



**Department  
of Commerce**

Division of Industrial Compliance

John R. Kasich, Governor  
Andre T. Porter, Director

**Ohio Board of Building Standards  
Building on the Code Education Series**

**Accessibility Requirements in Ohio and  
Code Administration  
August 29, 2014**

**Presentation Handout**



# OHIO BOARD OF BUILDING STANDARDS

## BUILDING ON THE CODE

*Accessibility Requirements in Ohio and  
Code Administration*

*August 29, 2014*

## Accessibility Requirements In Ohio

MAKING BUILDINGS & FACILITIES USEABLE  
FOR OHIO CITIZENS

Jan Sokolnicki

## **Program Content**

- **History of the related accessibility laws**
- **How the requirements are integrated/organized in our building code?**
- **An overview understanding of how accessibility requirements are applied for exterior elements**
- **Examining a couple problem areas**

## **Objectives**

**Upon the completion of this course, you will be better able to:**

- **Understand what accessibility means**
- **Understand how the changing laws have resulted in our current provisions**
- **Distinguish what the differences are between federal and state laws**
- **Understand which laws currently apply to buildings and facilities**
- **Understand how to correctly apply the accessibility provisions of the building code**

# ACCESSIBILITY

Accessibility in general context.....



Most laws, rules and codes define “accessibility” by referring to the measurable specifications required, such as those located in OBC Chapter 11 and in the ICC/ANSI A117.1.

BUT, more correctly stated, **it is a condition** that exists when a building, mechanism, device, space, facility or program **is functionally usable** by people, including those in our society with disabilities and physical limitations.

# ACCESSIBILITY

Before today’s laws reducing barriers:



INSTITUTIONALIZATION



REQUIRED PERSONAL CARE

## **HISTORY**

1. 1950's – Researching the issue, President's Committees and 1<sup>st</sup> national standard
2. Rehabilitation Act 1973 – Law applying to public funded entities
3. A117.1 Updated, UFAS Created 1980s
4. Civil Rights Protection expanded – Fair Housing Amendments Act 1988, first mandate for multi-family accessibility
5. 1990 Americans with Disabilities Act (ADA) further expands specific rights for individuals with disabilities – design & construction requirements for public accommodations
6. Ohio's HB 321 (June, 1992) Revisions to Ohio Civil Rights and Building Code laws requiring compatibility with ADA & FHAA

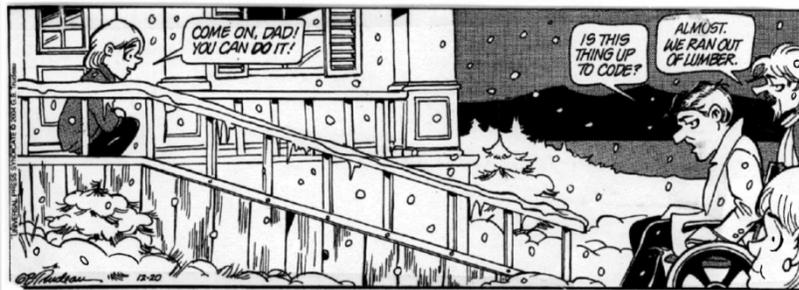
## **HISTORY**

7. February, 1993 – Changes to OBC section 512, making ADAAG & FHAAG the referenced standards for design & construction
8. 1995 OBC has new Chapter exclusively dedicated to accessibility. ADAAG continues to be used for common & public spaces, FHAAG for dwelling units
9. HUD evaluates and determines that ICC's 2001 revisions to the IBC with the ICC/ANSI A117.1-1998 is considered "safe harbor" design for the FHAA.
10. 2002 OBC includes revisions to adopt provisions found compatible with HUD/USDOJ rules and legal positions related to ADA & FHAA

## HISTORY

Ohio's requirements for accessibility are in the Ohio Building Code

In 2012, ICC, representatives of federal agencies and other state and national experts joined a committee to formulate a conclusive set of IBC accessibility provisions eliminating conflicts between federal law and standards and the ICC/ANSI provisions. The final revisions will be published in the 2015 version of the IBC. Ohio volunteered to be the first state to adopt these provisions With the final changes integrated into the July 1, 2014 OBC amendments.



## Ohio's Accessibility Provisions

• ***If*** the design complies with the current OBC provisions for accessibility, and ***if*** the construction is completed in accordance with the design, ***the facility will be in compliance with Federal and Ohio Accessibility Laws.***

The Ohio system, including:

- the laws and rules,
- the plan review, inspections and approvals

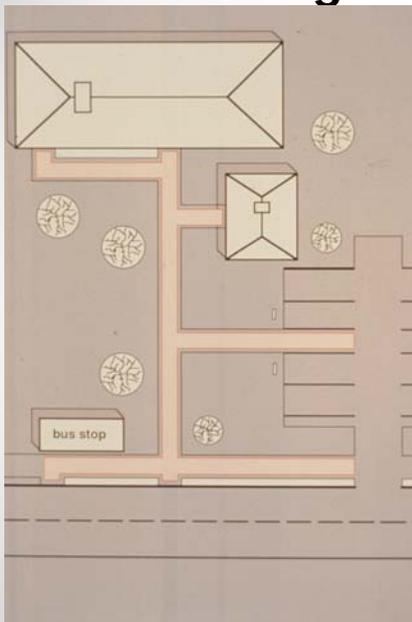
Is set up to minimize lawsuits for designers, developers, contractors, and property owners. The system relies on:

- Designers and property owners committed to compliant design
- Contractors committed to compliant installation and methods of construction
- Comprehensive and code oriented plan examination
- Comprehensive and effective on-site inspections

## Review

- **What does accessibility mean?**  
It's a condition where our buildings and facilities are useable by all our citizens.
- **What do I need to remember about the history of accessibility laws and rules?**  
Before the '70s, there wasn't much that required buildings to be useable .....today we have a comprehensive set of codes that, if followed, allow the greatest percentage of Ohio citizens to use facilities easily.
- **What do I need to remember about the federal accessibility laws?**  
Actually, nothing if you apply the current Ohio provisions for accessibility properly

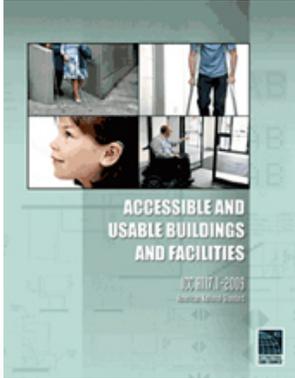
## Reviewing Plans & Inspecting



**Make it easy on yourself!  
Review and inspect in a  
sequence..plan your process  
like the facility will be used.....**

- **Bus or drive in**
- **Look for accessible pkg**
- **Connected access route**
- **# of Van & car spaces**
- **Signage**
- **Space size & level access aisle**
- **Accessible routes to connect all elements**

## Ohio's Accessibility Provisions

<p><b>Scoping Requirements:</b></p> <p>“What, Where and How Many”</p> <p><i>Current OBC with 2014 amendments</i></p>	<p><b>Technical Requirements:</b></p> <p>“How...the measurable specifications”</p> <p><i>ICC/ANSI A117.1-2009</i></p>
	
	

## Ohio's Accessibility Provisions

### OBC - Scoping

- Chapter 10 Egress
- Chapter 11 Accessibility
- Chapter 34 (accessibility for) Existing Buildings

### OBC referenced standard Chapter 35

- **ICC A117.1-2009** - Accessible and Usable Buildings and Facilities
  - Basic concepts & elements (Building Blocks)
  - Specific elements – routes, common & public use spaces, devices, fixtures
  - Specific elements related to Residential uses and Recreational facilities

## **Outline/Layout of OBC Provisions**

### **OBC Chapter 10**

- 1001.1 – both chapters apply
- Definitions
- 1007 Accessible Means of Egress –
  - 1007.2.1, 1007.4 Egress Elevators
  - 1007.3, 1007.6 Areas of Refuge
  - 1007.7 Exterior Rescue
  - 1007.8, 1007.9 Communication/Signage

## **Outline/Layout of OBC Provisions**

### **OBC Chapter 11**

- 1103 Scoping
- 1103.2 – Exceptions 1103.2.1- 1103.2.15
- 1104 Routes
- 1105 Entrances
- 1106 Parking & Loading
- 1107 Living, Sleeping & Institutional units
- 1108 Assembly, Dining, Drinking & Judicial areas
- 1109 Other Facility Features
- 1110 Recreational
- 1111 Signage
- 1112 Changes to A117.1

## **Outline/Layout of OBC Provisions**

### **OBC Chapter 34**

- 3411.1 Scoping & Exception for Type Bs
- 3411.4 – Change of Occupancy
  - Partial/alterations
  - Complete building
- 3411.5 Additions
- 3411.7 & 3411.8 Alterations, primary function, disproportional costs, scoping for elements of the building (3411.8.1-.15)
- 3411.9 Historic Structures

## **Outline/Layout of A117.1 Provisions**

### **Technical Provisions – Measurable**

#### **Chapter 3 – Building Blocks**

- Base requirements for vertical and horizontal space and dimension related to human physiology (including mobility and sight limited conditions as researched in '50s)
- Travel surfaces; Level changes; clear space; obstacles; reach ranges; operable parts

*Also definitions and general scoping in Chapter 11 OBC*

## A Few Definitions:

### OBC Section 1102.1

**ACCESSIBLE.** A site, building, facility or portion thereof that complies with this chapter.

**ACCESSIBLE ROUTE.** A continuous, unobstructed path that complies with this chapter.

**CIRCULATION PATH.** An exterior or interior way of passage from one place to another for pedestrians

Checking the definitions before applying the code while reviewing the plans or when trying to make a proper determination of interpretation will save Time and minimize mistakes being made

## SCOPE – WHAT MUST BE ACCESSIBLE?

**OBC 1103.1:** Sites, buildings, structures, facilities, elements and spaces, temporary or permanent, shall be accessible to *individuals* with disabilities.

***SO, WE'RE STARTING WITH A OVERALL REQUIREMENT THAT EVERY BUILDING, STRUCTURE AND FACILITY MUST BE ACCESSIBLE .....EXCEPT/UNLESS EXEMPTED IN AN 1103.2 SUBSECTION***

## SCOPE – WHAT IS EXEMPTED?

**1103.2.1** In addition to the exceptions listed in 1103.2, there are limits placed on the degree/extent of the accessibility required and those limits are found in specific sections throughout Chapter 11.

*Primary Exceptions 1103.2.2 – 1103.2.15:*

- **Employee work areas.** Only access to, into and from spaces and 907.5.2.3.2, 1007, 1104.3.1, 1108.4.1.4 shall apply.
- **Detached 1, 2 & 3 family** dwellings and associated structures
- **Group U structures** not open to the public, most agriculture structures, garages/carports not required to be accessible
- **Construction sites.** Structures associated with actual construction.
- **Raised areas** used primarily for purposes of security, life safety or fire
- **Limited Access & Equipment spaces**
- **Some areas in churches**
- **Toll booths** (bridge & underground access)
- **R-1 facilities (Small, owner occupied)**
- **Child care in detached dwellings,** areas not used for care
- **Jails/prison** common areas not serving accessible cells
- **Walk in coolers/freezer areas** w/o public access
- **Existing buildings** – see Chapter 34

## SO..... WHAT MUST BE ACCESSIBLE?

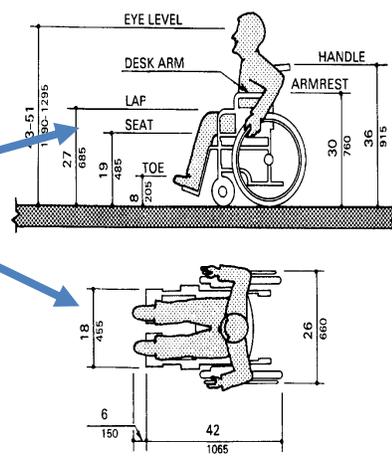
**UNLESS EXEMPTED IN 1103.2, Sites, buildings, structures, facilities, elements and spaces, temporary or permanent, shall be accessible...additionally, there are limits and conditions placed on the extent of the provisions as indicated in the previous slide:**

- **1103.2.1 Specific requirements.** ".....to the extent permitted by Sections 1104 through 1111."

