



# 2010 ADA Standards for Accessible Design for Public Accommodations and Commercial Facilities: Title III

## CHAPTER 3: BUILDING BLOCKS

**301 General.** The provisions of Chapter 3 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

**302 Floor or Ground Surfaces**

**302.1 General.** Floor or ground surfaces shall be stable, firm, and slip resistant and shall comply with 302.

**EXCEPTIONS:**

- Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.
- Areas of sport activity shall not be required to comply with 302.

**302.2 Carpet.** Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Pile height shall be 1/2 inch (13 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 303.

**302.3 Openings.** Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch (13 mm) diameter except as allowed in 407.4.3, 408.4.3, 410.4, 810.5.3 and 810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

**303 Changes in Level**

**303.1 General.** Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.

**EXCEPTIONS:**

- Animal containment areas shall not be required to comply with 303.
- Areas of sport activity shall not be required to comply with 303.

**303.2 Vertical.** Changes in level of 1/4 inch (6.4 mm) high maximum shall be permitted to be vertical.

**303.3 Beveled.** Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

**303.4 Ramps.** Changes in level greater than 1/2 inch (13 mm) high shall be ramped, and shall comply with 405 or 406.

**304 Turning Space**

**304.1 General.** Turning space shall comply with 304.

**304.2 Floor or Ground Surfaces.** Floor or ground surfaces of a turning space shall comply with 302. Changes in level are not permitted. **EXCEPTION:** Slopes not steeper than 1:48 shall be permitted.

**304.3 Size.** Turning space shall comply with 304.3.1 or 304.3.2.

**304.3.1 Circular Space.** The turning space shall be a space of 60 inches (1525 mm) diameter minimum. The space shall be permitted to include knee and toe clearance complying with 306.

**304.3.2 T-Shaped Space.** The turning space shall be a T-shaped space within a 60 inch (1525 mm) square minimum with arms and base 36 inches (915 mm) wide minimum. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction and the base shall be clear of obstructions 24 inches (610 mm) minimum. The space shall be permitted to include knee and toe clearance complying with 306 only at the end of either the base or an arm.

**304.4 Door Swing.** Doors shall be permitted to swing into turning spaces.

**305 Clear Floor or Ground Space**

**305.1 General.** Clear floor or ground space shall comply with 305.

**305.2 Floor or Ground Surfaces.** Floor or ground surfaces of a clear floor or ground space shall comply with 302. Changes in level are not permitted. **EXCEPTION:** Slopes not steeper than 1:48 shall be permitted.

**305.3 Size.** The clear floor or ground space shall be 30 inches (762 mm) minimum by 48 inches (1220 mm) minimum.

**305.4 Knee and Toe Clearance.** Unless otherwise specified, clear floor or ground space shall be permitted to include knee and toe clearance complying with 306.

**305.5 Position.** Unless otherwise specified, clear floor or ground space shall be positioned for either forward or parallel approach to an element.

**305.6 Approach.** One full unobstructed side of the clear floor or ground space shall adjoin an accessible route or join another clear floor or ground space.

**305.7 Maneuvering Clearance.** Where a clear floor or ground space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearance shall be provided in accordance with 305.7.1 and 305.7.2.

**305.7.1 Forward Approach.** Alcoves shall be 36 inches (915 mm) wide minimum where the depth exceeds 24 inches (610 mm).

**305.7.2 Parallel Approach.** Alcoves shall be 60 inches (1525 mm) wide minimum where the depth exceeds 15 inches (380 mm).

**306 Knee and Toe Clearance**

**306.1 General.** Where space beneath an element is included as part of clear floor or ground space or turning space, the space shall comply with 306. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear floor or ground space or turning space.

**306.2 Toe Clearance.**

**306.2.1 General.** Space under an element between the finish floor or ground and 9 inches (230 mm) above the finish floor or ground shall be considered toe clearance and shall comply with 306.2.

**306.2.2 Maximum Depth.** Toe clearance shall extend 25 inches (635 mm) maximum under an element.

**306.2.3 Minimum Required Depth.** Where toe clearance is required at an element as part of a clear floor space, the toe clearance shall extend 17 inches (430 mm) minimum under the element.

**306.2.4 Additional Clearance.** Space extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the finish floor or ground shall not be considered toe clearance.

**306.2.5 Width.** Toe clearance shall be 30 inches (760 mm) wide minimum.

**306.3 Knee Clearance.**

**306.3.1 General.** Space under an element between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground shall be considered knee clearance and shall comply with 306.3.

**306.3.2 Maximum Depth.** Knee clearance shall extend 25 inches (635 mm) maximum under an element at 9 inches (230 mm) above the finish floor or ground.

**306.3.3 Minimum Required Depth.** Where knee clearance is required under an element as part of a clear floor space, the knee clearance shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground.

**306.3.4 Clearance Reduction.** Between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

**306.3.5 Width.** Knee clearance shall be 30 inches (760 mm) wide minimum.

**307 Protruding Objects**

**307.1 General.** Protruding objects shall comply with 307.

**307.2 Protrusion Limits.** Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path. **EXCEPTION:** Handrails shall be permitted to protrude 4 1/2 inches (115 mm) maximum.

**307.3 Post-Mounted Objects.** Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches (305 mm) maximum when located 27 inches (685 mm) minimum and 80 inches (2030 mm) maximum above the finish floor or ground. Where a sign or other obstruction is located between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the finish floor or ground.

**EXCEPTION:** The sloping portions of handrails serving stairs and ramps shall not be required to comply with 307.3.

**307.4 Vertical Clearance.** Vertical clearance shall be 80 inches (2030 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground. **EXCEPTION:** Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

**307.5 Required Clear Width.** Protruding objects shall not reduce the clear width required for accessible routes.

**308 Reach Ranges**

**308.1 General.** Reach ranges shall comply with 308.

**308.2 Forward Reach.**

**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 finish floor or ground.

**308.2.2 Obstructed High Forward Reach.** Where a high forward reach is over an obstruction, the clear floor space 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 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.

**308.3 Side 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. **EXCEPTIONS:**

- An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches (255 mm) maximum.
- Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

**308.3.2 Obstructed High Side Reach.** Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

**308.3.2 EXCEPTIONS:**

- The top of washing machines and clothes dryers shall be permitted to be 36 inches (915 mm) maximum above the finish floor.
- Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

**309 Operable Parts**

**309.1 General.** Operable parts shall comply with 309.

**309.2 Clear Floor Space.** A clear floor or ground space complying with 305 shall be provided.

**309.3 Height.** Operable parts shall be placed within one or more of the reach ranges specified in 308.

**309.4 Operation.** Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum. **EXCEPTION:** Gas pump nozzles shall not be required to provide operable parts that have an activating force of 5 pounds (22.2 N) maximum.

**CHAPTER 4: ACCESSIBLE ROUTES**

**401 General.** The provisions of Chapter 4 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

**402 Accessible Routes**

**402.1 General.** Accessible routes shall comply with 402.

**402.2 Components.** Accessible routes shall consist of one or more of the following components: walking surfaces with a running slope not steeper than 1:20, doorways, ramps, curb ramps excluding the flared sides, elevators, and platform lifts. All components of an accessible route shall comply with the applicable requirements of Chapter 4.

**403 Walking Surfaces**

**403.1 General.** Walking surfaces that are a part of an accessible route shall comply with 403.

**403.2 Floor or Ground Surface.** Floor or ground surfaces shall comply with 302.

**403.3 Slope.** The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall not be steeper than 1:48.

**403.4 Changes in Level.** Changes in level shall comply with 303.

**403.5 Clearances.** Walking surfaces shall provide clearances complying with 403.5. **EXCEPTION:** Within employee work areas, clearances on common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

**403.5.1 Clear Width.** Except as provided in 403.5.2 and 403.5.3, the clear width of walking surfaces shall be 36 inches (915 mm) minimum. **EXCEPTION:** The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

**403.5.2 Clear Width at Turn.** Where the accessible route makes a 180 degree turn around an element which is less than 48 inches (1220 mm) wide, clear width shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum at the turn and 42 inches (1065 mm) minimum leaving the turn. **EXCEPTION:** Where the clear width at the turn is 60 inches (1525 mm) minimum compliance with 403.5.2 shall not be required.

**403.5.3 Passing Spaces.** An accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either: a space 60 inches (1525 mm) minimum by 80 inches (2030 mm) minimum; or, an intersection of two walking surfaces providing a T-shaped space complying with 304.3.2 where the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

**403.6 Handrails.** Where handrails are provided along walking surfaces with running slopes not steeper than 1:20 they shall comply with 505.

**404 Doors, Doorways, and Gates**

**404.1 General.** Doors, doorways, and gates that are part of an accessible route shall comply with 404. **EXCEPTION:** Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.1, 404.2.2, 404.2.3, 404.2.4, 404.2.5, 404.3.2 and 404.3.4 through 404.3.7.

**404.2 Manual Doors, Doorways, and Manual Gates.** Manual doors and doorways and manual gates intended for user passage shall comply with 404.2.

**404.2.1 Revolving Doors, Gates, and Turnstiles.** Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

**404.2.2 Double-Leaf Doors and Gates.** At least one of the active leaves of doorways with two leaves shall comply with 404.2.3 and 404.2.4.

