

4.6 PARKING AND PASSENGER LOADING ZONES.

4.6.1 MINIMUM NUMBER. PARKING SPACES REQUIRED TO BE ACCESSIBLE BY 4.1 SHALL COMPLY WITH 4.6.2 THROUGH 4.6.4. PASSENGER LOADING ZONES REQUIRED BY 4.1 SHALL COMPLY WITH 4.6.5 AND 4.6.6.

4.6.2 LOCATION. ACCESSIBLE PARKING SPACES SERVING A PARTICULAR BUILDING SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE ENTRANCE. THAT DOES NOT SERVE A PARTICULAR BUILDING, ACCESSIBLE ROUTES OF TRAVEL TO AN ACCESSIBLE ENTRANCE OF THE BUILDING, ACCESSIBLE ENTRANCES WITH ADJACENT PARKING, ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AND LOCATED CLOSEST TO THE ACCESSIBLE ENTRANCES.

4.6.3 PARKING SPACES. PARKING SPACES FOR DISABLED PEOPLE SHALL BE AT LEAST 96" (2440mm) WIDE AND SHALL HAVE AN ADJACENT ACCESSIBLE WALKWAY 112" (2845mm) WIDE. MINIMUM PARKING ACCESSIBLE SPACES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH 4.3. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESSIBLE WALKWAY. PARKED VEHICLES OVERHANGS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE. PARKING SPACES AND ACCESSIBLE WALKWAYS SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.

EXCEPTION. IF ACCESSIBLE PARKING SPACES FOR VANS DESIGNED FOR HANDICAPPED PERSONS ARE PROVIDED, EACH SHOULD HAVE AN ADJACENT ACCESSIBLE AT LEAST 96" (2440mm) WIDE COMPLYING WITH 4.5, GROUND AND FLOOR SURFACES.

4.6.4 SIGNAGE. ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED FOR THE DISABLED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY (SEE 4.3.5). SUCH SIGNS SHALL NOT BE OCCUPIED BY A VEHICLE PARKED IN THE SPACE.

4.6.5 PASSENGER LOADING ZONES. PASSENGER LOADING ZONES SHALL PROVIDE AN ACCESSIBLE ASILE AT LEAST 60" (1525mm) WIDE AND 20' (6096mm) LONG ADJACENT AND PARALLEL TO THE VEHICLE PULL-UP SPACE (SEE FIG. 10). IF THERE ARE CURBS BETWEEN THE ACCESSIBLE ASILE AND THE VEHICLE PULL-UP SPACE, THEN A CURB RAMP COMPLYING WITH 4.7 SHALL BE PROVIDED. VEHICLE STANDING SPACES AND ACCESSIBLE ASILES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.

4.6.6 VERTICAL CLEARANCE. PASSENGER LOADING ZONES SHALL PROVIDE AN ACCESSIBLE ASILE AT LEAST 60" (1525mm) WIDE AND 20' (2440) (6096mm) LONG ADJACENT AND PARALLEL TO THE VEHICLE PULL-UP SPACE (SEE FIG. 10). IF THERE ARE CURBS BETWEEN THE ACCESSIBLE ASILE AND THE VEHICLE PULL-UP SPACE, THEN A CURB RAMP COMPLYING WITH 4.7 SHALL BE PROVIDED. VEHICLE STANDING SPACES AND ACCESSIBLE ASILES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.

4.7 CURB RAMPS.

4.7.1 LOCATION. CURB RAMPS COMPLYING WITH 4.7 SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES A CURB.

4.7.2 SLOPE. SLOPES OF CURB RAMPS SHALL COMPLY WITH 4.8.2. THE SLOPE SHALL BE UNIFORM THROUGHOUT THE RAMP. THE MAXIMUM SLOPE OF CURB RAMPS SHALL BE 1:12. THE SLOPE SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.