## Concepts from HUD 10 year 1950's study in A117.1 Chapter 3

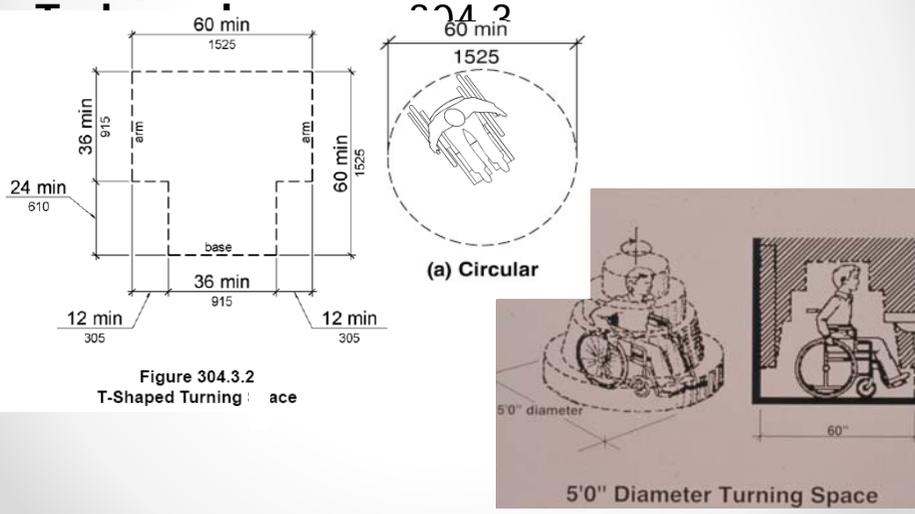
Clear Widths  
 Clear Floor Space  
 Clearances Under  
 Fixtures or Work  
 Surfaces

Dimensions of Adult  
 Sized Wheelchair



## Concepts from HUD 10 year 1950's study

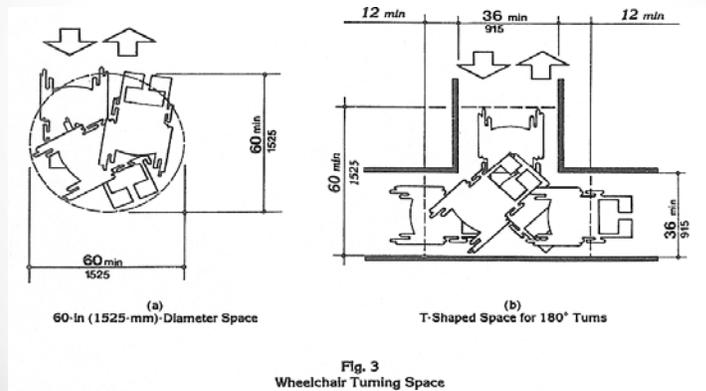
The minimum space for a wheelchair to make a 180-degree turn is a clear space of **60" dia. or**



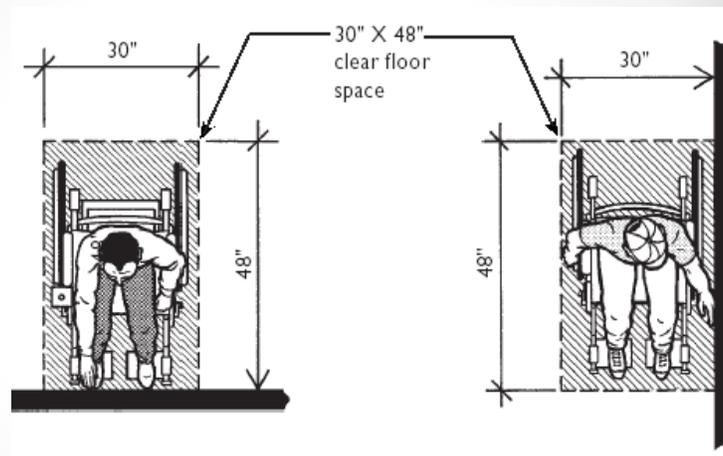
The minimum space for a wheelchair to make a 180-degree turn is a clear space of 60" dia. or a T-shaped space.

**Can you locate a reference to this requirement in the 2009 A117.1?**

Example: 2009 A117.1 section 603.2



**Adequate Space & Reach Range**



### Height Limits/reach range for Controls and Accessible Items

**308.2.1 Unobstructed.** Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.

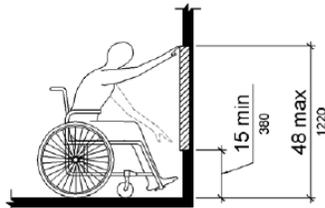
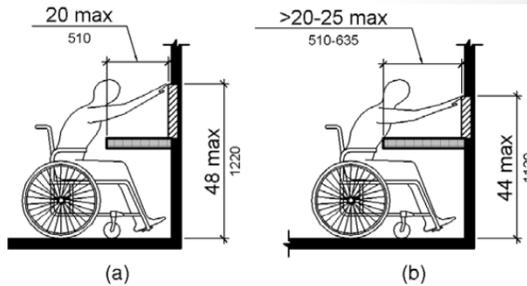


Figure 308.2.1  
Unobstructed Forward Reach

**308.2.2 Obstructed High Reach.** Where a high forward reach is over an obstruction, the clear floor space complying with Section 305 shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 in. (1220 mm) maximum above the floor where the reach depth is 20 in. (510 mm) maximum. Where the reach depth exceeds 20 in. (510 mm), the high forward reach shall be 44 in. (1120 mm) maximum above the floor, and the reach depth shall be 25 in. (635 mm) max.



### Height Limit/reach range for Controls and Accessible Items

**308.2.1 Unobstructed.** Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.

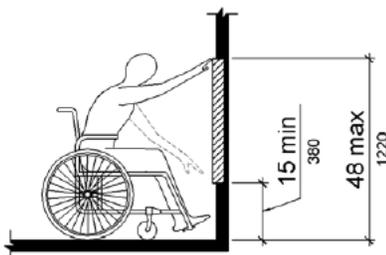


Figure 308.2.1  
Unobstructed Forward Reach

**308.3.1 Unobstructed.** Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

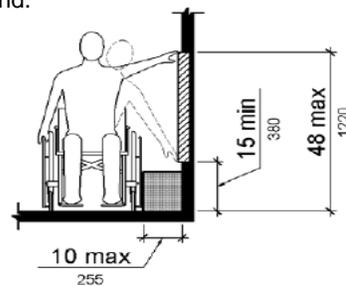
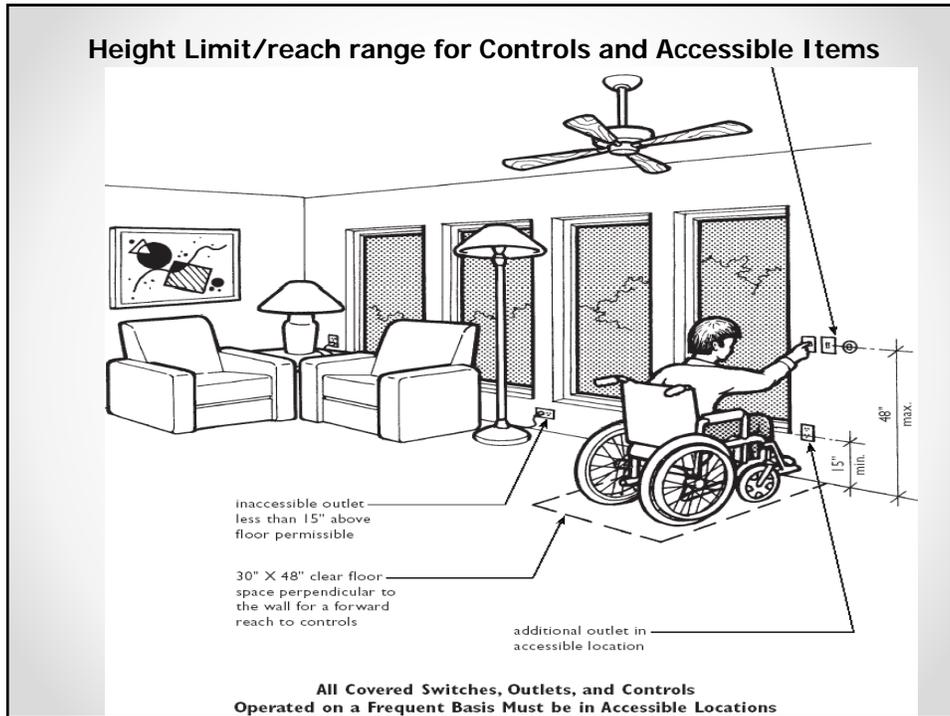
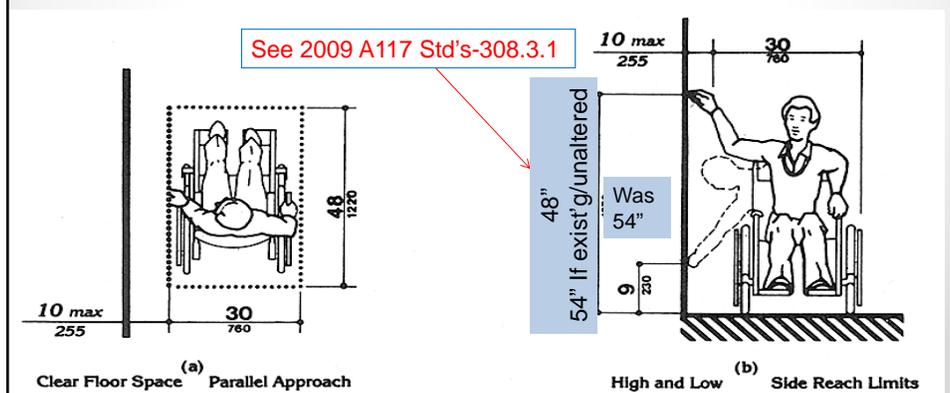


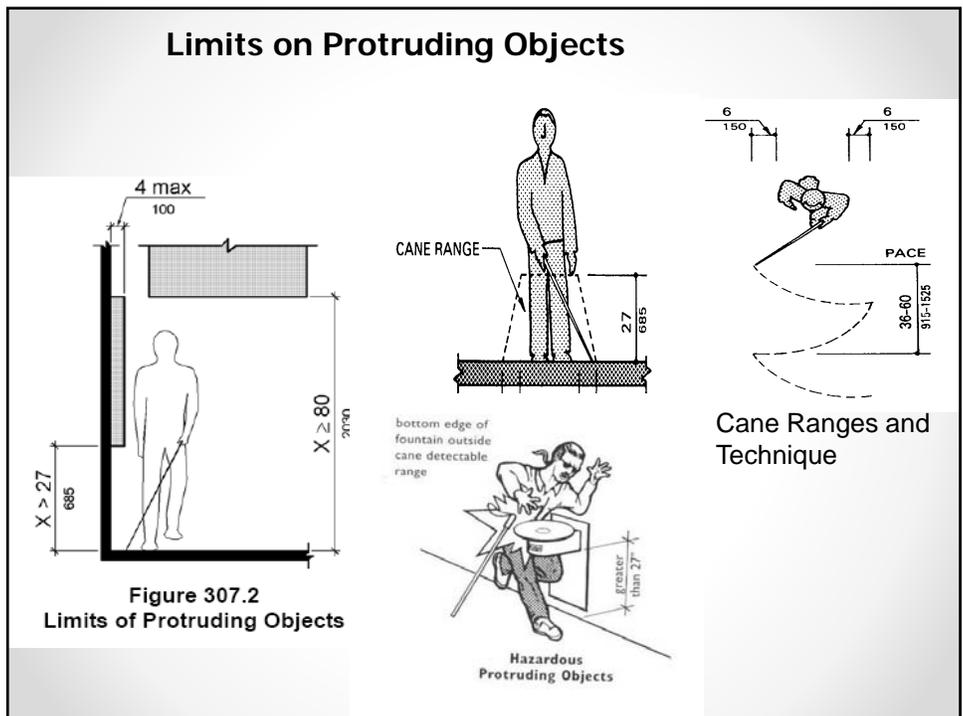
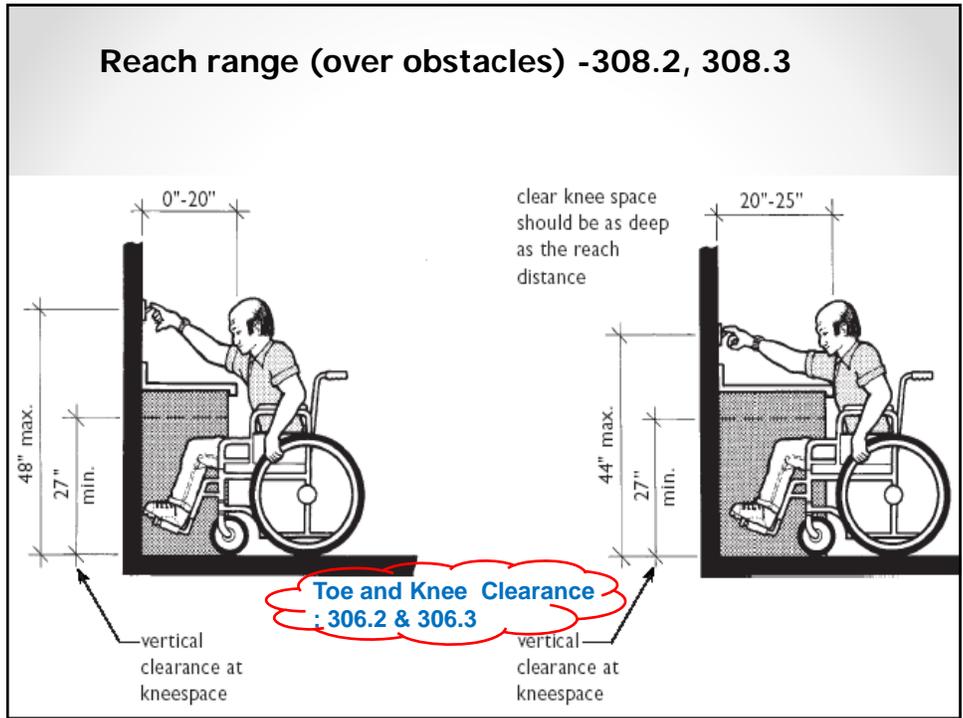
Figure 308.3.1  
Unobstructed Side Reach



### Changes to the "unobstructed" side reach requirements.....

**1994 ADAAG: 4.2.6\* Side Reach.** If...parallel approach ....the maximum high side reach allowed shall be 54 in (1370 mm) and the low side reach shall be no less than 9 in (230 mm) above the floor (Fig. 6(a) and (b)).





## Outline/Layout of A117.1 Provisions

### Technical Provisions – Measurable

#### Chapter 4 – Accessible Routes

- Travel and use criteria including: surface conditions; gradients; space and dimensions needed to assure successful horizontal and vertical travel to and from all facility elements
- Surfaces; doorways; ramps; elevators/other lifts;

We need to consider both A117.1 and the related “Accessible Route” scoping provisions at the same time so, from OBC 1104 ....

## SITE ACCESS

### Site Arrival Points:

**OBC 1104.1:** *At least one route* within the site shall be provided from *accessible facilities*; public transportation stops; accessible parking; accessible passenger loading zones; and public streets or sidewalks to the accessible building entrance served.

