

Using The ADA and ABA Standards Series: Chapter 7: Communication Features

1

1

Presenters U.S. Access Board



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2

2

AccessibilityOnline Webinar Series

Using the ADA and ABA Standards Series: Chapter 7: Communication Elements and Features

August 6, 2020

1

Agenda

Communication Elements & Features:

- Fire Alarm Systems
- Signs
- Telephones
- Detectable Warnings
- Assistive Listening Systems
- ATMs & Fare Machines
- Two-Way Communication Systems

3

3

Fire Alarm Systems

Scoping: 215

Technical Requirements: 702

4

4

Where Required (215.1)

New construction:

“Where fire alarm systems provide audible alarm coverage, alarms shall comply with 215.”

Existing Facilities:

“EXCEPTION: In existing facilities, visible alarms shall not be required except where an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed.”

5

Where are compliant alarms required?

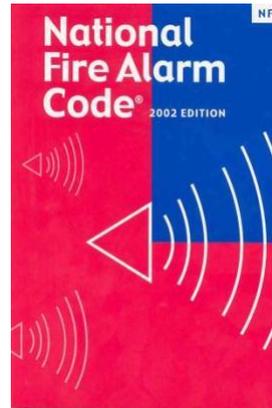
- In public use and common areas. (215.2)
- In employee work areas with audible coverage, wiring must be designed to allow later integration of visible alarms. (215.3)
- In transient lodging guest rooms with communication features . (215.4)
- If provided in residential dwelling units with communication features, fire alarms must comply. (215.5)
- Existing facilities not required to have visible alarms unless alarm system is replaced or upgraded, or if a new alarm system is installed. (215.2)

6

6

Fire Alarm Systems

- **NFPA 72 National Fire Alarm Code (1999 or 2002) – referenced standard**
- **National Fire Protection Association (www.nfpa.org)**
- **2010 Standards - sound level of 110 dB max.**
- **Exception for systems in medical care facilities – accordance with industry practice**



7

7

What does NFPA 72 cover?

- Flash rate and pulse duration
- Location – wall and ceiling
- Minimum intensity
- Larger coverage through fewer appliances
- Many spaces can be covered (other than corridors) by one appliance
- Synchronization of multiple appliances

8

8

Fire Alarms (702)



Audible and Visual Combination Appliance

“Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (1999 or 2002 edition)”

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Fire Alarms (702)



Audible Horn Speaker



Visible Alarm Appliance

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Fire Alarm Pulls 205 & 309



- Operable with one hand
- Not require tight grasping, pinching, or twisting of the wrist
- Maximum force required of 5 pounds to activate

11

11

Signs

Scoping: 216

Technical Requirements: 703

12

12

Where does the ADA require signs?

- Means of egress (exit doors, directional signs, and areas of refuge): 216.4
- Accessible parking spaces: 216.5
- Where not all entrances are accessible: 216.6
- Where not all elevators are accessible: 216.7
- Where not all toilet rooms or bathing rooms are accessible: 216.8
- TTYs: 216.9
- Assistive listening systems in assembly areas: 216.10
- Accessible check-out aisles: 216.11
- Amusement rides: 216.12



Otherwise, standards apply only where signs are provided

13

13

Signs not required to comply:

- Building directories and menus
- Seat and row designations in assembly areas
- Occupant names
- Building addresses
- Company names and logos (216.1, ex. 1)
- Temporary signs, seven days or less (216.1 ex. 3)
- Signs in detention and correctional facilities not in public use areas (216.1 ex. 4)

14

14

Which signs are required to be tactile?