4.7.3 WIDTH. THE MINIMUM WIDTH OF A CURB RAMP SHALL BE 36", EXCLUSIVE OF FLARED SIDES.

4.7.4 SURFACE. SURFACES OF CURB RAMPS SHALL COMPLY WITH 4.5.

4.7.5 SIDES OF CURB RAMPS. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, THEN IT SHALL HAVE FLARED SIDES. THE MAXIMUM SLOPE OF THE FLARE SHALL BE 1:10 (SEE FIG. 10). CURB RAMPS WITH RETURNED CURBS MAY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP (SEE FIG. 10B).

4.7.6 BUILT-UP CURB RAMPS. BUILT-UP CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES (SEE FIG. 13).

4.7.7 WARNING TEXTURES. (REMOVED & RESERVED).

4.7.8 OBSTRUCTIONS. CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.

4.7.9 LOCATION AT MARKED CROSSINGS. CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.

4.7.10 DIAGONAL CURB RAMPS. IF DIAGONAL (OR CORNER TYPE) CURB RAMPS HAVE RETURNED CURBS OR OTHER WELL-DEFINED EDGES, SUCH EDGES SHALL BE PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS ARE PROVIDED AT MARKED CROSSINGS. THE 48" (1220mm) CLEAR SPACE SHALL BE WITHIN THE MARKINGS. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL ALSO HAVE A 48" (1220mm) CLEAR SPACE OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING.

4.7.11 ISLANDS. ANY RAISED ISLANDS IN CROSSING SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48" (1220mm) LONG IN THE PART OF THE ISLAND INTERSECTED BY THE CROSSING.

4.7.12 UNCURBED INTERSECTIONS. (REMOVED AND RESERVED).

4.8 RAMPS.

4.8.1 GENERAL. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP AND SHALL COMPLY WITH 4.8.

4.8.2 SLOPE & RISE. THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION SHALL BE 1:12. THE MAXIMUM RISE FOR ANY RAMP SHALL BE 30" (762mm). CURB RAMPS AND RAMPS TO BE CONSTRUCTED ON EXISTING SITES OR IN EXISTING BUILDINGS OR FACILITIES MAY HAVE SLOPES AND RISE AS SHOWN IN TABLE 2.

2. IF SPACE LIMITATIONS PROHIBIT THE USE OF A 1:12 SLOPE OR LESS (SEE 4.1.6).

4.8.3 CLEAR WIDTHS. THE MINIMUM CLEAR WIDTH OF A RAMP SHALL BE 36" (915mm).

4.8.4 LANDINGS. RAMPS SHALL HAVE LEVEL LANDINGS AT THE BOTTOM AND TOP OF EACH RUN. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:

- (1) THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN ADJACENT TO IT.
- (2) THE LANDING LENGTH SHALL BE A MINIMUM OF 60" (1525mm) CLEAR.
- (3) IF RAMPS CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60" BY 60" (1525mm) BY (1525mm).
- (4) IF A DOORWAY IS LOCATED AT A LANDING, THEN THE AREA IN FRONT OF THE DOORWAY SHALL COMPLY WITH 4.13.6.

4.8.5 HANDRAILS. IF A RAMP RUN HAS A RISE GREATER THAN 6" (152mm) OR A HORIZONTAL PROJECTION GREATER THAN 2' (1830mm), THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. HANDRAILS SHALL COMPLY WITH 4.8.6 AND SHALL HAVE THE FOLLOWING FEATURES:

- (1) HANDRAILS SHALL BE PROVIDED ALONG BOTH SIDES OF RAMP SEGMENTS. THE INSIDE HANDRAIL ON SWITCHBACK OR DOGLEG RAMPS SHALL ALWAYS BE CONTINUOUS.
- (2) IF HANDRAILS ARE NOT CONTINUOUS, THEY SHALL EXTEND AT LEAST 12" (305mm) BEYOND THE TOP AND BOTTOM OF THE RAMP SEGMENT AND BE PARALLEL WITH THE FLOOR OR GROUND SURFACE.
- (3) THE CLEAR SPACE BETWEEN THE HANDRAIL AND THE WALL SHALL BE 1-1/2" (38mm).
- (4) GRIPPING SURFACES SHALL BE CONTINUOUS.
- (5) TOP OF HANDRAIL GRIPPING SURFACE SHALL BE MOUNTED BETWEEN 30" & 34" (760mm & 865mm) ABOVE RAMP SURFACES.
- (6) ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.
- (7) HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

4.8.6 CROSS SLOPE & SURFACES. THE CROSS SLOPE OF RAMP SURFACES SHALL BE NO GREATER THAN 1:50. RAMP SURFACES SHALL COMPLY WITH 4.5.

