A Summary of THE ADA ACCESSIBILITY GUIDELINES

Introduction

Prior to the enactment of the Americans with Disabilities Act, accessible design had been an issue that few design professionals and enforcement officials took very seriously. Accessibility Standards such as ANSI A117.1 and the Uniform Federal Accessibility Standards had been available for many years, but depending upon funding, the developer of the project, and in what municipality the project was developed, the legal mandate for providing accessible facilities may or may not have been met. Obstacles such as ignorance of the law and poor enforcement of state and local regulations resulted in many new and renovated projects constructed in the building boom of the '80's to be inaccessible to persons with disabilities and in violation of State of Maine law. Even today, most Maine municipalities do not have ordinances requiring facilities to be built in an accessible manner.

With the passage of the Americans with Disabilities Act, the issue of states and/or local municipalities being required to adopt regulations mandating accessibility is of little consequence. The federal government now mandates that nearly all new and existing public and private facilities serving the general public be accessible to and usable by persons with disabilities. In order to realize the ADA federal mandate, the Architectural and Transportation Barriers Compliance Board [Access Board] has provided guidelines [ADA Accessibility Guidelines or ADAAG] by which the design of facilities covered by this law is to be judged. What follows is a summarized review of the ADA Title II and Title III requirements that mandate compliance with the ADAAG and an overview of ADAAG technical requirements. For more detailed and comprehensive information on all of the points and elements covered by this document, the reader is encouraged to refer to the ADA Accessibility Guidelines and the Technical Assistance Manuals available on the Dept. of Justice’s website [www.ada.gov].

ADAAG Development

The original ADA Accessibility Guidelines, initially consisting of nine sections were adopted by the DOJ in July of 1991 and published in the Federal Register July 26, 1991 with the final rule for Title III Public Accommodations and Commercial Facilities. Sections 1 thru 4 of the guidelines contain general sections, scoping provisions, and technical specifications applicable to all types of buildings and facilities. Sections 5 thru 9 contain additional scoping provisions and technical specifications for restaurants and cafeterias (section 5); medical care facilities (section 6); mercantile establishments (section 7); libraries (section 8); and hotels, motels, and transient lodging (section 9).
In 1994, Section 10 for Transportation Facilities was adopted by DOJ and added to the ADAAG. A new revised ADAAG document was reprinted in July, 1994 and includes section 10 and other minor language revisions as well as revisions to ATM guidelines adopted in January, 1994. The smaller reprint of the regulations and guidelines is the official document still in use today. Although numerous proposed and final rules have been released by the Access Board, these have not been adopted by the DOJ and are therefore not enforceable. They are considered the most current information and guidance on compliance assistance, however, and are being widely used by design professionals.

**Regulatory Requirements for New Construction**

- All newly constructed places of accommodation and commercial facilities must be accessible to individuals with disabilities to the extent that it is not structurally impracticable. Public entities must ensure that newly constructed buildings and facilities are free of architectural and communication barriers that restrict access or use by individuals with disabilities.

- The new construction requirements apply to any facility occupied after January 26, 1993, for which the last application for a building permit or permit extension is certified as complete after January 26, 1992.

- Full compliance will be considered "structurally impracticable" only in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features (e.g., marshland that requires construction on stilts).

- The architectural standards for accessibility in new construction are contained in the ADA Accessibility Guidelines issued by the Architectural and Transportation Barriers Compliance Board, an independent Federal agency. These standards are incorporated in the final Department of Justice Title III regulation. Public entities may choose between two technical standards for accessible design: The UFAS established under the ABA, or the ADAAG adopted by the DOJ for Title III facilities.

- Elevators are not required in facilities under three stories or with fewer than 3,000 square feet per floor, unless the building is a shopping center, shopping mall, professional office of a health care provider, or station used for public transportation. The elevator exemption for small buildings does not apply to public entities covered by Title II of the ADA.
Regulatory Requirements for Alterations

- Alterations after January 26, 1992, to existing places of public accommodation and commercial facilities must be accessible to the maximum extent feasible. When a public entity undertakes alterations to an existing building, it must ensure that the altered portions are accessible.

