



Accessibility in the Built Environment

Southern Obesity Summit- October 3, 2017

Dave Roberts, ASLA

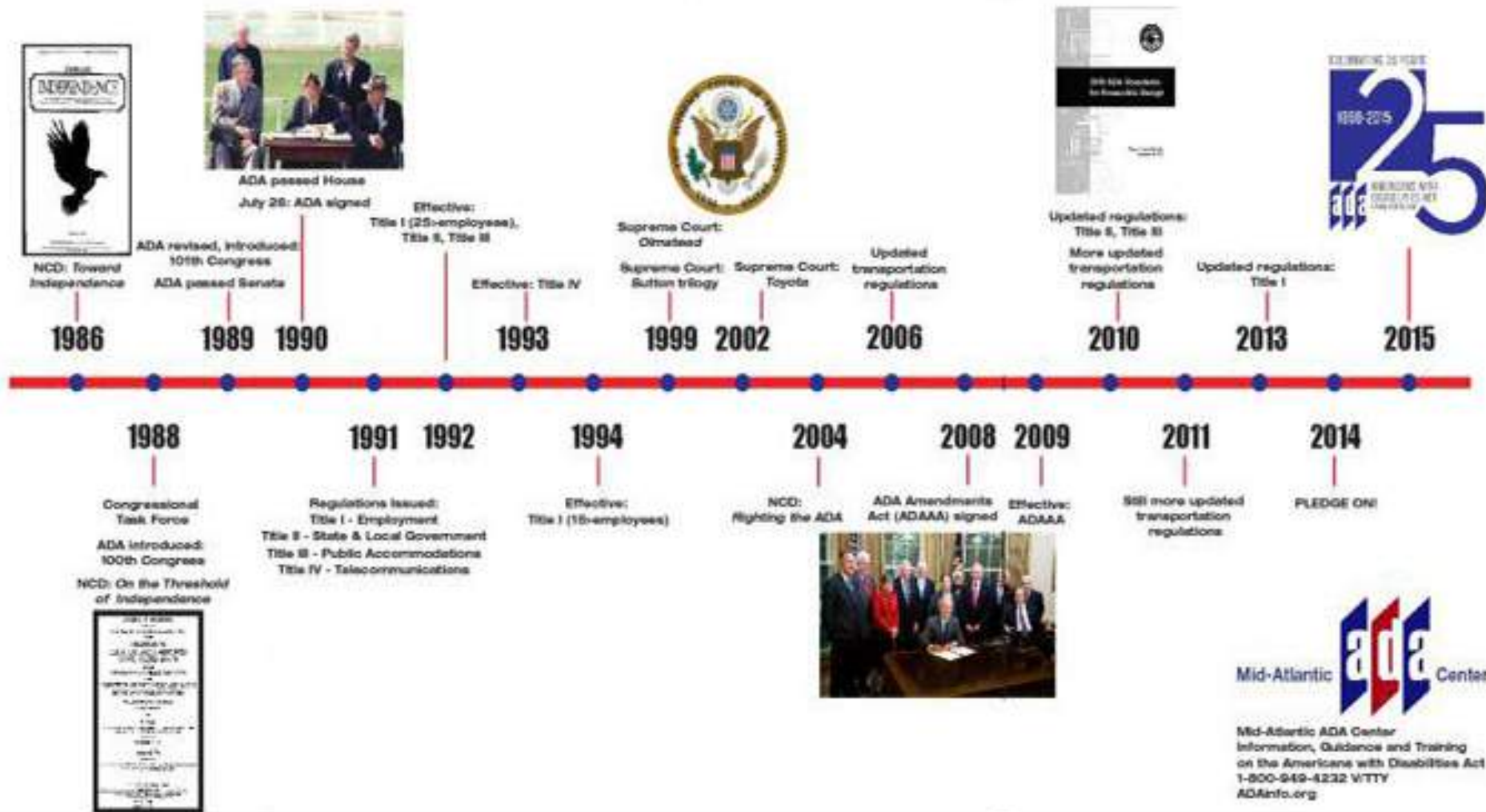
Presentation Chapters

- **Introduction**
 - Background on ADA
 - Point of View
- **Universal Design**
 - Paving
 - Crosswalks
 - ADA Parking
- **Inclusive Recreation**
 - Playgrounds
 - Trails
- **Accessible Streetscapes**
 - Complete Streets
 - Walkshops