4.8.7 EDGE PROTECTION. RAMPS AND LANDINGS WITH DROP-OFFS SHALL HAVE CURBS, WALLS, BALINGS, OR PROJECTING SURFACES THAT PREVENT PEOPLE FROM SLIPPING OFF THE RAMP. CURBS SHALL BE A MINIMUM OF 2" (50mm) HIGH (SEE FIG. 17).

4.8.8 OUTDOOR CONDITIONS. OUTDOOR RAMPS AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.

4.9 STAIRS.

4.9.1 MINIMUM NUMBER. STAIRS REQUIRED TO BE ACCESSIBLE BY 4.1 SHALL COMPLY WITH 4.9.

4.9.2 TREADS & RISERS. ON ANY GIVEN FLIGHT OF STAIRS, ALL STEPS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD WIDTHS. STAIR TREADS SHALL BE NO LESS THAN 11" (280mm) WIDE, MEASURED FROM RISER TO RISER (SEE FIG. 16a). OPEN RISERS ARE NOT PERMITTED ON ACCESSIBLE ROUTES.

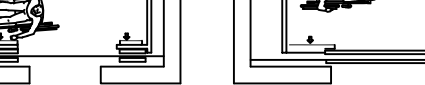
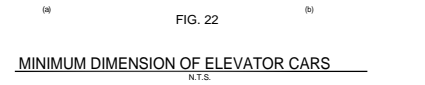
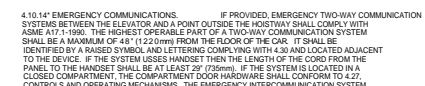
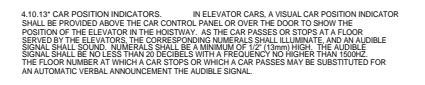
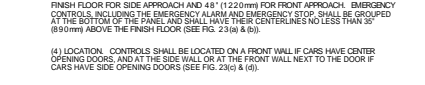
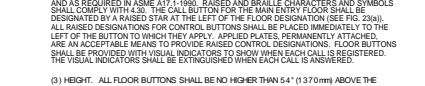
