

# ICC A117.1-2017

## Standard for Accessible and Usable Buildings and Facilities

American National Standard



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American National Standard

International Code Council  
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## FOREWORD

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### Development

The 1961 edition of ANSI Standard A117.1 presented the first criteria for accessibility to be approved as an American National Standard and was the result of research conducted by the University of Illinois under a grant from the Easter Seal Research Foundation. The National Easter Seal Society and the President's Committee on Employment of People with Disabilities became members of the Secretariat, and the 1961 edition was reaffirmed in 1971.

In 1974, the U.S. Department of Housing and Urban Development joined the Secretariat and sponsored needed research, which resulted in the 1980 edition. After further revision that included a special effort to remove application criteria (scoping requirements), the 1986 edition was published. When requested in 1987, the Council of American Building Officials (CABO) assumed the Secretariat. Central to the intent of the change in the Secretariat was the development of a standard that, when adopted as part of a building code, the standard would be compatible with the building code and its enforcement. The 1998 edition largely achieved that goal. The 2017 edition of the standard is the latest example of the A117.1 committee's effort to continue developing a standard that is compatible with the building code.

In 1998, CABO became the International Code Council (ICC). The International Code Council (ICC) became the secretariat in 1998 when CABO became ICC. The 2017 edition marks the 30th anniversary of the ICC Secretariat of the standard.

### 2017 Edition

New to the 2017 edition are enhanced dimensions for clear floor spaces and turning spaces. These increases were in response to technical data regarding the space needed by persons using scooters and some types of motorized wheelchairs. These enhanced provisions only apply to new buildings and facilities. Where existing buildings and facilities are remodeled, the historic dimensions will still apply.

Other changes include exterior routes, curb cuts, blended transitions, clarity for detectable warnings, passenger drop offs and parking requirements coordinated with the Public Rights of Way Guidelines, providing an accessible design standard for electrical vehicle charging stations and enhanced safety for accessible routes crossing parking lots. Also introduced are acoustic standards for classrooms, features allowing for better communication for persons using sign language, provisions addressing the recharging of wheelchairs in assembly venues and hotels, access to





gaming machines and tables, and provisions for water bottle filling stations.

The new standard continues to provide coordination between the accessible provisions of this standard and the Fair Housing Accessibility Guidelines (FHAG) and the 2010 Standard for Accessible Design referenced by the American's with Disabilities Act (ADA) and the Architectural Barriers Act (ABA).

### **ANSI Approval**

This Standard was processed and approved for submittal to ANSI by the Accredited Standards Committee A117 on Architectural Features and Site Design of Public Buildings and Residential Structures for Persons with Disabilities. ANSI approved the 2017 edition on March 28, 2017. Committee approval of the Standard does not necessarily imply that all Committee members voted for its approval.

### **Adoption**

ICC A117.1–2017 is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's laws.

### **Interpretations**

Requests for interpretations on the provisions of ICC A117.1–2017 should be addressed to: ICC, Chicago District Office, 4051 W. Flossmoor Road, Country Club Hills, IL 60478–5795.

### **Maintenance—Submittal of Proposals**

All ICC standards are revised as required by ANSI. Proposals for revising this edition are welcome. Please visit the ICC website at [www.iccsafe.org](http://www.iccsafe.org) for the official “Call for proposals” announcement. A proposal form and instructions can also be downloaded from [www.iccsafe.org](http://www.iccsafe.org).

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### **Marginal Markings**

Solid vertical lines in the margins within the body of the standard indicate a technical change from the requirements of the 2009 edition. Deletion indicators in the form of an arrow (◄) are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

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**Acknowledgment**

The updating of this standard over the past 6 years could only be accomplished by the hard work of not only the current committee members listed at the time of approval but also the many committee members who participated and contributed to the process over the course of development. ICC recognizes their contributions as well as those of the participants who, although not on the committee, provided valuable input during this update cycle.

