

013010 ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Cornell’s Design and Construction Standards provide mandatory design constraints and acceptable or required products for all construction at Cornell University. These standards are provided to aid the design professional in the development of contract documents and are not intended to be used verbatim as a contract specification nor replace the work and best judgement of the design professional. Any deviation from the Design and Construction standards shall only be permitted with approval of the University Engineer.

PART 1:

1.01 GENERAL

- A. Cornell University is committed to making its facilities accessible and usable for people with mobility, hearing, visual and other types of disabilities. As such, new facilities or those being modified, especially educational facilities, will be designed and constructed for access by all. Accessibility that goes beyond minimal compliance is strongly encouraged. Cornell University strongly values elements of Universal Design that provide experiential equity – allowing people with disabilities equivalent opportunity to experience our programs, services and activities as those without disabilities. Link to [Principles of Universal Design](#)

- B. Designs must comply with the latest editions of the Uniform Federal Access Standards (UFAS), 2010 ADA Standards for Accessible Design, and New York State Uniform Fire Prevention and Building Code (NYSUFPBC) and ICC/ANSI A117.1-2009. Caution shall be exercised such that all requirements are met for each of these regulations. Compliance for one DOES NOT necessarily ensure compliance with the aspects of all the applicable provisions. As such, details, dimensions, and construction specifications shall comply with all requirements set forth in the NYSUFPBC, ICC/ANSI A117.1-2009 (or any current reference standard adopted by the NYSUFPBC), UFAS, and 2010 ADA Standards for Accessible Design for the following bold and underlined items that represent the Cornell Standard.

- C. Alterations affecting primary function areas shall comply with the following section of the Access Board guidelines, Chapter 2 Alterations and Additions-United States Access Board:

General: [Section 202.1] Additions and alterations undertaken at existing facilities are covered by the ADA standards. The extent of application is largely determined by a project’s scope of work as the standards apply to those elements or spaces that are altered or added. Additional requirements apply to the projects that affect or could affect the usability of or access to an area containing a primary function. See link:

<https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-2-alterations-and-additions>

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1.02 SITE AND BUILDING COMPONENTS

A. Parking, Drop Off and Exterior Accessible Routes:

1. Walks: Maximum slope shall not exceed 1 in 20 (5 percent gradient), but lesser grades than 5 percent are encouraged where possible.
2. Ramps: Maximum slope shall not exceed 1 in 12 (8.3 percent gradient), but lesser grades than 8.33 are encouraged where possible.
3. Cross slopes shall not exceed 2 percent gradient.
4. Accessible parking, all elements: vertical signage, slope, access aisles, no parking any time signs on access aisles, proximity to accessible entrance. Percentage of accessible parking spaces is not calculated per lot, rather per campus needs and accessible entrances and routes to building. Consultation with stakeholders needs to occur during all stages of the design process when calculating accessible parking and exterior accessible routes.
5. Passenger loading zones are included in Accessibility Requirements.
6. Curb ramps. Refer to the proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way:

<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines>.

- a) Detectable warning pad. Cornell Standard is steel (rubber is not acceptable) detectable warning pad in asphalt and concrete. Preferred Manufacturers are Duralast & Neenah Foundry Company:
https://cfs.fs.cornell.edu/file/1_3_1%20ADA%20ACCESSIBLE%20CURB%20RAMP_SIDEWALK%20DETAIL.pdf

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B. Entrances and Doors

1. Automatic operators: Cornell Standards require automatic operators shall be included as a means of providing access to all primary entrances for buildings.
2. Entrances: Cornell Standards require the majority of all entrances to be accessible.
3. Thresholds: Cornell Standards require that all thresholds be flush with transitions.

C. Interior Accessible Routes

1. Protruding objects/Cane detection: To prevent hazards to people with vision impairments, the standards limit the projection of objects into circulation paths. These requirements apply to all circulation paths and are not limited to accessible routes. Circulation paths include interior and exterior walks, paths, hallways, courtyards, elevators, platform lifts, ramps, stairways, and landings. The Cornell Standards require a 24” maximum for cane sweep distances. (See Figure 1)