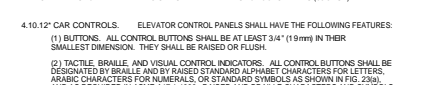
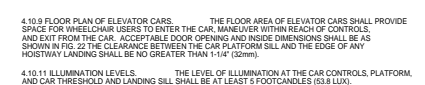
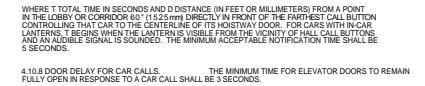
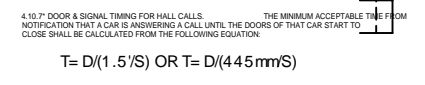
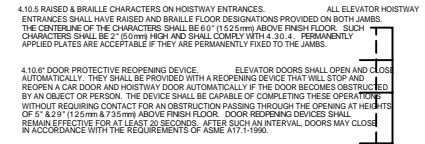
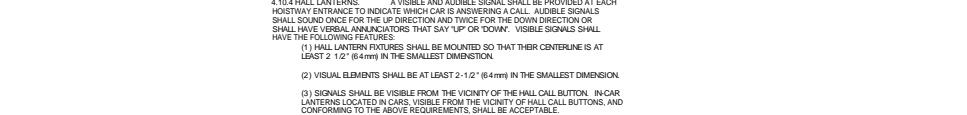
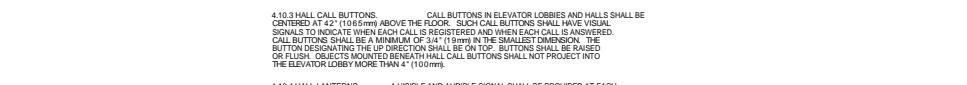
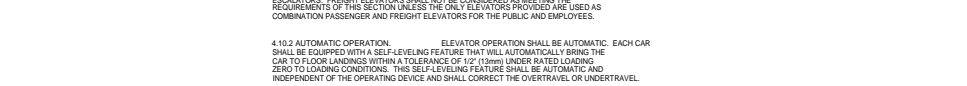
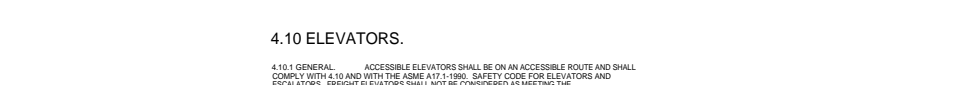
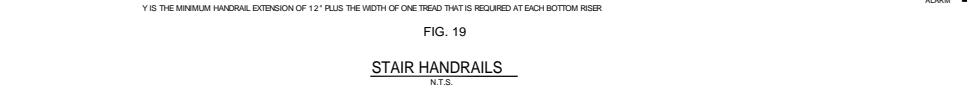
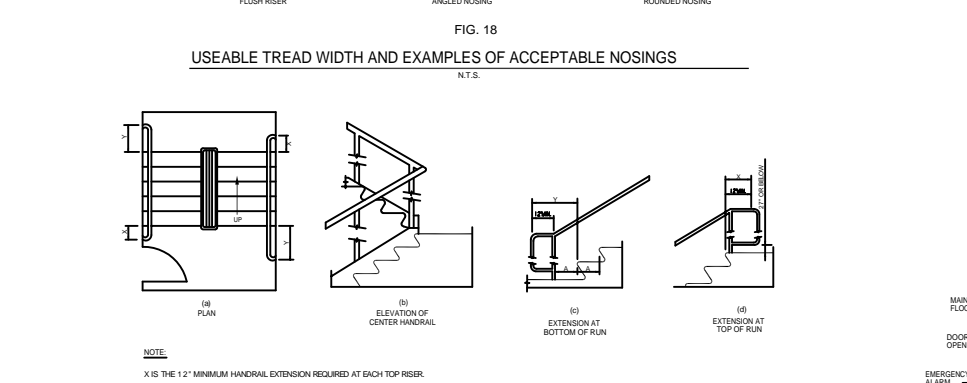
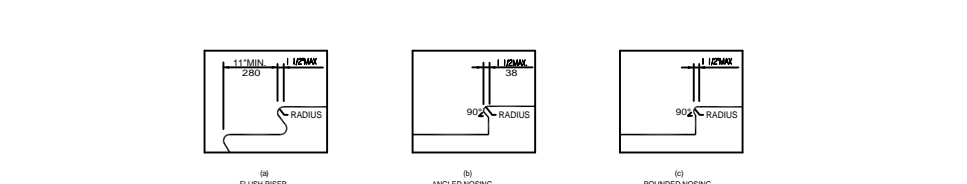
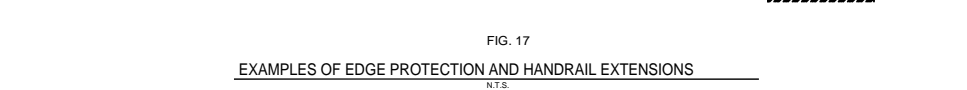
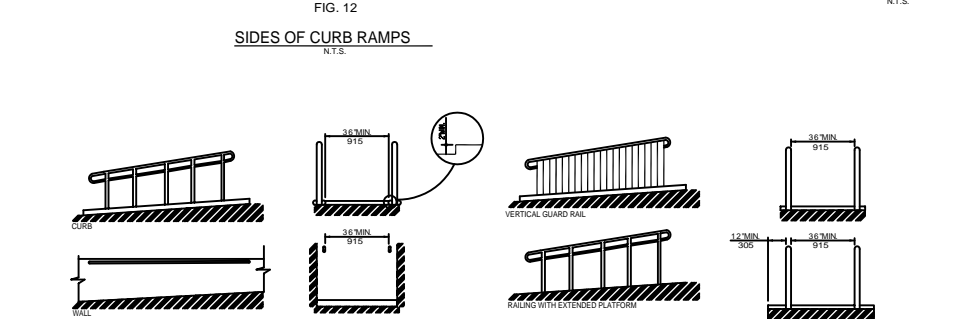
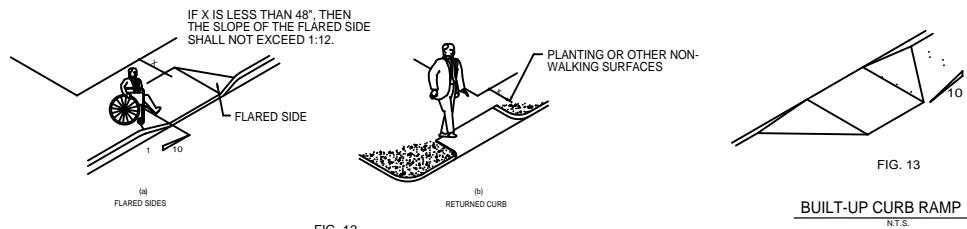
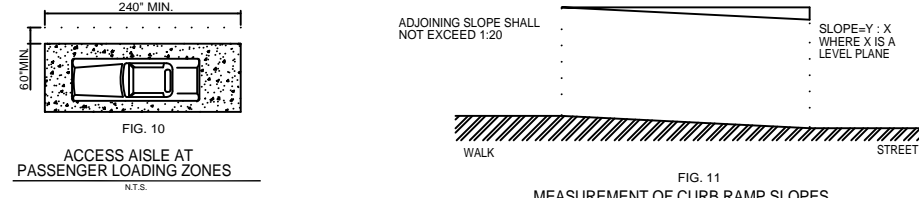
4.9.3 NOSINGS. THE UNDERSIDES OF NOSINGS SHALL NOT BE ABRUPT. THE RADIUS OF RISERS SHALL BE SMOOTH. THE UNDERSIDE OF THE NOSING SHALL BE AN ANGLE NOT LESS THAN 10 DEGREES FROM THE HORIZONTAL. NOSINGS SHALL PROJECT NO MORE THAN 1-1/2" (38mm) (SEE FIG. 16).

