

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 TO BE ACCESSIBLE BY 4.1 SHALL COMPLY WITH 4.6.5 AND 4.6.6.

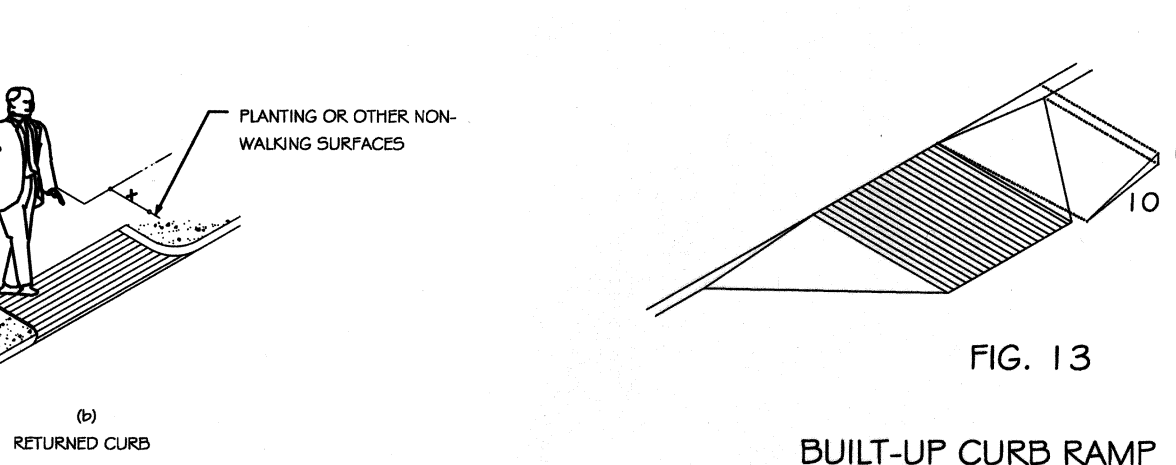
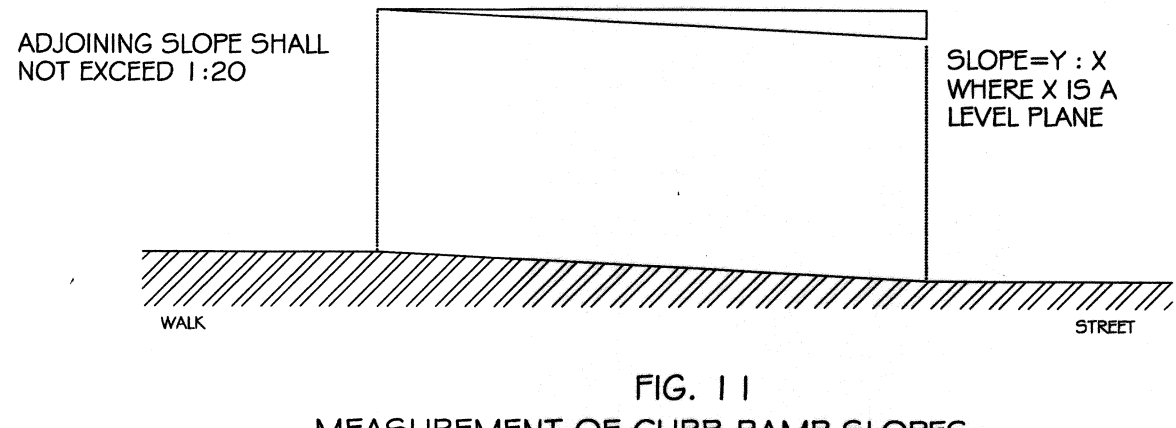
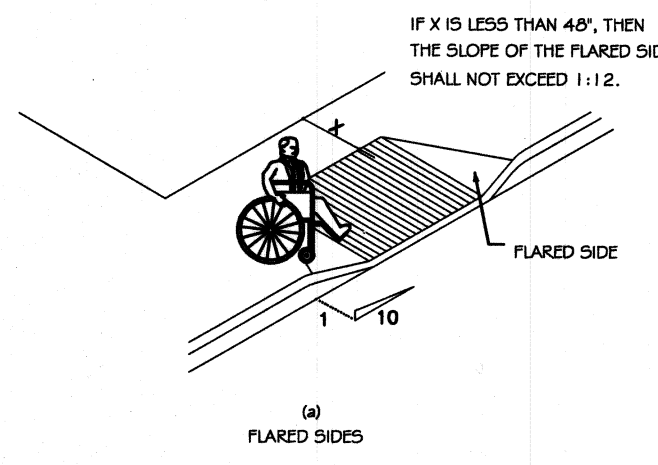
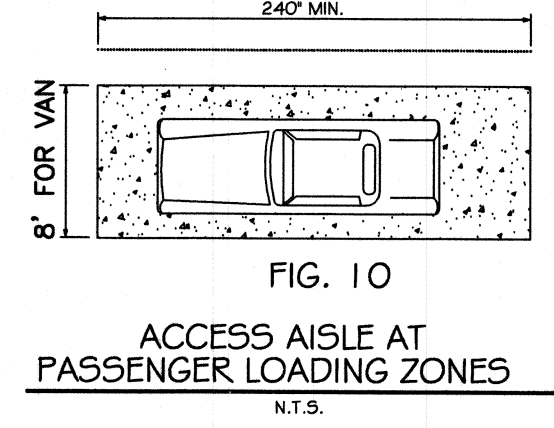
4.6.2 LOCATION. ACCESSIBLE PARKING SPACES SERVING A PARTICULAR BUILDING SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE ENTRANCE. THAT DO NOT SERVE A PARTICULAR BUILDING, ACCESSIBLE ROUTE OF TRAVEL TO AN ACCESSIBLE ENTRANCE OF THE BUILDING SHALL BE THE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

4.6.3 PARKING SPACES. PARKING SPACES FOR DISABLED PEOPLE SHALL BE AT LEAST 8'0" (2440mm) WIDE AND SHALL HAVE AN ADJACENT ACCESS AISLE AT LEAST 5'0" (1525mm) WIDE. PARKING SPACES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH 4.3. THE ACCESSIBLE PARKING SPACE MAY SHARE A COMMON ACCESS AISLE. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.