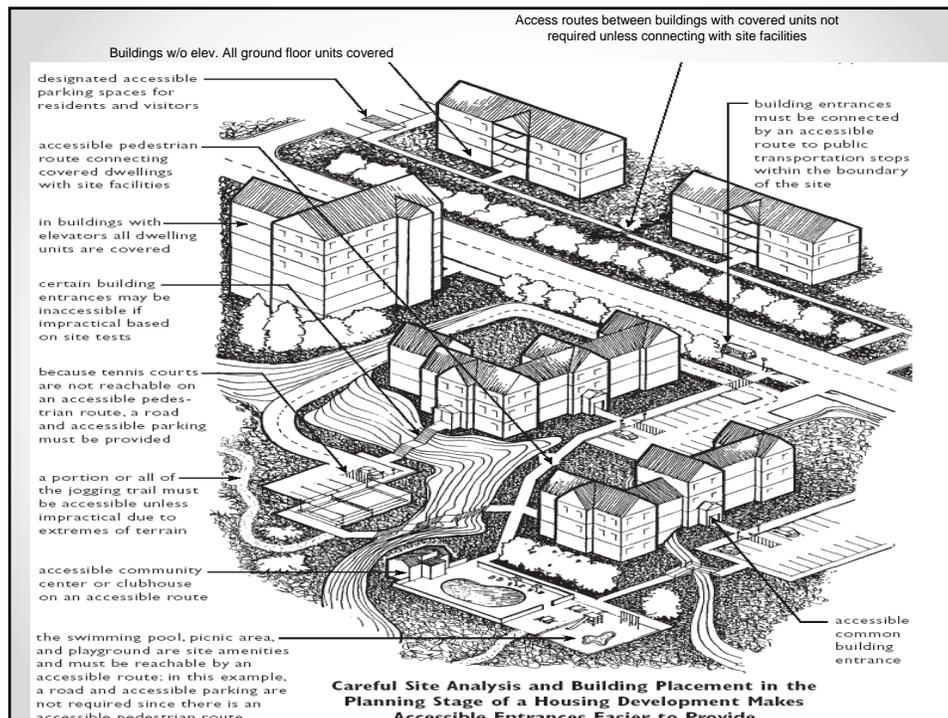
**Exception:** Other than in buildings or facilities containing or serving Type B units, an accessible route shall not be required between site arrival points and the building or facility entrance if the only means of access between them is a vehicular way not providing for pedestrian access.

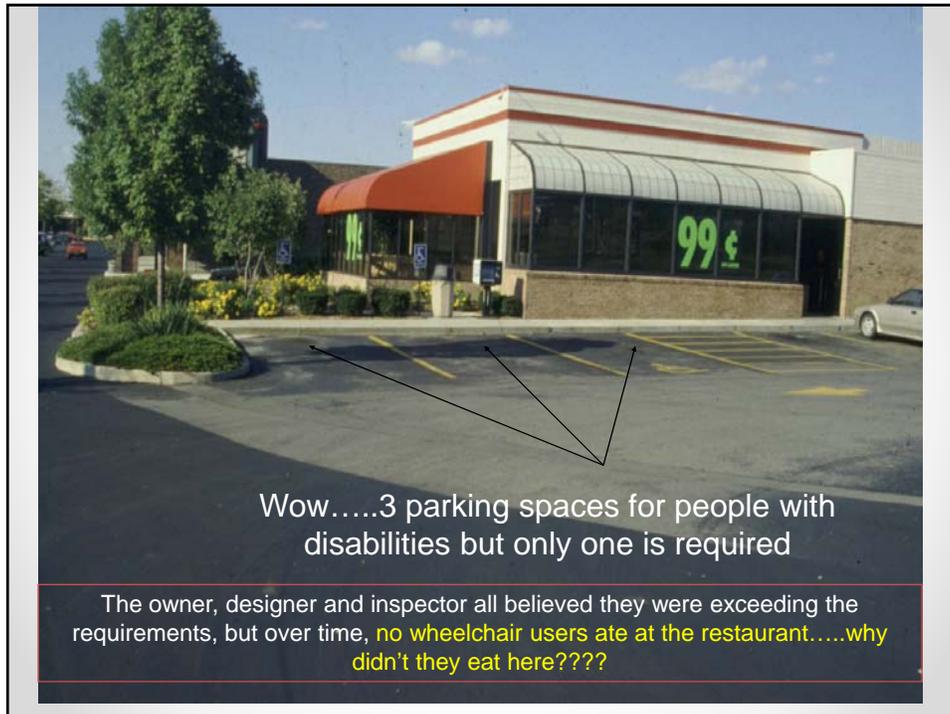
## SITE ACCESS

**1104.2 Within a site.** At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site.

### Exceptions:

1. An accessible route is not required between accessible buildings, accessible facilities, accessible elements and accessible spaces that have, as the only means of access between them, a vehicular way not providing for pedestrian access.
2. *An accessible route to recreational facilities shall only be required to the extent specified in Section 1110.*





## Exterior Accessible Routes

- Exterior Accessible Routes (OBC)
  - Work areas 1104.3.1; Press boxes 1104.3.2; Multilevel buildings/facilities 1104.4 Location/circulation path 1104.5; Security barriers 1104.6
- Exterior elements specifications (A117.1)
  - Going over these first

## =

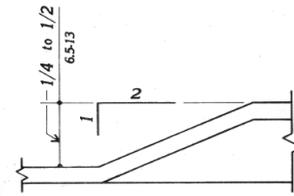
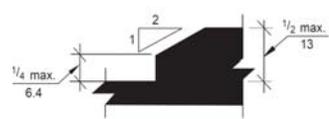
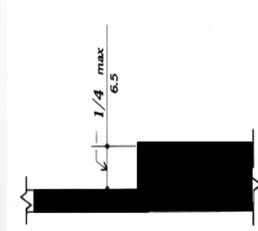
# ACCESSIBLE ROUTE

Surface 302.1: Stable, Firm & Slip Resistant

- Recommended between .43 - .6, OSHA recommends .5
- Search SCOF online  
[www.issa.com/data/File/regulatory/Kenzior,%20Russ%20202.pdf](http://www.issa.com/data/File/regulatory/Kenzior,%20Russ%20202.pdf)

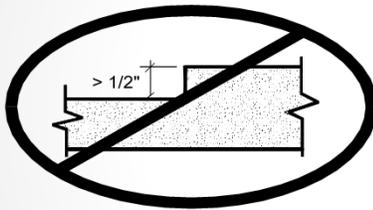
Elevation changes - What vertical edges are allowed?

- 1/4" Max. 303.2, 1/4" - 1/2" max 22 1/2 degs. bevel
- Carpet pile ht. = 1/2" max. §302.2



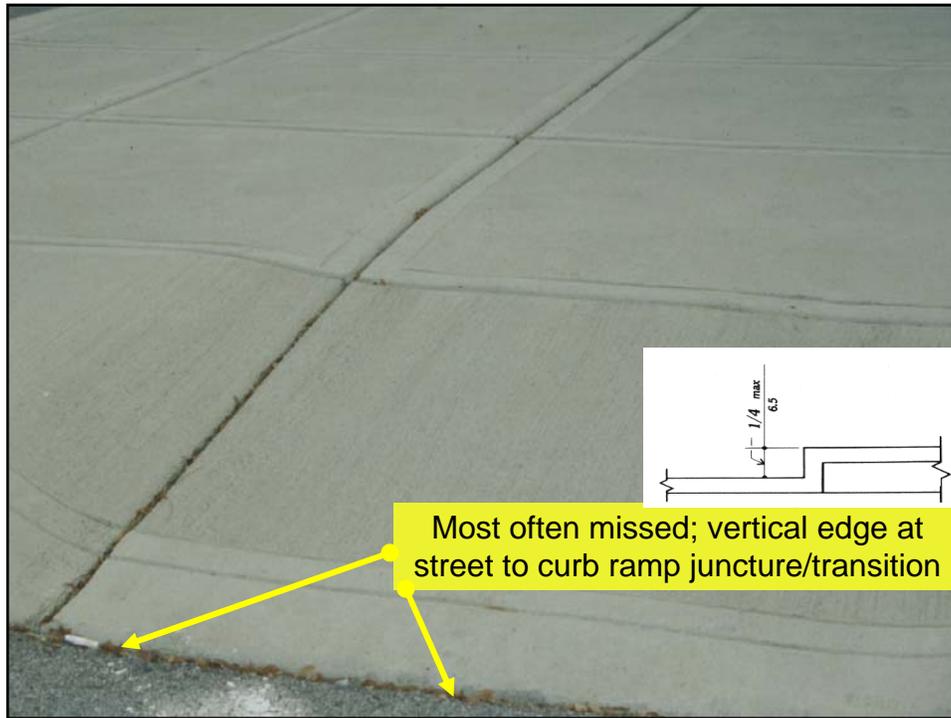
## ACCESSIBLE ROUTE

Hazardous Change in  
Elevation



Changes in Elevation > 1/2 in. shall be corrected with ramps or sloped surfaces not exceeding 1:12

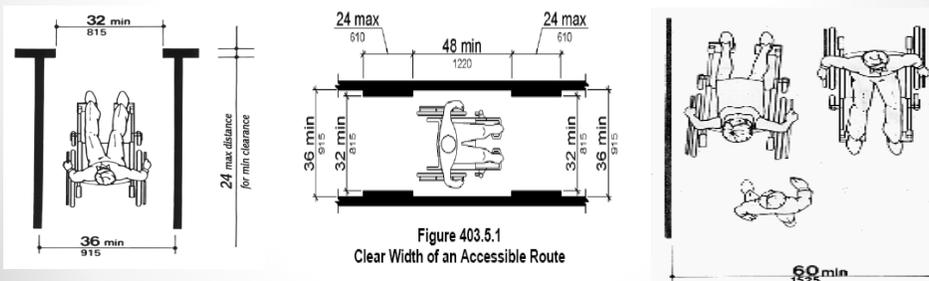
(Ramps) 303.4; 405 & 406 (Curb Ramps)

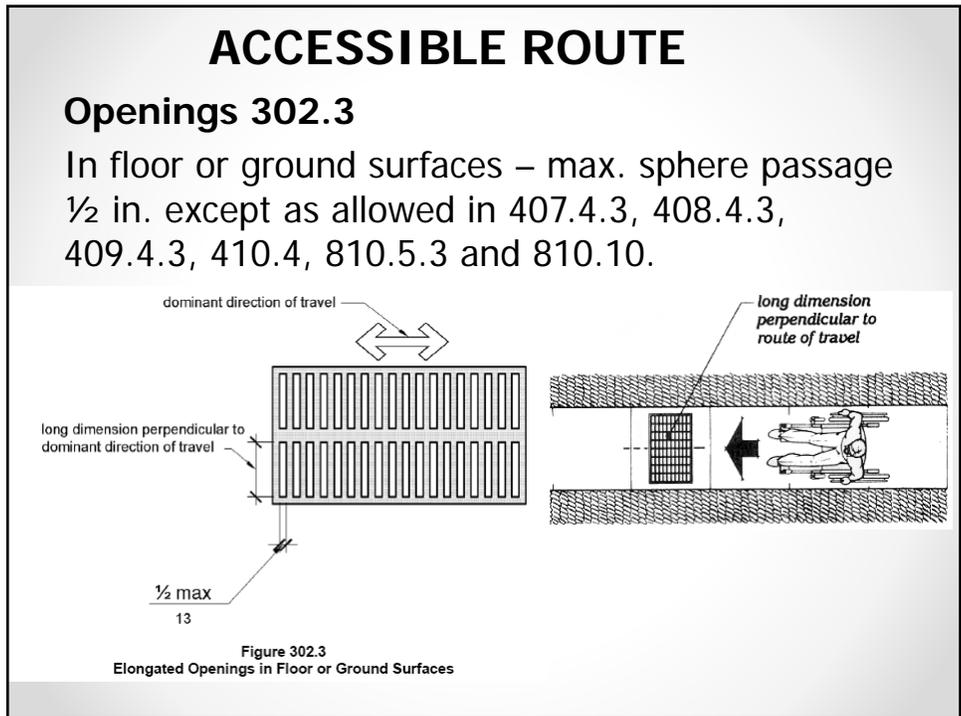
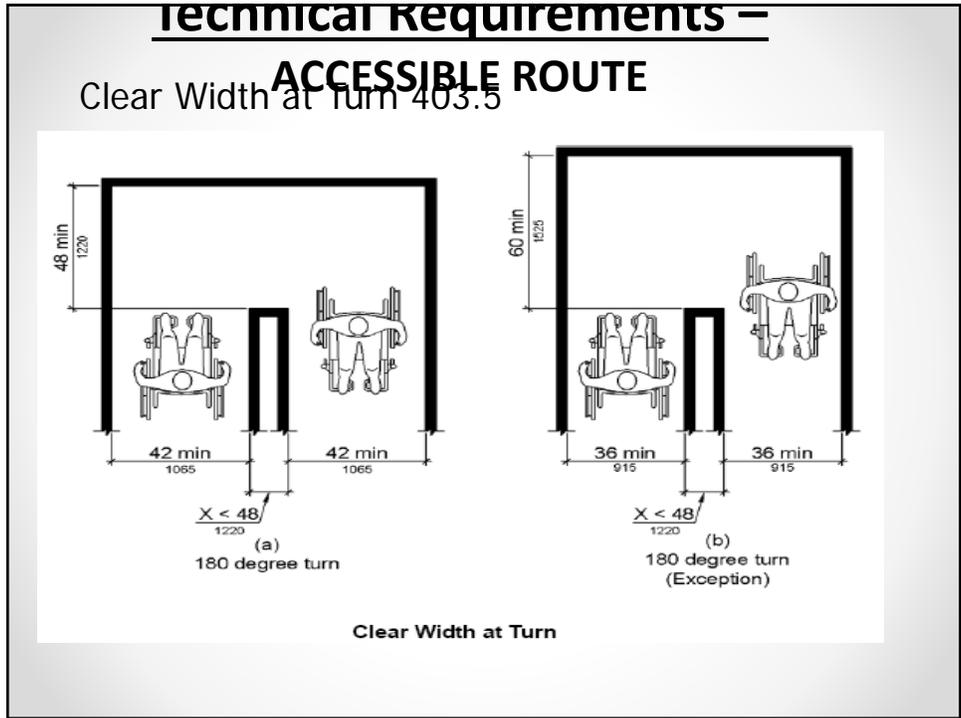


## ACCESSIBLE ROUTE

Passage width 403.5

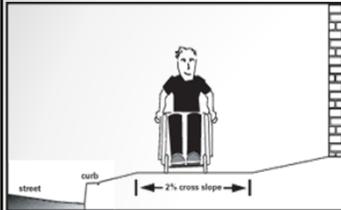
- **Single point** – **32"** occurrences separated by *min. 48"*
- **Continuous** – **36"**,
- **Wheelchair passing** – **60"** by **60"** at intervals of *200 ft. maximum.*





## ACCESSIBLE ROUTE

### Gradients/Slopes



- Level changes greater than 1/2" must comply with 403.3, 405 or 406 (303.4)
- Travel direction slopes not to exceed 1:20; cross slope no steeper than 1:48 (403.3, 402.2), or:
- Travel direction slopes exceeding 1:20 shall be ramps or curb ramps

#### Cross Slope 2% or 1:48

Length of slope divided by 20 limits the elevation change maximum before the route element must be ramped

Eg. 14 ft.x 12 = 168 inches

168

20 = 8.4 inches max/1:20

Actual rise is 13.5 inches

Slope exceeds 1:20 so what's missing?



