City of Newport Beach - Building Department

BUILDING CODE POLICY

Effective Date	Subject	Policy No.
November 16, 1998 Revised August 21, 2001	Disabled Access Dimensional Tolerances	UBC 1101B.4

Previous policy is superseded by ICBO Orange Empire Chapter's "Reasonable Construction Tolerances for Disabled Access Construction," ratified by the Building Code Board of Appeals on August 21, 2001. (Attached)

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Jay Elbettar, Building Director

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Orange Empire Chapter

International Code Council

REASONABLE CONSTRUCTION TOLERANCES FOR DISABLED ACCESS CONSTRUCTION

Orange Empire Chapter of ICBO

Ad Hoc Committee

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Recommended for Member Use as a Guideline Document
By Orange Empire Chapter of ICBO - June 15, 2000
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Introduction and Background

Implementing California Title 24 Accessibility Regulations (Title 24) and The Americans With Disabilities Act (ADA) has been challenging for all parties involved. Two basic reasons are 1) the sometimes differing interpretations of the regulations by the state and federal enforcing agencies and 2) the regulations usually call for exact dimensions which are not practical, even in new construction. Substandard construction practices are generally not at fault. The real-world application of precise dimensions creates an inherent flaw when applying normal construction practices and using construction materials.

Nevertheless, the access codes are necessary to accommodate the needs of today's society and it is incumbent upon building officials and their staffs to enforce "minimum" access standards. Code sections permitting field tolerances were added to state and federal regulations to assist the building official with enforcing the regulations. These sections are Health & Safety Code §19957, Title 24 §1101 and ADA 3.2. These sections are general in nature and do not specify an acceptable tolerance for the differing code sections. These code sections create another enforcement dilemma because permitting a minor variance for one code section may be acceptable but the same variance would not be acceptable for another code section.

Therefore, the intent of this guideline is to provide the information necessary for building officials and their staffs to make intelligent decisions as to what are acceptable tolerances for the different code sections while not reducing accessibility for people with disabilities. This guideline is also intended to be a "living document" which can be updated, expanded or terminated whenever it is shown to be appropriate in order to best serve the public-at-large. Addressing these reasonable construction tolerances will best serve the interests of the disabled community since the often-harsh enforcement will be mitigated thus encouraging goodwill and not unnecessarily creating an attitudinal barrier. Attitudinal barriers are often the most difficult barriers to overcome.

These construction tolerances have not been approved or endorsed by any state or federal enforcing agency. These tolerances are based on the over twenty years of experience gained by the members of this committee when enforcing accessibility regulations. The intent of this guideline is to make accessibility regulations more user friendly and to ensure a building department does not grant a code exception that would reduce or limit accessibility for people with disabilities.

Administrative Application

The purpose of this guideline is to combine the thoughts and practices of regulatory officials as applied in the design and construction of accessible buildings and to document what is believed to be an acceptable standard industry practice. Therefore, this guideline is to be used as a tool to establish what is an acceptable tolerance in specific situations and does not unnecessarily reduce accessibility for people with disabilities. **Construction plans shall always indicate full compliance.** Acceptance of reasonable tolerances is **only** to be considered for normal field construction variances and not to relieve substandard construction practices or poor design practices.

Both the Title 24 California Code of Regulations (T-24 CCR) and the Americans with Disabilities Act Accessible Guidelines (ADAAG) permit deviations from stated dimensions based on field conditions. The authority to establish and enforce regulations based on reasonable tolerances is listed as follows:

> **Title 24 CCR - Section 1101B.4 Dimensional Tolerances.** All dimensions are subject to conventional building industry tolerances for field conditions.
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> **Health & Safety Code 19957. Exceptions from literal requirements of standards and specifications in hardship, etc., cases.** In cases of practical difficulty, unnecessary hardship, or extreme differences, a building department responsible for the enforcement of this part may grant exceptions from the literal requirements of the standards and specifications required by this part or permit the use of other methods or materials, but only when it is clearly evident that equivalent facilitation and protection are thereby secured. Added by Stats 1969 ch 1560'1 operative July 1, 1970.
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> **ADAAG - Section 3.2 Dimensional Tolerances.** All dimensions are subject to conventional building industry tolerances for field conditions.