4.6.4 SIGNAGE. ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED FOR THE DISABLED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY (SEE 4.30.5). 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 ACCESS AISLE AT LEAST 6'0" (1830mm) LONG ADJACENT AND PARALLEL TO THE ACCESSIBLE VEHICLE FULL-UP SPACE (SEE FIG. 10). IF THERE ARE CURBS BETWEEN THE ACCESS AISLE AND THE VEHICLE FULL-UP SPACE, THEN A CURB RAMP COMPLYING WITH 4.7 SHALL BE PROVIDED. VEHICLE STANDING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.

4.6.6 VERTICAL CLEARANCE. PASSENGER LOADING ZONES SHALL PROVIDE AN ACCESS AISLE AT LEAST 6'0" (1830mm) LONG ADJACENT AND PARALLEL TO THE ACCESSIBLE VEHICLE FULL-UP SPACE (SEE FIG. 10). IF THERE ARE CURBS BETWEEN THE ACCESS AISLE AND THE VEHICLE FULL-UP SPACE, THEN A CURB RAMP COMPLYING WITH 4.7 SHALL BE PROVIDED. VEHICLE STANDING SPACES AND ACCESS AISLES 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 4.6.2. THE SLOPE SHALL BE MEASURED AS SHOWN IN FIG. 11. TRANSITIONS FROM RAMPS TO WALKWAYS, DRIVEWAYS, OR STREETS 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 FLARED SIDES SHALL BE 1:10 (SEE FIG. 12). CURB RAMPS WITH RETURNED CURBS MAY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP (SEE FIG. 13).

4.7.6 BUILT-UP CURB RAMPS. BUILT-UP CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT OBSTRUCT VEHICLE TRAFFIC LANE USE (SEE FIG. 13).

4.7.7 WARNING TEXTURES. (REMOVED AND 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 SHALL BE LOCATED AT MARKED CROSSINGS. THE 40" (1020mm) CLEAR SPACE SHALL BE WITHIN THE MARKINGS. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THE MAXIMUM SLOPE OF THE FLARED SIDES SHALL BE 1:10. SEGMENTS 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 40" (1020mm) 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 4.5.

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 NO GREATER THAN 1:12. FOR ANY RAMP SHALL BE 30" (762mm) CLEAR. 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. 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 RAMP. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:

- (1) THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP LEADING 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" (250mm) OR A HORIZONTAL PROJECTION GREATER THAN 72" (1830mm), THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. HANDRAILS ARE REQUIRED ON CURB RAMPS. HANDRAILS SHALL COMPLY WITH 4.26 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 SHALL BE PARALLEL WITH THE FLOOR OR GRADING 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 SURFACES SHALL BE MOUNTED BETWEEN 30" & 34" (762mm & 863mm) 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, RAILINGS, OR PROTECTING 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 STAIRS SHALL HAVE UNIFORM RISES, RISERS 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.