## ACCESSIBLE ROUTE



If the length increased, 1:20 slope could be used.

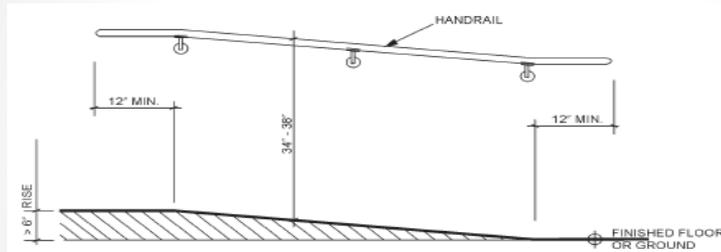
Slope exceeds 1:20 so what's the solution for 13.5 inches?  
increase the sloped component to 270 inches (22.5 ft.)

Why would someone want to do this?

## Are handrails required on all ramps?

Turn to 405.8 Handrails.

If elevation/rise of a **ramp** > 6 in. (150 mm), handrails required



So, cost is an incentive, also safety, ease of use and aesthetics

## ACCESSIBLE ROUTE



### Ramps

405.2 Slope  $\leq 1:12$

Table 405.2, existing sites, bldg's & facilities

>1:10 up to 1:8 max. rise = 3 in.

>1:12 up to 1:10 max. rise = 6 in.

405.3 Cross Slope  $\leq 1:48$ .

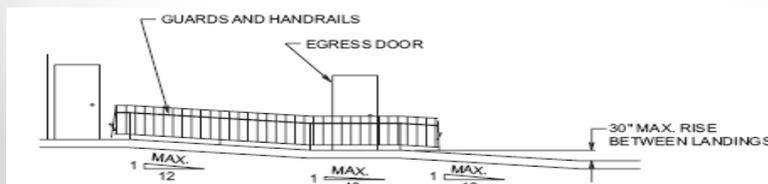
405.5 Clear Width. between handrails 36 in. min.

405.6 Rise. 30 in. max.

405.7 Landings. Landings required at the top and the bottom of each ramp run.

405.9 Edge Protection Curbs or barriers required to prevent wheel runoff – 4 exceptions

405.10 Landings subject to rain/snow shall be pitched to drain....but are required to be level (1:48)



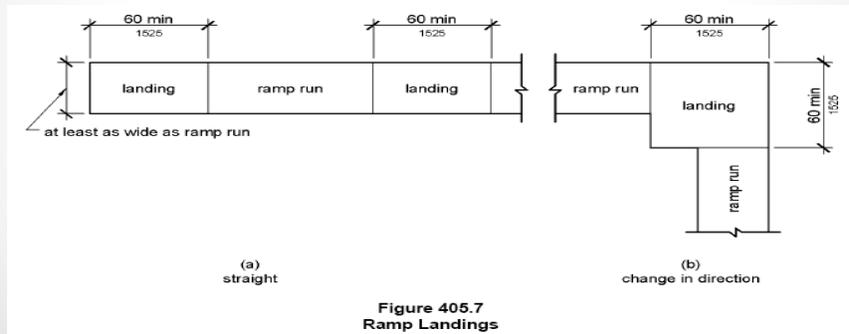
## ACCESSIBLE ROUTE

### Ramp Landings required at top & bottom of ramp runs

**405.7.2 Width.** at least as wide as the widest ramp run leading to the landing

**405.7.3 Length.** 60 inches long min.

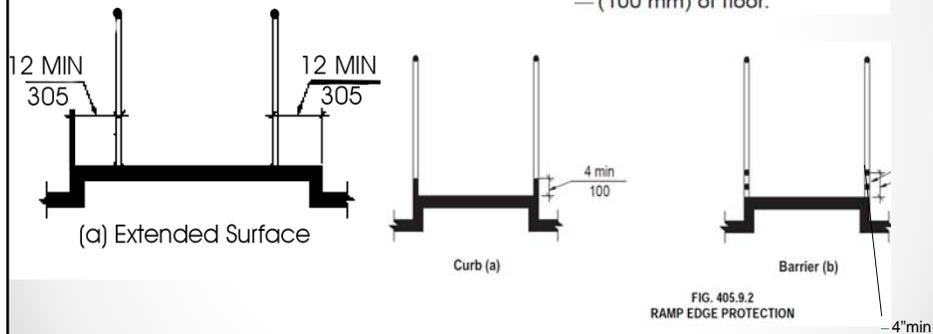
**405.7.4 At Change in Direction.** 60 in. min. X 60 in. min



## ACCESSIBLE ROUTE

**405.9 Edge Protection.** ....on each side of ramp runs and at each side of ramp landings.

Barrier prevents passage of 4 inch (100 mm) sphere with any portion within 4 inch (100 mm) of floor.



## ACCESSIBLE ROUTE

### Curb Ramps 406

Required where accessible route crosses a curb.....

#### Curb "ramps" must:

- Have a slope/gradient of 1:12 or less;
- Connect to walks, streets & access aisles w/o abrupt change;
- Connected to walks, streets w/ slope/gradient of 1:20 or less;
- 36" wide min. (w/o flared side);
- **Detectable warnings** (raised marked crossings, islands, medians, or public right of way only); *when installed must comply*
- Not obstruct or be obstructed.

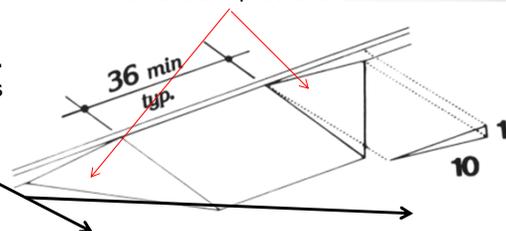
## ACCESSIBLE ROUTE

### Curb Ramps

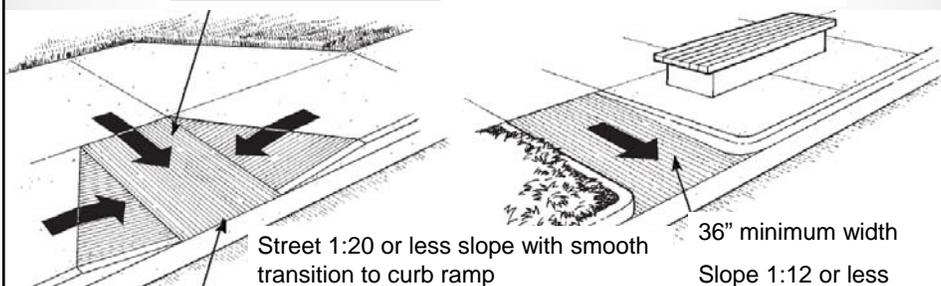
**406.3 Sides of Curb Ramps.**  
Where provided, curb ramp flares shall not be steeper than 1:10.

**Curb ramps cannot be  
Located within traffic areas,  
Parking or access aisle spaces**

Flared sides provided



**BUILT-UP CURB RAMPS**-Located out of vehicular traffic area

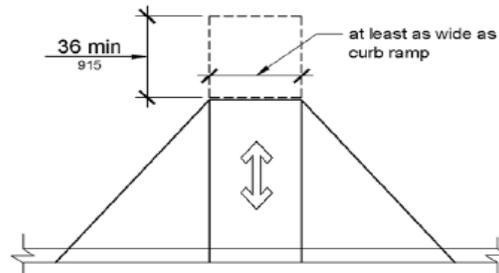


## ACCESSIBLE ROUTE

### Curb Ramps

Landings are required at the tops of curb ramps. The landing clear length shall be 36 inches minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.

**EXCEPTION:** In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.



Landings at the Top of Curb Ramps

## ACCESSIBLE ROUTE

### Entrances – OBC 1105, A117.1 404

- 60% of all public entrances required to be accessible in addition to conditions in 1105.1.1 – 1105.1.7 except areas not requiring accessibility (including doors exclusively used by security)
- Doors/entrances are required to have space, clearances, operating mechanisms and layout allowing the approach, use and passage through to be easily accomplished



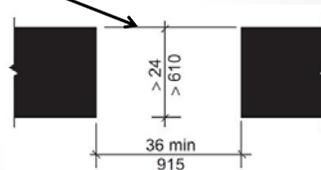
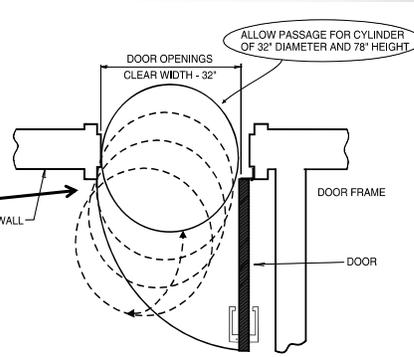
## ACCESSIBLE ROUTE – entrances/doors

**404.2.2. Clear Width 32 in. min.** measured between face of door and stop.

Openings at doors

Openings in doorways deeper than 24 in. without doors

Openings in doorways without doors less than 24 in. deep can be 32 in. min.

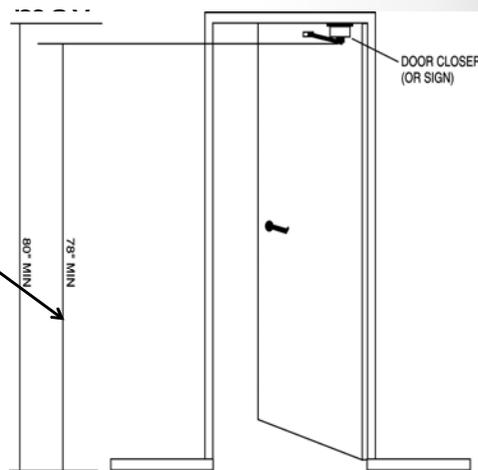


## ACCESSIBLE ROUTE – entrances/doors

No projections lower than 34" above the finish floor or ground. Projections btwn. 34" & 80" above floor - 4"

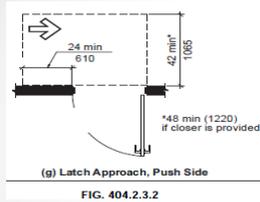
404.2.2 Clear Width.

**Exception 1.** Door closers and door stops

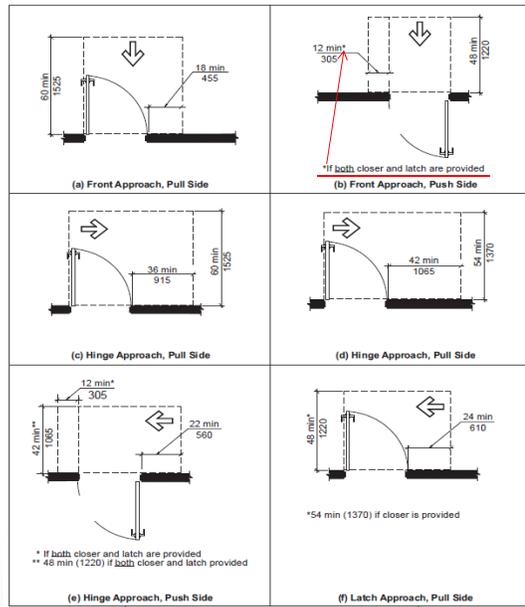


## ACCESSIBLE ROUTE – entrances/doors

### Maneuvering Clearances



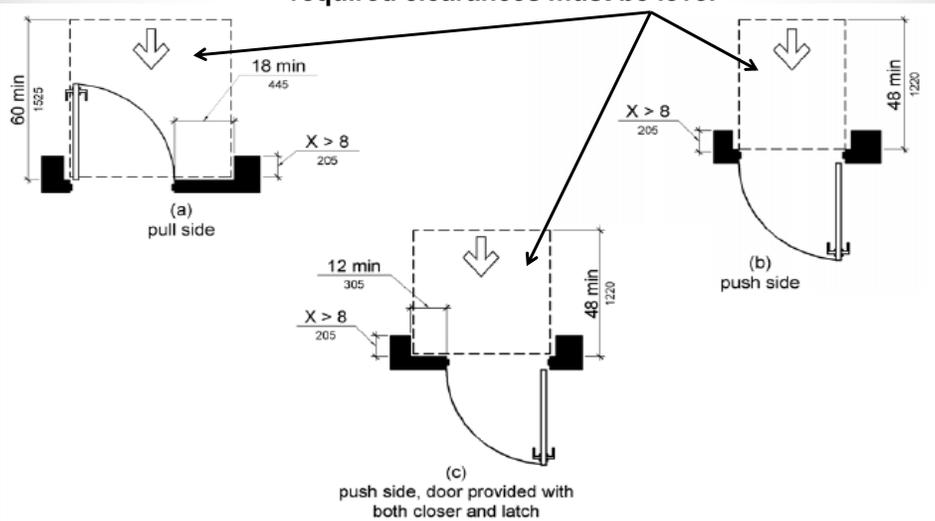
**404.2.3.1 Floor surface of the required clearances must be level**