**404.2.3 Clear Width.** Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening with lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening with between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm). **EXCEPTIONS:**

- In alterations, a projection of 5/8 inch (16 mm) maximum into the required clear width shall be permitted for the latch side stop.
- Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

**404.2.4 Maneuvering Clearances.** Minimum maneuvering clearances at doors and gates shall comply with 404.2.4.1 through 404.2.4.4.

**404.2.4.1.** Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearances.

**404.2.4.2 Clear Width of Doorways.** Side reach entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door. **404.2.4.1 Swinging Doors and Gates.** Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1. (as illustrated on Figures 404.2.4.1)

**404.2.4.3.** Clear Width of Doorways. Side reach entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door. **404.2.4.1 Swinging Doors and Gates.** Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1. (as illustrated on Figures 404.2.4.1)

**404.2.4.4.** Floor or Ground Surface. Floor or ground surface within required maneuvering clearances shall comply with 302. Changes in level are not permitted. **EXCEPTIONS:**

- Slopes not steeper than 1:48 shall be permitted.
- Changes in level at thresholds complying with 404.2.5 shall be permitted.

**404.2.5 Thresholds.** Thresholds, if provided at doorways, shall be 1/2 inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303. **EXCEPTION:** Existing or altered thresholds 3/4 inch (19 mm) high maximum that have a beveled edge on each side with a slope not steeper than 1:2 shall not be required to comply with 404.2.5.

**404.2.6 Doors in Series and Gates in Series.** The distance between two hinged or pivoted doors in series and gates in series shall be 48 inches (1220 mm) minimum plus the width of doors or gates swinging into the space.

**404.2.7 Door and Gate Hardware.** Handles, pulls, latches, locks, and other operable parts on doors and gates shall comply with 309.4. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides. **EXCEPTIONS:**

- Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
- Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic open, or integral combination lock.

**404.2.8 Closing Speed.** Door and gate closing speed shall comply with 404.2.8.

**404.2.8.1 Door Closers and Gate Closers.** Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

**404.2.8.2 Spring Hinges.** Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

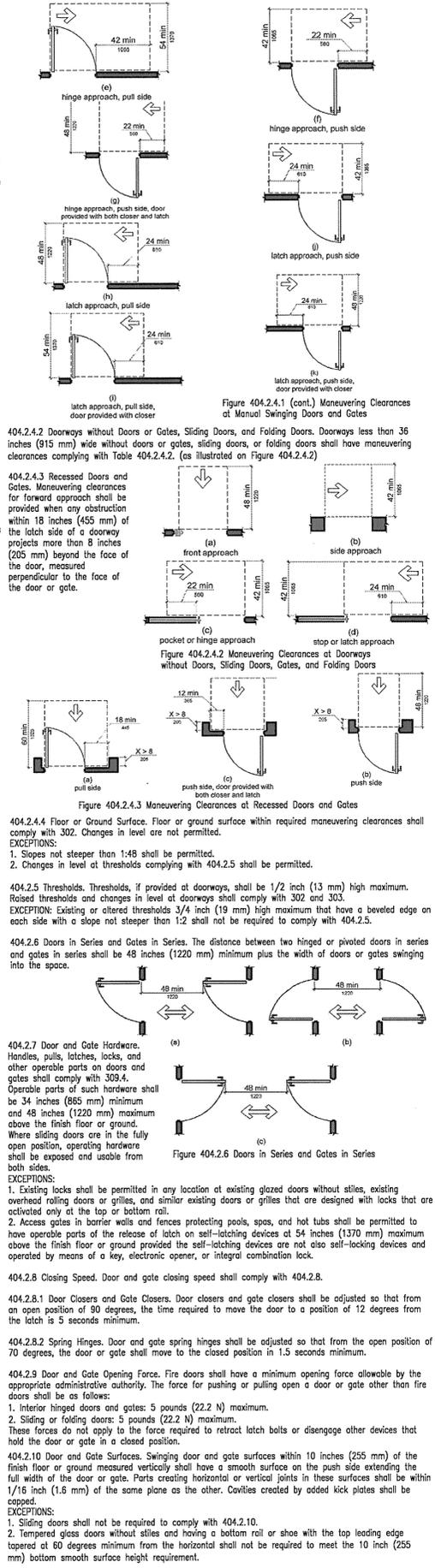
**404.2.9 Door and Gate Opening Force.** Fire doors shall have a minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

- Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
- Sliding or folding doors: 5 pounds (22.2 N) maximum.

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

**404.2.10 Door and Gate Surfaces.** Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped. **EXCEPTIONS:**

- Sliding doors shall not be required to comply with 404.2.10.
- Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (255 mm) bottom smooth surface height requirement.



**404.3 Clear Width.** Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position.

**404.3.2 Maneuvering Clearances.** Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an accessible means of egress shall comply with 404.2.4.

**EXCEPTION:** Where automatic doors and gates remain open in the power-off condition, compliance with 404.2.4 shall not be required.

**404.3.3 Thresholds.** Thresholds and changes in level at doorways shall comply with 404.2.5.

**404.3.4 Doors in Series and Gates in Series.** Doors in series and gates in series shall comply with 404.2.6.

**404.3.5 Controls.** Manually operated controls shall comply with 309. The clear floor space adjacent to the control shall be located beyond the arc of the door swing.

**404.3.6 Break Out Opening.** Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode. **EXCEPTION:** Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

**404.3.7 Revolving Doors, Revolving Gates, and Turnstiles.** Revolving doors, revolving gates, and turnstiles shall not be a part of an accessible route.

**405 Ramps**

**405.1 General.** Ramps on accessible routes shall comply with 405. **EXCEPTION:** In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with 405.

**405.2 Slope.** Ramp runs shall have a running slope not steeper than 1:12. **EXCEPTION:** In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities	
Slope (A slope steeper than 1:8 is prohibited.)	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

**405.3 Cross Slope.** Cross slope of ramp runs shall not be steeper than 1:48.

**405.4 Floor or Ground Surfaces.** Floor or ground surfaces of ramp runs shall comply with 302. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

**405.5 Clear Width.** The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 36 inches (915 mm) minimum. **EXCEPTION:** Within employee work areas, the required clear width of ramps that are a part of common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

**405.6 Rise.** The rise for any ramp run shall be 30 inches (760 mm) maximum.

**405.6.1 Landings.** Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7.

**405.7 Ramp Landings**

**405.7.1 Slope.** Landings shall comply with 302. Changes in level are not permitted. **EXCEPTION:** Slopes not steeper than 1:48 shall be permitted.

**405.7.2 Width.** The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

**405.7.3 Length.** The landing clear length shall be 60 inches (1525 mm) long minimum.

**405.7.4 Change in Direction.** Ramps that change direction on between runs at landings shall have a clear landing of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

**405.7.5 Doorways.** Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

**405.8 Handrails.** Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505. **EXCEPTION:** Within employee work areas, handrails shall not be required where ramps that are part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception to 405.5 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

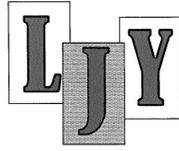
**405.9 Edge Protection.** Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings. **EXCEPTION 1:** Edge protection shall not be required on ramps that are not serving to have handrails and have sides complying with 406.3. **EXCEPTION 2:** Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway. **EXCEPTION 3:** Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

**405.9.1 Extended Floor or Ground Surface.** The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with 505.

**405.9.2 Curb or Barrier.** A curb or barrier shall be provided that prevents the passage of a 4 inch (100 mm) diameter sphere, where any portion of the sphere is within 4 inches (100 mm) of the finish floor or ground surface.

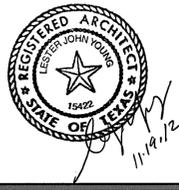
**Figure 405.9.1:** Extended Floor or Ground Surface Edge Protection. Shows a ramp run with a landing, with a minimum width of 60 inches and a minimum length of 60 inches.

**Figure 405.9.2:** Curb or Barrier Edge Protection. Shows a ramp run with a landing, with a minimum width of 60 inches and a minimum length of 60 inches.



**lester j young, architect**  
6304 royal lane  
dallas, texas 75230  
214.455.7878

No.	Date	Revision
1	11.9.12	Revision



**Accessibility Improvements for**  
**ADDISON MARKET**  
 4550 Beltline Road Addison, Texas

**ACCESSIBILITY STANDARDS**

Project: 1203  
Date: 10.22.12  
Drawn by: LY  
Checked by: LY

Drawing Number  
**A0.1**

# 2010 ADA Standards for Accessible Design for Public Accommodations and Commercial Facilities: Title III

## CHAPTER 4: ACCESSIBLE ROUTES (cont.)

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

### 405 Curb Ramps

405.1 General. Curb ramps on accessible routes shall comply with 406, 405.2 through 405.5, and 405.10.

405.2 Counter Slope. Counter slopes of adjoining curbs and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.

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

405.4 Landings. Landings shall be provided at the tops of curb ramps. The landing clear length shall be 36 inches (915 mm) 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.

405.5 Location. Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.

405.6 Diagonal Curb Ramps. Diagonal or corner type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) minimum outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) long minimum located on each side of the curb ramp and within the marked crossing.

405.7 Islands. Raised islands in crossings shall be cut through level with the street and have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area and the accessible route shall be permitted to overlap.

405.8 Landings at Top of Curb Ramps. Diagonal curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) minimum outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) long minimum located on each side of the curb ramp and within the marked crossing.