- The architectural standards for accessibility in alterations are contained in the ADA Accessibility Guidelines issued by the Architectural and Transportation Barriers Compliance Board. These standards are incorporated in the final Department of Justice Title III regulation.

- An alteration is a change that affects usability of a facility. For example, if during remodeling, renovation, or restoration, a doorway is being relocated, the new doorway must be wide enough to meet the requirements of the ADA Accessibility Guidelines.

- When alterations are made to a "primary function area," such as the lobby or work areas of a bank, an accessible path of travel to the altered area, and the bathrooms, telephones, and drinking fountains serving that area, must be made accessible to the extent that the added accessibility costs are not disproportionate (20% or more) to the overall cost of the original alteration.

  - Alterations to windows, hardware, controls, electrical outlets, and signage in primary function areas do not trigger the path of travel requirement.

  - The added accessibility costs are disproportionate if they exceed 20 percent of the original alteration.

  - Elevators are not required in Title III facilities under three stories or with fewer than 3,000 square feet per floor, unless the building is a shopping center, shopping mall, professional office of a health care provider, or station used for public transportation. The elevator exemption does not apply to Title II facilities.
General ADAAG Requirements for New Construction and Alterations

- New construction and alterations must be accessible and in compliance with the ADA Accessibility Guidelines.

- **Equivalent Facilitation**: Departures from particular requirements are permitted where alternative designs and technologies will provide substantially equivalent or greater access to a facility. Examples:
  - smaller elevator cab size in alterations
  - a folding shelf in lieu of reconstructing a ticketing counter

- Access to work areas, but not individual work stations, is required.
  - design so as to be able to approach, enter, and exit areas
  - provide 5% or at least one accessible work station in multiple station areas; no requirements for placement of fixtures and equipment

- Temporary buildings extensively used by the public are covered by the regulations
  - construction related structures, sites, equipment not covered

- Accessibility **not required** to:
  - security related observation galleries
  - non-occupiable limited access mechanical/electrical spaces
  - mechanical rooms / closets covered but exempt from elevator requirement

- The Guidelines contain "technical" design standards (or specifications) for building and site elements, such as parking, accessible routes, ramps, stairs, elevators, doors, entrances, drinking fountains, bathrooms, controls and operating mechanisms, storage areas, alarms, signage, telephones, fixed seating and tables, assembly areas, automated teller machines, and dressing rooms. They also have specific technical standards for restaurants, medical care facilities, mercantile facilities, libraries, transient lodging (such as hotels and shelters), and transportation facilities.

- The Guidelines also contain "scoping" requirements for various elements (i.e., how many, and under what circumstances, accessibility features must be incorporated).

- Technical and scoping requirements for alterations are sometimes less stringent than those for new construction. For example, when compliance with the new construction requirements would be technically infeasible, one accessible unisex bathroom per floor is acceptable.
• Following are some examples of scoping requirements in new construction:

  • **Sites:**
   
   • An accessible route must connect accessible public transportation stops, parking spaces, passenger loading zones, and public streets or sidewalks to all accessible features and spaces within a building.
   
   • Parking requirements generally mandate one out of every 25 parking spaces to be accessible; percent lower for larger parking lots [see chart on p. 6 of ADAAG]
     • medical care & services related to disabled require higher percentage
     • one of every eight accessible spaces needs to be van accessible
   
   • Exterior signs must incorporate the international symbol of accessibility and used to identify accessible parking, passenger loading zones, entrances, and toilet facilities if all are not accessible.

