

BEST PRACTICES GUIDE.

Administration and technical guidance.

INTRODUCTION: The Accessible Design Accreditation Initiative (ADAI) is a methodology for developing a broader understanding and more robust application of accessible design principles within the professions of architecture and interior design. The most effective manner to undertake this endeavor is by establishing educational outcomes that focus on accessible design foundations for architecture and interior design students. The logical process for evolving curricula is by working with the school accreditation organizations to ensure students are introduced to the regulations and codes that establish accessible design minimum standards. A separate objective is course content regarding the environment in which disabilities and access function in society.

REGULATIONS AND CODES: The *Department of Justice 2010 ADA Standards for Accessible Design* (ADA Standards) and the International Code Council *International Building Code* and *ICC/A117 Usable and Accessible Buildings* (model codes) govern practically every construction project across America and are in the files of design firms everywhere. (Hereinafter the ADA Standards and the ICC model codes are collectively referred to as the ‘*accessibility standards.*’) These two accessibility standards are the federal regulations and model codes respectively that are an essential aspect to design and project success. Stated simply, a design, building, facility, site, or element that does not meet these accessibility standards crosses the line wherein some level of legal enforcement is possible. The enforcement may range from a simple delay of a building permit to the extremes of costly litigation. This is not hyperbole; this is the reality that designers, firms, clients, contractors, and others face every day.

The ADA Standards are a set of civil rights regulations for the past 33 years. Various model codes have included accessible design provisions for more than 45 years. Yet, no standardized accreditation or educational method describes what these two accessibility standards are, where to find them, how to use them, and how they interact and function. The intent of the ADAI and this Best Practices Guide (BPG) is to elevate exposure to these accessibility standards for architecture and interior design students *before* they transition into professional careers.

AN INNOVATIVE APPROACH: Offering a broader exposure to the accessibility standards presents practical difficulties for schools and accreditation organizations. Each accessibility standard contains hundreds of pages of complex and interrelated text, charts, tables, graphics, civil rights law applications, and more. And because the two accessibility standards are developed and distributed by separate organizations, they are not always in synch administratively, technically, or in the timing of revisions and public release.

There is a long-standing and substantial harmonization process between the U.S. Access Board and the International Code Council as the authors of these two standards. Regardless, fundamental differences are characteristic in the purpose, scoping, purview, administration, publication, promulgation, and enforcement mechanisms. The burden on schools and accreditation organizations to keep up with the differences in the technical details, timetables, ongoing revisions, and harmonization is neither realistic nor advocated in the ADAI.

FLEXIBILITY: This *ADAI Best Practices Guide* (ADAI BPG) is organized to facilitate alternate and versatile teaching strategies. Students are introduced to the concepts of introductory accessibility principles that underscore - and are harmonized within - both of the accessibility standards without delving into the many hundreds of pages of minutiae. This approach emphasizes the fundamentals of immutable disability obstacles and the respective design responses. This foundational methodology establishes a usable and enduring footing for students to understand what these accessibility standards are and how they operate in the profession and in society. A foundational approach is a constant; academies and accreditation organizations can choose whether or not staying current with the annual revisions of the model codes and/or litigation under the ADA are in their best interest.

In conjunction with teaching accessibility standards, the ADAI BPG is also formulated to present students with a broader perspective of how accessible design functions in society. *For that to happen, the first step is ensuring students are introduced and instructed in the use of the two accessibility standards.* Questions for learning outcomes in this module might include:

- What are the federal ADA and model codes standards?
- Who are the authors?
- How are the model codes developed and enforced?
- How are the ADA federal accessibility standards developed and enforced?
- Where do students acquire the two accessibility documents?
- What are the major topics and themes in the standards?
- What are the differences in how the two sets of laws/codes apply to a project?
- What are the differences in how the two standards apply to religious and private entities?
- How do the standards impact licensure, firms, careers, litigation, and construction projects?
- How does accessible design impact the lives of the building end-users?

HOW AND WHY: Both of the accessibility standards illustrate similar architectural responses to the challenges faced by people with disabilities in mobility, sight, hearing, chemical sensitivities, operating elements, etc. The disability types and available architectural resolutions are the *foundational principles of accessible design* that represent the goal for the technical learning outcomes. But, just knowing the 'How' of designing a usable and accessible facility is only one goal of the intended outcomes.