4.9.4 HANDRAILS. STAIRWAYS SHALL HAVE HANDRAILS AT BOTH SIDES OF ALL STAIRS. HANDRAILS SHALL COMPLY WITH 4.8 AND SHALL HAVE THE FOLLOWING FEATURES:

- (1) HANDRAILS SHALL BE CONTINUOUS ALONG BOTH SIDES OF STAIRS. THE INSIDE HANDRAIL ON SWITCHBACK OR DOGLEG STAIRS SHALL ALWAYS BE CONTINUOUS (SEE FIG. 19a & b).
- (2) IF HANDRAILS ARE NOT CONTINUOUS, THEY SHALL EXTEND AT LEAST 12" (305mm) PLUS THE WIDTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT THE TOP, THE EXTENSION SHALL BE PARALLEL WITH THE FLOOR OR GROUND SURFACE. AT THE BOTTOM, THE HANDRAIL SHALL CONTINUE TO SUPPORT A DISTANCE OF THE WIDTH OF ONE TREAD FROM THE BOTTOM RISER. THE REMAINDER OF THE EXTENSION SHALL BE HORIZONTAL (SEE FIG. 19c) & d).
- (3) THE CLEAR SPACE BETWEEN HANDRAILS AND WALLS SHALL BE 1-1/2" (38mm).
- (4) GRIPPING SURFACES SHALL BE UNINTERRUPTED BY MEMEL POSTS, OTHER CONSTRUCTION ELEMENTS, OR OBSTRUCTIONS.
- (5) TOP OF HANDRAIL GRIPPING SURFACE SHALL BE MOUNTED BETWEEN 30" & 34" (760mm & 865mm) ABOVE STAIR NOSINGS.
- (6) ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.
- (7) HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