  • **Buildings; new construction:**
   
   • An accessible route must connect all accessible elements within a building
   
   • Stairs must be accessible if levels are not connected by an elevator, ramp, or lift; means of egress stairs must meet life safety requirements which are similar to access requirements
   
   • Elevators required to serve each level of a new building except:
     • if building is exempted because of size [3000 sq. ft. / flr]
     • at limited access mechanical spaces covered by exceptions
     • if ramps used instead
     • if lifts used instead
   
   • The following doors must be accessible:
     • at least one accessible door at each accessible entrance
     • each door part of an accessible route
     • each exit door required for egress
   
   • At least 50 percent of all public entrances must be accessible. In addition, there must be accessible entrances to enclosed parking, pedestrian tunnels, and elevated walkways.
   
   • Every public and common use restroom must be accessible. Only one stall must be accessible, unless there are six or more stalls, in which case two stalls must be accessible (one of which must be of an alternative, narrow-style design).
• Each floor in a building without a supervised sprinkler system must contain an "area of rescue assistance" (i.e., an area with direct access to an exit stairway where people unable to use stairs may await assistance during an emergency evacuation).

• One TTY must be provided inside any building that has four or more public pay telephones, counting both interior and exterior phones. In addition, one TDD must be provided whenever there is an interior public pay phone in a stadium or arena; convention center, hotel with a convention center, covered shopping mall; or hospital emergency, recovery, or waiting room.

• One accessible public phone must be provided for each floor, unless the floor has two or more banks of phones, in which case there must be one accessible phone for each bank.

• Fixed seating assembly areas that accommodate 50 or more people or have audio-amplification systems must have a permanently installed assistive listening system.

• Dispersal of wheelchair seating in theaters is required where there are more than 300 seats. In addition, at least one percent of all fixed seats must be aisle seats without armrests (or with moveable armrests). Fixed seating for companions must be located adjacent to each wheelchair location.

• Where automated teller machines are provided, at least one must be accessible.

• Five percent of fitting and dressing rooms (but never less than one) must be accessible.
Specific Scoping Requirements for Various Building Types

The following are examples of specific scoping requirements for special types of facilities, such as historic buildings, restaurants, medical care facilities, mercantile establishments, libraries, hotels, and transportation facilities such as bus stops, terminals, stations, and airports:

- Historic buildings are not required to strictly follow the technical design requirements of ADAAG if, by doing so would threaten or destroy the historic fabric of the facility. Alternative standards to the ADAAG are allowed under these circumstances.

- In restaurants, generally all dining areas and 5% of fixed tables (but not less than one) must be accessible.

- In medical care facilities, all public and common use areas must be accessible. In general purpose hospitals and in psychiatric and detoxification facilities, ten percent of patient bedrooms and toilets must be accessible. The required percentage is 100% for special facilities treating conditions that affect mobility, and 50% for long-term care facilities and nursing homes.

- In mercantile establishments, at least one of each type of counter containing a cash register and at least one of each design of check-out aisle must be accessible. In some cases, additional check-out aisles are required to be accessible (i.e., from 20 to 40 percent depending on the number of check-out aisles and the size of the facility.

- In libraries, all public areas must be accessible. In addition, five percent of fixed tables or study carrels (or at least one) must be accessible. At least one lane at the check-out aisles between card catalogs, magazine displays, and stacks must be accessible.

- In hotels, 4% of the first 100 rooms and approximately two percent of rooms in excess of 100 must be accessible to persons with hearing impairments (i.e., contain visual alarms, visual notification devices, volume control telephones, and an accessible electrical outlet for a TTY) and to persons with mobility impairments. Moreover, an identical percentage of additional rooms must be accessible to persons with hearing impairments.

- Every station, bus stop, bus stop pad, shelters, terminal, building or other transportation facility is required to comply with ADAAG provisions and with additional provisions contained in section 10 Transportation Facilities. See Section 10 of the ADAAG for specific and extensive design requirements for transportation facilities including rail stations and airports.
Overview of ADAAG Technical Requirements for Specific Elements

The following are summarized technical specifications taken from the Americans with Disabilities Act Accessibility Guidelines. They are very similar to the ANSI and UFAS standards but do not represent a complete review of all elements included in the ADAAG document. The following elements were selected because they address questions and issues of concern from constituents using the regulations in the last eight years. The information contained in this section of this manual should not be substituted for the ADAAG but should be viewed as a tool for greater understanding of some of the elements in the Guidelines.