In addition, **Part II of T-24 CCR, Section 104.2.1** prescribes the following: "The building official shall have the power to render interpretations of this code and to adopt and enforce rules and supplemental regulations to clarify the application of its provisions." Therefore, the building official is responsible for interpreting what "conventional building industry tolerances" are acceptable.

The context of this guideline, where a feature falls short of code compliance, does not imply that such a condition complies with a specific code section. If a feature is found to be accessible but lacking compliance by a minor degree; it is up to the local building official to establish a just enforcement policy. This guideline is intended to address Title 24 Regulations and not those codes and standards that are outside the local building official's scope of authority.

Following this guideline is intended to allow a project to be constructed (not designed) within reasonable tolerances and not be redone at considerable expense when the corrective measures provide little or no additional accessibility for people with disabilities. Remember, cost alone is not a deciding factor. It does not mean that the developer may not at sometime in the future be made to correct the condition if a nonconforming situation precludes accessibility to an aggrieved individual.

It is understood that these tolerances would only be utilized if a building feature has been completed such as placed concrete or a framed and finished wall. If a code violation is noted at the forming or framing stage respectively, the developer should be made to comply since it is practicable for them to do so. Consideration when applying reasonable construction practices enforcement should be 1) safety, 2) type of occupancy and 3) cost versus access achieved. Again, cost alone cannot be a deciding factor. These tolerances are to be used in those cases where conditions unique to the site make it difficult to correct the non-complying feature and the correction would create a more hazardous situation. Examples include: 1) a tripping hazard would be created if correcting the cross slope of the sidewalk creates a 9" or higher curb or 2) a slip and fall condition would be created if correcting the slope of a parking space creates a drainage problem and causes water to pool in the path of travel. Remember, the item must be corrected if it is reasonable to do so.

The enforcing agency should stipulate when they are using a 24" or a 48" level with a digital readout to check for compliance. In addition, we recommend that the Building Department policy require the field inspector to note when a non-complying feature is being accepted because it falls within these tolerances.

Recommended Tolerances:

1) **Parking Lot**.
   a. Slope of accessible parking stall and unloading/access aisle surface is 2% maximum for new construction. §1129B.4.4
      Exception: Surface slopes up to 3 or up to 4% for no more than 50% of parking space & access aisle has a 3% max. slope where a person exits a vehicle. Surface slopes exceeding 3% should only be acceptable if there is a site condition preventing compliance. (i.e. existing topographic condition or a drainage problem).

2) **Sidewalk.**
   a. Sidewalk/Walks requires a 2% maximum cross fall for new construction. §1023.1.3, 1133B.7.3
      Exception: A 3% maximum cross slope or a 4% maximum cross slope for up to 30'.

   b. A 48" minimum width. §1133B.7.1 & 1133B.7.1.3 Exception
      Exception: A 46 1/2" minimum width or if natural or existing condition creates hardship, then 36" minimum wide.

3) **Walk.**
   a. Sidewalk/Walks requires a 2% maximum cross fall for new construction. §1133B.7.1.3
      Exception: A 3% maximum cross slope or 4% maximum cross slope for up to 30'.

   b. Minimum width is 48". §1133B.7.1 & 1133B.7.1.3 Exception
      Exception: A ≥46 1/2" width.

   c. Continuous handrails on both sides if ramp slope exceeds 1:20 (5%). §1133B.5.5
      Proposed Exceptions:
      1. Handrails not required on walks in parks and wilderness situations unless they are adjacent to and serve a building or facility such as restrooms, a ball field with bleachers or theater, etc.
      2. Provide handrails when there is a drop off or excessive cross slope that creates a hazardous condition.
      3. Permit up to a 6.66% slope without handrails unless it is a hazardous condition.