405.9 Diagonal or Corner Type Curb Ramps. Diagonal or corner type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) minimum outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) long minimum located on each side of the curb ramp and within the marked crossing.

405.10 Islands in Crossings. Raised islands in crossings shall be cut through level with the street and have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area and the accessible route shall be permitted to overlap.

405.11 General. Elevators shall comply with 407 and with ASME A17.1.

(Incorporated by reference, see "Referenced Standards" in Chapter 1). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.

405.12 Elevator Landing Requirements. Elevator landings shall comply with 407.2.

405.13 Call Controls. Where elevator call buttons or keypads are provided, they shall comply with 407.2.1 and 409.4. Call buttons shall be raised or flush. EXCEPTION: Existing elevators shall not have recessed call buttons.

405.14 Height. Call buttons and keypads shall be located within one of the reach ranges specified in 308, measured to the centerline of the highest operable part. EXCEPTION: Existing call buttons and keypads shall be permitted to be located at 54 inches (1370 mm) maximum above the finish floor, measured to the centerline of the highest operable part.

405.15 Size. Call buttons shall be 3/4 inch (19 mm) minimum in the smallest dimension. EXCEPTION: Existing elevator call buttons shall not be required to comply with 407.2.1.2.

405.16 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided at call controls.

405.17 Location. The call button that designates the up direction shall be located at the destination of the down direction. EXCEPTION: Destination-oriented elevators shall not be required to comply with 407.2.1.

405.18 Visible Signals. Call buttons shall have visible signals to indicate when each call is registered and when each call is answered. EXCEPTIONS:

1. Destination-oriented elevators shall not be required to comply with 407.2.1.5 provided that visible and audible signals complying with 407.2.2 indicating which elevator car to enter are provided.

2. Existing elevators shall not be required to comply with 407.2.1.5.

405.19 Keypads. Where keypads are provided, keypads shall be in a standard telephone keypad arrangement and shall comply with 407.4.7.2.

405.20 Hall Signals. Hall signals, including in-car signals, shall comply with 407.2.2.

405.21 Visible and Audible Signals. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call and the car's direction of travel. Where in-car signals are provided, they shall be visible from the floor area adjacent to the hall call buttons. EXCEPTIONS:

1. Visible and audible signals shall not be required at each destination-oriented elevator where a visible and audible signal complying with 407.2.2 is provided indicating the elevator car designation information.

2. In existing elevators, a signal indicating the direction of car travel shall not be required.

405.22 Visible Signals. Visible signal fixtures shall be centered at 72 inches (1830 mm) minimum above the finish floor or ground. The visible signal elements shall be 2 1/2 inches (64 mm) minimum measured along the vertical centerline of the element. Signals shall be visible from the floor area adjacent to the hall call button. EXCEPTIONS:

1. Destination-oriented elevators shall be permitted to have signals visible from the floor area adjacent to the hoistway entrance.

2. Existing elevators shall not be required to comply with 407.2.2.2.

405.23 Audible Signals. Audible signals shall sound once for the up direction and twice for the down direction, or shall have verbal annunciators that indicate the direction of elevator car travel. Audible signals shall have a frequency of 1500 Hz maximum. Verbal annunciators shall have a frequency of 300 Hz minimum and 3000 Hz maximum. The audible signal and verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80 dB, measured at the hall call button. EXCEPTIONS:

1. Destination-oriented elevators shall not be required to comply with 407.2.2.3 provided that the audible tone and verbal announcement is the same as those given at the call button or call button keypad.

2. Existing elevators shall not be required to comply with the requirements for frequency and dB range of audible signals.

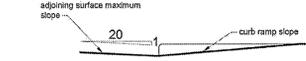


Figure 406.2 Counter Slope of Surfaces Adjacent to Curb Ramps



Figure 406.3 Sides of Curb Ramps

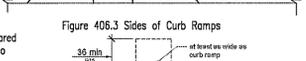


Figure 406.4 Landings at the Top of Curb Ramps



Figure 406.6 Diagonal or Corner Type Curb Ramps

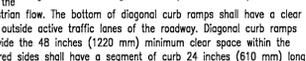


Figure 406.7 Islands in Crossings

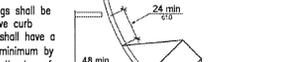


Figure 406.8 Islands in Crossings



Figure 406.9 Islands in Crossings

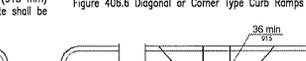


Figure 406.10 Islands in Crossings



Figure 406.11 Islands in Crossings



Figure 406.12 Islands in Crossings

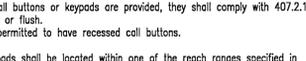


Figure 406.13 Islands in Crossings

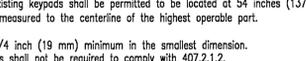


Figure 406.14 Islands in Crossings

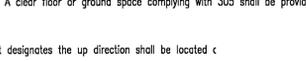


Figure 406.15 Islands in Crossings

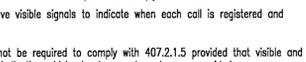


Figure 406.16 Islands in Crossings

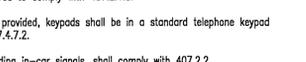


Figure 406.17 Islands in Crossings

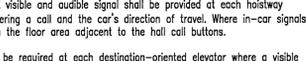


Figure 406.18 Islands in Crossings

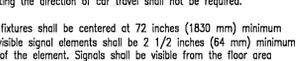


Figure 406.19 Islands in Crossings

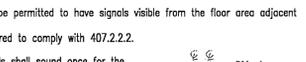


Figure 406.20 Islands in Crossings

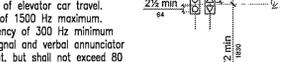


Figure 407.2.2.2 Visible Hall Signals call button keypad

407.2.4 Differentiation. Each destination-oriented elevator in a bank of elevators shall have audible and visible means for differentiation.

407.2.5 Hoistway Signs. Signs at elevator hoistways shall comply with 407.2.3.

407.2.3.1 Floor Designation. Floor designations complying with 703.2 and 703.4.1 shall be provided on both jamba of elevator hoistway entrances. Floor designations shall be provided in both tactile characters and braille. Tactile characters shall be 2 inches (51 mm) high minimum. A tactile star shall be provided on both jambs at the main entry level.

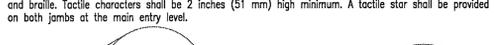


Figure 407.2.3.1 Floor Designations on Jamba of Elevator Hoistway Entrances



Figure 407.2.3.2 Car Designations on Jamba of Destination-Oriented Elevator Hoistway Entrances

407.2.3.3 Car Designations. Destination-oriented elevators shall provide tactile car identification complying with 703.2 on both jambs of the hoistway immediately below the floor designation. Car designations shall be provided in both tactile characters and braille. Tactile characters shall be 2 inches (51 mm) high minimum.

407.3 Elevator Door Requirements. Hoistway and car doors shall comply with 407.3.

407.3.1 Type. Elevator doors shall be the horizontal sliding type. Car gates shall be prohibited.

407.3.2 Operation. Elevator hoistway and car doors shall open and close automatically. EXCEPTION: Existing manually operated hoistway swing doors shall be permitted provided that they comply with 404.2.3 and 404.2.9. Car door closing shall not be initiated until the hoistway door is closed.

407.3.3 Reopening Device. Elevator doors shall be provided with a reopening device complying with 407.3.3 that shall stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. EXCEPTION: Existing elevators with manually operated doors shall not be required to comply with 407.3.3.

407.3.3.1 Height. The device shall be actuated by sensing an obstruction passing through the opening at 5 inches (125 mm) nominal and 29 inches (735 mm) nominal above the finish floor.

407.3.3.2 Contact. The device shall not require physical contact to be activated, although contact is permitted to occur before the door reverses.

407.3.3.3 Duration. Door reopening devices shall remain effective for 20 seconds minimum.

407.3.4 Door and Signal Timing. The minimum acceptable time from notification that a car is answering a call or notification of the car assigned at the means for the entry of destination information until the doors of that car start to close shall be calculated from the following equation:

$T = D / (1.5 \text{ ft/s})$  or  $T = D / (455 \text{ mm/s}) = 5$  seconds minimum where T equals the total time in seconds and D equals the distance (in feet or millimeters) from the point in the lobby or corridor 60 inches (1525 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door. EXCEPTIONS:

1. For cars with in-car lanterns, T shall be permitted to begin when the signal is visible from the point 60 inches (1525 mm) directly in front of the farthest hall call button and the audible signal is sounded.

2. Destination-oriented elevators shall not be required to comply with 407.3.4.

407.3.5 Door Delay. Elevator doors shall remain fully open in response to a car call for 3 seconds minimum.

407.3.6 Width. The width of elevator doors shall comply with Table 407.4.1. EXCEPTION: In existing elevators, a power-operated car door complying with 404.2.3 shall be permitted.

407.4 Elevator Car Requirements. Elevator cars shall comply with 407.4.

407.4.1 Car Dimensions. Inside dimensions of elevator cars and clear width of elevator doors shall comply with Figure 407.4.1 (Table 407.4.1). EXCEPTION: Existing elevator car configurations that provide a clear floor area of 16 square feet (1.5 m<sup>2</sup>) minimum and also provide an inside clear depth 54 inches (1370 mm) minimum and a clear width 36 inches (915 mm) minimum shall be permitted.