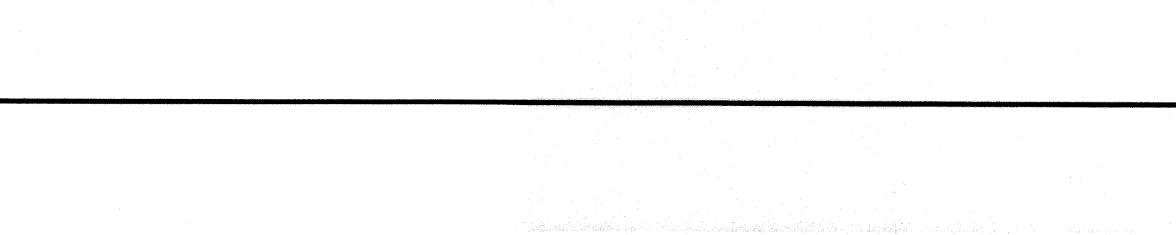
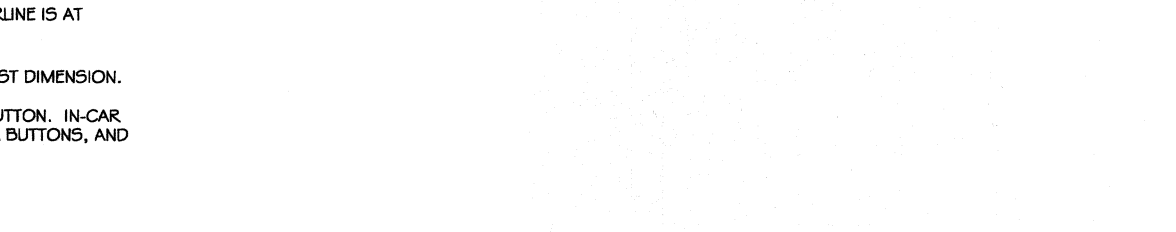
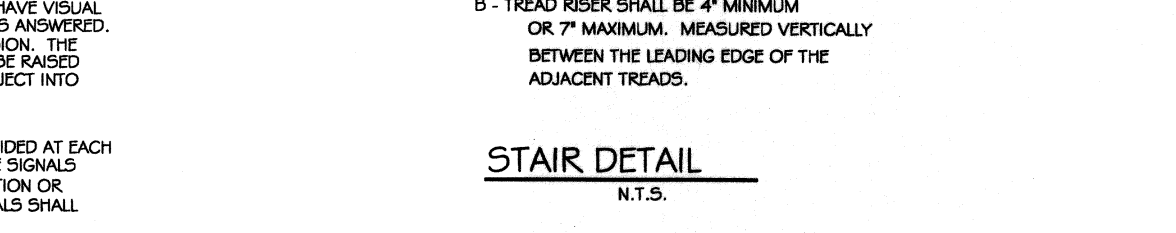
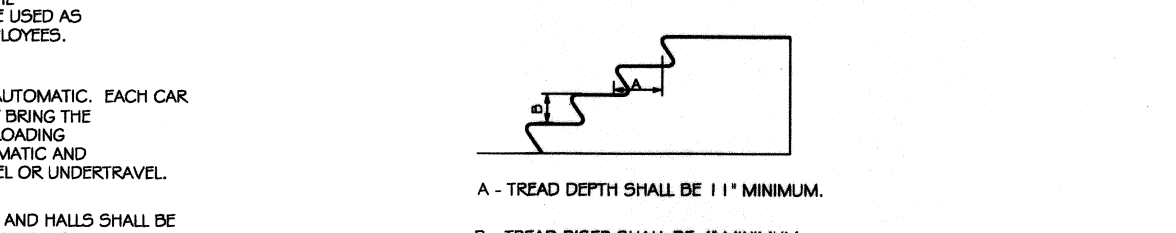
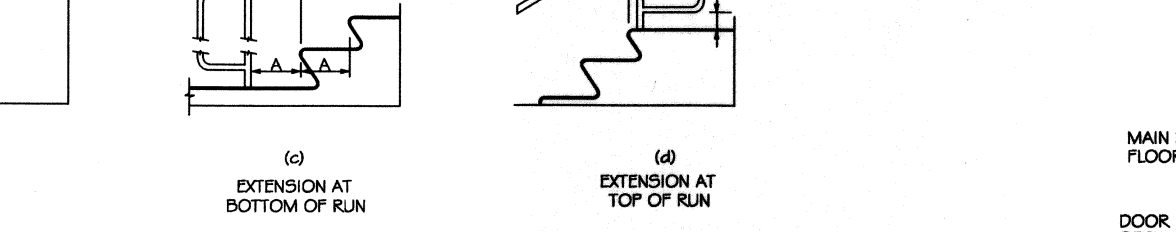
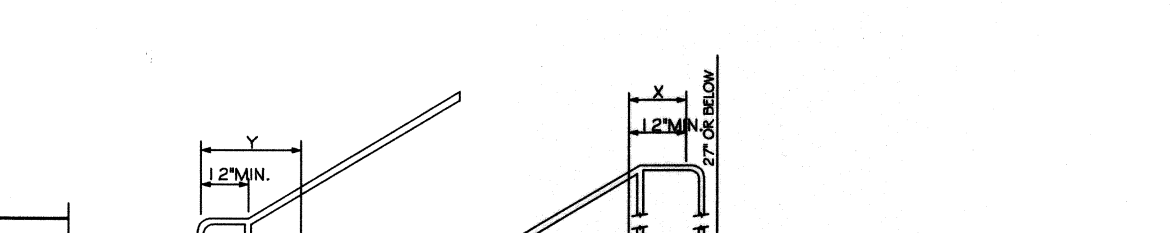
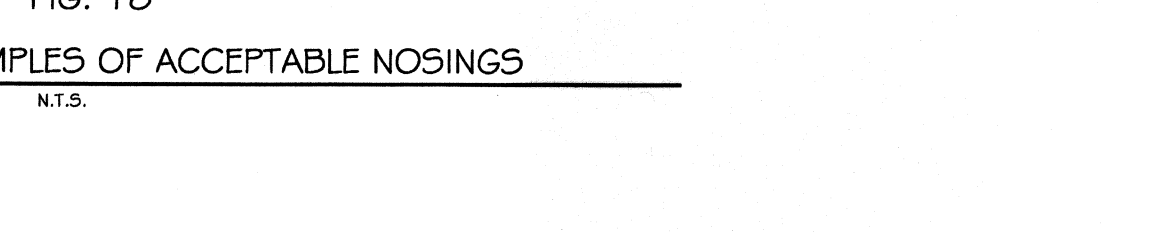
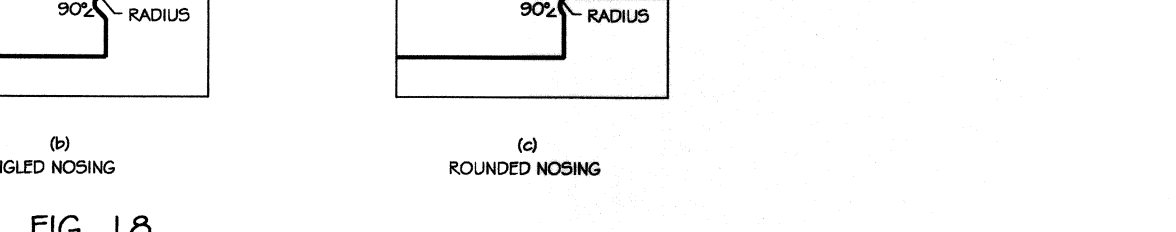
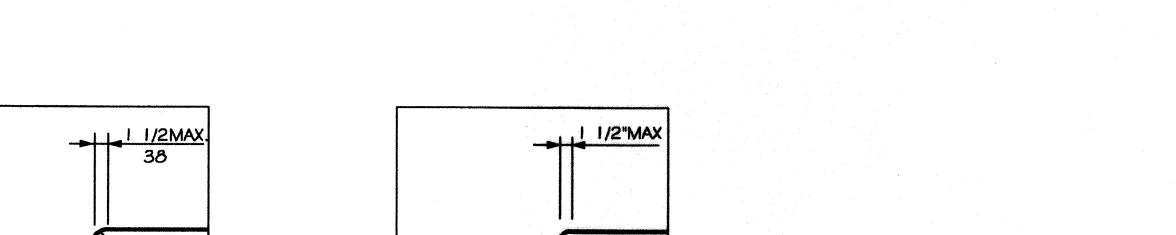
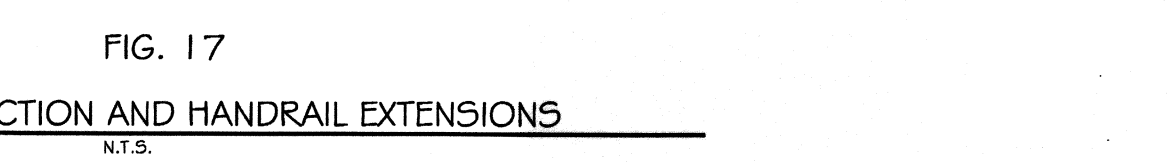
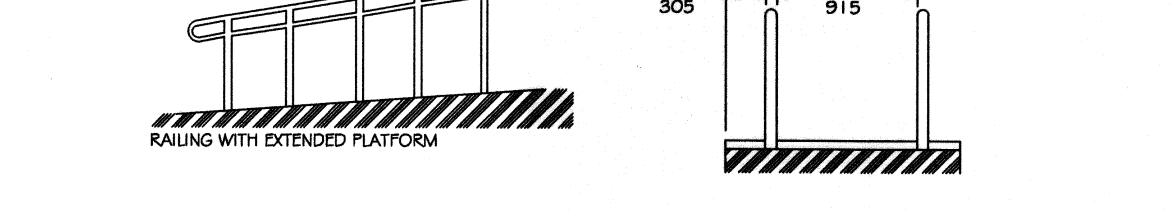
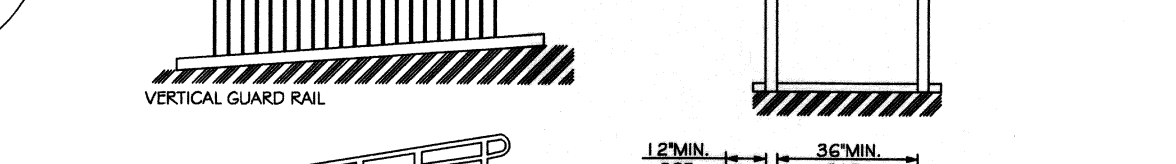
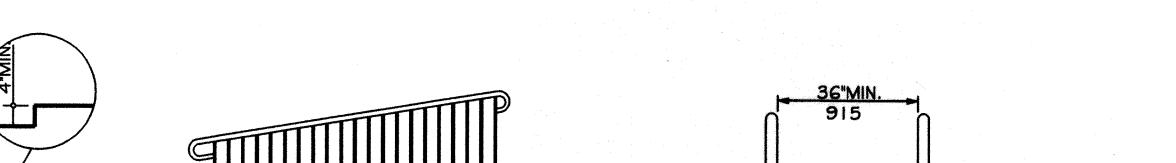
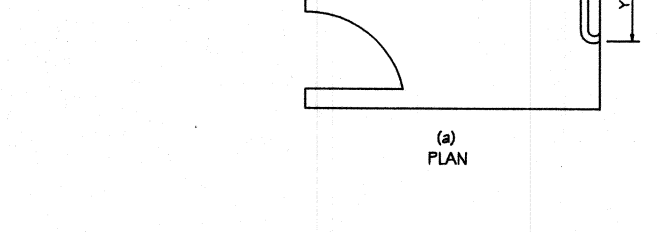
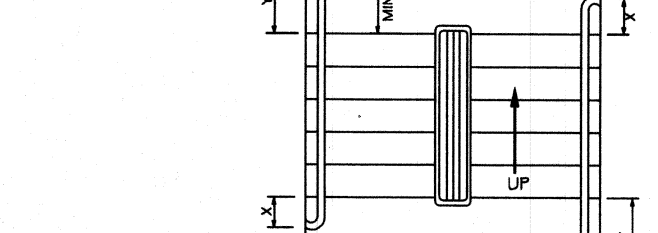
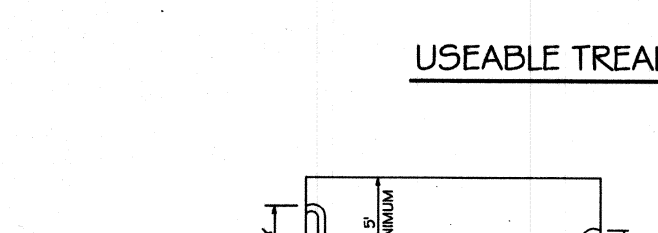
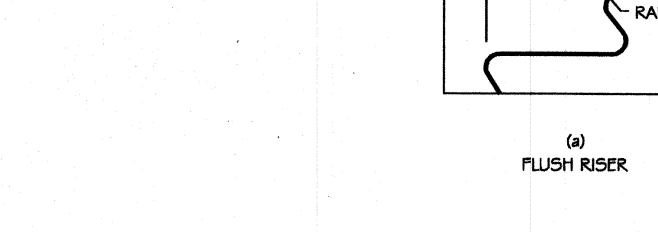
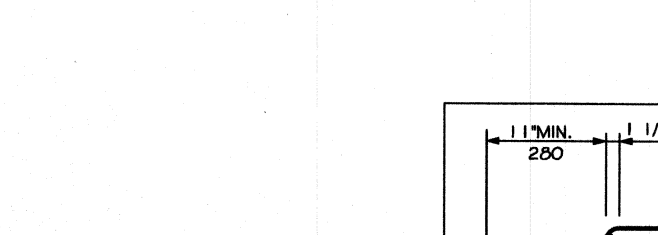
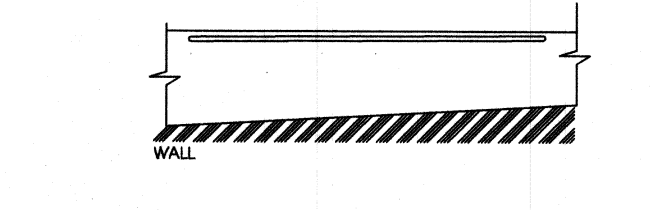
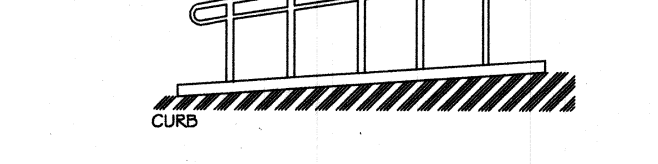
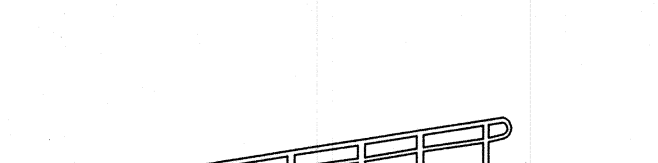
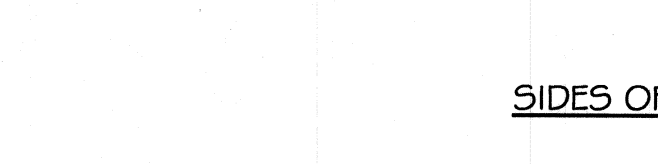
4.9.3 NOSINGS. THE UNDERSIDES OF NOSINGS SHALL NOT BE ABRADE. THE RADIUS OF CURVATURE AT THE LEADING EDGE OF THE TREAD SHALL BE NO GREATER THAN 1/2" (12.7mm). NOSINGS SHALL BE NO MORE THAN 1/2" (12.7mm) THICK. NOSINGS SHALL PROJECT NO MORE THAN 1-1/2" (38mm) (SEE FIG. 18).