- Signs designating permanent rooms and spaces (216.2)
- Signs at doors at exit passageways, exit discharge, and exit stairways (216.4.1)
- For elevators:
 - Floor designations (407.2.3.1)
 - Car designations for destination-oriented elevators (407.2.3.2)
 - Car control buttons (407.4.7.1)
 - Emergency communication (407.4.9)
- At rail stations:
 - Sign at or near entrance identifying the station (810.6.1)
 - Sign on platform or boarding area identifying the station (810.6.2)

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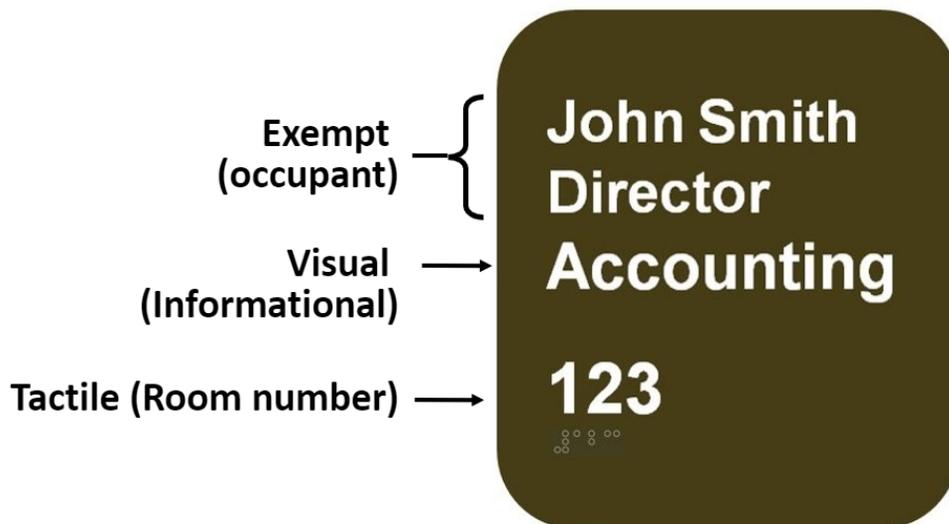
Designation of a permanent room or space

- Interior or exterior signs identifying permanent rooms or spaces
- Designations unlikely to change over time
- Room or floor numbers and letters
- Room names
- Labels for restrooms, locker rooms, cafeterias, libraries, conference rooms, break rooms, mechanical rooms, areas of refuge, etc.
- Exception: raised & braille characters not required on exterior signs not located at door to the space they serve (216.2 ex.)

16

16

Example of signage



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17

Why aren't all signs required to be tactile?

The standards limit the requirements for tactile characters to those types of signs that are usually located at a door or doorway. For people with little or no vision, doors and doorways provide a cue that helps locate signs by touch. Other types of signs, including informational and directional signs, are not as easy to locate tactilely because they are not often consistently placed in proximity to doors.

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18

Example of person using tactile sign

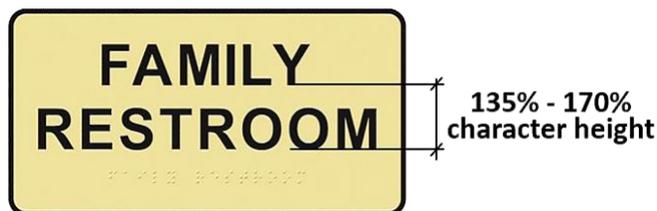


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Requirements for Tactile Signs

- raised characters (§703.2)
- grade 2 braille (§703.3)
- location at doorways (§703.4)
- visual access: finish and contrast (§703.5.1)
- pictograms (where provided) (§703.6)



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At doors, where are tactile signs to be placed?

- Between 48" and 60" above the finish floor or ground (703.4.1)
- At single doors, locate the sign alongside the door at the latch side
- At double doors with one active leaf, locate sign on the inactive leaf
- At double doors with two active leaves, locate sign to the right of the righthand door
- Where there is no wall space at the latch side of a single door or at the right side of double doors, locate sign on the nearest adjacent wall



21

21

At doors, where are tactile signs to be placed?

- Must be an 18"x18" minimum clear floor space centered on the tactile characters of the sign beyond the arc of any door swing between the closed position and the 45 degree open position
- Exception: Signs permitted on the push side of doors with closers and without hold-open devices (703.4.2)



22

22

Which signs must meet visual requirements?