4.9.5 TACTILE WARNINGS AT STAIRS. (REMOVED & RESERVED).

4.9.6 OUTDOOR CONDITIONS. OUTDOOR STAIRS AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.



4.11 PLATFORM LIFTS (WHEELCHAIR LIFTS).

4.11.1 LOCATION. PLATFORM LIFTS (WHEELCHAIR LIFTS) PERMITTED BY 4.1 SHALL COMPLY WITH THE REQUIREMENTS OF 4.11.

4.11.2 OTHER REQUIREMENTS. IF PLATFORM LIFTS (WHEELCHAIR LIFTS) ARE USED, THEY SHALL COMPLY WITH 4.2.4, 4.5, 4.27, & ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS, SECTION XX, 1990.

4.11.3 ENTRANCE. IF PLATFORM LIFTS ARE USED, THEN THEY SHALL FACILITATE UNASSISTED ENTRY, OPERATION, AND EXIT FROM THE LIFT IN COMPLIANCE WITH 4.11.2.

4.12 WINDOWS.

4.12.1 GENERAL. (RESERVED).

4.12.2 WINDOW HARDWARE. (RESERVED).

4.13 DOORS.

4.13.1 GENERAL. DOORS REQUIRED TO BE ACCESSIBLE BY 4.1 SHALL COMPLY WITH THE REQUIREMENTS OF 4.13.

4.13.2 REVOLVING DOORS & TURNSTILES. REVOLVING DOORS OR TURNSTILES SHALL NOT BE THE ONLY MEANS OF PASSAGE AT AN ACCESSIBLE ENTRANCE OR ALONG AN ACCESSIBLE ROUTE. AN ACCESSIBLE GATE OR DOOR SHALL BE PROVIDED ADJACENT TO THE TURNSTILE OR REVOLVING DOOR AND SHALL BE SO DESIGNED AS TO FACILITATE THE SAME USE PATTERN.

4.13.3 GATES. GATES, INCLUDING TICKET GATES, SHALL MEET ALL APPLICABLE SPECIFICATIONS OF 4.13.

4.13.4 DOUBLE-LEAF DOORWAYS. IF DOORWAYS HAVE TWO INDEPENDENTLY OPERATED DOOR LEAVES, THEN AT LEAST ONE LEAF SHALL MEET THE SPECIFICATIONS IN 4.13.5.4.1.3. THAT LEAF SHALL BE AN ACTIVE LEAF.

4.13.5 CLEAR WIDTH. DOORWAYS SHALL HAVE A MINIMUM CLEAR OPENING OF 32" (815mm) WITH THE DOOR OPEN 90 DEGREES, MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP. CRAMPS, MOORS, OR OTHER DEVICES SHALL NOT BE USED TO HOLD THE DOOR OPEN. EXCEPTION: DOORS NOT REQUIRING FULL USER PASSAGE, SUCH AS SHALLOV CLOSETS, MAY HAVE THE CLEAR OPENING REDUCED TO 30" (762mm).

4.13.6 MANEUVERING CLEARANCES AT DOORS. THE FLOOR OR GROUND AREA WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND CLEAR.

EXCEPTION: ENTRY DOORS TO ACUTE CARE HOSPITAL BEDROOMS FOR INPATIENTS SHALL BE EXEMPTED FROM THE REQUIREMENT FOR SPACE AT THE LATCH SIDE OF THE DOOR IF THE DOOR IS AT LEAST 44" (1120mm) WIDE.

4.13.7 TWO DOORS IN SERIES. THE MINIMUM SPACE BETWEEN TWO HINGED OR PIVOTED DOORS IN SERIES SHALL BE 48" (1220mm) PLUS THE WIDTH OF ANY DOOR SWINGING INTO THE SPACE. DOORS IN SERIES SHALL SWING EITHER IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS.

4.13.8 THRESHOLDS AT DOORWAYS. THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 3/4" (19mm) IN HEIGHT FOR EXTERIOR SLIDING DOORS OR 1/2" (13mm) FOR OTHER TYPES OF DOORS. PASSED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE BELIEVED WITH A SLOPE NO GREATER THAN 1:2 (SEE 4.5.2).