4.9.4 HANDRAILS. STAIRWAYS SHALL HAVE HANDRAILS AT BOTH SIDES OF ALL STAIRS. HANDRAILS SHALL COMPLY WITH 4.26 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) BEYOND THE WIDTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT THE TOP, THE EXTENSION SHALL BE PARALLEL WITH THE FLOOR OR GRADING SURFACE. AT THE BOTTOM, THE HANDRAIL SHALL CONTINUE TO EXTEND FOR A DISTANCE OF ONE TREAD FROM THE BOTTOM RISER. THE REMAINDER OF THE EXTENSION SHALL BE HORIZONTAL (SEE FIG. 19c & d).
- (3) HANDRAIL EXTENSIONS SHALL COMPLY WITH 4.4.
- (4) THE CLEAR SPACE BETWEEN HANDRAILS AND WALLS SHALL BE 1-1/2" (38mm).
- (5) GRIPPING SURFACES SHALL BE UNINTERRUPTED BY NEWEL POSTS, OTHER CONSTRUCTION ELEMENTS, OR OBSTRUCTIONS.
- (6) TOP OF HANDRAIL GRIPPING SURFACE SHALL BE MOUNTED BETWEEN 30" & 34" (762mm & 863mm) ABOVE STAIR NOSINGS.
- (7) ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.
- (8) 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.