- Signs designating permanent rooms and spaces (216.2) and exit doors (216.4.1) (one sign with tactile and visual characters or a sign with visual characters and a sign with tactile characters(703.1))
- Directional and informational signs
- Required signs for areas of refuge (216.4.2)
- Required signs providing direction to accessible means of egress (216.4)

23

23

Which signs must meet visual requirements? (cont.)

- Required signs at inaccessible elements giving directions to the nearest accessible element:
 - Entrances (216.6)
 - Toilet rooms and bathing rooms (216.8)
- Directional signs to public TTYs (216.9.2)
- Required signs indicating the availability of ALS (216.10)



24

24

Directional and Informational Signs

EXAMPLES:

- Signs providing direction to or information about interior spaces and facilities
- Rules of conduct
- Occupant load
- Department names
- “Authorized Personnel Only”



**Visitors must
sign in**



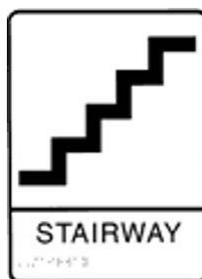
**NOTICE
EMPLOYEES
ONLY**

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Pictograms

- Only pictograms used on signs to designate a permanent room or space must comply with requirements in 703.6
- If a pictogram is informational or directional, compliance with 703.6 is not required

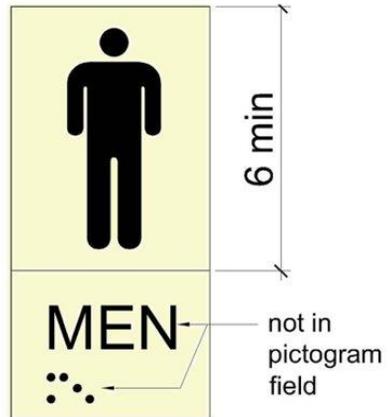


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Requirements for Pictograms (703.6)

- text descriptors (raised & braille)
- 6" min. field height
- non-glare finish
- contrast (dark-on-light or light-on-dark)
- Pictogram is not required to be raised



27

27

What pictograms does the ADA require?

- International Symbol of Accessibility (ISA) (703.7.2.1)
- International Symbol of TTY (703.7.2.2)
- International Symbol of Access for Hearing Loss (703.7.2.4)
- These pictograms are informational and do not have to comply with 703.6
- No other specific symbols are required, including symbols for labeling restrooms



28

28

Identification of Accessible Parking Spaces

- Must include ISA complying with 703.7.2.1
- Van parking spaces must include the designation “van accessible”
- Signs must be 60” minimum above the finish floor or ground surface measured to the bottom of the sign
- ISA surface decals can not substitute for signs mounted at the proper height
- ADA has no other requirements for the size, color, or wording, though other state or local codes may

29

29

Telephones

Scoping: 217

Technical requirements: 704

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30

Telephones

- Where provided, each type of public telephone must comply.

Types include:

- Coin-operated and coinless pay phones;
- Closed-circuit telephones;
- Courtesy phones, e.g., at airports or rail stations.



- A bank of phones is two or more adjacent phones.

31

31

Telephones

Wheelchair Accessible Telephones (217.2) (at least 1 per floor/level, bank, exterior site)

Table 217.2 Wheelchair Accessible Telephones

Number of Telephones Provided on a Floor, Level, or Exterior Site	Minimum Number of Required Wheelchair Accessible Telephones
1 or more single units	1 per floor, level, and exterior <i>site</i>
1 bank	1 per floor, level, and exterior <i>site</i>
2 or more banks	1 per bank

32

32

Telephones – Volume Controls

- volume controls on all public phones (217.3)
- volume control (704.3)
 - to 20 dB minimum,
 - for incremental a 12 dB minimum intermediate step
 - automatic reset