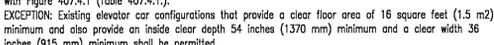


Figure 407.4.1 Elevator Car Dimensions



Figure 407.4.1 Elevator Car Dimensions



Figure 407.4.1 Elevator Car Dimensions

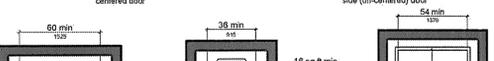


Figure 407.4.1 Elevator Car Dimensions



Figure 407.4.1 Elevator Car Dimensions

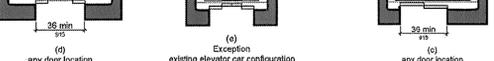


Figure 407.4.1 Elevator Car Dimensions

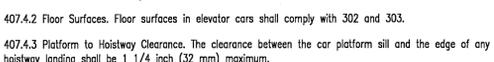


Figure 407.4.1 Elevator Car Dimensions

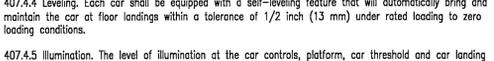


Figure 407.4.1 Elevator Car Dimensions

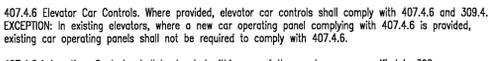


Figure 407.4.1 Elevator Car Dimensions

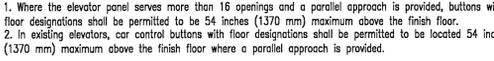


Figure 407.4.1 Elevator Car Dimensions

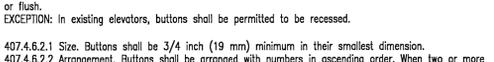


Figure 407.4.1 Elevator Car Dimensions

407.4.6.3 Keypads. Car control keypads shall be in a standard telephone keypad arrangement and shall comply with 407.4.7.2.

407.4.6.4 Emergency Controls. Emergency controls shall comply with 407.4.6.4.

407.4.6.4.1 Height. Emergency control buttons shall have their centerlines 35 inches (890 mm) minimum above the finish floor.

407.4.6.4.2 Location. Emergency controls, including the emergency alarm, shall be grouped at the bottom of the panel.

407.4.6.4.3 Designations and Indicators of Car Controls. Designations and indicators of car controls shall comply with 407.4.7.

EXCEPTION: In existing elevators, where a new car operating panel complying with 407.4.7 is provided, existing car operating panels shall not be required to comply with 407.4.7.

407.4.7.1 Buttons. Car control buttons shall comply with 407.4.7.1.

407.4.7.1.1 Type. Control buttons shall be identified by tactile characters complying with 703.2.

407.4.7.1.2 Location. Raised character and braille designations shall be placed immediately to the left of the control button to which the designations apply. EXCEPTION: Where space on an existing car operating panel precludes tactile markings to the left of the controls, markings shall be placed as near to the control as possible.

407.4.7.1.3 Symbols. The control button for the emergency stop, alarm, door open, door close, main entry floor and phones, shall be identified with tactile symbols as shown in Table 407.4.7.1.3 (refer to 2010 ADA for table).

407.4.7.1.4 Visible Indicators. Buttons with floor designations shall be provided with visible indicators to show that a call has been registered. The visible indication shall extinguish when the car arrives at the designated floor.

407.4.7.2 Keypads. Keypads shall be identified by characters complying with 703.5 and shall be centered on the corresponding keypad button. The number five key shall have a single raised dot. The dot shall be 0.118 inch (3 mm) to 0.120 inch (3.05 mm) base diameter and in other aspects comply with Table 703.3.1.

407.4.8 Car Position Indicators. Audible and visible car position indicators shall be provided in elevator cars.

407.4.8.1 Visible Indicators. Visible indicators shall comply with 407.4.8.1.

407.4.8.1.1 Size. Characters shall be 1/2 inch (13 mm) high minimum.

407.4.8.1.2 Location. Indicators shall be located above the car control panel or above the door.

407.4.8.1.3 Floor Arrival. As the car passes a floor and when a car stops at a floor served by the elevator, the corresponding character shall illuminate. EXCEPTION: Destination-oriented elevators shall not be required to comply with 407.4.8.1.3 provided that the visible indicators extinguish when the call has been answered.

407.4.8.1.4 Destination Indicator. In destination-oriented elevators, a display shall be provided in the car with visible indicators to show car destinations.

407.4.8.2 Audible Indicators. Audible indicators shall comply with 407.4.8.2.

407.4.8.2.1 Signal Type. The signal shall be an automatic verbal annunciator which announces the floor or which the car is about to stop.

EXCEPTION: For elevators other than destination-oriented elevators that have a rated speed of 200 feet per minute (1 m/s) or less, a non-verbal audible signal with a frequency of 1500 Hz maximum which sounds as the car passes or is about to stop at a floor served by the elevator shall be permitted.

407.4.8.2.2 Signal Level. The verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80 dB, measured at the annunciator.

407.4.8.2.3 Frequency. The verbal annunciator shall have a frequency of 300 Hz minimum to 3000 Hz maximum.

407.4.9 Emergency Communication. Emergency two-way communication systems shall comply with 308. Tactile symbols and characters shall be provided adjacent to the device and shall comply with 703.2.

408 Limited-Use/Limited-Application Elevators

408.1 General. Limited-use/limited-application elevators shall comply with 408 and with ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.

408.2 Elevator Landings. Landings serving limited-use/limited-application elevators shall comply with 408.2.

408.2.1 Call Buttons. Elevator call buttons and keypads shall comply with 407.2.1.

408.2.2 Hall Signals. Hall signals shall comply with 407.2.2.

408.2.3 Hoistway Signs. Signs at elevator hoistways shall comply with 407.2.3.1.

408.3 Elevator Doors. Elevator hoistway doors shall comply with 408.3.

408.3.1 Sliding Doors. Sliding hoistway and car doors shall comply with 407.3.1 through 407.3.3 and 408.4.1.

# 2010 ADA Standards for Accessible Design for Public Accommodations and Commercial Facilities: Title III

## CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES

701 General. The provisions of Chapter 7 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

702 Fire Alarm Systems. Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (1999 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1), except that the maximum allowable sound level of audible notification appliances complying with section 4.3.2.1 of NFPA 72 (1999 edition) shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with sections 4-3 and 4-4 of NFPA 72 (1999 edition) or sections 7.4 and 7.5 of NFPA 72 (2002 edition).

EXCEPTION: Fire alarm systems in medical care facilities shall be permitted to be provided in accordance with industry practice.

703 Signs. General. Signs shall comply with 703. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

703.2 Raised Characters. Raised characters shall comply with 703.2 and shall be duplicated in braille complying with 703.3. Raised characters shall be installed in accordance with 703.4.

703.2.1 Depth. Raised characters shall be 1/32 inch (0.8 mm) minimum above their background.

703.2.2 Case. Characters shall be uppercase.

703.2.3 Style. Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.2.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.2.5 Character Height. Character height measured vertically from the baseline of the character shall be 5/8 inch (16 mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "I".

EXCEPTION: Where separate raised and visual characters with the same information are provided, raised character height shall be permitted to be 1/2 inch (13 mm) minimum.



Figure 703.2.5 Height of Raised Characters

703.2.6 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the character.

703.2.7 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Where characters have rectangular cross sections, spacing between individual raised characters shall be 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum. Where characters have other cross sections, spacing between individual raised characters shall be 1/16 inch (1.6 mm) minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum at the top of the cross sections. Characters shall be separated from raised borders and decorative elements 3/8 inch (9.5 mm) minimum.

703.2.8 Line Spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

703.3 Braille. Braille shall be contracted (Grade 2) and shall comply with 703.3 and 703.4.

703.3.1 Dimensions and Capitalization. Braille dots shall have a domed or rounded shape and shall comply with Table 703.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

Measurement Range	Minimum in Inches to Maximum in Inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell	0.090 (2.3 mm) to 0.100 (2.5 mm) measured center to center
Distance between corresponding dots in adjacent cells	0.241 (6.1 mm) to 0.300 (7.6 mm) measured center to center
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below	0.395 (10 mm) to 0.400 (10.2 mm) measured center to center

703.3.2 Position. Braille shall be positioned below the corresponding text. If text is multi-lined, braille shall be placed below the entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other tactile characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements.

EXCEPTION: Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum and shall be located either directly below or adjacent to the corresponding raised characters or symbols.

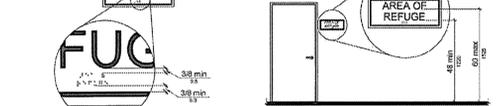


Figure 703.3.2 Position of Braille

703.4.1 Height Above Finish Floor or Ground. Tactile characters on signs shall be located 48 inches (1220 mm) minimum above the finish floor or ground surface, measured from the baseline of the lowest tactile character and 60 inches (1525 mm) maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character.

EXCEPTION: Tactile characters for elevator car controls shall not be required to comply with 703.4.1.

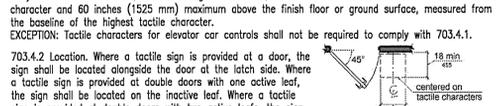


Figure 703.4.1 Height of Tactile Characters Above Finish Floor or Ground

703.4.2 Location. Where a tactile sign is provided at a door, the sign shall be located alongside the door at the latch side. Where a tactile sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a tactile sign is provided at double doors with two active leaves, the sign shall be located to the right of the right hand door. Where there is no wall space at the latch side of a single door or at the right side of double doors, signs shall be located on the nearest adjacent wall. Signs containing tactile characters shall be located so that a clear floor space of 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degree open position.