4.10.5 RAISED & BRaille CHARACTERS ON HOSTWAY ENTRANCES.

ALL ELEVATOR HOSTWAY ENTRANCES SHALL HAVE RAISED AND BRaille FLOOR DESIGNATIONS PROVIDED ON BOTH SIDES. THE CENTERLINE OF THE CHARACTERS SHALL BE 60" (1525mm) ABOVE FINISH FLOOR. SUCH CHARACTERS SHALL BE 2" (50mm) HIGH AND SHALL COMPLY WITH 4.30.4. PERMANENTLY APPLIED LETTERS ARE ACCEPTABLE IF THEY ARE PERMANENTLY FIRED TO THE JAMES.

4.10.6 DOOR PROTECTIVE REOPENING DEVICE. ELEVATOR DOORS SHALL OPEN AND CLOSE AUTOMATICALLY. THEY SHALL BE PROVIDED WITH A REOPENING DEVICE THAT WILL STOP AND REOPEN A CAR DOOR AND HOSTWAY DOOR AUTOMATICALLY IF THE DOOR BECOMES OBSTRUCTED BY AN OBJECT OR PERSON. THE DEVICE SHALL BE CAPABLE OF COMPLETING THESE OPERATIONS WITHOUT REQUIRING CONTACT FOR AN OBSTRUCTION PASSING THROUGH THE OPENING AT HEIGHTS OF 3'4" (1025mm) ABOVE FINISH FLOOR. DOOR REOPENING DEVICES SHALL REMAIN CLOSED FOR AT LEAST 3 SECONDS AFTER EACH SUCH INTERVAL. DOORS MAY CLOSE IN ACCORDANCE WITH THE REQUIREMENTS OF ASME A17.1-1990.