33

33

Telephones

704.2.1 Clear Floor or Ground Space

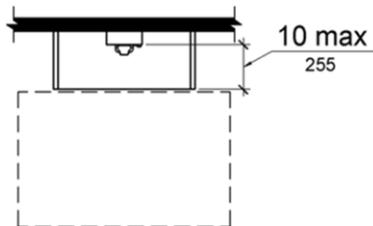


Figure 704.2.1.1
Parallel Approach to Telephone

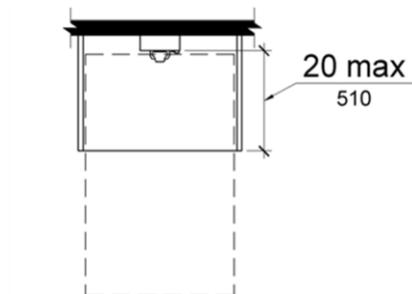
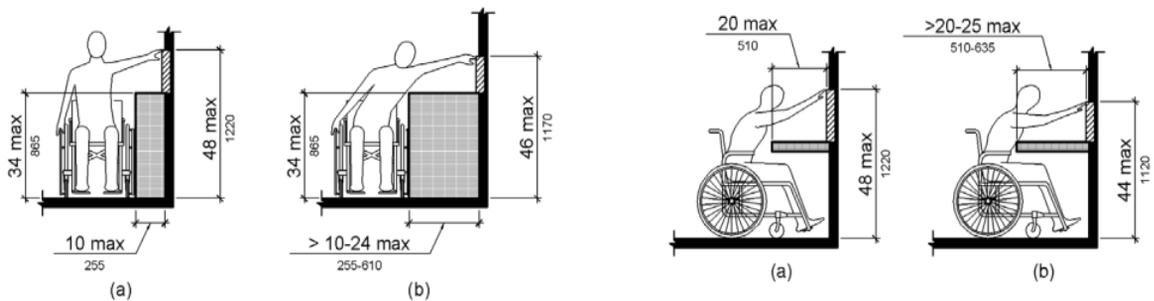


Figure 704.2.1.2
Forward Approach to Telephone

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Telephones



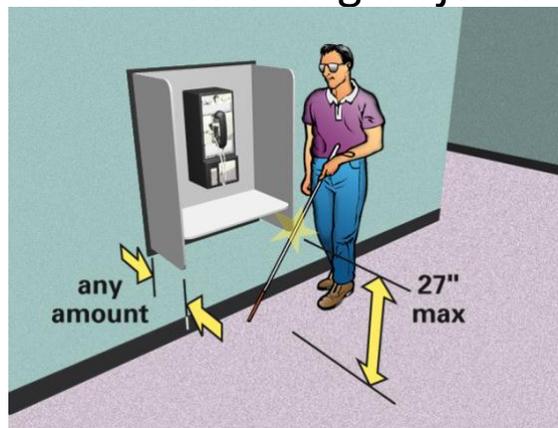
Chapter 3: Operable Parts Requirements

35

35

Telephones

307 Protruding Objects



36

36

TTYs

Scoping: 217.4, 217.5

Technical requirements: 704.4

37

37

Required Compliance

- Scoping based on public pay phones provided
- Banks (217.4.1):
 - Required for banks providing 4 or more phones
 - Exception for banks within 200 ft. of a bank with a TTY
- Floor requirements (217.4.2):
 - In public buildings, required on a floor where at least 1 phone is provided
 - In private buildings, required on a floor where at least 4 phones are provided
- Building requirements (217.4.3):
 - In public buildings, required where at least 1 phone is provided; required in a public use area if at least 1 phone is provided in a public use area
 - In private buildings, required where at least 4 phones are provided
- On exterior sites, required where 4 or more phones are provided (217.4.4)



38

38

Required Compliance (cont.)