## ACCESSIBLE ROUTE – entrances/doors

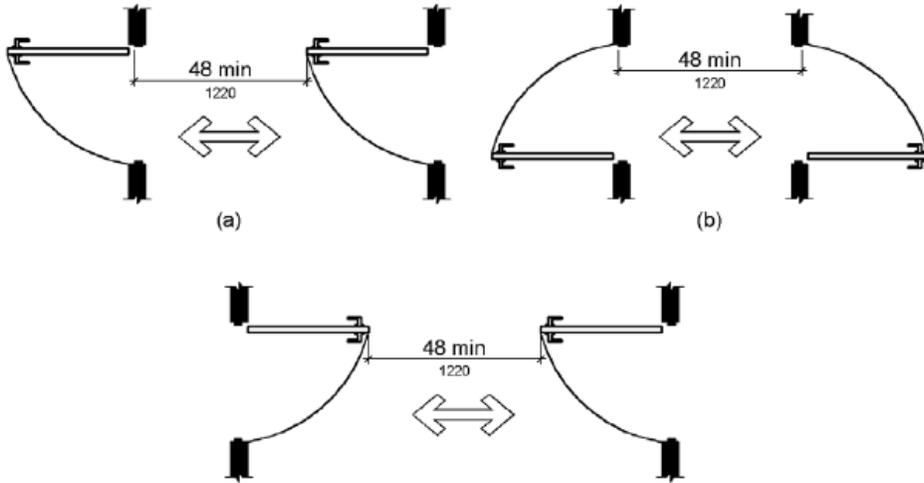
Maneuvering Clearances for Recessed Doors Fig. 404.2.3.5

**404.2.3.1 Floor surface of the required clearances must be level**

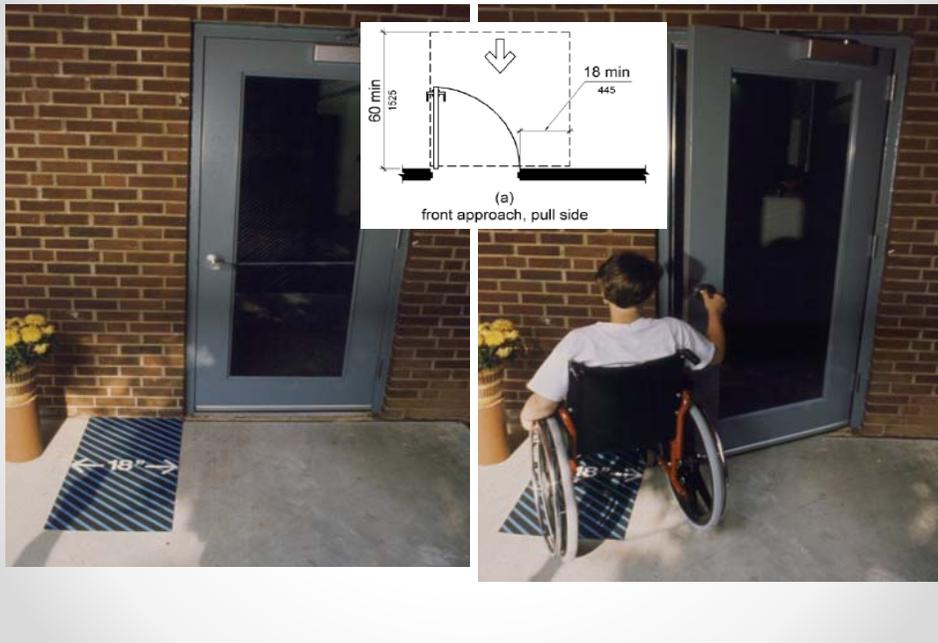


## ACCESSIBLE ROUTE – entrances/doors

Two Doors in Series Fig. 404.2.5 & OBC 1008.1.8



## ACCESSIBLE ROUTE – entrances/doors



## ACCESSIBLE ROUTE – entrances/doors



## ACCESSIBLE ROUTE – entrances/doors



1. Slopes not steeper than 1:48 shall be permitted.
2. Changes in level at thresholds complying with 303 & OBC 1008.1.7 shall be permitted.

Clear width (36" door leaf, each) ???  
Latch-side space ???  
Level platform ???



**ACCESSIBLE ROUTE – entrances/doors**



## ACCESSIBLE ROUTE – entrances/doors



### Site & Building Elements

OBC – 1104, 1105, 1106

A117.1 Provisions

Chapter 5 – General Site & Building

- Typical exterior and interior elements
- Vehicle spaces/loading zones; stairs; handrails; windows

### Technical Provisions – Measurable

A117.1 Provisions

Chapter 5 – General Site & Building

- Typical exterior and interior elements
- Vehicle spaces/loading zones; stairs; handrails; windows

## **Parking - an element required to be accessible**

- **Where are accessible parking spaces located?**
- **How many accessible spaces shall be provided?**
- **What's required of the spaces, connections to a route, marking and signage?**
- **Where are passenger loading zones**

## **Site & Building Elements - Parking**

- **Location – Close/Safe**  
OBC 1106.6: Located & connected via shortest accessible route to an accessible entrance. Where parking serves more than one accessible entrance, accessible parking spaces shall be dispersed amongst shortest accessible routes to the accessible entrances.



## Site & Building Elements - Parking



## Site & Building Elements - Parking

### Adequate # of total accessible spaces?

OBC Table 1106.1

Note: For every 6 or fraction of 6, van accessible spaces required (OBC §1106.5.)

OBC Table 1106.1

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

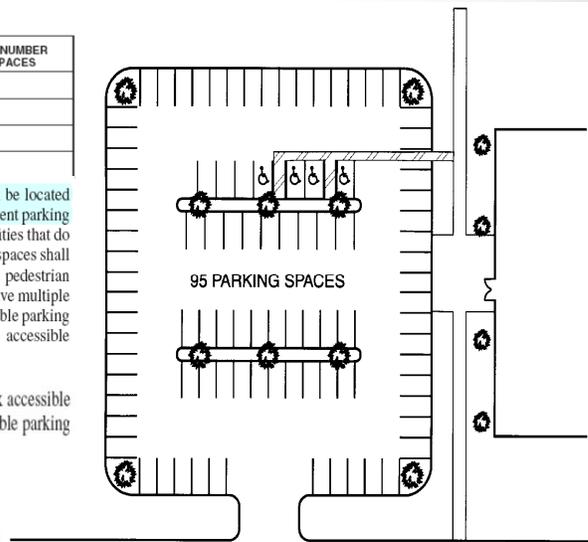
## Site & Building Elements - Parking

TABLE 1106.1  
ACCESSIBLE PARKING SPACES

TOTAL PARKING SPACES PROVIDED	REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4

**1106.6 Location.** Accessible parking spaces shall be located on the shortest accessible route of travel from adjacent parking to an accessible building entrance. In parking facilities that do not serve a particular building, accessible parking spaces shall be located on the shortest route to an accessible pedestrian entrance to the parking facility. Where buildings have multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located near the accessible entrances.

**1106.5 Van spaces.** For every six or fraction of six accessible parking spaces, at least one shall be a van-accessible parking space.

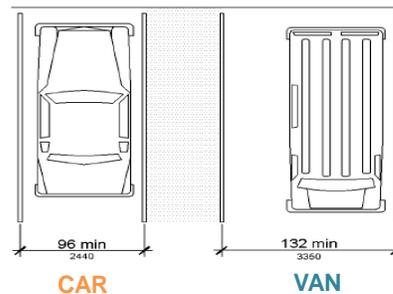
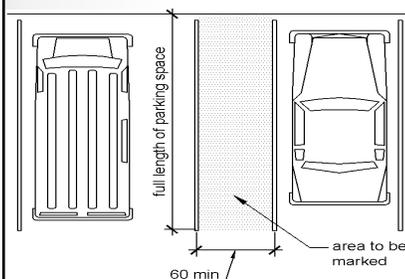


## Site & Building Elements - Parking

### Vehicle Space Size 502

**502.2** Car spaces = 96 in. wide min. & van parking spaces = 132 in. wide min, & marked to define the width, & have an adjacent access aisle complying w/ 502.4.

**EXCEPTION:** Van spaces 96 inches (2440 mm) wide minimum where the access aisle is 96 inches (2440 mm) wide minimum.



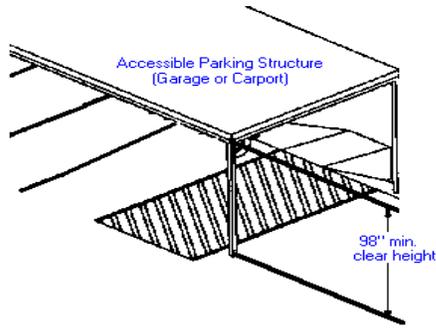
**502.3.1 Width.** Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) wide minimum.

Figure 502.2  
Vehicle Parking Spaces

## Site & Building Elements - Parking

### Parking Vertical Clearance 502.6

Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 in. min.



Covered Accessible Parking Structures  
Min. Clear Height

## Site & Building Elements - Parking

Vehicle space and access aisle marking is now required to define width measured from centerline but includes line width. 502.3, 502.4.4.



Access aisle marking to discourage parking in them.....

## Site & Building Elements - Parking

Surfaces level 502.5

Access aisles and accessible parking spaces are required to be level but

*allow sufficient slope for drainage*  
Level: 1:48 or less

**gradient**



Must be level for length of space & aisle

## Site & Building Elements - Parking

### Signage

502.7 Identification & OBC §1110.1.1

60 in. min. above the surface to bottom of the sign.

- Vertical fixed or moveable sign
- Clearly visible to driver parked in space.
- *International Symbol of Accessibility*
- OBC fine notice (not < \$250.00 nor > \$500.00)
- Van accessible spaces identified





## Site & Building Elements - Parking

### Loading Zones - Surface and Vertical Clearance

**503.2 Vehicle Pull-Up Space** a space 96 inches wide min. and 20 feet long min.

**503.3 Access Aisle** 60" wide adjoining accessible route...

**503.2 & 503.4 Floor and Ground Surfaces** Pull-up spaces and access aisles must be same level Slopes = to or <1:48 permitted for drainage.

**503.5 Vertical Clearance.** 114 in. min. to the entrance or vehicular exit;

**OBC 1106.7.1 Continuous loading zones** – one per 100 ft. accessible

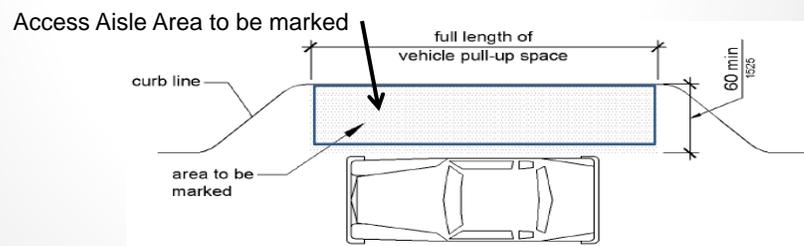


Figure 503.3  
Passenger Loading Zone Access Aisle

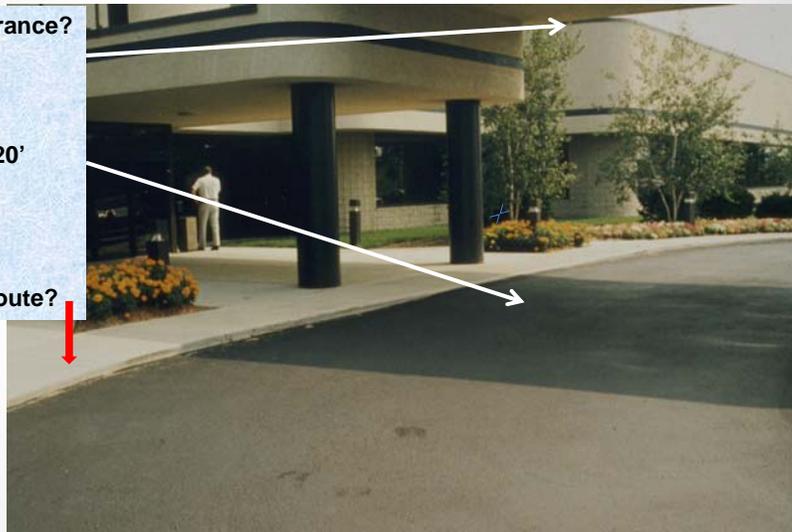
## Site & Building Elements - Parking

Vertical clearance?  
(114 inches)

Level 60" X 20'  
space?

Marked?

Connects to  
accessible route?



## Site & Building Elements - Signage

- Located where required – see OBC §1110.1
- Where is identification for accessible elements required along an exterior accessible route?
- Where is directional signage required along an exterior accessible route?

## Site & Building Elements - Signage

OBC 1110.1 Items 1 & 2 - Accessible parking spaces. Accessible passenger loading zones. (Identification Signage)



OBC 1110.1 Item 5 - Accessible entrances where not all entrances are accessible. (Directional Signage)



## **Balance of A117.1 Provisions**

### **Technical Provisions – Measurable**

#### **Chapter 6 – Plumbing**

- Facility and fixture access and clearance space, layout and dimensional locations
- Drinking fountains; rest & bathroom fixtures; assist devices; wash & drying machines; sauna & steam rooms

#### **Chapter 7 – Communication elements**

- Requirements specific to improving building function and safety effectiveness for hearing and sight limitations
- Alarms; signs; phones; detectable warnings; assistive listening, ATMs and communication systems

## **Outline/Layout of A117.1 Provisions**

### **Technical Provisions – Measurable**

#### **Chapter 8 – Specific Use Areas**

- Requirements providing space and function for uses with unique purposes
- Assembly aisles, spaces, seating layout, & lines of sight; dressing/fitting/locker room space & function; kitchen space, work surfaces, appliance/devices/appliances; transportation facilities; detention and courtrooms

#### **Chapter 9 – Fixed Furniture & Equipment**

- Requirements for access, spaces, and clearances typically found in certain public, uses
- Dining, work, sales, service surfaces/counters, checkout aisles, food service lines and storage facilities.