The second objective is to engage students in 'Why' these foundational principles are necessary. *Educational success requires an understanding and application of what living with disabilities means when using a facility.* A famous book and tenet of accessibility is "Nothing About Us Without Us." (Charlton, J. 1998) Both the ICC model codes, and the federal ADA regulations have been – and continue to be – developed, revised, and directed by persons who themselves have blindness, mobility, hearing impairments, and other disabilities. They know better than anyone exactly what works for them as they navigate facilities. Their collective wisdom, knowledge, and experiences are embodied in the codes and federal regulations; making the imperative to teach these accessibility standards that much more relevant.

Teaching students how and why society and government embrace - and consistently revise - these legal standards is far more effective than simply asserting that they are legitimately required. Inspiring the upcoming generations of designers toward a benevolent and cultural understanding of the life challenges of persons with disabilities is equally as important as learning the technical documents and their minimum project requirements.

1. THE LANDSCAPE OF ACCESS: The accessibility standards operate within an intertwined personal, medical, cultural, regulatory, anthropometric, ergonomic, public health, and architectural framework. That framework and intertwined influences are often unseen and unknown by the able-bodied and people outside the field of accessibility, yet each can impact the facility's end users. Well-rounded design professionals are conversant in the entire milieu within which accessible design functions, not just regulations and codes. The ADAI BPG proposes drawing students into the human scale of living with impairments when using a facility, while at the same time presenting the 40,000-foot view of the industry. For example, the two following quotes are from persons with blindness and vision impairment respectively, regarding bathroom use.

a. *“My biggest issue with using an unfamiliar toilet room is locating the elements. First is the soap dispenser and then when hands are washed finding the paper towel dispenser. Cannot tell you how many toilet rooms I trashed tracking wet hand across mirrors and walls trying to locate it. Hands were not as clean when I finally found the towels.”*

(P. Berg, personal communication December 7, 2021)

b. *“Also, sometimes when using a hand dryer, the warm air blows up into my face and causes my eyes to tear so much that I need to wash my face – and the wheels go round and round. I have some experience with (faucets that incorporate the hand dryer in the fixture at the sink) or a very similar product. It was installed in an airport restroom, and I could not determine how to activate the water, let alone the hand dryer. It was late at night, so no one else was using the restroom. After several minutes, another person came in and kindly showed me how to use the lavatory – it was humiliating.”*

(M. Mazz, personal communication December 7, 2021)

These personal testimonies from people with blindness and vision loss underscore the importance of teaching ‘Why’ accessible design matters. Bathroom design is just one example that is notoriously problematic for people with disabilities. Designers must be allowed to see the human impact a design can have, and potentially access a level of attention that takes a learner beyond mandatory ‘regulations and codes’ and into a more creative, evolved, and successful design process. E.G.: Professionals can be encouraged to recognize the importance of meeting with people with disabilities, the ADA Coordinator, and the Human Resources departments simultaneously during the space planning phase of a project, to exercise the “*nothing about us without us*’ philosophy. Given the ever-expanding demographics of aging and the inevitable rise in related disabilities, the need for a deeper and broader educational focus on accessibility is invaluable to all stakeholders.

- 2. BROADER PERSPECTIVES:** The ADAI BPG recognizes multiple schools of thought in design principles, as demonstrated in the list below. Education and accreditation processes should consider implementing these and other ancillary accessibility topics to reinforce the student's understanding of the industry. Supplemental approaches to accessible design can complement the technical foundations of the required accessibility standards while broadening a student's overall conception of designing for persons with disabilities and society at large.

However, design constructs such as 'universal or inclusive design' should not be replacements for the technical standards of the model codes and the federal ADA regulations. These and other ancillary perspectives are valuable for enhancing the foundations in both of the accessibility standards. But none can substitute for the necessity of teaching the accessibility standards in developing a student's effectiveness when they enter their professional career. Put another way, a professional must first have a foundation in the regulatory ADA and model codes standards simply because those are the *legal minimums* for the majority of projects. Equally, universal or inclusive design principles generally do not represent legal standards that result in construction delays, litigation, or the capability to negatively impact careers, firms, clients, and end-users.