- If at least 1 public pay phone is provided, at least 1 TTY must be provided:
 - At rest stops, emergency roadside stops, and service plazas (217.4.5)
 - In hospital emergency rooms, recovery rooms, or waiting rooms (217.4.6)
 - In a secured area in a detention or correctional facility used only by detainees and security personnel (217.4.8)
- Additional requirements for transportation facilities (217.4.7)

39

39

TTY Technical Requirements

- Permanently affixed within, or adjacent to, the phone enclosure (704.4)
- Where an acoustic coupler is used, telephone cord shall be long enough to allow connection of the TTY and the telephone receiver (704.4)
- When in use, touch surface of the TTY keypad 34" minimum above the finish floor unless a seat is provided (704.4.1)
- Required keyboard height prevents phone with TTY from being a wheelchair-accessible phone because other operable parts will be out of reach range

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Detectable Warnings

Scoping: 406.8, 810.5.2

Technical requirements: 705

41

41

What is the purpose of required detectable warnings?

- To indicate the boundary between pedestrian and vehicular routes where there is a flush rather than a curbed connection
- To indicate a drop off at boarding platforms
- Detectable warning surfaces are not intended to provide wayfinding for pedestrians who are blind or have low vision



42

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Where are detectable warnings required?

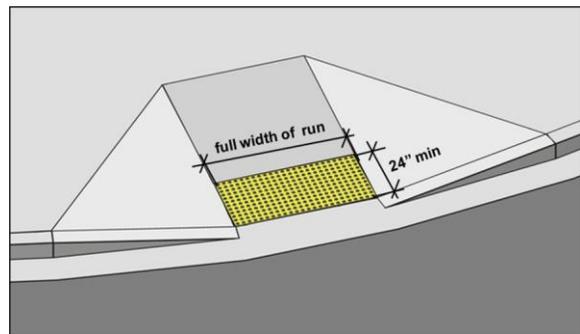
- On curb ramps at public transportation facilities covered by DOT's ADA standards (406.8):
 - Transportation services state or local governments provide the general public on a regular and continuing basis by bus, rail, or other conveyance (excluding aircraft and public-school transportation)
 - Intercity and commuter rail stations
- On curb ramps in projects funded by the Federal Highway Administration
- At rail station boarding platforms with open drop-offs at any transit facility, including private sector transit facilities subject to DOJ's ADA Standards (810.5.2)

43

43

Why do the ADA standards no longer require detectable warnings at all curb ramps?

- In the last update, the ADA standards were revised to focus more clearly on facilities located on sites
- Access Board is developing guidelines for public rights-of-way
- These guidelines address requirements for detectable warnings on public streets and sidewalks



44

44

Technical Requirements

- Requirements for truncated domes:
 - Dome size (705.1.1)
 - Dome spacing (705.1.2)
 - Visual contrast with adjacent walking surfaces (705.1.3)
- Extent of surface along platform edges required to have truncated domes (705.2)
- Extent of surface of curb ramps required to have truncated domes (406.8)

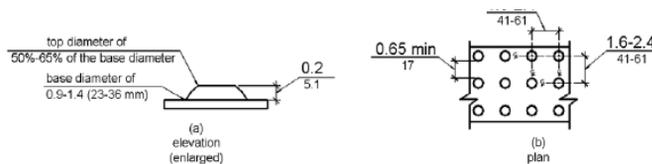


Figure 705.1 Size and Spacing of Truncated Domes

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Assistive Listening Systems (ALS)

Scoping: 219

Technical requirements: 706

46

46

Where Required

- Audible communication integral to use of space (219.2)
- Exception where no audio amplification is provided
- Courtrooms do not get this exception
- Not triggered by fixed seating or occupant load
- Signs indicating availability of ALS, which include the International Symbol of Access for Hearing Loss (216.10)



47

47

Types of Assistive Listening Systems

- Infrared
- FM radio
- Induction loop

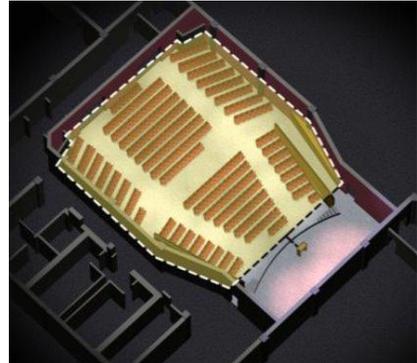


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Requirements for Receivers

- Minimum number of receivers required per assembly area based on seating capacity (Table 219.3)
- 25%, no fewer than 2, must be hearing-aid compatible
- Hearing-aid compatible receivers not required where all seats are served by an induction loop system