EXCEPTION: Signs with tactile characters shall be permitted on the push side of doors with closers and without hold-open devices.

703.5 Visual Characters. Visual characters shall comply with 703.5. EXCEPTION: Where visual characters comply with 703.2 and are accompanied by braille complying with 703.3, they shall not be required to comply with 703.5.2 through 703.5.9.

703.5.1 Finish and Contrast. Characters and their background shall have a non-gloss finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

703.5.2 Case. Characters shall be uppercase or lowercase or a combination of both.

703.5.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.5.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.5.5 Character Height. Minimum character height shall comply with Table 703.5.5. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Character height shall be based on the uppercase letter "I".

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	less than 72 inches (1830 mm)	5/8 inch (16 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	72 inches (1830 mm) and greater	5/8 inch (16 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1830 mm)
Greater than 120 inches (3050 mm)	less than 180 inches (4570 mm)	2 inch (51 mm)
	180 inches (4570 mm) and greater	2 inches (51 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4570 mm)
	less than 20 feet (6400 mm)	3 inch (75 mm)
	21 feet (6400 mm) and greater	3 inches (75 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

703.5.6 Height From Finish Floor or Ground. Visual characters shall be 40 inches (1015 mm) minimum above the finish floor or ground.

EXCEPTION: Visual characters indicating elevator car controls shall not be required to comply with 703.5.6.

703.5.7 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the character.

703.5.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height.

703.5.9 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

703.6 Pictograms. Pictograms shall comply with 703.6.

703.6.1 Pictogram Field. Pictograms shall have a field height of 6 inches (150 mm) minimum. Characters and braille shall not be located in the pictogram field.

703.6.2 Finish and Contrast. Pictograms and their field shall have a non-gloss finish. Pictograms shall contrast with their field with either a light pictogram on a dark field or a dark pictogram on a light field.

703.6.3 Text Descriptors. Pictograms shall have text descriptors located directly below the pictogram field. Text descriptors shall comply with 703.2, 703.3 and 703.4.

703.7 Symbols of Accessibility. Symbols of accessibility shall comply with 703.7.

703.7.1 Finish and Contrast. Symbols of accessibility and their background shall have a non-gloss finish. Symbols of accessibility shall contrast with their background with either a light symbol on a dark background or a dark symbol on a light background.

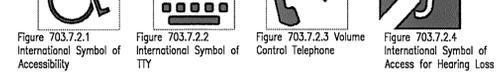
703.7.2 Symbols. General. Symbols of accessibility shall comply with 703.7.2.1.

703.7.2.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with Figure 703.7.2.1.

703.7.2.2 International Symbol of TTY. The International Symbol of TTY shall comply with Figure 703.7.2.2.

703.7.2.3 Volume Control Telephones. Telephones with a volume control shall be identified by a pictogram of a telephone handset with radiating sound waves on a square field such as shown in Figure 703.7.2.3.

703.7.2.4 Assistive Listening Systems. Assistive listening systems shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.7.2.4.



704 Telephones. General. Public telephones shall comply with 704.

704.1 Input Controls. At least one tactilely discernible input control shall be provided for each function. Where provided, key surfaces not on active areas of display screens, shall be raised above surrounding surfaces. Where membrane keys are the only method of input, each shall be tactilely discernible from surrounding surfaces and adjacent keys.

704.2 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided. The clear floor or ground space shall not be obstructed by bases, enclosures, or seats.

704.2.1 Parallel Approach. Where a parallel approach is provided, the distance from the edge of the telephone enclosure to the face of the telephone unit shall be 10 inches (255 mm) maximum.

704.2.1.1 Parallel Approach to Telephone. The distance from the edge of the telephone enclosure to the face of the telephone unit shall be 20 inches (510 mm) maximum.

704.2.1.2 Forward Approach. Where a forward approach is provided, the distance from the front edge of a counter within the telephone enclosure to the face of the telephone unit shall be 20 inches (510 mm) maximum.

704.2.2 Operable Parts. Operable parts shall comply with 309. Telephones shall have push-button controls where such service is available.

704.2.3 Telephone Directories. Telephone directories, where provided, shall be located in accordance with 309.

704.2.4 Cord Length. The cord from the telephone to the handset shall be 29 inches (735 mm) long minimum.

704.3 Volume Control Telephones. Public telephones required to have volume controls shall be equipped with a remote volume control that provides a gain adjustable to 20 dB minimum. For incremental volume control, provide at least one intermediate step of 12 dB of gain minimum. An automatic reset shall be provided.

704.4 TTYs. TTYs required at a public pay telephone shall be permanently affixed within, or adjacent to, the telephone enclosure. Where an acoustic coupler is used, the telephone cord shall be sufficiently long to allow connection of the TTY and the telephone receiver.

704.4.1 Height. When in use, the touch surface of TTY keypads shall be 34 inches (865 mm) minimum above the finish floor.

EXCEPTION: Where seats are provided, TTYs shall not be required to comply with 704.4.1.

704.5 TTY Shelf. Public pay telephones required to accommodate portable TTYs shall be equipped with a shelf and an electrical outlet within or adjacent to the telephone enclosure. The telephone handset shall be capable of being placed flush on the surface of the shelf. The shelf shall be capable of accommodating a TTY and shall have 6 inches (150 mm) minimum vertical clearance above the area where the TTY is to be placed.

705 Detectable Warnings

705.1 General. Detectable warnings shall consist of a surface of truncated domes and shall comply with 705.

705.1.1 Dome Size. Truncated domes in a detectable warning surface shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 inch (5.1 mm).

705.1.2 Dome Spacing. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.85 inch (17 mm) minimum, measured between the most adjacent domes on a square grid.

705.1.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent walking surfaces either light-on-dark, or dark-on-light.

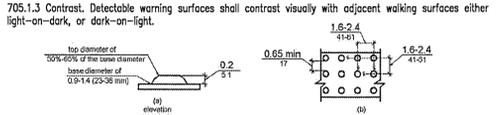


Figure 705.1 Size and Spacing of Truncated Domes

705.2 Platform Edges. Detectable warning surfaces at platform boarding edges shall be 24 inches (610 mm) wide and shall extend the full length of the public use areas of the platform.

706 Assistive Listening Systems. General. Assistive listening systems required in assembly areas shall comply with 706.

706.2 Receiver Jacks. Receivers required for use with an assistive listening system shall include a 1/8 inch (3.2 mm) standard mono jack.

706.3 Receiver Hearing-Aid Compatibility. Receivers required to be hearing-aid compatible shall interface with telecoils in hearing aids through the provision of neckloops.

706.4 Sound Pressure Level. Assistive listening systems shall be capable of providing a sound pressure level of 110 dB minimum and 118 dB maximum with a dynamic range at the volume control of 50 dB.

706.5 Signal-to-Noise Ratio. The signal-to-noise ratio for internally generated noise in assistive listening systems shall be 18 dB minimum.

706.6 Peak Clipping Level. Peak clipping shall not exceed 18 dB of clipping relative to the peaks of speech.

707 Automatic Teller Machines and Fare Machines

707.1 General. Automatic teller machines and fare machines shall comply with 707.

707.2 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided. EXCEPTION: Clear floor or ground space shall not be required at drive-up only automatic teller machines and fare machines.

707.3 Operable Parts. Operable parts shall comply with 309. Unless a clear or correct key is provided, each operable part shall be able to be differentiated by sound or touch, without activation.

EXCEPTION: Drive-up only automatic teller machines and fare machines shall not be required to comply with 309.2 and 309.3.

707.4 Privacy. Automatic teller machines shall provide the opportunity for the same degree of privacy of input and output available to all individuals.

707.5 Speech Output. Machines shall be speech enabled. Operating instructions and orientation, visible transaction prompts, user input verification, error messages, and all displayed information for full use shall be accessible to and independently usable by individuals with vision impairments. Speech shall be delivered through a mechanism that is readily available to all users, including but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized.

EXCEPTIONS: 1. Audible tones shall be permitted instead of speech for visible output that is not displayed for security purposes, including but not limited to, asterisks representing personal identification numbers.

2. Advertisements and other similar information shall not be required to be audible unless they convey information that can be used in the transaction being conducted.

3. Where speech synthesis cannot be supported, dynamic alphabetic output shall not be required to be audible.

707.5.1 User Control. Speech shall be capable of being repeated or interrupted. Volume control shall be provided for the speech function.

EXCEPTION: Speech output for any single function shall be permitted to be automatically interrupted when a transaction is selected.

707.5.2 Receipts. Where receipts are provided, speech output devices shall provide audible balance inquiry information, error messages, and all other information on the printed receipt necessary to complete or verify the transaction.

EXCEPTIONS: 1. Machine location, date and time of transaction, customer account number, and the machine identifier shall not be required to be audible.

2. Information on printed receipts that duplicates information available on-screen shall not be required to be presented in the form of an audible receipt.

3. Printed copies of bank statements and checks shall not be required to be audible.

707.6 Input. Input devices shall comply with 707.6.

707.6.1 Input Controls. At least one tactilely discernible input control shall be provided for each function. Where provided, key surfaces not on active areas of display screens, shall be raised above surrounding surfaces. Where membrane keys are the only method of input, each shall be tactilely discernible from surrounding surfaces and adjacent keys.