4) **Curbcuts.**
   a. A 1:12 (8.33%) maximum slope in direction of travel. ADAAG 4.7 requires least possible slope not to exceed 1:12. §1127B.5.3
      Exception: An 8.4% maximum average slope checked at quarter points with a 9.5% maximum slope at only one point. All other checkpoints shall not exceed 9.5%.

   b. A 1:10 (10%) maximum side flare slope or a 1:12 (8.33%) maximum side flare slope if there's pedestrian cross traffic. §1127B.5.3
      Exception: A maximum 1:8 slope (12.5%) if there is no pedestrian cross slope and a 36" minimum level landing at the top.

   c. A 48" deep level top landing (2 % maximum slope) or a 1:12 maximum side flare slope. §1127B.5.4
      Exception: A 4% maximum slope and a 36" minimum level landing across width of curbcut.

   d. A ½" lip at bottom of a curbcut/ramp beveled at 45°. (**ADAAG 4.7.2 prohibits a ½" high lip at the bottom of curbcut/ramp**). §1127B.5.5

Exception: The local enforcing agency should set a policy of following the California requirement for a ½" high lip at the bottom of curbcut or comply with the ADAAG guideline that prohibits the ½" lip. All national associations representing people with visual disabilities state that the ½" high lip at a 45 degree angle does not provide any additional safety for people with visual disabilities.

e. A contrasting finish to adjacent surface. §1127B.5.6
Exception: Most code enforcement agencies state that a hard broom finish meets this criteria.

f. A 48" deep bottom landing with a ≤5% slope or up to a 2% if mid-block curbcut. §1127B.5.3
Exception: A bottom landing with up to a 6% slope for a standard curbcut/ramp. A 4% max. slope in any direction for mid-block curbcut.

g. Level landing**.** A level landing 4 feet (1219 mm) deep shall be provided at the upper end of each curb ramp over its full width to permit safe egress from the ramp surface, or the slope of the fanned or flared sides of the curb ramp shall not exceed 1 unit vertical to 12 units horizontal (8.33% slope). §1127B.5.4.
Exception: Accept a 36" minimum landing across the width of the ramp with up to a 1:12 side flare slope.
Interpretation: This section does not permit a curbcut across the sidewalk that would create a cross slope in the sidewalk exceeding 2% or up to 4% for 30' unless there is a 48" (36"if hardship) deep level top landing.

5) <u>Pedestrian Ramps.</u>

a. Pedestrian ramps are required to be the least possible slope, not to exceed 8.33% slope. §1133B.5.3
Exception: An 8.33% maximum average slope when checked at quarter points with a 9.5% maximum slope at only one point. All other check points hall not exceed 9.5% slope.

b. Continuous handrails on both sides, installed 34" to 38" above ramp surface. §1003.3.4.5, 1133B.5.5.1
Exception: None - Handrails installed 34" to 38" high.

c. Handrails extend 12" minimum parallel to floor past top and bottom landings. §1133B.4.2.2.
Exception: Handrail extensions may turn 90 degrees at the top or bottom of the ramp.

d. A 1-1/4" - 2" diameter handrail, and if adjacent wall or other surface be free of sharp or abrasive elements and smooth gripping surface without sharp corners. §1133B.5.5.1.
Exception: None – (1-1/4" to 2" exterior diameter)

e. A 1-1/2" space minimum between the wall and handrail. §1133B.5.5.1.
Exception: None - 1-1/2" minimum clearance between wall and handrail.

6) <u>Restrooms.</u>

***<u>General</u>*<u>:</u>**

a. A 5' minimum radius clearance with 12" maximum door swing intrusion in restrooms for new construction. §1115B.7.1.1
Exception: A ≥36" x 60" space outside the door swing into restrooms.

***<u>Water closets</u>*<u>:</u>**

b. Water closets require an 18" clearance to centerline for new construction. §1115B.7.1.3, 1503B
Exception: A 17" - 19" clear space to centerline.

c. Water closets require a 36" wide by 48" long clear space in front of toilet for new construction. §1115B.7.2.
Exception: A 45" min. space in front of a water closet for a front entry stall if there's a 32" min. space beside the water closet OR 58" min. in front of a toilet in front of a side entry stall.

d. New construction requires a 32" minimum space beside water closet.
Exception: A 31" minimum clearance beside the fixture to a wall or a 27" clear space to a fixture.