Parking Spaces [ADAAG 4.1.2 and 4.6]

- check local zoning ordinance for stricter requirements
- locate accessible parking close to accessible entrance [200’ max preferred]
- avoid having to cross lanes of traffic or behind parked cars when possible
- standard stall: 8’ wide w/ 5’ access aisle; van accessible stall has 8’ access aisle
- maximum allowed slope and cross slope is 1:50 or 2%
- two spaces can use the same access aisle
- backing into a space to access the aisle is allowed

Ramps [ADAAG 4.1.3,5,6, & 7 and 4.8]

- requirements the same for interior or exterior ramps
- any change in elevation more than 1/2" requires a ramp
- 1:12 slope is a maximum allowed; least possible slope required
- landings required at every 30" of rise or 30' of length; Alpha One recommends 20'
- 36" minimum clearance width is between handrails; two way traffic on ramp would require consideration for wider installation
- minimum length of landing in a ramp is 5’; at change of direction: 5’ x 5’; landings at entrances should be 5’ x 5’ also
- ramps less than 6’ long or with a rise less than 6” do not need handrails
- handrails should be continuous on the inside edge; outside rails extend 1’ beyond the sloped surface, top & bottom
- provide 1 1/2" clearance between the wall and wall-mounted handrail
- mount handrail between 34 & 38”; life safety code same
- ends of handrails should be rounded or return to the wall
- use curbs [wheel stops] or guardrails to prevent over-travel under the rails
- maximum allowed slope and cross slope is 1:50 or 2%
- ramps in existing buildings:
  - slope of 1:8 is allowed for rise of 3"
  - slope of 1:10 is allowed for rise of 6"
  - no slope greater than 1:8 is allowed
Curb Ramps [ADAAG 4.7]

- three designs: flared sides, returned curb, built-up curb [see fig. 12 & 13 on p. 27]; returned curb preferred
- slope of main portion of curb ramp: 1:12 max; flared sides: 1:10
- detectable warnings requirement suspended; still recommended [see ANSI standard]

Walks [ADAAG 4.1.2, 4.3 and 4.5]

- 36" min. width required; 48" to 60" preferred at two way traffic
- surface should be smooth and hard but slip resistant
- slope cannot exceed 1:20; steeper walks are actually ramps

Gratings [ADAAG 4.5]

- run slotted gratings or mats perpendicular to path of travel
- slots cannot be wider than 1/2"

Changes in Level [ADAAG 4.5]

- 1/4" rise does not need beveled edge; 1/2" rise does
- rise greater than 1/2" requires ramp, curb ramp, or other vertical mechanical equipment

Doormats [ADAAG 4.5]

- make sure that the doormat is firmly attached to the floor
- must be slip resistant
- must have a pile thickness of no more than 1/2"

Protruding Objects [ADAAG 4.1.2, 3, and 4.4]

- objects protruding from the wall cannot be higher than 27" above the floor unless they protrude no more than 4"
- headroom along an accessible route is required to be 80" or 6'-8"; if less, provide barriers to warn the blind or visually impaired

Corridor Widths [ADAAG 4.3]

- 36" minimum is required; 32" width allowed for 24" only
- 48" width allows for passing of a wheelchair and ambulatory person
- 60" width allows for passing of two wheelchairs
Doors [ADAAG 4.1.3, 6, and 4.13]

- 32” minimum clear passage width required; with door open in 90 degree position
- maneuvering clearances vary at doors with closers and/or latches [See fig. 25]
- clearances not applicable to doors w/ power openers; door openers are not required

Vestibules [ADAAG 4.13]