49

49

Technical Provisions

- Receiver jacks (706.2)
- Receiver hearing-aid compatibility (706.3)
- Sound pressure level (706.4)
- Signal-to-noise ratio (706.5)
- Peak clipping level (706.6)

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Automatic Teller Machines (ATMs) and Fare Machines

Scoping: 220

Technical requirements: 707

51

51

Required Compliance

- Machines covered:
 - ATMs
 - Self-service fare vending, collection, or adjustment machines
- Where provided, at least one of each type, at each location, must comply (220.1)
- If machines are provided at interior and exterior locations, accessible machines must be provided at interior and exterior locations.
- Accessible machines must offer the same services as inaccessible machines
- If bins are provided for envelopes, wastepaper, etc., at least one of each type must comply with storage requirements in 811 (220.1)

52

52

Information Transaction Machines

- ADA design standards cover ATMs and fare machines (transportation)
- Other types of transaction machines or kiosks are not covered by 707
- Other provisions may apply (e.g., operable parts)
- Section 508 applies if equipment is procured by the federal government



53

53

Requirements for Physical Access

- Clear floor space, unless machine is drive-up only (707.2)
- Operable parts; compliant height not required at drive-up only machines (707.3)
- Each operable part differentiated by sound or touch without activation unless clear or correct key provided (707.3)



54

54

Requirements for Speech Output

- Speech output of all information displayed on the screen (707.5)
 - Audible tones permitted for output not displayed for security e.g. passwords
 - Speech output of advertising not required
- Speech delivered through mechanism available to all users: standard industry connector, telephone handset
- User control: repeatable, interruptible (707.5.1)
- Audible information provided on receipts to allow for completion or validation of transaction
- Braille instructions for initiating speech mode required (707.8)

55

55

Input Controls

- At least one tactilely discernible input control for each function (707.6.1)
- Numbers arranged in a 12-key ascending or descending telephone keypad with a tactile 5 (707.6.2)
- Function keys, visual and tactile requirements (707.6.3)
 - Contrast: keys contrast with background surface, characters and symbols contrast with key surfaces (707.6.3.1)
 - Required tactile symbols for common functions(707.6.3.2)

56

56

Display Screen

- Visible from a point located 40" above the center of the clear floor space in front of the machine (707.7.1)
- Above not required for drive-up only machines
- Character font, size, and contrast requirements (707.7.2)

57

57

Two-Way Communication Systems

Scoping: 230

Technical requirements: 708

58

58

Required Compliance

- Where provided to gain admittance to a building or a restricted area of a building (230.1)
- For residential dwelling units with communication features, where a system permitting voice communication between a visitor and the occupant is provided (809.5.6)



59

59

Technical Requirements

- Both audible and visual signals required (708.2)
- If handset provided, cord min. 29" (708.3)
- Requirements for residential dwelling units (708.4)



60

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Is a two-way communication system for requesting customer assistance required to comply?

- Only systems used to gain admittance to a building or restricted area are required to comply
- Other types are considered - courtesy phones or closed-circuit phones and must comply with requirements for telephones

61

61

Technical Guides on the Standards Available on the Board's website



81

62

Questions ?

81

63



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82

64



Continuing Education



AIA Provider Number: I017

AICP Provider Name: Great Lakes ADA Center

Course Title: Using the ADA and ABA Standards Series: Chapter 7: Communication Elements and Features

Course Number: GL20200802

Date: August 6, 2020

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Questions will be addressed at the conclusion of this presentation.

65

65

Thank you for participating in today's webinar



Next session:

September 3, 2020

**USING THE ADA AND ABA STANDARDS SERIES: CHAPTER 8:
SPECIAL ROOMS, SPACES, AND ELEMENTS**

2:30 pm – 4:00 pm EST

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66

66