Supplemental accessibility topics include:

- I. Accessibility as human-scale design.
- II. Accessibility as improving good design.
- III. Accessibility as a function of civil rights.
- IV. Adaptive versus accessible design in housing.
- V. Performance versus prescriptive accessible design.
- VI. Accessible design compliance on local and federal levels.
- VII. Aging in place in extended care, housing, and employment settings.
- VIII. Ways of thinking: Inclusive, universal, and accessible design approaches.
- IX. Scoping: Overview of principles in existing facilities, alterations, and new construction.

- 3. FRAMEWORK-IN PROGRESS:** The following section proposes a framework that chronologically reflects the chapters and subsections of the *DOJ 2010 ADA Standards for Accessible Design* while identifying complementary, more restrictive, or differing provisions within the *ICC model codes*: This outline includes the foundational principles of both accessibility standards without examining the hundreds of pages and thousands of details therein.

- I. PROJECT ADMINISTRATION:** Students gain exposure to the scope, applicability, and enforcement dynamics between the ADA regulations and the ICC model codes. Manipulating the two sets of standards for a project is pivotal to professional success, risk reduction, project timetables, and other firm/client considerations.
- a. Students should be exposed to the mechanisms of using the model codes *in conjunction* with the ADA Standards. They are inseparable and the only means to meet the federal regulations. EG: The protocols for calculating/determining occupant loads, use groups, bathroom fixture counts, parking space counts, Accessible Means of Egress (AMOE), door and corridor width, etc., are contained *only in the model codes*. However, those code provisions impact the application of the ADA Standards and directly inform subsequent compliance federally.
 - b. Students receive an introduction to the differences between compulsory federal regulations of a Civil Rights law and the state and local government adoptions of model codes.
 - c. A short module on the differences in enforcement mechanisms is suggested.
 - d. Why both documents must often be used in tandem but are not always harmonized.
 - e. The ongoing harmonization process between the standards should be considered.
 - f. The concept of one document superseding or encompassing the other is relevant to applying the two standards in the profession.
- II. SCOPING:** Scoping introduces students to the ‘*When and How Many*’ aspects of features and elements within accessible design. This module would be one of the most content-rich since scoping applies to all technical uses and differs between the two documents. Both of the standards in question approach the triggering requirements for toilet facilities, water fountains, parking, and other fixtures and elements differently, for example. Students should also be exposed conceptually to the significant differences in how the federal regulations differ from the ICC model codes for existing structures and occupancy. E.G.:
1. One of the most frequent technical assistance questions is based on the confusion regarding the expansion of the intended scope of an alteration under the ‘*20% disproportionality rule.*’ In both the ICC model codes and the federal ADA regulations, a project is often required to allocate an additional 20% of the cost of altering a ‘*primary function area*’ and devote that additional money to the ‘*path of travel*’ from the entrances leading to the area being remodeled. The confusion persists despite the harmonized rule being in the model codes since the mid-1980’s and the ADA guidelines since 1991.
 2. The ICC model codes developed the *International Existing Building Code* (IEBC). Many jurisdictions have adopted the IEBC, but the federal ADA standards have no equivalent set of regulations for existing buildings. The ADA relies on litigation and other complaint-driven mechanisms for settlement.

- III. BUILDING BLOCKS:** Students gain an understanding of basic elements and principles that facilitate mobility in using sites, buildings, facilities, and elements. The building blocks are the design principles that make a facility, building, space, and site *potentially* usable and inform the minimum elements and systems for access to goods, services, programs, and activities.

The following key aspects of Building Blocks should be examined conceptually for their application throughout a site or facility and for the impact on people with disabilities.

- a. Floor and ground surfaces
- b. Changes in level
- c. Maneuvering spaces
- d. Turning configurations in spaces, at elements, landings, alcoves, ramps, etc.
- e. Ramps
- f. Reach ranges
- g. Operable parts

TAKE HOME MESSAGE: The 2021 International Building Code and 2017 ICC A117.1 substantially increased the dimensions and applications of maneuvering spaces, turns, footprints, and other design factors of Building Blocks to accommodate the proliferation of scooters and other powered mobility devices. (Steinfeld, E. et al, 2009) The new provisions *far surpass* the dimensions in the 2010 ADA Standards. Professional success means students need to understand the scoping and application differences between the ADA Standards and this recent set of sweeping architectural changes in the ICC model codes.