The 2017 standard committee would like to take a moment to recognize three members of the committee who were unable to see the fruits of their labor from this past cycle come to completion. Much of what has been accomplished would not have been possible without their contributions, expertise and passion for providing access to the disabled communities in the built environment. This edition of the standard will be a lasting tribute to their memory and a reminder for those who serve on the committee of what may be accomplished.

- Brian D. Black – National Elevator Industry, Inc.
- Ron Burton – Building Operators and Managers Association
- Tricia Mason – Little People of America

## Interest Categories

**Builder/Owner/Operator (BO)** – Members in this category include those in the private sector involved in the development, construction, ownership and operation of buildings or facilities; and their respective associations.

**Consumer/User (CU)** – Members in this category include those with disabilities, or others who require accessibility features in the built environment for access to buildings, facilities and sites; and their respective associations.

**Producer/Distributor (PD)** – Members in this category include those involved in manufacturing, distributing, or sales of products; and their respective associations.

**Professional (P)** – Members in this category include those qualified to engage in the development of the body of knowledge and policy relevant to their area of practice, such as research, testing, consulting, education, engineering or design; and their respective associations.

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**Individual Expert (IE)** (Nonvoting) – Members in this category are individual experts selected to assist the consensus body. Individual experts shall serve for a renewable term of one year and shall be subject to approval by vote of the consensus body. Individual experts shall have no vote.

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Category	Number
Builder/Owner/Operator - (BO)	8
Consumer/User - (CU)	11
Professional - (P)	15 (5 individual)
Producer/Distributor - (PD)	9 (1 individual)
Regulatory - (R)	9
<b>TOTAL MEMBERS</b>	<b>52</b>

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# CHAPTER 1

## APPLICATION AND ADMINISTRATION

### SECTION 101 TITLE

This document shall be known as the standard for Accessible and Usable Buildings and Facilities, hereinafter referred to as “this standard.”

### SECTION 102 PURPOSE

**102.1 General.** The technical criteria in Chapters 3 through 10, Sections 1102, 1103 and 1106 of this standard make sites, facilities, buildings and elements accessible to and usable by people with such physical disabilities as the inability to walk, difficulty walking, reliance on walking aids, blindness and visual impairment, deafness and hearing impairment, incoordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size. The intent of these sections is to allow a person with a physical disability to independently get to, enter, and use a site, facility, building or element.

Section 1104 of this standard provides criteria for Type B units. These criteria are intended to be consistent with the intent of the criteria of the U.S. Department of Housing and Urban Development (HUD) Fair Housing Accessibility Guidelines. The Type B units are intended to supplement, not replace, Accessible units or Type A units as specified in this standard.

Section 1105 of this standard provides criteria for minimal accessibility features for one and two family dwelling units and townhouses which are not covered by the U.S. Department of Housing and Urban Development (HUD) Fair Housing Accessibility Guidelines.

This standard is intended for adoption by government agencies and by organizations setting model codes to achieve uniformity in the technical design criteria in building codes and other regulations.

**102.2 Applicability.** Sites, facilities, buildings, and elements required to be accessible by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapters 3 through 10. Dwelling units and sleeping units shall comply with the applicable provisions of Chapter 11.

### SECTION 103 HUMAN FACTOR PROVISIONS

The technical criteria in this standard are based on body sizes and functional abilities of adults and, in those sections where specifically noted, children.

### SECTION 104 COMPLIANCE ALTERNATIVES

Nothing in this standard is intended to prevent the use of designs, products or technologies as alternatives to those prescribed by this standard, provided they result in equivalent or greater accessibility and such equivalency is approved by the administrative authority adopting this standard.

### SECTION 105 CONVENTIONS

**105.1 General.** Where specific criteria of this standard differ from the general criteria of this standard, the specific criteria shall apply.

**105.2 Calculation of percentages.** Where the determination of the required size or dimension of an element or facility involves ratios or percentages, rounding down for values less than one half shall be permitted.