Introduction: Background

The American with Disabilities Act Timeline



Introduction: Background

Definition:

Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by **all people regardless of their age, size, ability or disability.**

- Should be designed to meet the needs of all people
- not a special requirement, for the benefit of only a minority of the population.
- **It is a fundamental condition of good design.**
- If an environment is accessible, usable, convenient and a pleasure to use, everyone benefits.

7 Principles of Universal Design (NC State Univ. 1997)

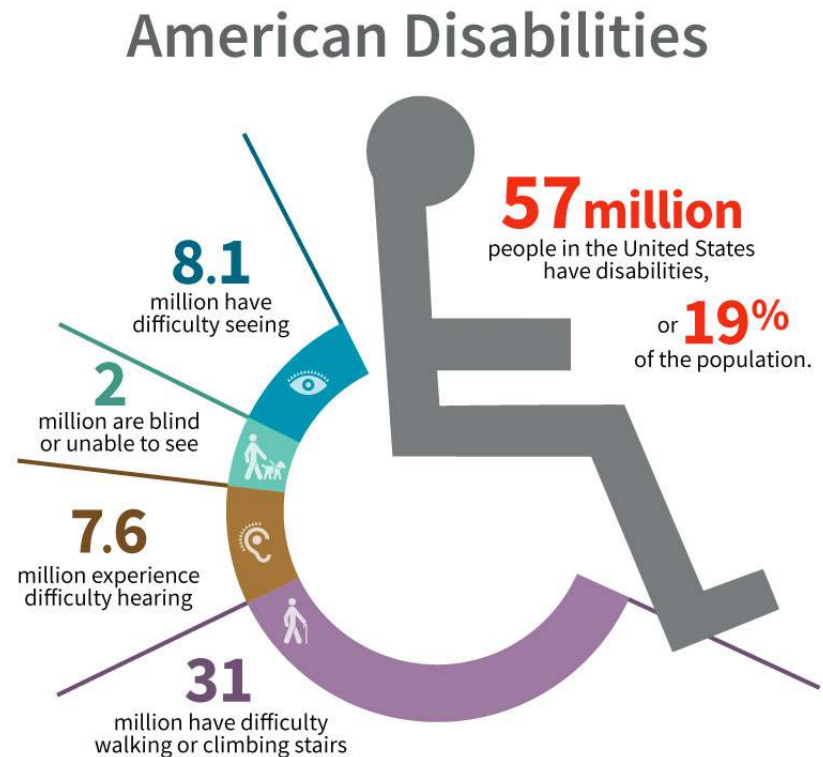
- Principle 1: Equitable Use – used by all
- Principle 2: Flexibility in Use – choices provided
- Principle 3: Simple & Intuitive Use – consistently not complex
- Principle 4: Perceptible Information – easily understood
- Principle 5: Tolerance for Error – minimized hazards
- Principle 6: Low Physical Effort – efficient & comfortable
- Principle 7: Size & Space for Approach & Use – user's reach



DEPARTMENT OF JUSTICE: THE LAW

The Americans with Disabilities Act of 1990 (ADA) prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation.

The current text of the ADA includes changes made by the ADA Amendments Act of 2008 (P.L. 110-325), which became effective on January 1, 2009. The ADA was originally enacted in public law format and later rearranged and published in the United States Code.