4.13.9 DOOR HARDWARE. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PUNCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVERS, OPERATED BY MECHANISMS AND PUSHING MECHANISMS, AND ACCEPTABLE DESIGNATIONS WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 44" (1120mm) ABOVE FINISHED FLOOR.

4.13.10 DOOR CLOSERS. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIODIC OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 20 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" (75mm) FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

4.13.11 DOOR OPENING FORCE. THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:

- (1) FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
- (2) OTHER DOORS:
 - (a) EXTERIOR HINGED DOORS: (RESERVED).
 - (b) INTERIOR HINGED DOORS: 5 LBF (22.2N)
 - (c) SLIDING OR FOLDING DOORS: 5 LBF (22.2N)

THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAUGE OTHER DEVICES THAT MAY HOLD THE DOOR IN A CLOSED POSITION.

4.13.12 AUTOMATIC DOORS AND POWER-ASSISTED DOORS. IF AN AUTOMATIC DOOR IS USED, THEN IT SHALL COMPLY WITH ANSI/BHMA A156.10-1986. SLOWLY OPENING, LOW-POWERED, AUTOMATIC DOORS SHALL COMPLY WITH ANSI/BHMA A156.10-1986. SLOWLY CLOSING DOORS SHALL NOT BE CHECK CHECK, FASTER THAN 3 SECONDS AND SHALL REQUIRE NO MORE THAN 15 LBF (66N) TO STOP DOOR MOVEMENT. IF A POWER-ASSISTED DOOR IS USED, ITS DOOR CLOSING SHALL COMPLY WITH 4.13.11 AND ITS CLOSING SHALL CONFORM TO THE REQUIREMENTS IN ANSI A156.10-1984.

4.13.13 DOOR HARDWARE. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PUNCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVERS, OPERATED BY MECHANISMS AND PUSHING MECHANISMS, AND ACCEPTABLE DESIGNATIONS WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 44" (1120mm) ABOVE FINISHED FLOOR.

4.13.14 DOOR CLOSERS. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIODIC OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 20 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" (75mm) FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

4.13.15 DOOR OPENING FORCE. THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:

- (1) FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
- (2) OTHER DOORS:
 - (a) EXTERIOR HINGED DOORS: (RESERVED).
 - (b) INTERIOR HINGED DOORS: 5 LBF (22.2N)
 - (c) SLIDING OR FOLDING DOORS: 5 LBF (22.2N)

THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAUGE OTHER DEVICES THAT MAY HOLD THE DOOR IN A CLOSED POSITION.

4.13.16 AUTOMATIC DOORS AND POWER-ASSISTED DOORS. IF AN AUTOMATIC DOOR IS USED, THEN IT SHALL COMPLY WITH ANSI/BHMA A156.10-1986. SLOWLY OPENING, LOW-POWERED, AUTOMATIC DOORS SHALL COMPLY WITH ANSI/BHMA A156.10-1986. SLOWLY CLOSING DOORS SHALL NOT BE CHECK CHECK, FASTER THAN 3 SECONDS AND SHALL REQUIRE NO MORE THAN 15 LBF (66N) TO STOP DOOR MOVEMENT. IF A POWER-ASSISTED DOOR IS USED, ITS DOOR CLOSING SHALL COMPLY WITH 4.13.11 AND ITS CLOSING SHALL CONFORM TO THE REQUIREMENTS IN ANSI A156.10-1984.

4.13.17 DOOR HARDWARE. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PUNCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVERS, OPERATED BY MECHANISMS AND PUSHING MECHANISMS, AND ACCEPTABLE DESIGNATIONS WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 44" (1120mm) ABOVE FINISHED FLOOR.

4.13.18 DOOR CLOSERS. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIODIC OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 20 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" (75mm) FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

4.13.19 DOOR OPENING FORCE. THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:

- (1) FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
- (2) OTHER DOORS:
 - (a) EXTERIOR HINGED DOORS: (RESERVED).
 - (b) INTERIOR HINGED DOORS: 5 LBF (22.2N)
 - (c) SLIDING OR FOLDING DOORS: 5 LBF (22.2N)