**105.3 Dimension tolerances.** All dimensions are subject to conventional industry tolerances except where the requirement is a range with stated minimum and maximum end points.

**105.4 Figures.** Unless specifically stated, figures included herein are provided for informational purposes only and are not considered part of the standard.

**105.5 Floor or floor surface.** The terms floor or floor surface refer to the finish floor surface or ground surface, as applicable.

**105.6 Referenced sections.** Unless specifically stated otherwise, a reference to another section or subsection within this standard includes all subsections of the referenced section or subsection.

### SECTION 106 REFERENCED DOCUMENTS

**106.1 General.** The documents listed in Section 106.2 shall be considered part of this standard to the prescribed extent of each such reference. Where criteria in this standard differ from those of these referenced documents, the criteria of this standard shall apply.

**106.2 Documents.**

**106.2.1 Americans with Disabilities Act (ADA) Accessibility Guidelines for Transportation Vehicles.** 36 CFR 1192 published in 56 Federal Register 45558, September 6, 1991 (United States Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111).

Convention	Description
	dimension showing English units (in inches unless otherwise specified) above the line and SI units (in millimeters unless otherwise specified) below the line
	dimension for small measurements
	dimension showing a range with minimum - maximum
min	minimum
max	maximum
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to
	boundary of clear floor space or maneuvering clearance
	centerline
	a permitted element or its extension
	direction of travel or approach
	a wall, floor, ceiling or other element cut in section or plan
	a highlighted element in elevation or plan
	location zone of element, control or feature

FIGURE 105.4  
GRAPHIC CONVENTION FOR FIGURES

**106.2.2 Hearing aids – Magnetic field strength in audio-frequency induction loops for hearing aids operating with an induction pickup coil.** IEC 60118.4-2014 (International Electrotechnical Commission, 3 rue de Varenbe, PO Box 131, 1211 Geneva 20, Switzerland.)

**106.2.3 Manual on Uniform Traffic Control Devices.** MUTCD-2009 with Revisions 1 and 2 incorporated, May 2012 (The Federal Highway Administration, Office of Transportation Operations, Room 3408, 400 7th Street, S.W., Washington, DC 20590).

**106.2.4 National Fire Alarm and Signaling Code.** NFPA 72-2016 (National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101).

**106.2.5 Performance Criteria for Accessible Communications Entry Systems.** DASMA 303-2006. (Door and

Access Systems Manufacturers Association, 1300 Sumner Avenue, Cleveland, OH 44115-2851).

**106.2.6 Power Assist and Low Energy Power Operated Doors.** BHMA A156.19-2013 (Builders Hardware Manufacturers’ Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017).

**106.2.7 Power Operated Pedestrian Doors.** ANSI/BHMA A156.10-2011 (Builders Hardware Manufacturers’ Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017).

**106.2.8 Safety Code for Elevators and Escalators.** ASME A17.1-2013/CSA B44-16 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990).

**106.2.9 Safety Standard for Platform Lifts and Stairway Chairlifts.** ASME A18.1-2014 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990).

**106.2.10 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.** ASTM F 1487-01 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

**106.2.11 Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of Operable Windows and Doors in Accessible Spaces.** AAMA 513-14 (AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268).

**106.2.12 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment.** ASTM F 1292-13 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

**106.2.13 Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods.** ASTM E 2235-04 (2012) (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959).

## SECTION 107 DEFINITIONS

**107.1 General.** For the purpose of this standard, the terms listed in Section 107.5 have the indicated meaning.

**107.2 Terms defined in referenced documents.** Terms specifically defined in a referenced document, and not defined in this section, shall have the specified meaning from the referenced document.

**107.3 Undefined terms.** The meaning of terms not specifically defined in this standard or in a referenced document shall be as defined by collegiate dictionaries in the sense that the context implies.

**107.4 Interchangeability.** Words, terms and phrases used in the singular include the plural, and those used in the plural include the singular.