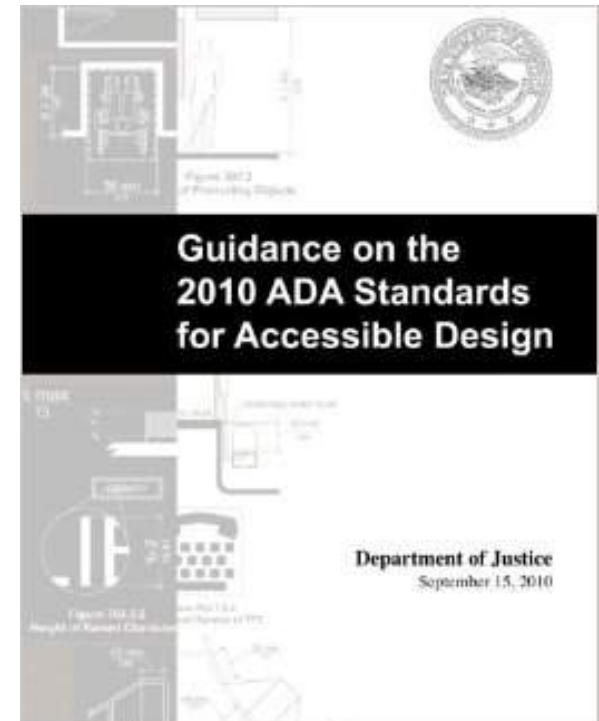
DEPARTMENT OF JUSTICE: THE 2010 REGULATIONS

On Friday, July 23, 2010, Attorney General Eric Holder signed final regulations revising the Department's ADA regulations, including its ADA Standards for Accessible Design.

These final rules went into effect on March 15, 2011, and were published in the 2011 edition of the Code of Federal Regulations (CFR).

ADA Titles

- Title I: Employment
- **Title II: Public Transportation, State & Local Govt. Services**
- **Title III: Places of Public Accommodations**
- Title IV: Telecommunications
- Title V: Miscellaneous



UNITED STATES ACCESS BOARD: ADA STANDARDS

The ADA standards are issued by the Department of Justice (DOJ) and the Department of Transportation (DOT) and **apply to facilities covered by the ADA in new construction and alterations.** DOJ's standards apply to all facilities covered by the ADA, **except public transportation facilities**, which are subject to DOT's standards.

Both standards are very similar and are closely based on the Board's ADA Accessibility Guidelines (ADAAG).



www.ada.gov

www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards

Introduction: Point of View

Imagine life from a different point of view



Introduction: Point of View



Introduction: Point of View



Introduction: Point of View



Introduction: Point of View



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Universal Design: Must Be Intentional

Must have the physical infrastructure to accommodate all users!



Commitment



Afterthought

Universal Design: Must Be Intentional

Must have the physical infrastructure to accommodate all users!