- IV. ACCESSIBLE ROUTES:** Similar to the Building Blocks principles of accessible design, accessible routes are fundamental for mobility-impaired access. Equity in housing, employment, access to goods, services, medical care, socialization, recreation, transportation, etc. is significantly impacted when the sites, facilities, buildings, and elements are approachable and usable. Potential curriculum should introduce the basic concepts of:

- a. Connecting elements within a site
- b. Connecting spaces and elements within a facility
- c. Changes in level
- d. Walking surfaces
- e. Doors, entrances
- f. Slopes, cross slopes
- g. Vertical access; elevators, escalators, lifts, ramps, stairs, Lula's
- h. Turning spaces
- i. Passing spaces
- j. Accessible Means of Egress (AMOE)

V. SITE AND BUILDING ELEMENTS: Stairways, hand and guardrails, and parking are topics that generate a substantial percentage of technical assistance questions.

- a. Parking is part of the American landscape in design and building function. The ten National ADA Centers receive hundreds of technical assistance questions each year on parking configurations and applications. The ICC model codes have added provisions for accessible routes across parking facilities and other designs that are not harmonized with the federal ADA standards. Students should be engaged in understanding the fundamentals of parking. Questions are constantly raised about:
 - i. Location of accessible parking relative to entrances and the ‘shortest accessible route’ on a site.
 - ii. Signage placement.
 - iii. Access aisles and marking of accessibility elements.
 - iv. Multiple facility entrances and multiple parking structures/lots
 - v. Detectable warnings within private parking lots
 - vi. Valet parking as a service versus a site element
- b. The following published excerpts regarding stairs underscore the importance of teaching students ‘Why’ accessible design matters: “Stairway falls...are a major problem in our society, resulting in much unnecessary pain, suffering, and expense.” (Osterberg, 2021) Falling is the number one cause of death for older adults, and more than 6.8 million people were treated in emergency rooms for injuries from falls in 2020. (National Safety Council, 2023) Falling also creates new disabilities where none existed before.

4. PLUMBING FACILITIES AND ELEMENTS. Sanitation has distinct implications for health and medical complications, life span, dignity, and even pandemics. Plumbing is content-rich, as the list of topics below demonstrates. *The ADIA BPG is not a curriculum that could cover this extent of plumbing details.* Instead, imparting the general principles of equity in sanitation, toileting, bathing, drinking fountains, sinks, etc., can provide students with the basis for acquiring related in-depth specifics when needed. Designers also need to know the differences between the two standards.

- a. Key differences in scoping between the two accessibility standards
- b. Clear floor spaces at fixtures.
- c. Drinking fountains
- d. Toilet and bathing rooms
- e. *Assisted Toileting and Bathing (ATAB) – ICC A117.1 Only*
- f. Water closets and toilet compartments
- g. Element overlap in compartments/stalls.
- h. Accessible V. ambulatory compartments
- i. Urinals
- j. Faucets
- k. Exposed pipes/surfaces
- l. Bathtubs, showers

VI. COMMUNICATION FEATURES, ELEMENTS AND PRINCIPLES. Elements like tactile signage, detectable warnings, emergency signaling systems, alarms, protruding objects, etc., are critical to the life, safety, and welfare of persons with vision and/or hearing impairments. Thoughtful wayfinding prevents retracing routes, separating caretakers, family, or others from persons with impairments, wasting time and resources, and unnecessary exposure to pathogens. With the advent of digital signage, websites, and other applications, communication has taken on new directions, including legal and technical challenges.

- a. **TAKE HOME MESSAGE:** Effective communication also involves websites and the digital footprint of the client. *Domino's Pizza* (2019, *Robles v. Domino's Pizza LLC*) and *Lucky Brand Denim* (2014, *David New v. Lucky Brand Dungarees*) are two recent examples of the many prominent corporations and businesses subject to litigation based on the lack of accessibility of their websites, point-of-sale devices in the stores and other services. In this case, understanding how the ADA and model codes differentiate has an impact on the professionals and their clients.