### 107.5 Defined terms.

**accessible:** Describes a site, building, facility or portion thereof that complies with this standard.

**administrative authority:** A jurisdictional body that adopts or enforces regulations and standards for the design, construction or operation of buildings and facilities.

**amusement attraction:** Any facility, or portion of a facility, located within an amusement park or theme park which provides amusement without the use of an amusement device. Amusement attractions include, but are not limited to, fun houses, barrels and other attractions without seats.

**amusement ride:** A system that moves persons through a fixed course within a defined area for the purpose of amusement.

**amusement ride seat:** A seat that is built-in or mechanically fastened to an amusement ride intended to be occupied by one or more passengers.

**area of sport activity:** That portion of a room or space where the play or practice of a sport occurs.

**assembly area:** A building or facility, or portion thereof, used for the purpose of entertainment, worship, educational or civic gatherings, or similar purposes. For the purposes of these requirements, assembly areas include, but are not limited to, classrooms, lecture halls, courtrooms, public meeting rooms, public hearing rooms, legislative chambers, spaces utilized for viewing motion picture projections, auditoria, theaters, playhouses, dinner theaters, concert halls, centers for the performing arts, amphitheaters, arenas, stadiums, grandstands, places of religious worship or convention centers.

**assistive listening system (ALS):** An amplification system utilizing transmitters, receivers and coupling devices to bypass the acoustical space between a sound source and a listener by means of induction loop, radio frequency, infrared, or direct-wired equipment.

**blended transition:** A raised pedestrian street crossing, depressed corner or similar connection between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that has a grade of 1:20 or less.

**boarding pier:** A portion of a pier where a boat is temporarily secured for the purpose of embarking or disembarking.

**boat launch ramp:** A sloped surface designed for launching and retrieving trailed boats and other water craft to and from a body of water.

**boat slip:** That portion of a pier, main pier, finger pier or float where a boat is moored for the purpose of berthing, embarking, or disembarking.

**catch pool:** A pool or designated section of a pool used as a terminus for water slide flumes.

**characters:** Letters, numbers, punctuation marks and typographic symbols.

**children's use:** Spaces and elements specifically designed for use primarily by people 12 years old and younger.

**circulation path:** An exterior or interior way of passage provided for pedestrian travel, including but not limited to, walks, hallways, courtyards, elevators, platform lifts, ramps, stairways and landings.

**common use:** Interior or exterior circulation paths, rooms, spaces or elements that are not for public use and are made available for the shared use of two or more people.

**counter slope:** Any slope opposing the running slope of a curb ramp.

**cross slope:** The slope that is perpendicular to the direction of travel (see running slope).

**curb ramp:** A short ramp cutting through a curb or built up to it.

**destination-oriented elevator system:** An elevator system that provides lobby controls for the selection of destination floors, lobby indicators designating which elevator to board and a car indicator designating the floors at which the car will stop.

**detectable warning:** A standardized surface feature built in or applied to floor surfaces to warn of hazards on a circulation path.

**dwelling unit:** A single unit providing complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

**element:** An architectural or mechanical component of a building, facility, space or site.

**elevated play component:** A play component that is approached above or below grade and that is part of a composite play structure consisting of two or more play components attached or functionally linked to create an integrated unit providing more than one play activity.

**elevator car call sequential step scanning:** A technology used to enter a car call by means of an up or down floor selection button.

**employee work area:** All or any portion of a space used only by employees and used only for work. Corridors, toilet rooms, kitchenettes and break rooms are not employee work areas.

**existing building:** A building erected prior to the date of adoption of this standard, or one for which a legal building permit has been issued.

**existing facility:** A facility completed prior to the date of adoption of this standard, or one for which a legal permit has been issued.

**facility:** All or any portion of a building, structure, site improvements, elements and pedestrian routes or vehicular ways located on a site.

**gangway:** A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. Gangways that connect to vessels are not addressed by this document.