707.6.2 Numeric Keys. Numeric keys shall be arranged in a 12-key ascending or descending telephone keypad layout. The number five key shall be tactilely distinct from the other keys.

707.6.3 Function Keys. Function keys shall comply with 707.6.3.

707.6.3.1 Contrast. Function keys shall contrast visually from background surfaces. Characters and symbols on key surfaces shall contrast visually from key surfaces. Visual contrast shall be either light-on-dark or dark-on-light.

EXCEPTION: Tactile symbols required by 707.6.3.2 shall not be required to comply with 707.6.3.1.

707.6.3.2 Tactile Symbols. Function key surfaces shall have tactile symbols as follows: Enter or Proceed key: raised circle; Clear or Correct key: raised left arrow; Cancel key: raised letter 'X'; Add Value key: raised plus sign; Decrease Value key: raised minus sign.

707.6.3.3 Display Screen. The display screen shall comply with 707.7.

EXCEPTION: Drive-up only automatic teller machines and fare machines shall not be required to comply with 707.7.1.

707.7.1 Visibility. The display screen shall be visible from a point located 40 inches (1015 mm) above the center of the clear floor space in front of the machine.

707.7.2 Characters. Characters displayed on the screen shall be in a sans serif font. Characters shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

707.8 Braille Instructions. Braille instructions for initiating the speech mode shall be provided. Braille shall comply with 703.3.

708 Two-Way Communication Systems. General. Two-way communication systems shall comply with 708.

708.2 Audible and Visual Indicators. The system shall provide both audible and visual signals.

708.3 Handsets. Handset cords, if provided, shall be 29 inches (735 mm) long minimum.

## CHAPTER 8: SPECIAL ROOMS, SPACES AND ELEMENTS

801 General

801.1 Scope. The provisions of Chapter 8 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

802 Wheelchair Spaces, Companion Seats, and Designated Aisle Seats. General. Wheelchair spaces shall comply with 802.1.

802.1.1 Floor or Ground Surface. The floor or ground surface of wheelchair spaces shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

802.1.2 Width. A single wheelchair space shall be 36 inches (915 mm) wide minimum. Where two adjacent wheelchair spaces are provided, each wheelchair space shall be 33 inches (840 mm) wide minimum.

802.1.3 Depth. Where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 inches (1220 mm) deep minimum. Where a wheelchair space can be entered only from the side, the wheelchair space shall be 60 inches (1525 mm) deep minimum.

802.1.4 Approach. Wheelchair spaces shall adjoin accessible routes. Accessible routes shall not overlap wheelchair spaces.

802.1.5 Overlap. Wheelchair spaces shall not overlap circulation paths.

802.2 Lines of Sight. Lines of sight to the screen, performance area, or playing field for spectators in wheelchair spaces shall comply with 802.2.

802.2.1 Lines of Sight Over Seated Spectators. Where spectators are expected to remain seated during events, spectators in wheelchair spaces shall be afforded lines of sight complying with 802.2.1.

802.2.1.1 Lines of Sight Over Heads. Where spectators are provided lines of sight over the heads of spectators seated in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the heads of seated spectators in the first row in front of wheelchair spaces.

802.2.1.2 Lines of Sight Between Heads. Where spectators are provided lines of sight over the shoulders and between the heads of spectators seated in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the shoulders and between the heads of seated spectators in the first row in front of wheelchair spaces.

802.2.2 Lines of Sight Over Standing Spectators. Where spectators are expected to stand during events, spectators in wheelchair spaces shall be afforded lines of sight complying with 802.2.2.

802.2.2.1 Lines of Sight Over Heads. Where standing spectators are provided lines of sight over the heads of spectators standing in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the heads of standing spectators in the first row in front of wheelchair spaces.

802.2.2.2 Lines of Sight Between Heads. Where standing spectators are provided lines of sight over the shoulders and between the heads of spectators standing in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the shoulders and between the heads of standing spectators in the first row in front of wheelchair spaces.



Figure 802.2.1 Lines of Sight Over the Heads of Seated Spectators

Figure 802.2.1.2 Lines of Sight Between the Heads of Seated Spectators

802.2.2.1 Lines of Sight Over Standing Spectators. Where spectators are expected to stand during events, spectators in wheelchair spaces shall be afforded lines of sight complying with 802.2.2.1.

802.2.2.1.1 Lines of Sight Over Heads. Where standing spectators are provided lines of sight over the heads of spectators standing in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the heads of standing spectators in the first row in front of wheelchair spaces.

802.2.2.1.2 Lines of Sight Between Heads. Where standing spectators are provided lines of sight over the shoulders and between the heads of spectators standing in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the shoulders and between the heads of standing spectators in the first row in front of wheelchair spaces.

802.2.2.2 Lines of Sight Over Standing Spectators. Where spectators are expected to stand during events, spectators in wheelchair spaces shall be afforded lines of sight complying with 802.2.2.2.

802.2.2.2.1 Lines of Sight Over Heads. Where standing spectators are provided lines of sight over the heads of spectators standing in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the heads of standing spectators in the first row in front of wheelchair spaces.

802.2.2.2.2 Lines of Sight Between Heads. Where standing spectators are provided lines of sight over the shoulders and between the heads of spectators standing in the first row in front of their seats, spectators seated in wheelchair spaces shall be afforded lines of sight over the shoulders and between the heads of standing spectators in the first row in front of wheelchair spaces.