Universal Design: Must Be Intentional

Must make sense for the user



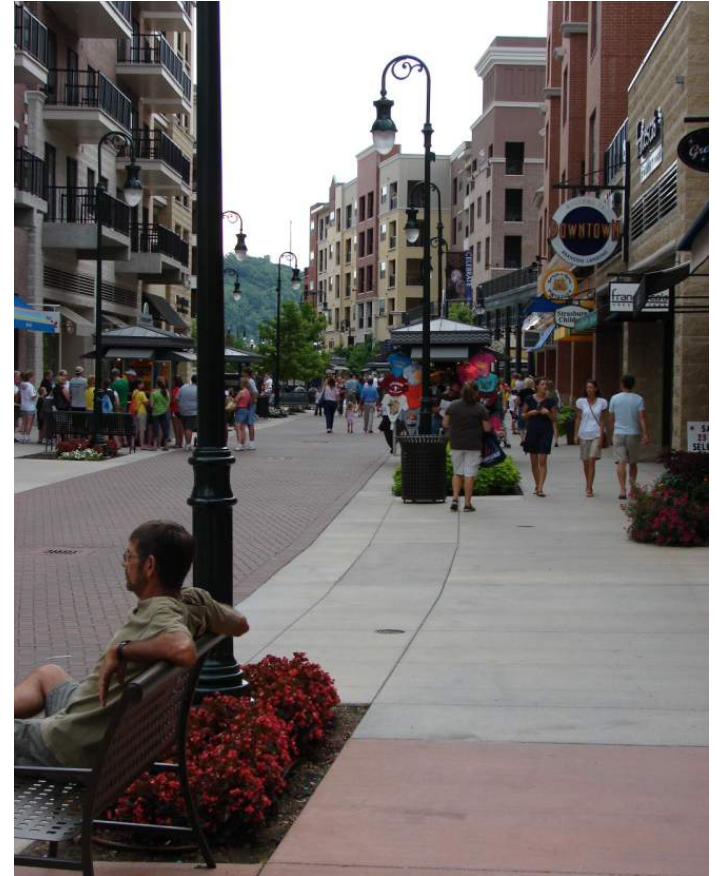
Universal Design: Paving Materials



Universal Design: Paving Materials

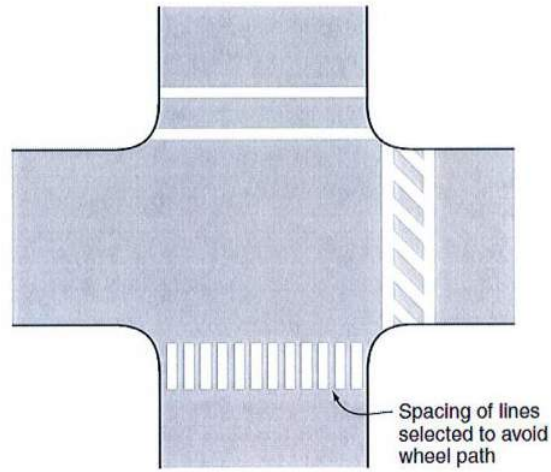


Decorative paving with texture-free zones



Branson Landing

Universal Design: Crosswalks



Universal Design: Crosswalks



Universal Design: Crosswalks



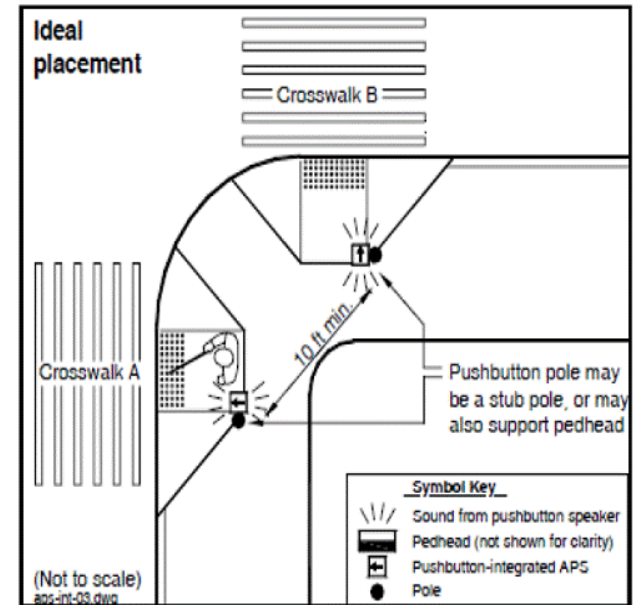
Universal Design: Crosswalks



Universal Design: Crosswalks

FHWA Best Practice: Designing Sidewalks and Trails for Access

- Information/signs, signals and markings;
- **The turning radius**
- Crosswalks
- **Crossing times**
- Medians
- **Refuge islands**
- Curb ramps
- Sight lines
- Traffic patterns



https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalk2/sidewalks208.cfm

Mid-Block Crossings

Median refuges provide safe haven for pedestrians on roads with wide cross sections



Universal Design: Crosswalks



Curb extensions or bulb outs reduce the width of the road cross section while delineating on-street parking



ADA Design Guide: www.ADA.gov

U.S. Department of Justice
Civil Rights Division
Disability Rights Section



ADA Design Guide

1

Restriping Parking Lots

Accessible Parking Spaces

When a business, State or local government agency, or other covered entity restripes a parking lot, it must provide accessible parking spaces as required by the ADA Standards for Accessible Design. Failure to do so would violate the ADA.

In addition, businesses or privately owned facilities that provide goods or services to the public have a continuing ADA obligation to remove barriers to access in existing parking lots when it is readily achievable to do so. Because restriping is relatively inexpensive, it is readily achievable in most cases.