4.10.7 DOOR & SIGNAL TINGING FOR HALL CALLS. THE MINIMUM ACCEPTABLE TIME FROM NOTIFICATION THAT A CAR IS ANSWERING A CALL UNTIL THE DOORS OF THAT CAR START TO CLOSE SHALL BE CALCULATED FROM THE FOLLOWING EQUATION:

$$T = D(1.5/5) \text{ OR } T = D/(445 \text{mm}/5)$$

WHERE T TOTAL TIME IN SECONDS AND D DISTANCE IN FEET OR MILLIMETERS FROM A POINT IN THE LOBBY OR CORRIDOR 60" (1525mm) DIRECTLY IN FRONT OF THE FASTEST CALL BUTTON CONTROLLING THAT CAR TO THE CENTERLINE OF ITS HOSTWAY DOOR. FOR CARS WITH HALL LANTERNS, T BEGINS WHEN THE LANTERN IS VISIBLE FROM THE VICINITY OF HALL CALL BUTTON AND AN AUDIBLE SIGNAL IS SOUNDED. THE MINIMUM ACCEPTABLE NOTIFICATION TIME SHALL BE 5 SECONDS.

4.10.8 DOOR DELAY FOR CAR CALLS. THE MINIMUM TIME FOR ELEVATOR DOORS TO REMAIN FULLY OPEN IN RESPONSE TO A CAR CALL SHALL BE 3 SECONDS.

4.10.9 FLOOR PLAN OF ELEVATOR CARS. THE FLOOR AREA OF ELEVATOR CARS SHALL PROVIDE SPACE FOR WHEELCHAIR USERS TO ENTER THE CAR, MANEUVER WITHIN REACH OF CONTROLS, AND EXIT FROM THE CAR. ACCESSIBLE DOOR OPENING AND INSIDE DIMENSIONS SHALL BE AS SHOWN IN FIG. 22. THE CLEARANCE BETWEEN THE CAR PLATFORM SILL AND THE EDGE OF ANY HOSTWAY LANDING SHALL BE NO GREATER THAN 1-1/4" (31.8mm).

4.10.10 ILLUMINATION LEVELS. THE LEVEL OF ILLUMINATION AT THE CAR CONTROLS, PLATFORM, AND CAR THROUGHOUT AND LANDING SHALL BE AT LEAST 5 FOOT-CANDELES (53 LUM).

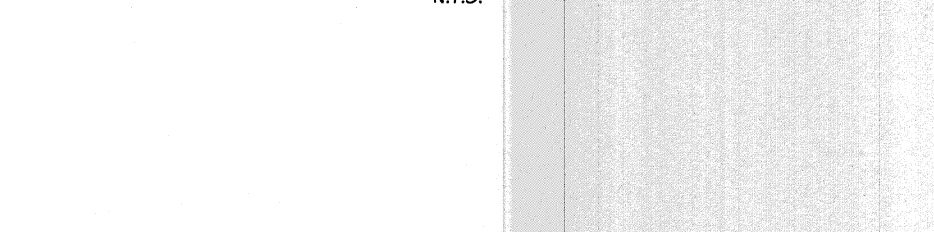
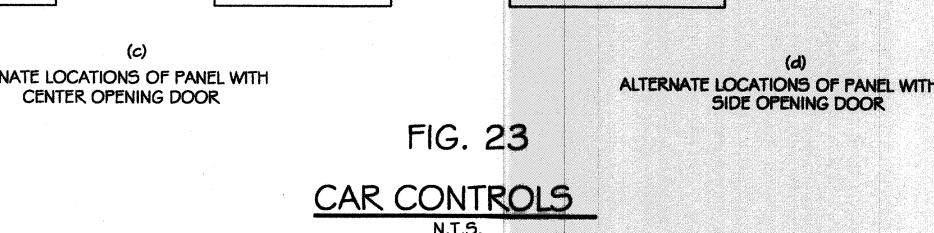
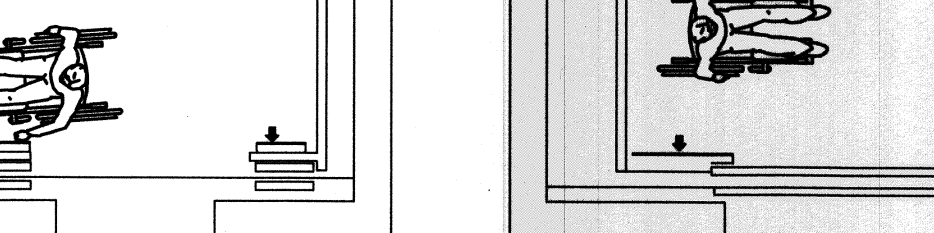
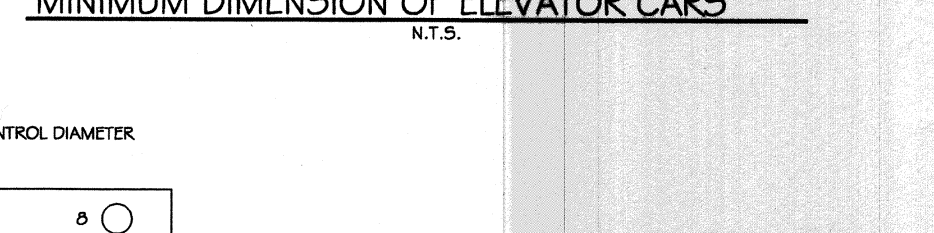
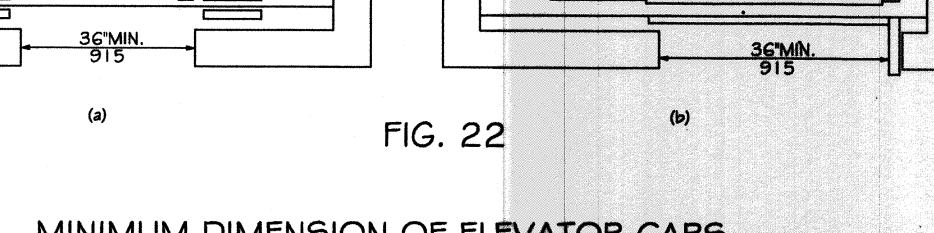
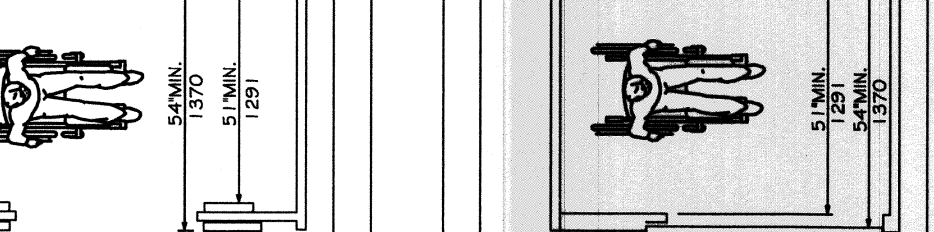
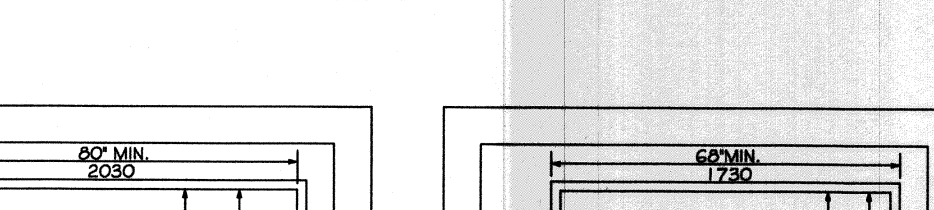
4.10.11 CAR CONTROLS. ELEVATOR CONTROL PANELS SHALL HAVE THE FOLLOWING FEATURES:

- (1) BUTTONS. ALL CONTROL BUTTONS SHALL BE AT LEAST 3/4" (19mm) IN THEIR SMALLEST DIMENSION. THEY SHALL BE RAISED OR FLUSH.
- (2) TACTILE, BRaille, AND VISUAL CONTROL INDICATORS. ALL CONTROL BUTTONS SHALL BE DESIGNATED BY BRaille AND BY RAISED STAMPED OR LETTERED CHARACTERS FOR LETTERS, ARABIC CHARACTERS FOR NUMERALS, OR STAMPED SYMBOLS AS SHOWN IN FIG. 23a AND AS SHOWN IN FIG. 23b. THE CALL BUTTON FOR THE MAIN ENTRY FLOOR SHALL BE IDENTIFIED BY A RAISED SYMBOL AND LETTERING COMPLYING WITH 4.30 AND LOCATED ADJACENT TO THE LEFT OF THE BUTTON TO WHICH IT APPLIES. APPLIED LETTERS, PERMANENTLY ATTACHED, ARE AN ACCEPTABLE MEANS TO PROVIDE RAISED CONTROL DESIGNATIONS. FLOOR BUTTONS SHALL BE PROVIDED WITH VISUAL INDICATORS TO SHOW WHEN EACH CALL IS REGISTERED. THE VISUAL INDICATORS SHALL BE EXTINGUISHED WHEN EACH CALL IS ANSWERED.
- (3) HEIGHT. ALL FLOOR BUTTONS SHALL BE NO HIGHER THAN 54" (1370mm) ABOVE THE FINISH FLOOR FOR SIDE APPROACH AND 40" (1020mm) FOR FRONT APPROACH. EMERGENCY CONTROLS, INCLUDING THE EMERGENCY ALARM AND EMERGENCY STOP, SHALL BE GROUPED AT THE BOTTOM OF THE PANEL AND SHALL HAVE THEIR CENTERLINES NO LESS THAN 35" (890mm) ABOVE THE FINISH FLOOR (SEE FIG. 23aa & b).

4.10.12 CAR POSITION INDICATORS. IN ELEVATOR CARS, A VISUAL CAR POSITION INDICATOR SHALL BE PROVIDED ABOVE THE CAR CONTROL PANEL OR OVER THE DOOR TO SHOW THE DISTANCE BETWEEN THE ELEVATOR AND A POINT OUTSIDE THE HOSTWAY SHALL COMPLY WITH ASME A17.1-1990. THE HIGHEST OPERABLE PART OF A TWO-WAY COMMUNICATION SYSTEM SHALL BE A MINIMUM OF 11" (280mm) FROM THE FLOOR OF THE CAR. IT SHALL BE IDENTIFIED BY A RAISED SYMBOL AND LETTERING COMPLYING WITH 4.30 AND LOCATED ADJACENT TO THE LEFT OF THE BUTTON TO WHICH IT APPLIES. APPLIED LETTERS, PERMANENTLY ATTACHED, ARE AN ACCEPTABLE MEANS TO PROVIDE RAISED CONTROL DESIGNATIONS. FLOOR BUTTONS SHALL BE PROVIDED WITH VISUAL INDICATORS TO SHOW WHEN EACH CALL IS REGISTERED. THE VISUAL INDICATORS SHALL BE EXTINGUISHED WHEN EACH CALL IS ANSWERED.