## **Outline/Layout of A117.1 Provisions**

### **Technical Provisions – Measurable**

#### **Chapter 10 – Residential units**

- **Specification requirements for the three types/levels of accessibility in dwelling/sleeping units:**
  - **Accessible units (section 1002) – commercial level of accessible devices, spaces, clearances, etc. Includes commercial residing and care like hospital rooms and nursing homes.**
  - **Type A units (Section 1003) – residential unit requirements intended for occupants with full range mobility limitations. These requirements allow some reduced accessible details when compared to “accessible units”.**
  - **Type B units (Section 1004) – these requirements are based on a concept of adaptability and allow space reductions, reach range flexibility as well as more options for toilet fixture and room design.**

## **Outline/Layout of A117.1 Provisions**

### **Technical Provisions – Measurable**

#### **Chapter 11 – Recreational Facilities**

- **Special Provisions (Section 1101.2) defines the more detailed exceptions for certain conditions occurring in recreational facilities.**
- **The balance of the provisions indicate the access, space, clearances, and some methods/options for compliance for specific recreational facilities.**
- **Amusement Rides; Boating facilities, piers and platforms; exercise equipment; golf facilities; play areas; swimming pools, spas; shooting facilities are all included**

## Problem areas in scoping

### Required connections of spaces within buildings 1104.3

- **All areas required to be accessible must be connected via compliant components:**
  - Surfaces 1:20 gradient or less
  - Doors & doorways
  - Ramps or curb ramps
  - Elevators and permitted platform lifts

#### **Exceptions:**

- Levels exempted in 1104.4
- Courtroom areas complying with 1108.4.1.4
- Assembly areas w/o wheelchair spaces
- Rec. areas not required to be accessible

## Problem areas in scoping

### Multilevel Building & Facilities 1104.4 – Each story & mezzanine must be connected

(one method is an elevator but it is not required)

#### **Exceptions:**

- Levels adjacent to accessed level that, when the areas are added together, don't exceed 3,000 sq. ft. when they aren't:
  - > 4 Retail tenant spaces
  - Containing health care facilities
  - Government/public buildings
  - Public institutions providing education
- Levels w/o accessible elements
- Non-public use Level in a 2 story bldg. with < 6 occ. load
- Air control towers cab & level below
- Courtroom stations in compliance with 1108.4.1.4

## Problem areas in scoping

### Dwelling & Sleeping units 1107

- All occupancies with dwelling or sleeping units must comply with 1107 (existing bldg. exception, 3411.1).
- Unit design details to comply with provisions in A117.1, Chapter 10 for Accessible, Type A & Type B

**ACCESSIBLE UNIT.** A dwelling unit or sleeping unit that complies with this code and the provisions for Accessible units in ICC A117.1. **(Chapter 10, 1002)**

**TYPE A UNIT.** A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with this code and the provisions for Type A units in ICC A117.1. **(Chapter 10, 1003)**

**TYPE B UNIT.** A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with this code and the provisions for Type B units in ICC A117.1, *which complies* with the design and construction requirements of the federal Fair Housing Act. **(Chapter 10, 1004)**

## Dwelling & Sleeping Units

Feature	Accessible 1002	Type A 1003	Type B 1004
Turning space per room	1 per room	1 per room	N/A
Doors & clear adjacent space	Per 404, Limited exceptions	Per 404, Limited exceptions, 3/4" threshold	Only entry door per 404, door size reduced, no adjacent floor space req.
Toilet room features	1 room per 603, 604-610 installed grabbars	Reduced space allowances, reinforcement for grabbars	Further reductions allowed for space, grabbar reinforcement design allowances, options for layout
Kitchens, Kitchenettes	Per 804	Reduced space and access, 30" accessible work surface	Reduced space and access, no accessible work surface req.

## Dwelling & Sleeping Units

### Conditions in scoping provisions applying to all occupancies:

- **Public & common spaces/amenities** – required to be accessible except:
  - Levels not required (1107.4) to be on an accessible route
  - Exempted recreational facilities (see 1110.2)
  - Decks/patios of Type B units with impervious (solid) surfaces can be 4" below adjacent interior floor level

## Dwelling & Sleeping Units

### Conditions in scoping provisions applying to all occupancies:

- **Accessible Route** – Accessible A, & B unit entry doors required to be connected to all accessible public & common space entrances serving the unit via accessible route except:
  - Topographical/legal barriers requiring vehicular route
  - I-3 or R-2 or r-3 & R-4 congregate residences/facilities with Type A units, levels not required to be connected if all common & public use facilities are connected to the accessible or Type A units
  - Ref in 1107.4 exc 3 typo fix to 1107.6.2.24.1
  - R-1 multilevels in guest units not required to be connected if accessed level has the accessible elements and serves at least 2.
  - Levels exempt by 1107.7

## Dwelling & Sleeping Units

### Conditions specific to occupancies:

- **Institutional – 1107.5 Number & type of units listed for each occupancy type**
  - **I-1 two types**, custodial care able to respond & where residents need assistance
  - **I-2 three types**, nursing homes, hospitals & rehab facilities
  - **I-3 scoping** provided based on function, sleeping units, holding & special housing and medical care

## Dwelling & Sleeping Units

### Conditions specific to occupancies:

- **Residential 1107.6 Number & type of units listed for each occupancy type**
  - **R-1** accessible sleeping and dwelling units determined in accordance with 1106.1.1 & Table 1107.6.1.1
  - **R-2** variation of units required based on type of occupancy:
    - **Live/work units** 1107.6.2.1 non-residential areas to be accessible, living space Type B
    - **Apartments, convents/monasteries**
      - Type As where >20 units then 2%
      - Exceptions
    - **Other R-2 occupancies** (see 310)
      - accessible and Type B units required
      - Exceptions

## Dwelling & Sleeping Units

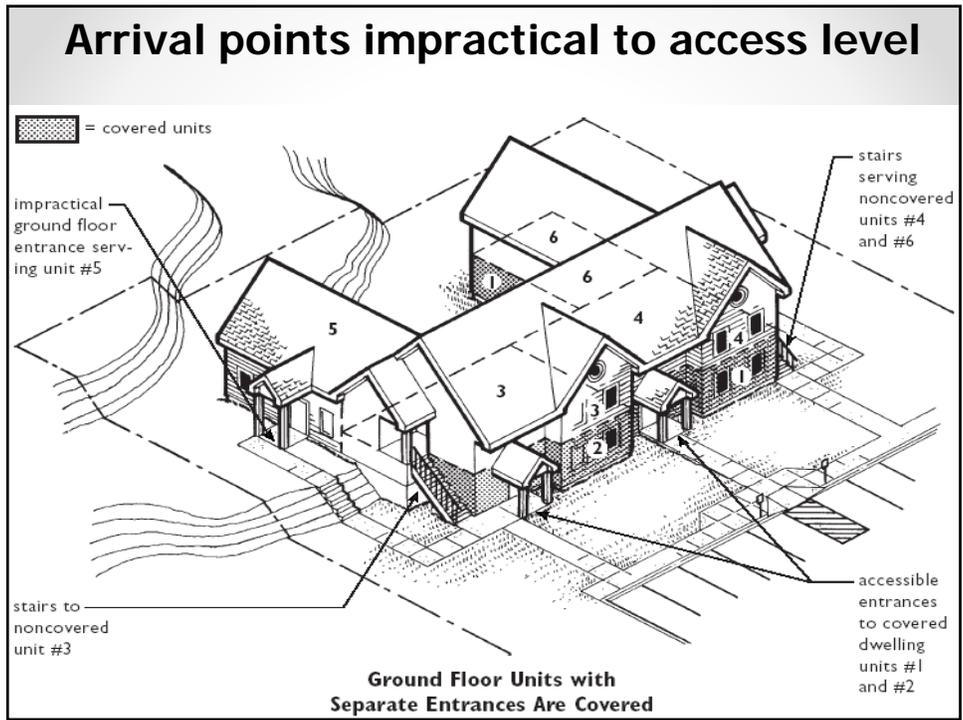
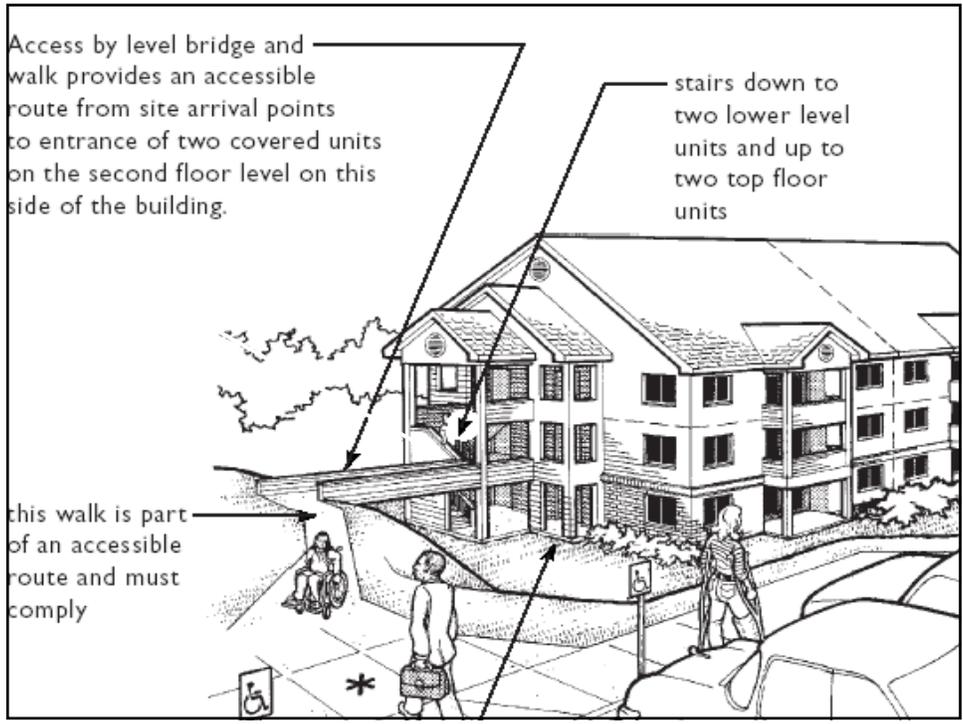
### Conditions specific to occupancies:

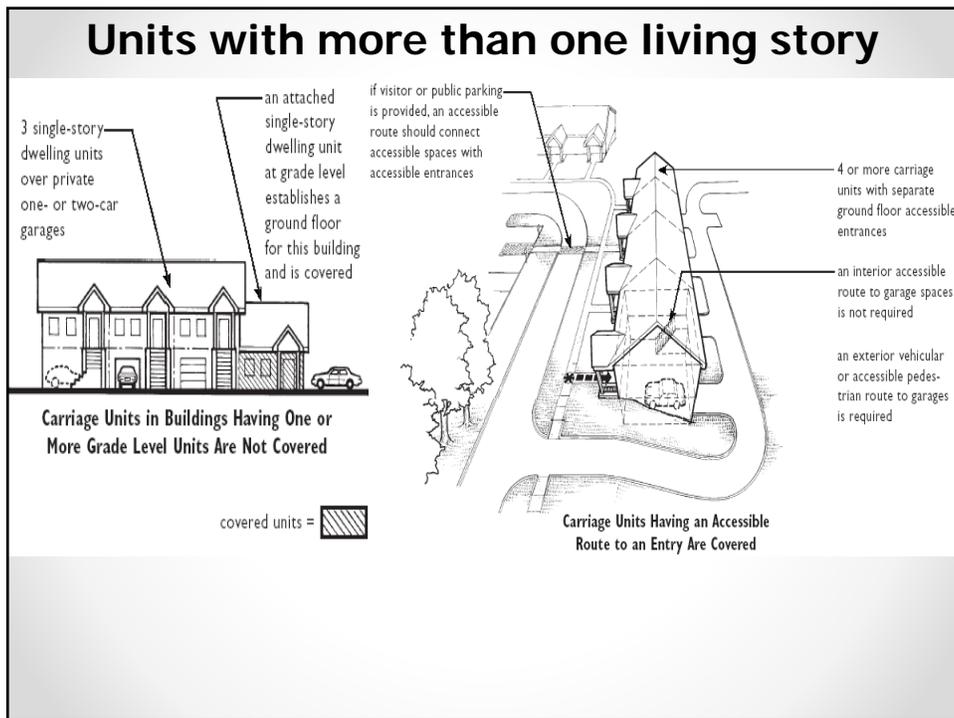
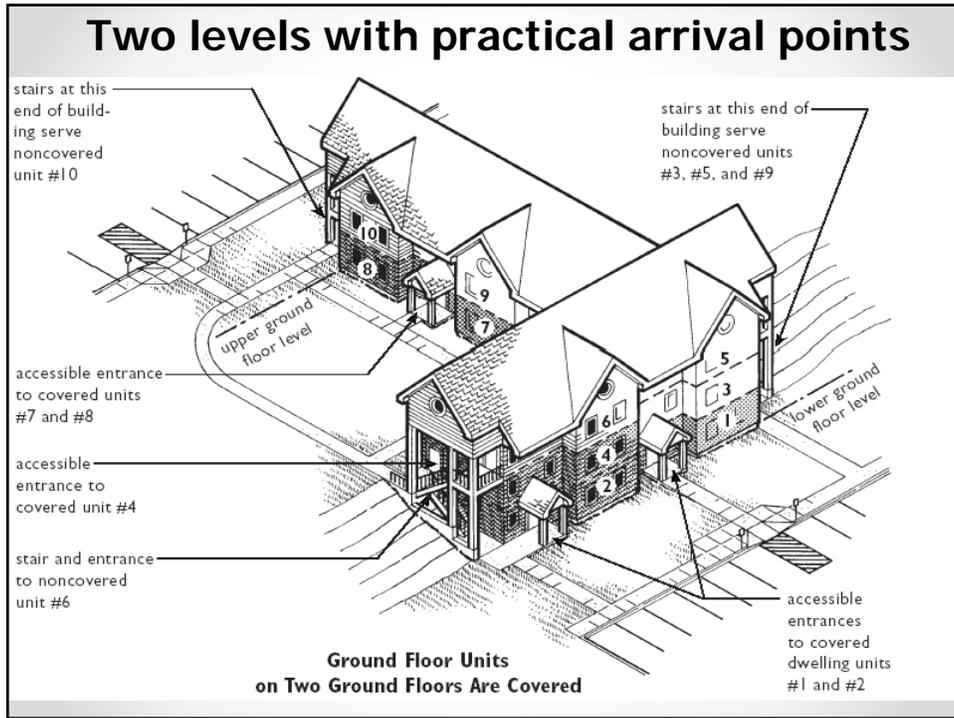
- **Residential 1107.6 Number & type of units listed for each occupancy type**
  - **R-3** where >3 units in a structure, all units must be Type B unless the units) exempted by 1107.7
  - **R-4** two conditions for accessible units:
    - In facilities providing care for residents capable of responding to emergencies, one unit is required to be accessible
    - When residents need some level of emergency assistance, two units must be accessible