Lavatories:

e. All lavatories are required to comply. §1115 B.9.1/ 1504(b)
Exception: For new construction require 50% of the lavatories to comply with a minimum of one complying lavatory per restroom.
Existing Condition: require one lavatory to comply or two if there are six or more lavatories.

f. Lavatories require a 29" minimum high X 30" minimum wide knee space, 29" minimum high extending 8" minimum under the lavatory, with a 30" minimum wide, 9" minimum high by 17" minimum deep toe space. §1504
Exception: A 27" minimum high X 30" minimum wide knee space at front of lavatory, with a 27" minimum high space extending 8" minimum under the lavatory, with a 30" minimum wide, 9" minimum high by 17" minimum deep toe space. §1504

Urinals:

g. Urinals are mounted 17" maximum high for new construction. §1503B
Exception: An 18" maximum high lip.

h. Code requires a urinal to extend 14" minimum off the wall.
Exception: Extend 12" minimum off the wall.

i. Code requires urinal flush handle to be 44" maximum high.
Proposed Exception: Up to 48" maximum high. This is within the allowable reach ranges.

Accessories:

j. Highest operable part of dispensers is 40" maximum AFF and located in area accessible to a person using a wheelchair. §1115B.9.2
Exception: A 42" maximum high product slot with a 48" maximum high operating handle.

k. Install all mirrors 40" AFF maximum to the bottom edge of the reflective portion of the mirror. §1115B.9.1.2
Exception: Install a minimum of one mirror at 42" maximum high to accommodate a person using the accessible lavatory.

7) Doorways.

a. A 12" minimum strike side door clearances (push side if door has latch and closure), 18" minimum (strike edge clearance on pull side of interior doors) and 24" minimum (strike edge clearance on pull side of exterior doors) for new construction. §1133B.2.4.3
Exception: A 6" minimum clear space on push side if latch and closure, 17"minimum clear space on pull side, and 23" minimum for exterior doors.

b. Entry doors and interior passage doors require a 60" minimum level landing in direction of door swing for new construction. §1133B.2.4.2.
Exception: A 54" minimum clear level landing with a 3.5% maximum slope.

c. A ¼ " maximum vertical high threshold or up to ½ " if beveled 1:2 maximum. §1133B.2.4.1
Exception: Up to ¾" high if beveled 1:2 maximum.

d. Title 24 requires a 5 lb. maximum effort to open interior doors, 8.5 lbs maximum to open exterior doors and 15 lbs maximum pull for fire rated exit doors. §1133B.2.5.
Exception: A 6 lb. maximum effort to open interior doors, 9 lbs maximum pull for exterior doors and 15 lbs maximum for fire rated exit doors.

8) **Stair Handrails.**

a. Continuous handrails on both sides, installed 34" to 38" above tread nosing. §1133B.4.2.1.
Existing Condition: Continuous handrails installed 32" to 38" high on both sides of the stairs.

b. Handrails extend 12" minimum parallel to floor past top landing, slope a tread width past bottom tread with an additional 12" minimum extending parallel to the floor (23" minimum extensions) measured to inside of curve on handrails. §1133B.4.2.2
Exception: Handrail may turn 90 degrees at the top or bottom of the stairs if they extend into a pedestrian path of travel or create a hazardous condition.

c. A 1-1/4" - 2"diameter, and if adjacent wall or other surface be free of sharp or abrasive elements and smooth gripping surface without sharp corners. §1133B.4.2.6.1.
Exception: None – **(**1 ¼ " to 2" exterior diameter)

d. A 1 ½" space between the wall and handrail. §1006.9.2.5, 1133B.4.2.5
Exception. A 1-1/4" to 1-3/4"clearance between wall and handrail.

9) Counter Heights.

Counter heights are required to be 28" - 34" maximum high for new construction. §1122B.4
Exception: A 35" maximum high counter.