- 48” clear depth is required with no obstructions; see fig. 26, p. 39
- if clearances cannot be met in existing building vestibules, door openers that open both exterior & interior doors is a reasonable barrier removal solution

Thresholds [ADAAG 4.1.6 and 4.13]

- low profile [1/2” or less] thresholds required; must have beveled edges
- 3/4” high thresholds are allowed at sliding doors; provide beveled transitions at each side of the door

Door Hardware [ADAAG 4.13]

- cannot require tight grasping, pinching, or twisting to operate
- lever-operated, push-type, and u-shaped hardware are acceptable ADAAG designs
- exposed hardware is required at sliding doors in the fully-open position
- although not addressed in ADAAG, 8.5 lbf door opening force at exterior doors with closers is recommended; see ANSI A117.1 Code for specifications; coordinate with life safety code fire door requirements
- 5 lbf is required at interior doors
- kick plates are recommended at doors on the push side of the door; 8” to 16” high

Stairs / Steps [ADAAG 4.1.3, 6, and 4.9]

- requirements similar to life safety code
- stair riser and tread widths must be uniform; 11” minimum tread depth required
- must have a curved nosing; radius of not more than 1/2” diameter
- provide sloped riser or sloped nosing not less than 60 degrees; 1 1/2” max. extens.
- exterior stairs must drain off water
- inside handrails must be continuous; outside handrails must project 12” at top and 1 tread + 12” at bottom
- handrails must be continuous & not interrupted by newel posts or other obstructions
- a clear space of 1 1/2” must be provided between the rail and the wall
- handrail mounting heights must be between 34” and 38”
- handrail ends must be rounded or returned to the wall
- handrails cannot be loose or rotate within their fittings
Railings [NFPA 101, Chapter 5]

- life safety code requires guardrails at platform heights greater than 30"; maximum 4" space allowed between balusters; 42" height requirement typical
- handrail would be mounted to the inside face of guardrail

Controls & Operating Mechanisms [ADAAG 4.2 and 4.27]

- provide clear floor space for either a front or parallel approach [see fig. 4, p. 17]
- front approach requires a 48" maximum mounting height; parallel approach requires a 54" maximum mounting height; lower height can accommodate more people
- wall outlets and telephone or computer jacks cannot be mounted less than 15" above finish floor

Elevators [ADAAG 4.1.3, 6 and 4.10]

- required in all facilities except those with less than three stories or those that have exceptionally small floor plan(s) [less than 3000 sq. ft.]
- must be located on an accessible route
- must include an auto leveling device that brings the elevator within 1/2" of the floor
- cab controls must be accessible; 48" max except 54" when a side approach is possible
- location of other elevator elements such as floor identification plaques, hall lantern signals, elevator call buttons, and door protective/re-opening devices are all defined in fig. 20, p. 33.
- minimum dimensions for elevator cars is designated in fig. 22, p. 34; 51" x 80" for a center accessed cab and 51" x 68" for a cab accessed to one side of the car. Smaller car size is allowed [under equivalent facilitation] in existing facilities that would require extensive demolition
- must have an audible / visual signal at each level accessed

Flooring [ADAAG 4.3]

- surface must be stable and regular [firm and smooth]
- must be slip resistant
- maximum carpet height allowed is 1/2"; install with no or very firm pad, direct glue
Toilet Rooms [ADAAG 4.1.2, 3, 6, 7 and 4.22]

- all public & common [employee] use toilets must have at least one standard HC stall
- in toilets with more than six stalls, one alternate 3' wide stall is also required
- unisex restrooms are allowed in altered existing facilities
- always check local ordinances for minimum requirements [number of stalls or fixtures] before eliminating fixtures to make access modifications
- the standard stall configuration is mandatory in new construction; an alternate stall may be used in alterations if space is not available or a unisex restroom cannot be provided
- grab bars are very important to persons with disabilities for balance & fall prevention
- the MHRA requires side approach configuration, i.e. 60” of clearance at the toilet fixture for all toilet rooms
- only private toilet rooms used by certain employees are exempt; must be "adaptable"
- door cannot swing into fixture approaches; into turning radius is o.k.