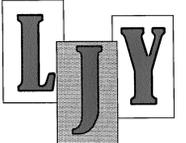


Figure 802.2.2.1 Lines of Sight Over the Heads of Standing Spectators

Figure 802.2.2.2 Lines of Sight Between the Heads of Standing Spectators

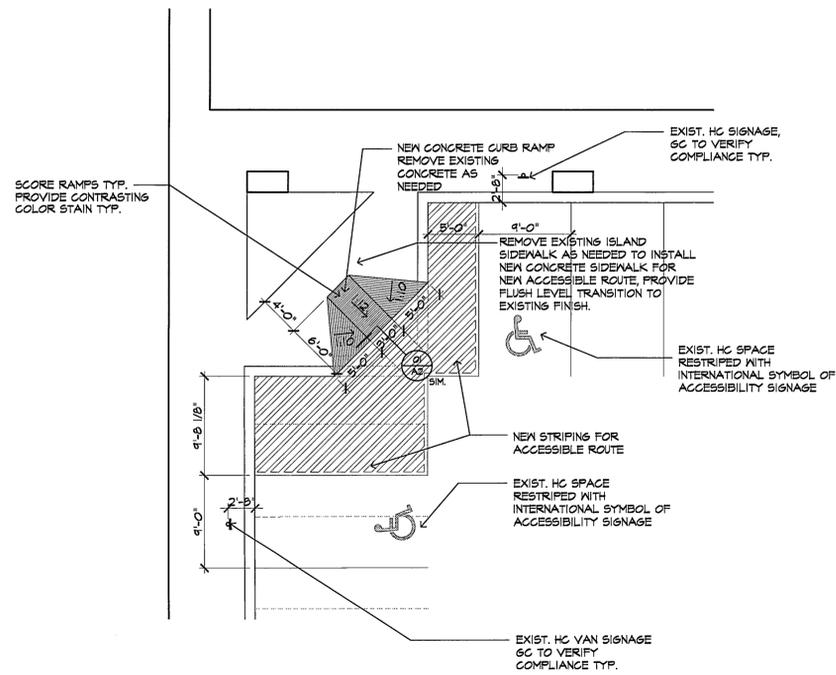
802.3



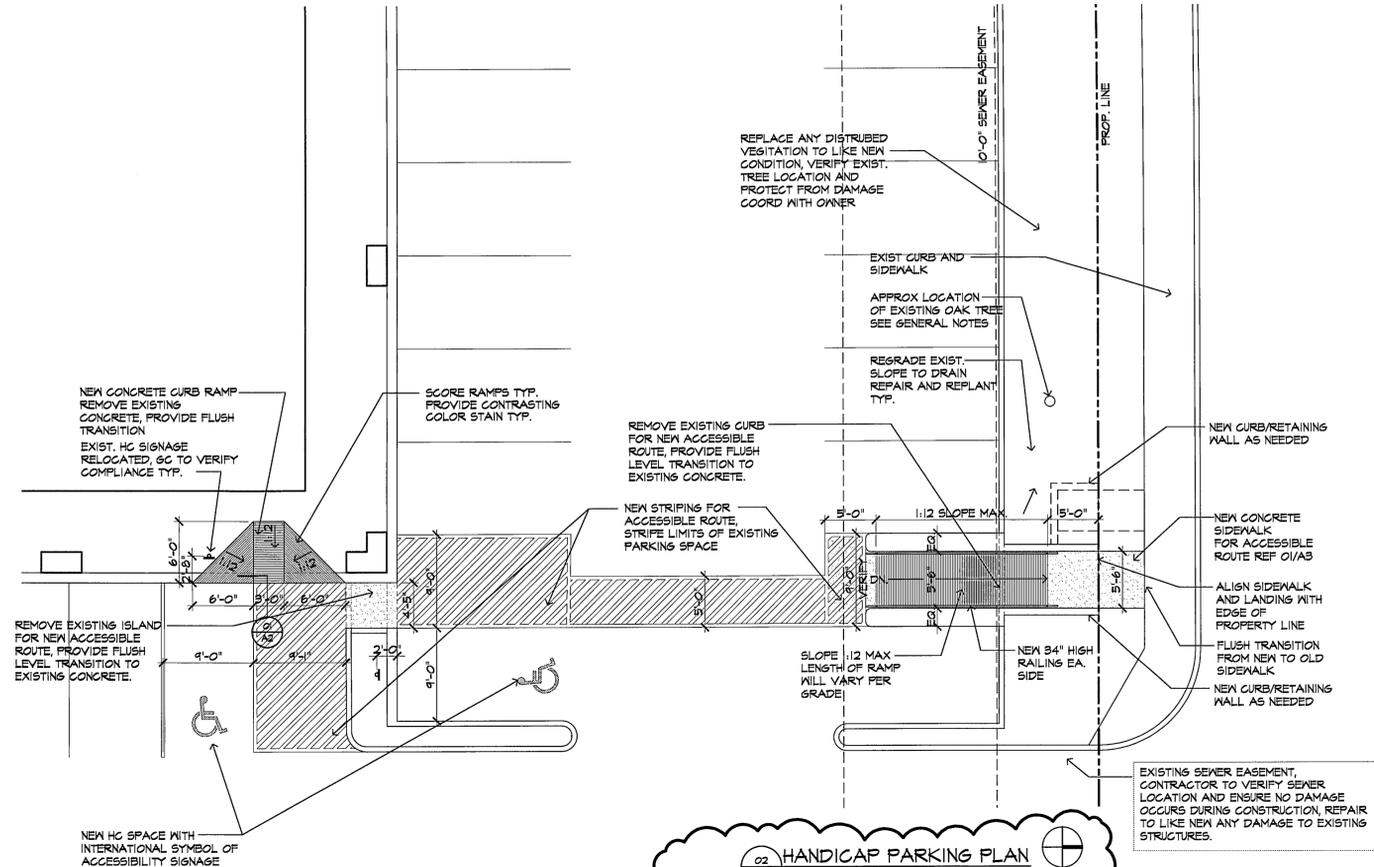


lester j young, architect  
 6304 royal lane  
 dallas, texas 75230  
 214.455.7878

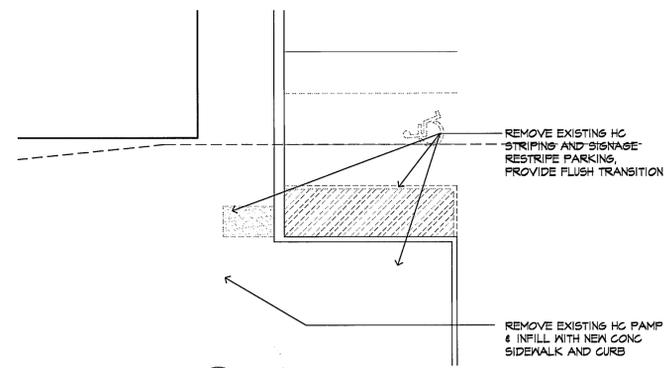
No.	Date	Revision
1	11.19.12	Revision



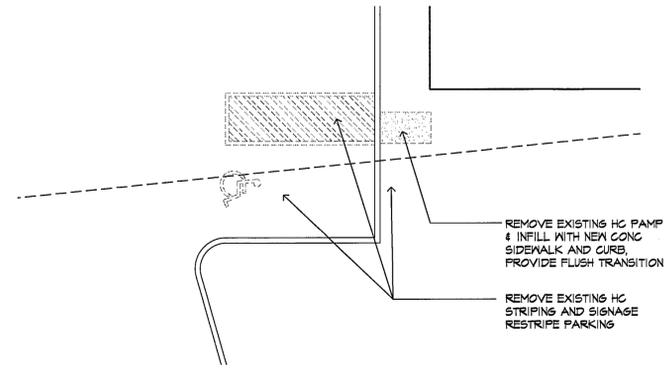
05 HANDICAP PARKING PLAN  
 A2 SCALE: 1/8" = 1'-0"  
 NORTH



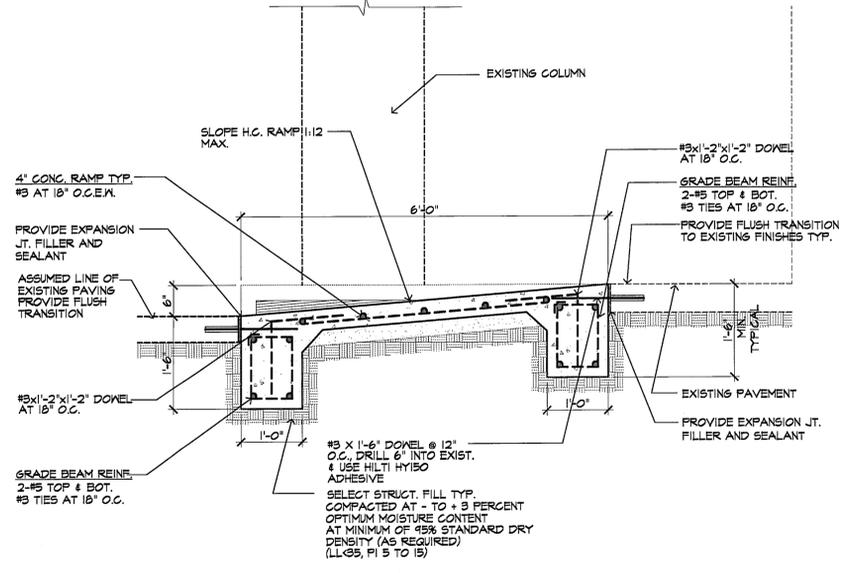
02 HANDICAP PARKING PLAN  
 A2 SCALE: 1/8" = 1'-0"  
 NORTH