VII. USE AND OCCUPANCY; SPECIAL ROOMS AND SPACES: The ICC model codes currently list ten major *Occupancy Classifications* and twenty-six sub-categories of building function. Occupancy groups and related occupancy loads directly affect building design and arguably are one of the more prominent code topics presented in design schools. The occupancy group affects building height and area, fire-rated materials, corridor width, egress design, bathroom fixture count, and more.

Given all the code categories and sub-categories, very few academic programs could delve into how these different uses of a building are related to accessibility. EG: Within the twenty-six sub-categories of Occupancy in the model codes, there are five separate functions listed for assembly alone. Conversely, the 2010 ADA Standards coalesce these myriad model code categories of building use into just an 'Assembly' definition.

Teaching how accessibility is informed by – or informs - every *Occupancy Classification* in the model codes and every detail of 'Assembly' under the ADA is impracticable. However, a student should be exposed to the terminologies and differences in the two accessibility standards' viewpoints toward grasping *how building functions inform accessibility*. This requires a student's ability to demonstrate mastery of these highly differentiated principles that often are applied simultaneously on projects.

VIII. RECREATION: *‘You can discover more about a person in an hour of play than in a year of conversation.’* Plato

Recreation characterizes significantly different and critical implications for the health, life span, socialization, and learning of children and adults with disabilities than for able-bodied people. E.G.: Wheelchair users know that the only time they are released from the bonds of gravity is in a pool or spa with enough water depth for safe buoyancy. For children with disabilities, access to play is learning and socialization that is often missing otherwise. Much as with toileting and bathing, access to recreation also directly informs the inclusion, safety, and efficacy of caretakers.

Critically, the ‘Recreation’ applications in the 2010 ADA Standards are the only accessibility regulations in the 2010 Standards that *do not* benefit from the legal principle of ‘*Safe Harbor*’. Consequently, all parks, pools, spas, playgrounds, court sports, piers, and other uses must be brought into compliance immediately, without the standard triggers of alterations or new construction. Given this reality, some schools offer separate programs focused on accessible design within health and wellness, sports and recreation, sports psychology, etc.

- a. Many of the topics such as building blocks, accessible routes, reach ranges, and other details apply to recreation. Features such as access into and out of pools, playground equipment, and surfacing standards, as well as the ‘Scoping’ of accessible elements, are different and unique to recreation.
- b. A general overview introducing students to the key principles and importance of accessible recreation and sports has the added benefit of making a student more marketable for the profession.

End of administrative and technical sections.

SUMMARY:

This ADAI *is not* intended to critique educators, school programs, the accreditation industries, or accessible design development in the model codes and federal standards. The present state of affairs for practicing architects and interior designers is the result of how our society has progressed as a whole. The fields of design, education, federal accessibility regulations, and model codes have each grown and developed based on their respective goals and their differing – yet sometimes overlapping - roles in society. The ADAI BPG endeavors to re-align and harmonize those corresponding objectives into a more collaborative paradigm.

The ADAI BPG is a framework-in-progress that is expected to be tested, revised, and adapted to various needs. Given the differences in accreditation conventions and school programs, there is no singular curriculum or methodology that can work for all the stakeholders. That said, exposing students to accessible design standards is the one necessary constant that can ensure they are prepared to translate and apply the minimum access principles expected of them in the profession. The ADAI BPG may not be the vaunted model every school or accreditation organization will accept for guidance. That does not change the demonstrated need for advancing educational and accreditation protocols.

This ADAI BPG *is* intended as a pilot outline upon which the schools and accreditation agencies can develop individual programs. There are undoubtedly other topics that stakeholders consider including or eliminating, as well as protocols and practices that must be judged case by case. However, the commonalities and shared values of all the various agencies involved are greater than their differences, and that is the starting point of the ADAI.

The many supporters of this sweeping initiative recognize the practical, logistical, political, financial, and other obstacles that will certainly arise in this endeavor to improve the lives of people with disabilities, education, design, and society at large. The ADAI is being proffered in a spirit of collaboration to facilitate advancing the educational focus of upcoming professionals.

There is no better response to this challenge than the one delivered 50 years ago by President John F Kennedy:

‘We choose to go to the moon in this decade and do other things not because they are easy, but because they are hard.’

John F. Kennedy, September 12, 1962

End.

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