4.10.13 EMERGENCY COMMUNICATIONS. IF PROVIDED, EMERGENCY TWO-WAY COMMUNICATION SYSTEMS BETWEEN THE ELEVATOR AND A POINT OUTSIDE THE HOSTWAY SHALL COMPLY WITH ASME A17.1-1990. THE HIGHEST OPERABLE PART OF A TWO-WAY COMMUNICATION SYSTEM SHALL BE A MINIMUM OF 11" (280mm) FROM THE FLOOR OF THE CAR. IT SHALL BE IDENTIFIED BY A RAISED SYMBOL AND LETTERING COMPLYING WITH 4.30 AND LOCATED ADJACENT TO THE LEFT OF THE BUTTON TO WHICH IT APPLIES. APPLIED LETTERS, PERMANENTLY ATTACHED, ARE AN ACCEPTABLE MEANS TO PROVIDE RAISED CONTROL DESIGNATIONS. FLOOR BUTTONS SHALL BE PROVIDED WITH VISUAL INDICATORS TO SHOW WHEN EACH CALL IS REGISTERED. THE VISUAL INDICATORS SHALL BE EXTINGUISHED WHEN EACH CALL IS ANSWERED.

4.10.14 EMERGENCY COMMUNICATIONS. IF PROVIDED, EMERGENCY TWO-WAY COMMUNICATION SYSTEMS BETWEEN THE ELEVATOR AND A POINT OUTSIDE THE HOSTWAY SHALL COMPLY WITH ASME A17.1-1990. THE HIGHEST OPERABLE PART OF A TWO-WAY COMMUNICATION SYSTEM SHALL BE A MINIMUM OF 11" (280mm) FROM THE FLOOR OF THE CAR. IT SHALL BE IDENTIFIED BY A RAISED SYMBOL AND LETTERING COMPLYING WITH 4.30 AND LOCATED ADJACENT TO THE LEFT OF THE BUTTON TO WHICH IT APPLIES. APPLIED LETTERS, PERMANENTLY ATTACHED, ARE AN ACCEPTABLE MEANS TO PROVIDE RAISED CONTROL DESIGNATIONS. FLOOR BUTTONS SHALL BE PROVIDED WITH VISUAL INDICATORS TO SHOW WHEN EACH CALL IS REGISTERED. THE VISUAL INDICATORS SHALL BE EXTINGUISHED WHEN EACH CALL IS ANSWERED.



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, 4 ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS, SECTION XV, 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 4.13.5.4.1.3.6. THAT LEAF SHALL BE AN ACTIVE LEAF.

4.13.5 CLEAR WIDTH. DOORWAYS SHALL HAVE A MINIMUM CLEAR OPENING OF 32" (813mm) WITH THE DOOR OPEN 90 DEGREES, MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP. OPENINGS MORE THAN 24" (610mm) IN DEPTH SHALL COMPLY WITH 4.13.5.4.1.3.3.

DEFLECTION: DOORS NOT REQUIRING FULL USER PASSAGE, SUCH AS SHALLOW CLOSETS, MAY HAVE THE CLEAR OPENING REDUCED TO 20" (508mm) MINIMUM.

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

DEFLECTION: ENTRY DOORS TO ACUTE CARE HOSPITAL BEDROOMS FOR IN-PATIENTS SHALL BE DEFLECTED FROM THE REQUIREMENT FOR SPACE AT THE LATCH SIDE OF THE DOOR IF THE DOOR IS AT LEAST 44" (1118mm) WIDE.

4.13.7 TWO DOORS IN SERIES. THE MINIMUM SPACE BETWEEN TWO HINGED OR PIVOTED DOORS IN SERIES SHALL BE 40" (1020mm) 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" (12.7mm) FOR OTHER TYPES OF DOORS. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE DEVELOPED WITH A SLOPE NO GREATER THAN 1:2 (SEE 4.1.6.2).

4.13.9 DOOR HANDLES. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT FINGERING, OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. 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 40" (1020mm) ABOVE FINISH 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 70 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 PANEL.

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 OPERATING 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 DISengage 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 A156.10-1995. SLOWLY OPENING, LOW-POWERED, AUTOMATIC DOORS SHALL COMPLY WITH ANSI A156.10-1995. SLIDING DOORS SHALL NOT OPEN TO BACK CHECK FASTER THAN 3 SECONDS AND SHALL REQUIRE NO MORE THAN 15 LBF (66.8N) TO STOP DOOR MOVEMENT. IF A POWER-ASSISTED DOOR IS USED, ITS DESIGN SHALL COMPLY WITH 4.13.11 AND ITS CLOSING SHALL CONFORM TO THE REQUIREMENTS IN ANSI A156.10-1995.

4.14 ENTRANCES.

4.14.1 MINIMUM NUMBER. ENTRANCES REQUIRED TO BE ACCESSIBLE BY 4.1 SHALL BE PART OF AN ACCESSIBLE ROUTE COMPLYING WITH 4.3. SUCH ENTRANCES SHALL BE CONNECTED BY AN ACCESSIBLE ROUTE TO PUBLIC TRANSPORTATION STOPS, TO ACCESSIBLE PARKING AND PASSENGER LOADING ZONES, AND TO PUBLIC STREETS OR DRIVEWAYS IF AVAILABLE (SEE 4.3.3). THEY SHALL ALSO BE CONNECTED BY AN ACCESSIBLE ROUTE TO ALL ACCESSIBLE SPACES OR ELEMENTS WITHIN THE BUILDING OR FACILITY.

4.14.2 SERVICE ENTRANCES