Van-Accessible Parking Spaces

Van-accessible parking spaces are the same as accessible parking spaces for cars except for three features needed for vans:

- a wider access aisle (96") to accommodate a wheelchair lift;
- vertical clearance to accommodate van height at the van parking space, the adjacent access aisle, and on the vehicular route to and from the van-accessible space, and
- an additional sign that identifies the parking spaces as "van accessible."

One of eight accessible parking spaces, but always at least one, must be van-accessible.



ADA Design Guide: www.ADA.gov

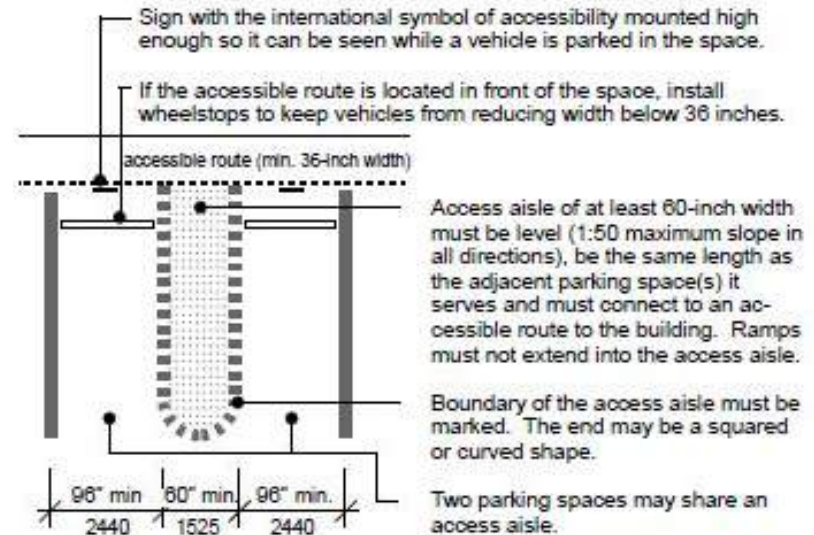
Minimum Number of Accessible Parking Spaces
ADA Standards for Accessible Design 4.1.2 (5)

Total Number of Parking spaces Provided (per lot)	Total Minimum Number of Accessible Parking Spaces (80" & 96" aisles)	Van Accessible Parking Spaces with min. 96" wide access aisle	Accessible Parking Spaces with min. 60" wide access aisle
Column A			
1 to 25	1	1	0
26 to 50	2	1	1
51 to 75	3	1	2
76 to 100	4	1	3
101 to 150	5	1	4
151 to 200	6	1	5
201 to 300	7	1	6
301 to 400	8	1	7
401 to 500	9	2	7
501 to 1000	2% of total parking provided in each lot	1/8 of Column A*	7/8 of Column A**
1001 and over	20 plus 1 for each 100 over 1000	1/8 of Column A*	7/8 of Column A**