Limits of Protruding Objects

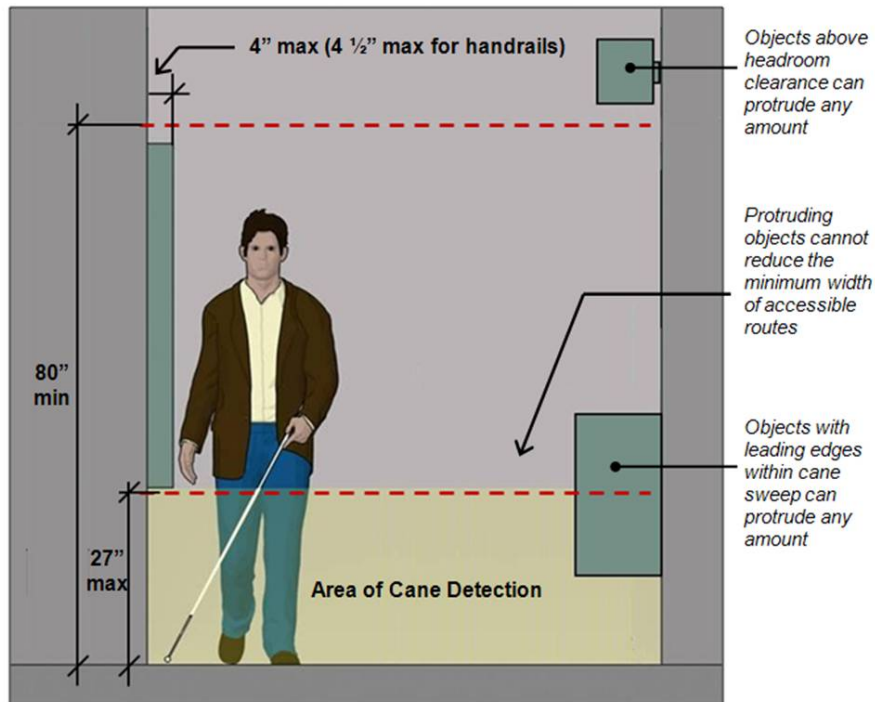


Figure 1

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2. Ground and floor surfaces. Specifications for floor and ground surfaces address surface characteristics, carpeting, openings, and changes in level. They include interior and exterior accessible routes, including walking surfaces, ramps, elevators, and lifts. Accessible floor and ground surfaces must be stable, firm, and slip resistant. Stable surfaces resist movement, while firm surfaces resist deformation by applied forces. Accessible surfaces remain unchanged by external forces, objects, or materials.
 - Level Surface: Surface smoothness that is not composed of cobblestones and pavers must have less than a 1/4” gap.
 - Carpet: The maximum allowable pile height is 1/2” measured to the backing, cushion or pad and require firm backing. Pads must be firm or avoided to ensure firmness.
 - Walk off mats: Firm and stable entry mats such as pedimat aluminum grate with carpet infill as opposed to a movable walking surface such as a rubber fingertip entry mat.
3. Drinking fountains and bottle fillers. Provide dual height units that do not project into accessible space.

D. Classrooms and Labs

1. Laboratory Spaces: All laboratory spaces shall have sinks, work counters, emergency showers/eyewash and fume hoods that are accessible to people with disabilities in accordance with Chapters 3 of the ICC/ANSI A117.1 ADA Standards for Accessible Design (latest edition). Cornell Standards require this in all teaching, dry, and wet research labs.
2. Classroom with fixed seats: All classrooms with fixed seats shall have dispersed seating that is accessible for people who use mobility devices for accessibility. Cornell Standards require these areas to be adjacent to companion seats and have adjustable height tables to accompany the space. Additional free standing chairs must accompany this area so that the occupancy count is maintained. Please note the 2010 ADA Standards for Accessible Design Section 221 (latest edition).
3. Cornell Standards require that an accessible route to the front of the teaching space is maintained for any speaker who is unable to navigate stairs.

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- E. Toilet Rooms. See accessories heights diagram:
https://cfs.cornell.edu/file/ADA_Mounting%20Heights_Standard%20102800.pdf
1. Water closets, wall hung and floor mount: Cornell Standard requires the mounting height of both wall hung and floor mounted water closets to be 18 ½” to the seat. *(Note: specify accessible water closet 17” from centerline to side wall, allowing for construction tolerances to be within the 16-18” allowable range)*
 2. Grab bars: For single user toilet rooms, Cornell Standard requires side grab bars to be 48” and mounted at 35” AFF. Rear grab bars should be 36” and mounted at 35” AFF. Vertical grab bars are required to be 18” tall and mounted 40” AFF, and 40” from the rear wall. In order to allow for 1 ½” distance from the wall mount, rear and side grab bars must be two separate accessories.)
 3. Lavatories: *(Hot water supply and drain shall be insulated, toilet accessories shall not project into clear fixture area.)*
 4. Mirrors: Cornell Standard allows for standard mirrors at least 36” x 48” and the bottom edge should be mounted at 36” AFF.
 5. Dispensers: Soap, paper towels, toilet tissue, feminine hygiene. *(Typical issues: see CU toilet room accessory standard for requirements, documents to detail reach criteria for soap dispenser and mechanism/lever for paper towel and feminine hygiene dispenser, confirm layout does not impact clear fixture area or door clearance requirements)*
 6. Bathtubs/Shower Stalls: Grab bars, control locations and seating – Cornell Standard requires the permanently fixed accessible seating in showers to be proximate to control locations. *(Basis of Design for 36”x36” shower stall and provide additional floor drain in clear fixture area with floor pitch not exceeding 2% in any direction. For maintenance purposes, do not specify an acrylic “all-in-one” construction with seat and grab bars, etc. – use individual, highly durable components that can be replaced or repaired)*
 7. Toilet Rooms *(Basis of Design is to provide restrooms on each occupied level and not travel up or down one level permitted by code)*
- F. Signage
1. Signage – Cornell Standard requires that permanent room signage be installed on the latch side of the door at 2” from casing and mounted 55” AFF to the baseline of the lowest braille cell.

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- G. Areas of Rescue Assistance: All buildings that have areas of rescue assistance must provide communication accessibility in the areas designated. All elements of the communication features should comply with Chapters 3 and 7 of the ICC/ANSI A117.1-2009 and 2010 ADA Standards for Accessible Design latest edition. *(Note: Typically, at the Ithaca campus, communication device is identical to emergency phone specified in section 270000 Communications)*

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