## Dwelling & Sleeping Units

### Exceptions allowed when referenced in 1107.5 & 1107.6:

- **Residential 1107.6 Number & type of units listed for each occupancy type**
  - **Structures w/o elevators –**
    - Only one story of dwelling/sleeping units is required to contain Type As or Bs if the terrain/topography makes access impractical (see 1107.7.1.2, #1 & 2 & paragraph following)
    - Units with more than one living story

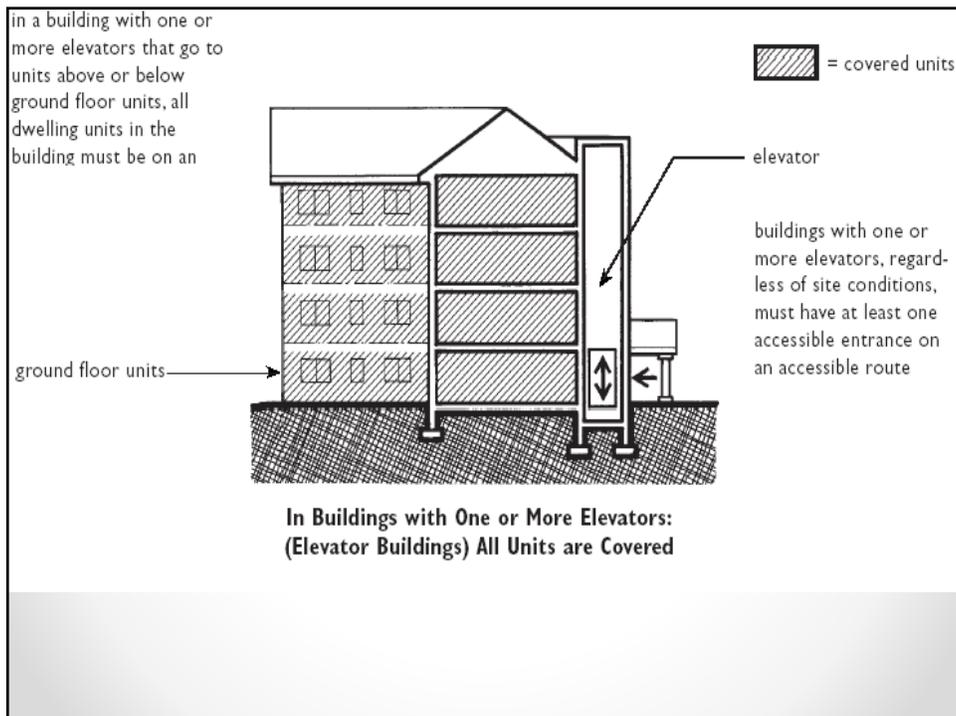


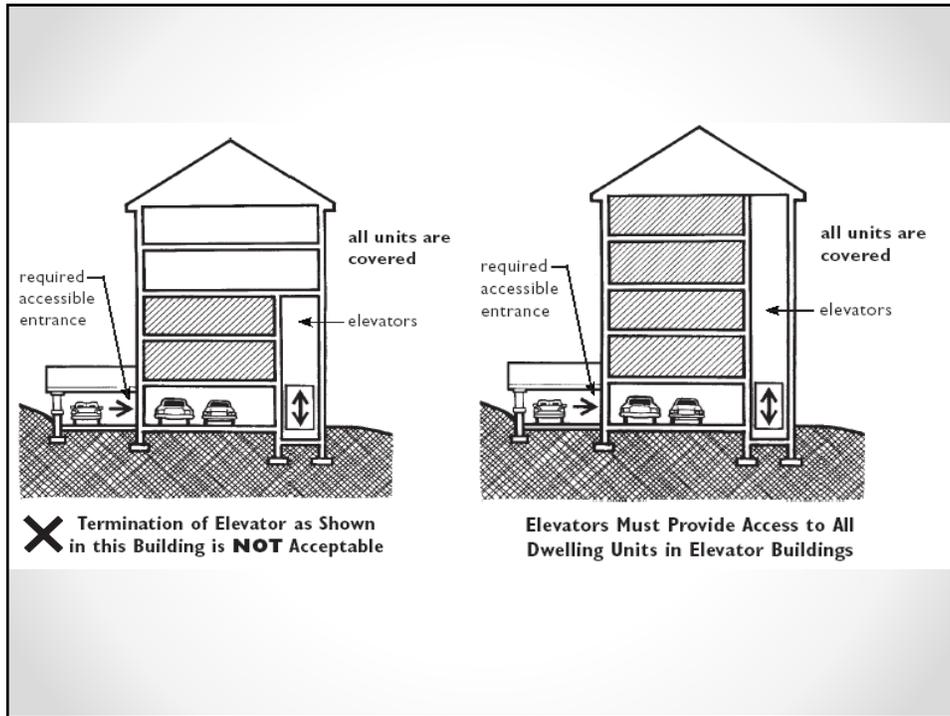


## Dwelling & Sleeping Units

### Exceptions allowed when referenced in 1107.5 & 1107.6:

- Residential 1107.6 Number & type of units listed for each occupancy type
  - Structures with elevator service
    - Units in these buildings with more than one floor must have living amenity features on the entry level which must be on the elevator access level (1107.7.2)
- Site impracticality & Flood elevation 1107.4 & 1107.7.5

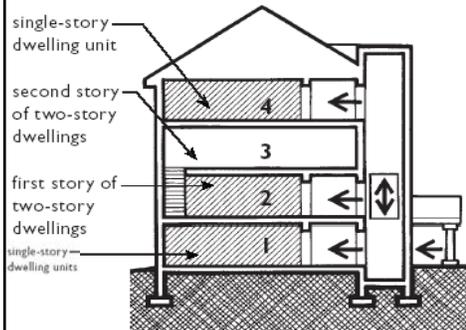




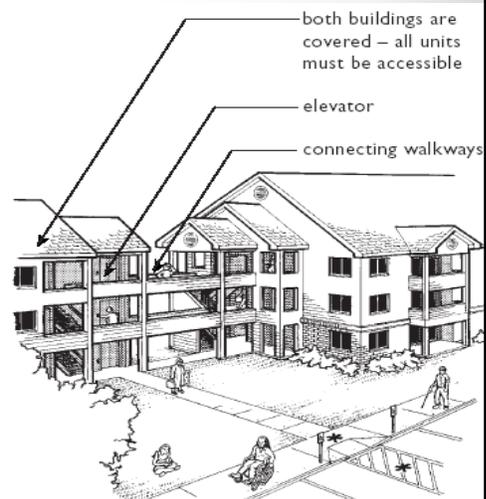
## Elevator service to floors

elevator must have stops at all floors containing single-story units and at the primary entry floor of two-story dwelling units

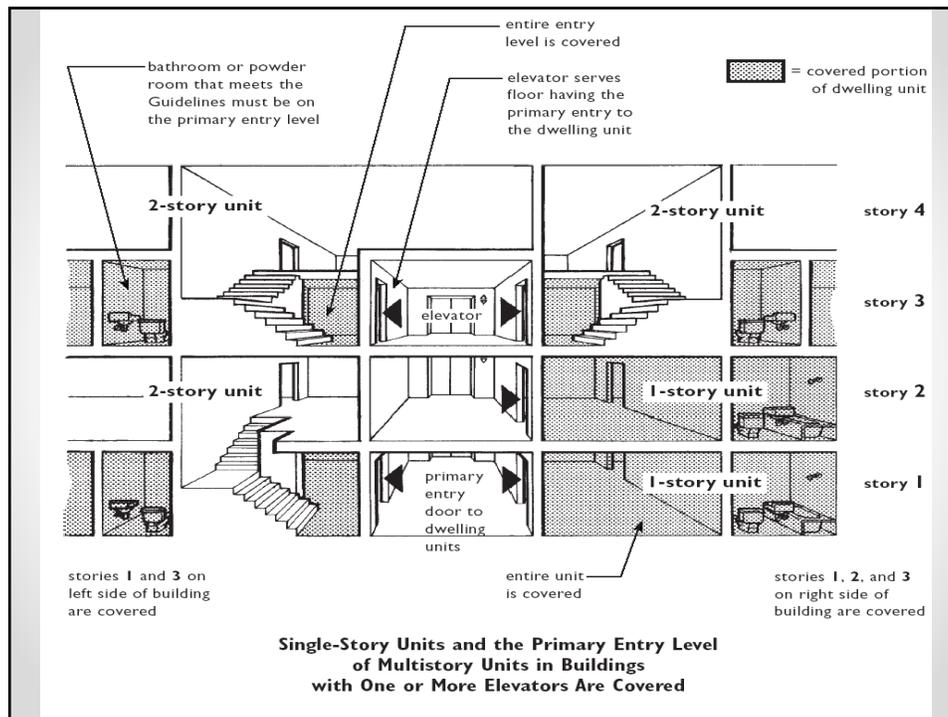
= covered unit:



**Elevators Must Provide Access to Primary Entry Floors of Two-Story Dwellings in Elevator Buildings**



**A Central Elevator Serving a Building with Two Wings**



## Existing buildings

### OBC Chapter 34, 3411

- No Type B units required
- Must be maintained accessible
- Provisions don't impose greater accessibility than required for new construction
- Changes to a building are not allowed to reduce existing accessibility

## Existing buildings

### OBC 3411.9

- Designated Historic Buildings shall comply with this chapter unless:
  - Unless technically infeasible (def?)
  - When compliance would destroy historic significance, the following applies:
    - An accessible route from site arrival to accessible entrance
    - Accessible route from accessible entrance to public spaces on that level
    - An accessible main entrance unless, 2 exceptions
    - Signage for entrances
- At least one accessible family or assisted-use toilet room to be provided

## Existing buildings

### OBC 3411.4

- **Portion of a building changing occupancy**
  - Alterations must comply with 3411.6, .7, & .8.
- **Building Change of Occupancy** (also see last paragraph)
  - All alterations must comply with 3411.6, .7, & .8
  - Building to have the following features:
    - One accessible entrance
    - Accessible route from entrance to primary function areas
    - Signage (see 1111)
    - Where provided:
      - Accessible parking
      - Passenger loading zone
      - Accessible route from parking/passenger loading

## Existing buildings

### OBC 3411.5

#### Additions

- Design and construction in accordance with new construction provisions (see chapter 11)
- When addition affects access to or contains a primary function, 3411.7 (alteration affecting an primary function area) applies

## Existing buildings

### OBC 3411.6

**Alterations** – In accordance with new construction provisions (chapter 11) to the extent of the alteration, also, 3411.7 & 3411.8 (scoping & detail)

#### Exceptions:

- Unless technically infeasible, then to extent possible
- Where the space/element isn't required to be on an accessible route
- Accessible means of egress not required for alterations in existing buildings
- Alterations to owner occupied R-2 Type A units are allowed to meet Type B provisions

## Existing buildings

### OBC 3411.7

**Alterations & Primary Function Areas** – when alteration affects accessibility to or occurs in an area of primary function, the route to and amenities serving the area must be accessible.

Exceptions:

- When cost disproportionality provision is applied. (see next slide)
- Alterations limited to:
  - Windows
  - Hardware
  - Operation controls
  - Electrical receptacles
  - Signs
  - Mechanical, electrical, fire protection systems & hazardous material abatement

## Existing buildings

### OBC 3411.7

**Alterations & Primary Function Areas** – when alteration affects accessibility to or occurs in an area of primary function, the route to and amenities serving the area must be accessible.