Urinals [ADAAG 4.18 and 4.22]

- if urinals are provided, one must be accessible
- must have an elongated bowl mounted no higher than 17”
- provide 30” wide approach with a minimum depth of 48”

Lavatories and Mirrors [ADAAG 4.19 and 4.22]

- lavatory rim or counter height must be no higher than 34”
- knee clearance at the front apron must be 29” minimum
- provide a clear floor space or approach at least 30” wide and 48” deep
- insulate hot water pipes and drain pipes
- faucet controls must be lever type, push-type or electronically controlled w/ a ten second delay
- bottom of mirror [glass surface] mounted at 40”; 74” min to top of mirror; full-length mirrors provide access to all users including children
- if tilted mirrors are used, they must stay in the tilted position

Toilet Room Accessories [ADAAG 4.22]

- toilet paper dispenser should be mounted no lower than 19” and non more than 36” from the rear wall
- other dispensers and accessories should be mounted within the front and side approach reach ranges of 48” to 54”; 48” preferred
Alarms [ADAAG 4.1.3 and 4.28]

• visual alarms are required when fire alarms must be installed
• alarms are required in restrooms, meeting rooms, conference rooms, and other general or common usage areas such as hallways and lobbies; classrooms are considered meeting rooms and must have visual alarm signals
• audible signals cannot exceed 120 decibels; visual signal flash rate shall be between 1 Hz with a maximum of 3 Hz

Public Telephones [ADAAG 4.1.3 and 4.31]

• if public telephones are provided, at least one per floor is required to be accessible
• if more than one bank of phones [2 or more] are provided, one per bank must be accessible:
  • clear floor space [30" x 48"]
  • 29" min. cord length
  • adjustable volume control on 25% or one other phone not covered
  • provide books within reach of wheelchair users
  • push button controls; within 48" to 54" reach ranges
  • TTY's are required in locations offering 4 or more phones; not all TDD users can comfortably access a lowered accessible phone
  • in locations offering 4 or more phones, at least one public telephone shall meet forward reach requirements [48" mounting height]

Work Surfaces [ADAAG 4.32]

• accessible mounting height ranges from 28" to 34" with 27" min knee clearance
• knee space must be at least 30" wide and 19" deep
• check chart on page A15 [Table A-1] for heights recommended for various tasks

Interior Finishes [Recommendations]

• use darker, higher contrast baseboards along corridors for visually impaired
• avoid dynamic and contrasting geometric patterns on the walls
• bare fluorescent bulbs sometimes trigger epileptic seizures
Signage [ADAAG 4.1.2, 4.1.3, and 4.31]

- entrances, restrooms, bathing facilities, and parking must be identified with the international symbol of accessibility
- text telephones, assistive listening systems, and volume control telephones must be identified with respective international symbols of access for each of the devices
- signs which designate permanent rooms or spaces must be accessible [tactile & Braille lettering, character proportion & height, sign finish and contrast, and mounting location; not required for temporary information like a person's name]
- exits are considered permanent rooms or spaces and must have accessible signage
- directional and informational signs are not required to have tactile and Braille lettering but must meet other sign requirements
- temporary signs are not required to comply with ADAAG requirements
- overhead signs must meet minimum headroom clearance, character proportion & height, and sign finish & contrast requirements

Water Fountains [ADAAG 4.1.3 and 4.15]

- requirements mandate wheelchair accessibility and also for those individuals who have difficulty in bending or stooping; this translates to a "hi-lo" type of fountain
- where more than one fountain or water cooler is provided on a floor, 50% must be wheelchair accessible [see 4.15 & fig. 27, pp. 40 & 41]
- spouts must be no higher than 36"
- locate the spout within 3" of the front edge of the fountain
- allow for appropriate approach and maneuvering clearances [see fig. 27, p. 41]