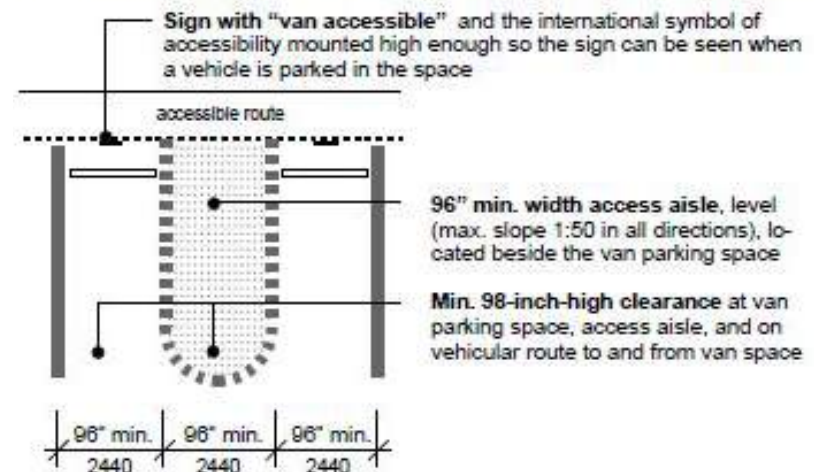
* one out of every 8 accessible spaces

** 7 out of every 8 accessible parking spaces

Features of Accessible Parking Spaces for Cars



Three Additional Features for Van-Accessible Parking Spaces



Universal Design: Parking



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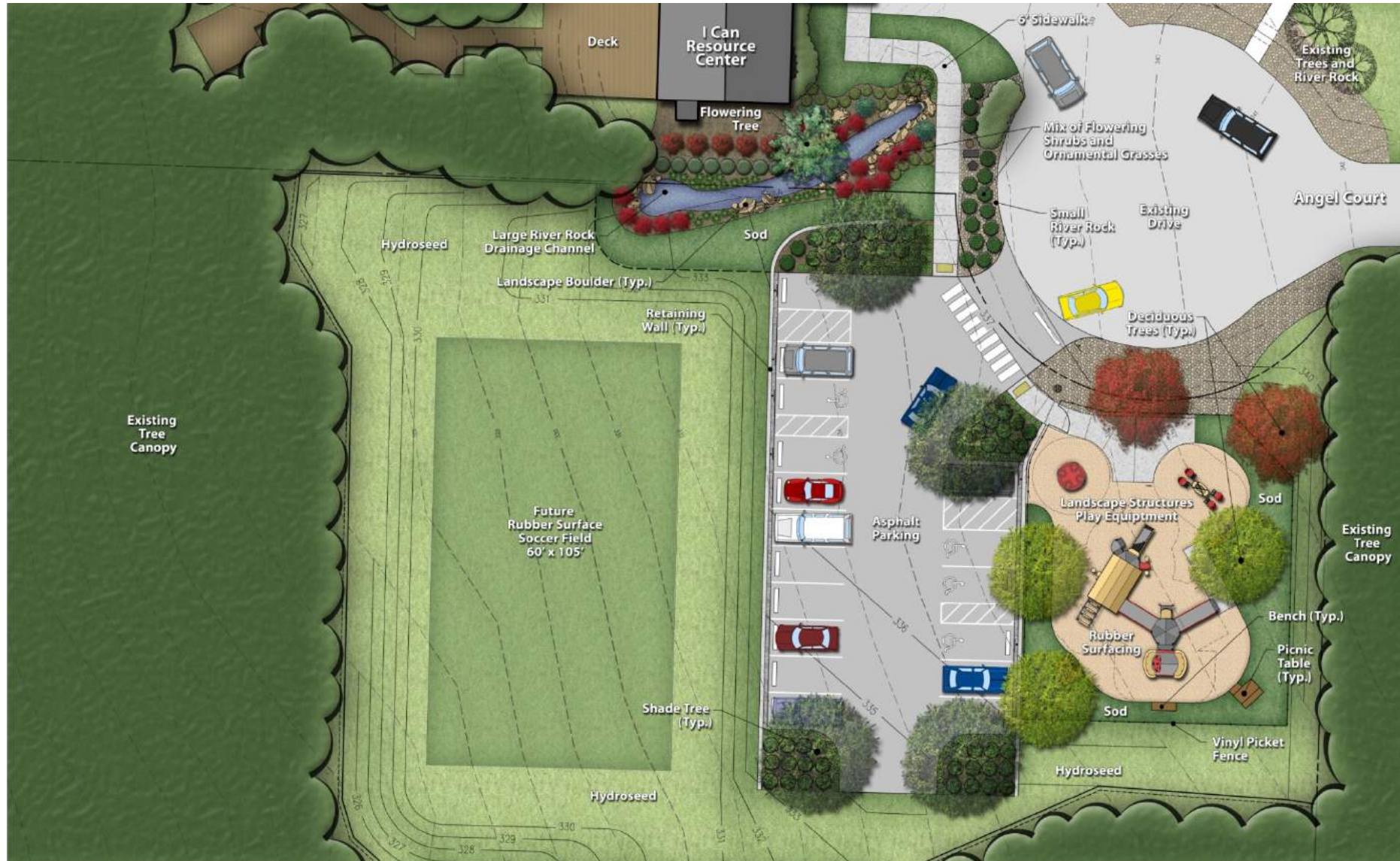