Exceptions:

- When cost disproportionality provision is applied.
- Alterations limited to:
  - Windows
  - Hardware
  - Operation controls
  - Electrical receptacles
  - Signs
  - Mechanical, electrical, fire protection systems & hazardous material abatement
  - Work specifically intended to increase accessibility

## Existing buildings

### OBC 3411.7.1

#### Alterations – applying disproportionate cost criteria

- When the additional work required by 3411.4, 3411.6, or 3411.7 is in excess of 20% of the proposed entire alteration to the primary function area, 3411.7.1 can be applied.
  - Additional required costs can include:
    - Accessible entrances, routes, restrooms and restroom details, telephone and drinking fountain changes.
  - Conditions that apply when using cost proportionality:
    - Such changes that can be made without incurring disproportional costs, shall be made
    - The changes shall be made using the following priority list:
      - » Entrance
      - » Route to altered area
      - » One restroom for each sex or one unisex
      - » Telephones
      - » Drinking fountains
      - » Parking, storage and alarms
  - Alterations shall not be sequenced to evade compliance (see 3411.7.1#3)

## Existing buildings

### OBC 3411.8

#### Alterations – Scoping for specific facility elements

- In addition to the preceding general provisions, elements intended or required to be altered have further limits and conditions in application when in existing buildings. Those elements and the specific scoping is indicated in 3411.8:
  - Entrances
  - Elevators
  - Platform Lifts
  - Stairs & escalators
  - Ramps
  - Performance areas
  - Dwelling and sleeping units (Accessible, Type A Type B)
  - Courtrooms
  - Toilet, dressing, fitting and locker rooms
  - Fuel dispensing facilities
  - Thresholds
  - Amusement rides

Questions?

Ohio Building Code  
Chapters 1 & 17  
Verification Bodies & Special Inspections

Steve Regoli  
Architect Administrator

## How Has the Product Approval System

- Appendix O:
  - *Approved Testing and Inspection Agencies*
- Appendix P:
  - *Approved National Evaluation and Accreditation Services*
- Will Change To:
  - *Conformity Assessment Bodies*

### Conformity Assessment Bodies

“104.2.1.3 Inspections. If the plans for the erection, construction, repair, alteration, relocating, or equipment of a building are subject to inspection by the building official, under section 108, the building official shall cause to be made such inspections, investigations, and determinations as are necessary to determine whether or not the work which has been performed and the installations which have been made are in conformity with the approved construction documents.”

## Conformity Assessment Bodies

“1714.1 General. Whenever there is a reasonable doubt as to the stability or loadbearing capacity of a completed building, structure or portion thereof for the expected loads, an engineering assessment shall be required. The engineering assessment shall involve either a structural analysis or an in-situ load test, or both. The structural analysis shall be based on actual material properties and other as-built conditions that affect stability or load-bearing capacity, and shall be conducted in accordance with the applicable design standard. If the structural assessment determines that the load-bearing capacity ...”

## Conformity Assessment Bodies

“103.2.3 Building department certification application. Application for certification of a municipal, township, or county building department shall be made on a form prescribed by the board of building standards and shall set forth:

1. Copy of the law creating such a department.
2. Copy of a resolution requesting certification of the building department to enforce the rules of the board.
3. The proposed budget for the operation of such department.
4. A chart showing the organization of the building department within the governmental body ...”

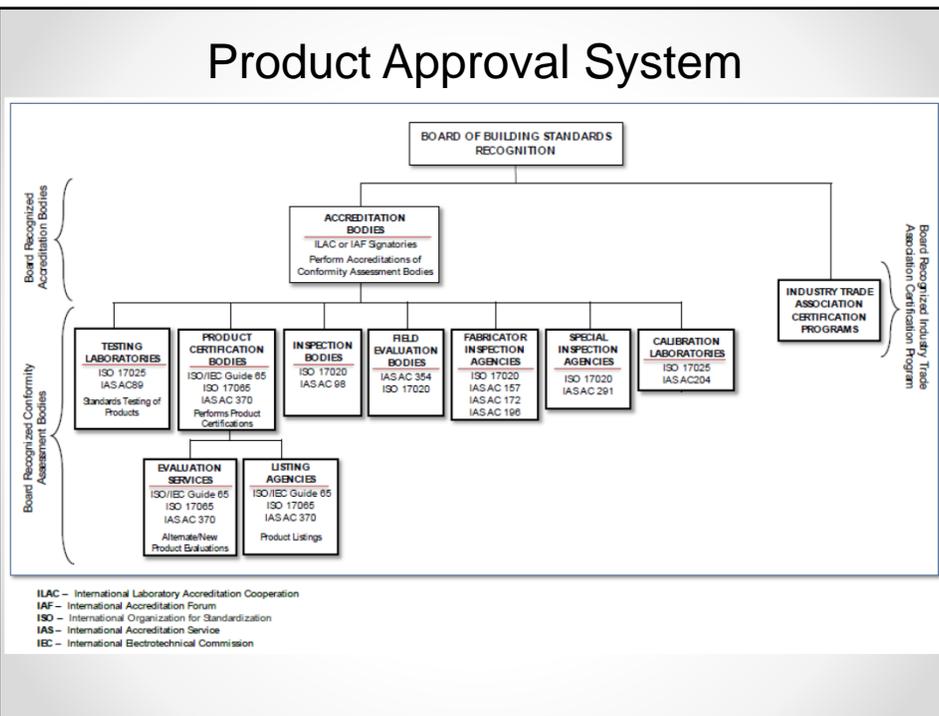
## Conformity Assessment Bodies

Conformity - Compliance in actions, behavior, etc., with certain accepted standards or norms

Assessment - Evaluate by comparing with a standard or measurement

Bodies - Cooperative enterprise, collective group, or unit

## Product Approval System



## Product Approval

*114.3 Building official approval process. The building official shall approve the use of products in accordance with Sections 114.3.1 through 114.3.3.*

## Product Approval

- *114.3.1 Materials, products, assemblies and methods of construction prescribed in the code.*
  - *114.3.1.1 Testing laboratories.*
  - *114.3.1.2 Listing agencies.*
- *114.3.2 Alternative materials, products, assemblies and methods of construction not prescribed in the code.*
- *114.3.3 Used materials and products.*

## OBC Chapter 1, Section 114, Ties Into Chapter 17, Special Tests and Special Inspections?

### What are Special Inspections?

#### OBC 1702 Definitions:

“SPECIAL INSPECTION. Inspection as herein required of the materials, installation, fabrication, erection, or placement of components or connections requiring special expertise to assure compliance with approved construction documents and referenced standards (see Section 1704).”

## What are Special Inspections?

### OBC 1702 Definitions

“SPECIAL INSPECTION, CONTINUOUS. The *full-time observation* of work requiring special inspection by an approved special inspector who is present in the area where the work is being performed.”

## What are Special Inspections?

### OBC 1702 Definitions

“SPECIAL INSPECTION, PERIODIC. The *part-time or intermittent observation* of work requiring special inspection by an approved special inspector who is present in the area where the work is being performed and at the completion of the work.”

# Who performs Special Inspections?

Not discussing an *approved agency* used for tests and inspections. (old Appendix O)

## NOT Appendix O



**Department of Commerce**  
Division of Industrial Compliance  
John A. White, Director  
Robert J. White, Director

**LISTING OF APPROVED TESTING AND INSPECTION AGENCIES**  
Revised May 10, 2013 (Formerly OBC Appendix O)

The following represents the list of Ohio approved testing laboratories and inspection agencies created in accordance with the provisions of section 1114.4 of the Ohio Building Code (OBC) and the Residential Code of Ohio (RCO). The intent of this list is for use by certified building departments wherever the OBC and RCO require the testing, inspection, labeling or grading/marketing of materials or assemblies. Whenever a certified building department receives a report from a laboratory or inspection agency or is required by this code to check for labeling or grading/marketing, the building department must review this list to determine if the report, label or grade/mark is from one of the approved agencies listed herein.

**AB & Witzig Engineering, Inc.**  
ATF-Indianapolis location  
4165 West 99th Street  
Carmel, IN 46032

**ATF-Cincinnati location**  
6203 Schumacher Park Drive  
West Chester, Ohio 45069

**APA - The Engineered Wood Association<sup>(1)</sup>**  
7011 South 19th Street  
P.O. Box 11700  
Tacoma, WA 98466

**Applied Research Laboratories**  
5371 N.W. 161st Street  
Miami, FL 33014

**ATC Associates, Inc.**  
8989 Hermann Drive  
Suite 300  
Columbia, MD 21045

**Bier & Prevost Engineering & Testing**  
5710 Wolfcreek Avenue  
Columbus, OH 43213

Ohio Board of Building Standards  
6100 Victory Road  
PO Box 4000  
Springfield, OH 45508-0000 U.S.A.

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614 | 444 2613  
Fax 614 | 444 3142  
TTY/TDD 888 | 738 8759  
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**BBC & M Engineering, Inc.<sup>(1)</sup>**  
Bovyer-Mosser Testing Lab, Inc.  
4518 Taylorville Road  
P.O. Box 51  
Dayton, OH 45424

**Canadian Plywood Association<sup>(2)</sup>**  
735 West 15th Street  
North Vancouver, B.C., Canada V7M 1T2

**Consulting Services Inc. of Kentucky**  
135 West Short Street  
Lexington, Kentucky 40507

**CSA International<sup>(3)</sup>**  
CSA-Headquarters  
178 Brimley Boulevard  
Toronto, Ontario, Canada M9V 1R3

**CSA-Alberta location**  
1707 - 94 Street  
Edmonton, Alberta, Canada T6N 1E6

**CSA-British Columbia location**  
13759 Cummer Parkway  
Richmond (Vancouver), B.C. Canada V6V 2N9

**CSA-California location**  
2805 Barranca Parkway  
Irvine, CA 92606

**CSA-Ohio location (formerly AGA)**  
8501 East Pleasant Valley Road Cleveland, OH 44131

**CSA-Quebec location**  
805 rue Ellingham  
Point-Clare, Quebec, Canada H9R 5E8

**CTL Engineering, Inc.**  
8777 Engle Road  
Building 111, Suite N  
Cleveland, OH 44130

Ohio Board of Building Standards  
6100 Victory Road  
PO Box 4000  
Springfield, OH 45508-0000 U.S.A.

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## Who performs Special Inspections?

### Existing Section 1704.1

- A qualified person demonstrating competence to perform the specific inspection requiring special inspection.
- The registered design professional of record.

## Who performs Special Inspections?

### Proposed Section 1702.1 (3 Options)

- A qualified person demonstrating competence to perform the specific inspection requiring special inspection.
- The registered design professional of record.
- *An employee of an accredited special inspection agency recognized by the board.*

## Who retains the Special Inspectors?

### Section 1704.1

The owner or the registered design professional in responsible charge acting as the owner's agent.

## When are Special Inspections required?

### Section 1704.1

- Where application is made for construction described in Section 1704.
  - Except:
    - ~Work of a minor nature (light-frame steel or wood)
    - ~Design of building components involving the practice of engineering or architecture as defined in registration laws.

## When are Special Inspections required?

### Section 1704

- |           |           |           |
|-----------|-----------|-----------|
| - 1704.2  | - 1704.3  | - 1704.4  |
| - 1704.5  | - 1704.6  | - 1704.7  |
| - 1704.8  | - 1704.9  | - 1704.10 |
| - 1704.11 | - 1704.12 | - 1704.13 |
| - 1704.14 | - 1704.15 | - 1704.16 |

## What inspections are required?

### Sections 1704.2 – 1704.16

- |               |                           |
|---------------|---------------------------|
| • Fabricators | • Pile Foundations        |
| • Steel       | • Pier Foundations        |
| • Concrete    | • Fireproofing (sprayed)  |
| • Masonry     | • Fire-resistant Coatings |
| • Wood        | • Insulation (EIFS)       |
| • Soils       | • Special Cases           |
|               | • Smoke Control           |

## Statement of Special Inspections

### Section 1704.1.1

- Required as condition for issuance of plan approval
  - Spelled out in Section 1705
- Prepared by qualified person if project not designed by a registered design professional

## Statement of Special Inspections

### Section 1705.2 Content

Statement shall identify:

- Work requiring special inspection or testing
- Type and extent of each special inspection
- Type and extent of each test
- Additional requirements for inspection or testing for seismic or wind resistance see 1705.3, 1705.4, 1707, 1708
- Whether inspection will be continuous or periodic

## Statement of Special Inspections

**SEISMIC DESIGN CATEGORY.** A classification assigned to a structure based on its occupancy category and the severity of the design earthquake ground motion at the site.

**OCCUPANCY CATEGORY.** A category used to determine structural requirements based on occupancy.

## Statement of Special Inspections

### Section 1705.3 Seismic Resistance

Section 1613 Seismic Design Category C, D, E, F

- Seismic force resisting systems
- HVAC or piping with hazardous materials
- Emergency power system anchorage
- Exterior wall panels, suspended ceilings
- Access floors, steel storage racks, electrical equipment

## Statement of Special Inspections

### Section 1705.4 Wind Resistance

Wind Exposure Categories B, C, D > 110, 120 mph

- Roof cladding and framing connections
- Wall connections to roof and floor
- Roof and floor diaphragms
- Wind force resisting systems
- Wind force resisting system connection to foundation
- Fabrication and installation of impact resistance

## What reports are required?

1704.1.2 Report requirement.

- Records of Inspection
- Discrepancy Notices
- Unresolved Discrepancies
- Final Reports

## Who receives reports?

### 1704.1.2 Report requirement.

- Inspection reports: building official and registered design professional in charge.
- Discrepancies: immediate attention of the contractor for correction.
- Unresolved discrepancies: building official and design professional.
- Final reports: documentation of special inspections and resolution of discrepancies to building official PRIOR to issuance of C of O.

## Special Inspection for Seismic Resistance

### 1707 Special Inspection for Seismic Resistance

- Structural steel
- Structural wood
- Cold-formed steel framing
- Pier foundations
- Storage racks and access floors
- Architectural components
- Mechanical and electrical components
- Designated seismic system verification
- Seismic isolation system

## Other Sections in Chapter 17

- 1708 Structural Testing for Seismic Resistance
- 1709 Contractor Responsibility
- 1710 Structural Observations
- 1711 Design Strengths of Materials
- 1712 Alternate Test Procedure
- 1713 Test Safe Load
- 1714 In-Situ Load Tests
- 1715 Preconstruction Load Tests
- 1716 Material and Test Standards

## Implementation Issues

- Consistency among building departments
- Compliance by owners, design professionals, contractors
- Enforcement by building officials
- Acceptance of special inspectors
- Availability of special inspectors

Questions?

THANK YOU!

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