including radio towers, and signs over 100' in height

# Requirements for SE to Design Structures

## ***Illinois***

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All structures

# Requirements for SE to Design Structures

## ***Hawaii***

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All structures except the following:

- Private non-concrete & non-steel one-story structures with an estimated cost  $\leq$  \$40,000
- Private non-concrete & non-steel two-story structures with an estimated cost  $\leq$  \$35,000
- Private one-story residential structures with an estimated cost  $\leq$  \$50,000
- Private two-story residential structures with an estimated cost  $\leq$  \$45,000



# Requirements for SE to Design Structures

## ***Washington*** (Significant Structures)

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### ➤ Essential Facilities:

Ground area > 5,000 SF, and 20' in mean roof height, defined as:

- Medical facilities having surgery & emergency treatment areas
- Fire and police stations
- Emergency vehicle shelters and garages
- Structures in emergency preparedness centers
- Structures in government communication centers and other facilities requiring emergency response
- Aviation control towers & emergency aircraft hangars
- Structures having critical national defense functions
- Structures containing or supporting water or fire suppression material or equipment required for protection of essential or hazardous facilities or special occupancy structures

# Requirements for SE to Design Structures

## ***Washington*** – cont'd

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- Buildings Customarily Occupied by Human Beings:  
5 stories or more above average ground level
- Special Occupancy Structures:  
Buildings and other structures where more than 300 people congregate in one area.
- Hazardous Facilities:  
Structures housing explosive substances to be of danger to the safety of the public

# Requirements for SE to Design Structures

## ***Washington*** – cont'd

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- Tall Structures:  
> 100' in height above average ground level
- Bridges:  
Total span > 200' and piers with surface area > 10,000 SF

# Requirements for SE to Design Structures

## **Utah** (Significant Structures)

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### ➤ Structures with Hazard to Human Life:

- Structures whose primary occupancy is public assembly with an occupant load > 300
- Structures with elementary or secondary school, or day care facilities with an occupant load >250
- Structures with an occupant load > 500 for colleges or adult education facilities
- Healthcare facilities with occupant load  $\geq 50$  resident patients, but not having surgery or emergency treatment facilities
- Jails and detention facilities with gross area > 3,000 SF
- Occupancy with an occupant load > 5,000

# Requirements for SE to Design Structures

## *Utah* – cont'd

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### ➤ Essential Facilities:

- Healthcare facilities with surgery or emergency treatment facilities and gross area > 3,000 SF
- Fire, rescue, police stations, and emergency vehicle garages with a mean height >24' or gross area > 5,000 SF
- Earthquake, hurricane, and other emergency shelters with gross area > 3,000 SF
- Emergency preparedness, communication, operation centers, and other emergency response buildings with a mean height >24' or gross area > 5,000 SF
- Power-generating stations and public utility facilities required as emergency backup facilities with gross area > 3,000 SF
- Structures with mean height > 24' or gross area > 5,000 SF containing highly toxic materials where quantity exceeds the maximum allowable set by the division
- Aviation control towers and emergency aircraft hangars with a mean height > 35' or gross area > 20,000 SF

# Requirements for SE to Design Structures

## ***Utah*** – cont'd

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- Structures Requiring Special Consideration:
  - Structures normally occupied by human beings and  $\geq 5$  stories, or with an average roof height  $> 60'$  above the average ground level
  - Any building  $> 200,000$  SF in gross area