Inclusive Recreation: Playgrounds



Morgan's Wonderland

Inclusive Recreation: Playgrounds



Inclusive Recreation: Playgrounds



Inclusive Recreation: Playgrounds

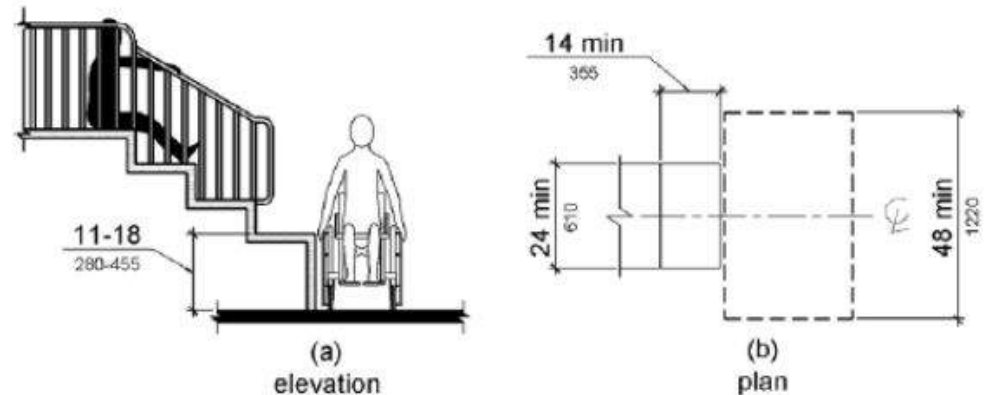


Inclusive Recreation: Playgrounds

Play Area Standards

- Accessible Routes
- Water Play Components
- **Transfer Systems**
 - Size
 - Height
 - Steps
 - Supports
- Ground Surface Material
- **Ramps**
 - Running slope not steeper than 1:16
 - Elevated 12" maximum
 - Handrails to comply with 505
- Play Components
- Play Tables

Transfer Platform



Inclusive Recreation: Playgrounds



Inclusive Recreation: Playgrounds



Inclusive Recreation: Playgrounds



Inclusive Recreation: Miracle League



Inclusive Recreation: Trails



Inclusive Recreation: Trails



Inclusive Recreation: Trails



Inclusive Recreation: Trails

12.6.1 Trail Corridors

The following characteristics are most directly related to access for people with disabilities:

- Surface
- Grade
- Cross slope
- Clear tread width
- Protruding objects
- Vertical clearance

Hendrix Pedestrian Underpass - Conway



Pedestrian Roundabouts: China



Inclusive Recreation: Trail Guidelines

Arkansas Bicycle and Pedestrian Plan



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Accessible Streetscapes: Complete Streets



“When you design your city around cars, you get more cars. When you design your city around people, you get more people.”

*-Fred Kent
(Project for Public Spaces)*



Accessible Streetscapes: Complete Streets



Accessible Streetscapes: Complete Streets



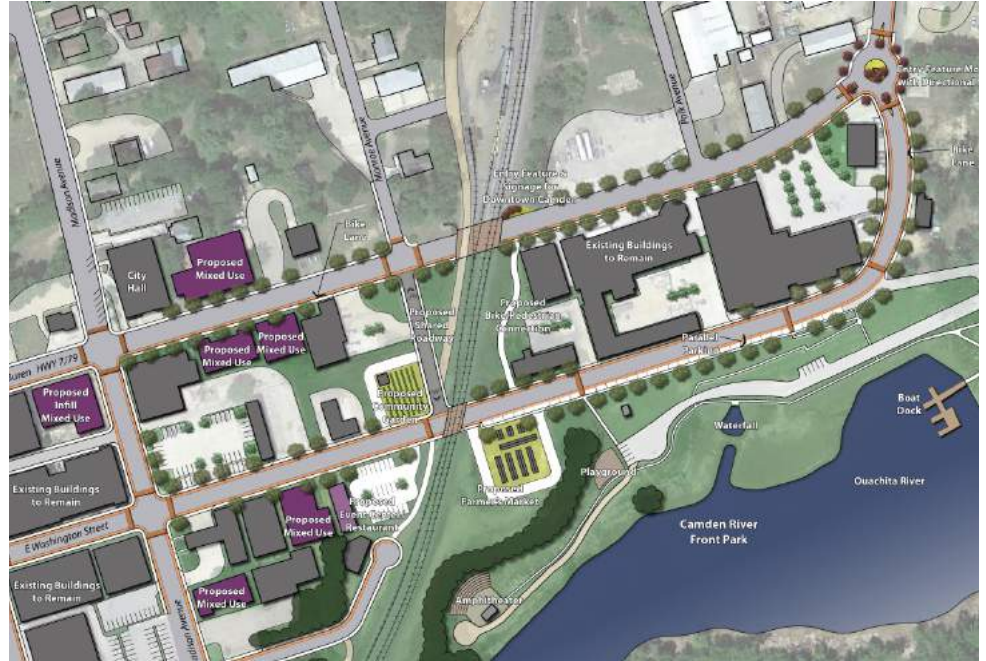
Accessible Streetscapes: Complete Streets