04 HANDICAP PARKING PLAN  
 A2 SCALE: 1/8" = 1'-0"  
 NORTH



03 HANDICAP PARKING PLAN  
 A2 SCALE: 1/8" = 1'-0"  
 NORTH



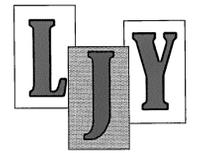
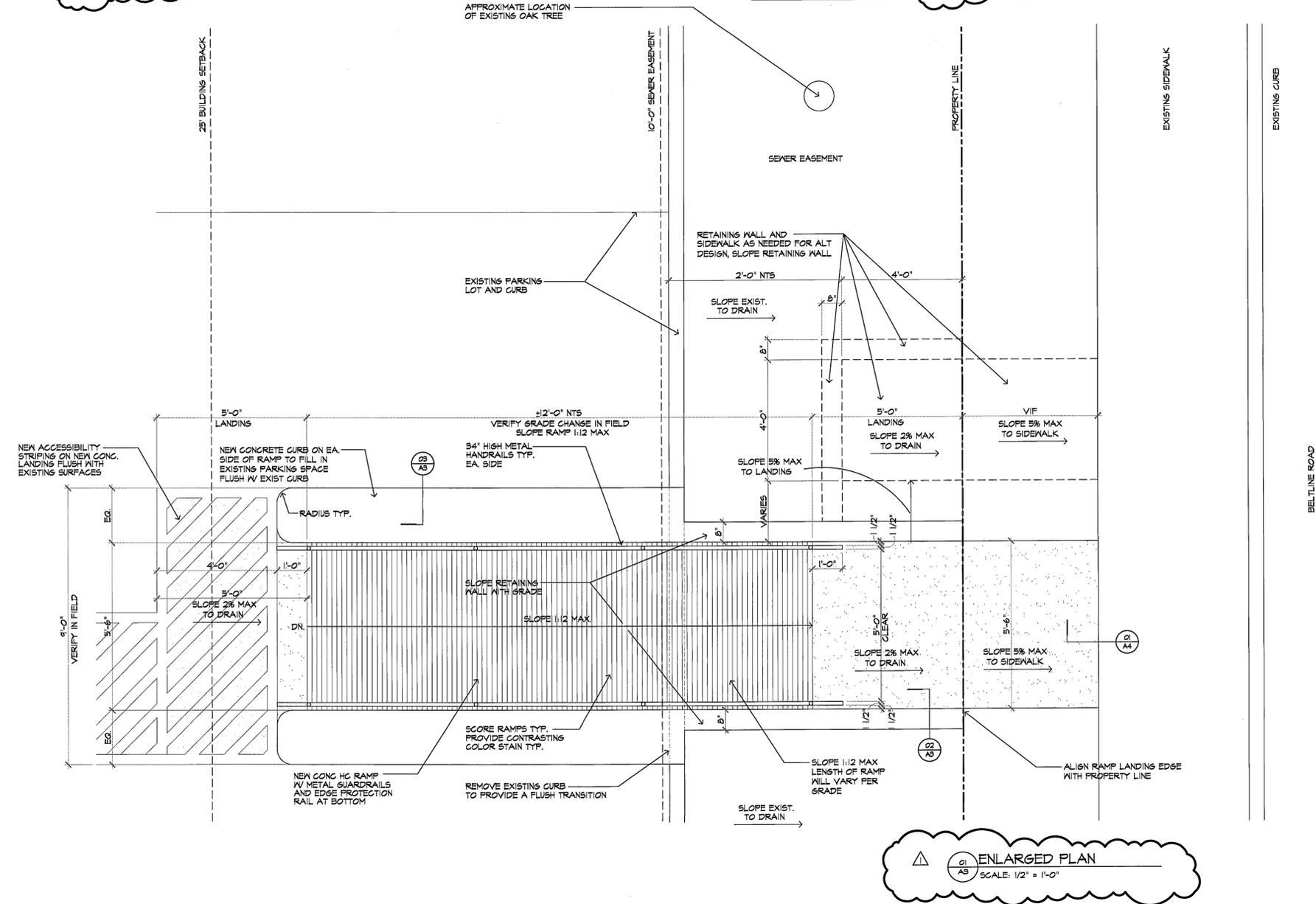
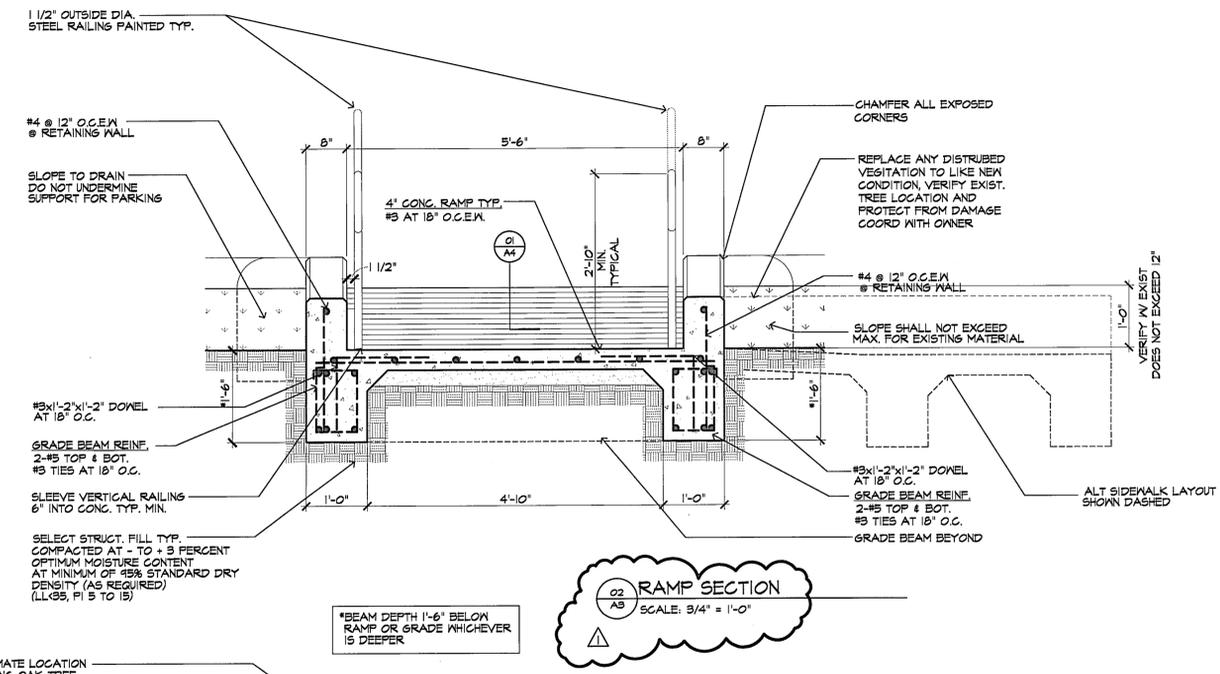
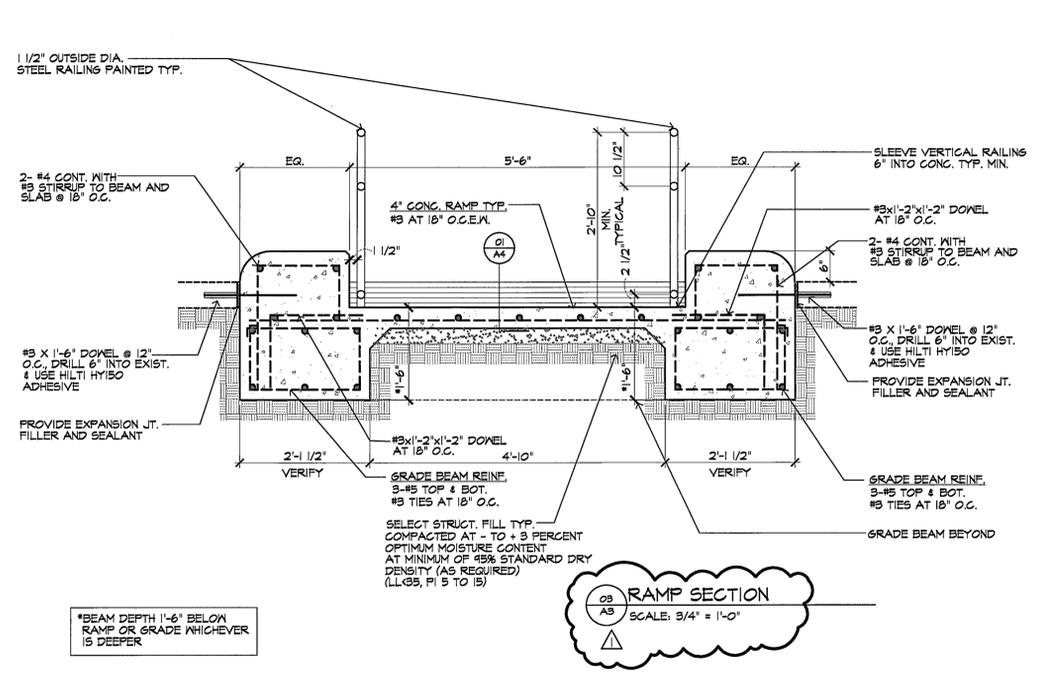
01 HANDICAP RAMP SECTION  
 A2 SCALE: 3/4" = 1'-0"

Accessibility Improvements for  
**ADDISON MARKET**  
 4530 Beltline Road Addison, Texas

LARGE PLANS

Project 1203  
 Date 10.22.12  
 Drawn by LY  
 Checked by LY

Drawing Number  
**A2**



lester j young, architect  
6304 royal lane  
dallas, texas 75230  
214.455.7878

No.	Date	Revision
1	11.19.12	Revision

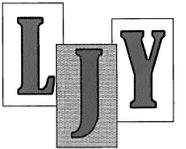


Accessibility Improvements for  
**ADDISON MARKET**  
4530 Beltline Road Addison, Texas

LARGE PLAN SECTIONS

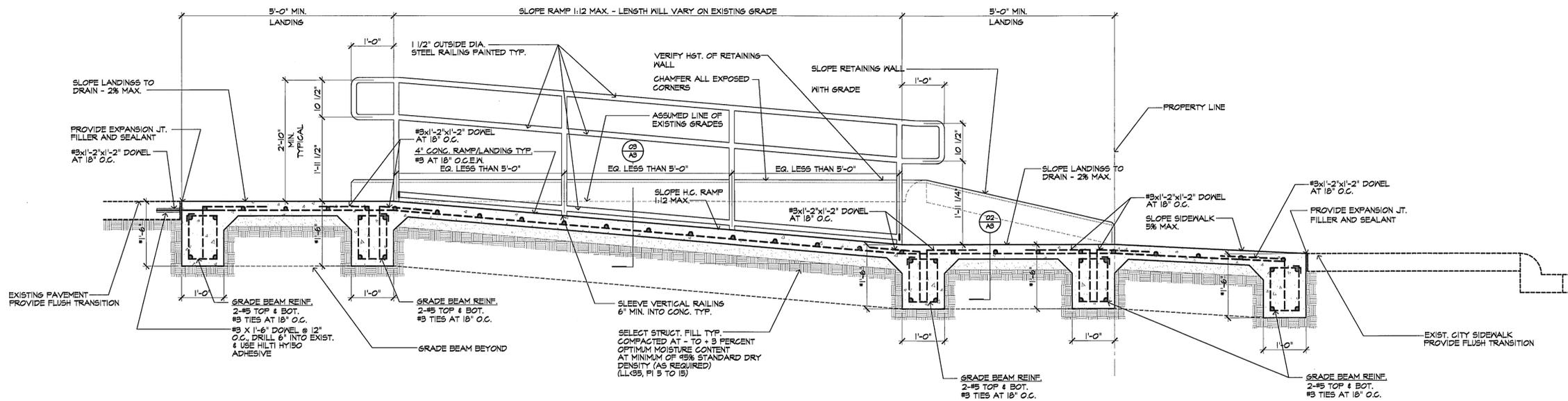
Project 1203  
Date 10.22.12  
Drawn by LY  
Checked by LY

Drawing Number  
**A3**



lester j young, architect  
 6304 royal lane  
 dallas, texas 75230  
 214.455.7878

No.	Date	Revision
1	11.19.12	Revision



\*BEAM DEPTH 1'-6" BELOW RAMP OR GRADE WHICHEVER IS DEEPER

**△ a1 HANDICAP RAMP SECTION**  
 SCALE: 3/4" = 1'-0"

Accessibility Improvements for  
**ADDISON MARKET**  
 4530 Beltline Road Addison, Texas

**SECTION**

Project 1203  
 Date 10.22.12  
 Drawn by LY  
 Checked by LY

Drawing Number

**A4**