**golf car passage:** A continuous passage on which a motorized golf car can operate.

**grade break:** The line where two surface planes with different grades meet.

**ground level play component:** A play component that is approached and exited at the ground level.

**habitable:** A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

**key surface:** The surface or plane of any key or button that must be touched to activate or deactivate an operable part or a machine function or enter data.

**marked crossing:** A crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.

**operable part:** A component of an element used to insert or withdraw objects, or to activate, deactivate or adjust the element.

**pictogram:** A pictorial symbol that represents activities, facilities or concepts.

**play area:** A portion of a site containing play components designed and constructed for children.

**play component:** An element intended to generate specific opportunities for play, socialization or learning. Play components are manufactured or natural; and are stand-alone or part of a composite play structure.

**ramp:** A walking surface that has a running slope steeper than 1:20.

**running slope:** The slope that is parallel to the direction of travel (see cross slope).

**sign:** An architectural element composed of displayed textual, symbolic, tactile or pictorial information.

**site:** A parcel of land bounded by a property line or a designated portion of a public right-of-way.

**sleeping unit:** A room or space in which people sleep that can also include permanent provisions for living, sleeping, eating and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.

**soft contained play structure:** A play structure made up of one or more play components where the user enters a fully enclosed play environment that utilizes pliable materials, such as plastic, netting or fabric.

**teeing ground:** In golf, the starting place for the hole to be played.

**transfer device:** Equipment designed to facilitate the transfer of a person from a wheelchair or other mobility aide to and from an amusement ride seat.

**transition plate:** A sloping pedestrian walking surface located at the ends of a gangway.

**TTY:** An abbreviation for teletypewriter. Equipment that employs interactive, text-based communications through the transmission of coded signals across the standard telephone network. The term TTY also refers to devices known as text telephones and TDDs.

**use zone:** The ground level area beneath and immediately adjacent to a play structure or play equipment that is designated by ASTM F 1487 listed in Section 106.2.10, for unrestricted circulation around the play equipment and where it is predicted that a user would land when falling from or exiting the play equipment.

**variable message signs (VMS):** Electronic signs that have a message with the capacity to change by means of scrolling, streaming or paging across a background.

**variable message sign (VMS) characters:** Characters of an electronic sign are composed of pixels in an array. High reso-

lution VMS characters have vertical pixel counts of 16 rows or greater. Low resolution VMS characters have vertical pixel counts of 7 to 15 rows.

**vehicular way:** A route provided for vehicular traffic, such as in a street, driveway or parking facility.

**walk:** An exterior pathway with a prepared surface for pedestrian use.

**wheelchair charging area:** A clear floor area where people with disabilities can recharge their wheelchair batteries.

**wheelchair space:** A space for a single wheelchair and its occupant.

**wheelchair space locations:** A space for a minimum of a single wheelchair and the associated companion seating. Wheelchair space locations can contain multiple wheelchair spaces and associated companion seating.



## CHAPTER 2

# SCOPING

### **SECTION 201 GENERAL**

This standard provides technical criteria for making sites, facilities, buildings and elements accessible. The administrative authority shall provide scoping provisions to specify the extent to which these technical criteria apply. These scoping provisions shall address the application of this standard to each building and occupancy type; new construction, alterations, temporary facilities, and existing buildings; specific site and building elements; and to multiple elements or spaces provided within a site or building.

### **SECTION 202 DWELLING AND SLEEPING UNITS**

Chapter 11 of this standard contains dwelling unit and sleeping unit criteria for Accessible units, Type A units, Type B

units, Type C (Visitable) dwelling units and units with communication features. The administrative authority shall specify, in separate scoping provisions, the extent to which these technical criteria apply. These scoping provisions shall address the types and numbers of units required to comply with each set of unit criteria.

### **SECTION 203 ADMINISTRATION**

The administrative authority shall provide an appropriate review and approval process to ensure compliance with this standard.