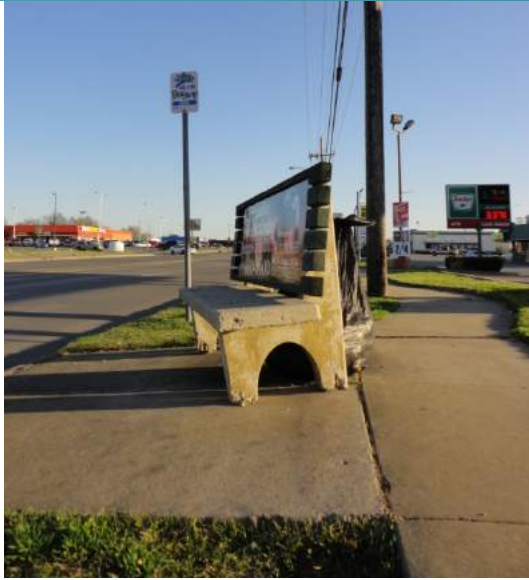
*According to HUD,
“The average
working American
family spends
nearly 60 percent
of its budget on
housing and
transportation
costs”*



Accessible Streetscapes: Walkshops – Camden



Accessible Streetscapes: Walkshops – East Tulsa

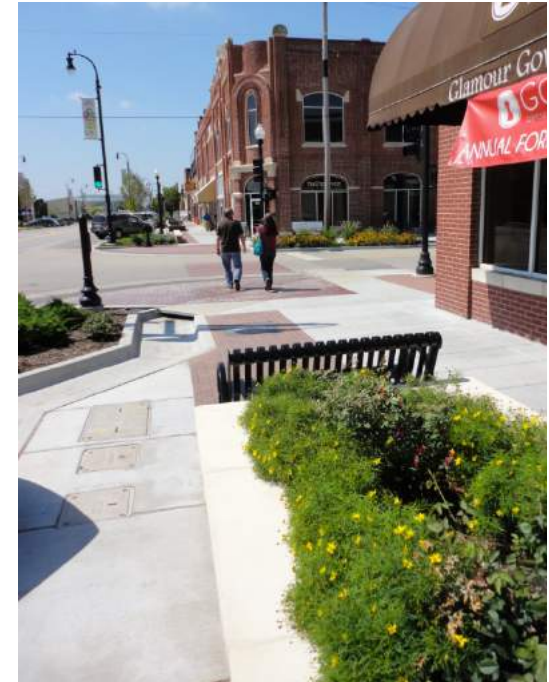


Constructed prior to 1991 American with Disabilities Act

Accessible Streetscapes: Walkshops – Broken Arrow Rose District



Accessible Streetscapes: Walkshops – Broken Arrow Rose District



Redevelopment after 1991 Americans with Disabilities Act

Accessible Streetscapes: Walkshops – Broken Arrow Rose District



Pedestrian zone / Amenity zone / Utility zone / Parking zone

Accessibility: Ribbons that tie our community together

“We think too small, like the frog at the bottom of the well. He thinks the sky is only as big as the top of the well. If he surfaced, he would have an entirely different view.”

– Mao Zedong





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