USABILITY

Arkansas
STANDARDS
in Housing:

guidance manual for designing & constructing
inclusive, functional dwellings
Arkansas Usability Standards in Housing:
Guidance Manual for Designing and Constructing Inclusive, Functional Dwellings
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Acknowledgements:
The Arkansas Usability Standards in Housing guidance manual was completed as part of the University of Arkansas Universal Design Project. The project was conducted with funding provided by the following agencies:
- Arkansas Rehabilitation Services, Department of Workforce Education
- Arkansas Department of Health & Human Services, Division of Aging and Adult Services, Centers for Medicare/Medicaid Services
- University of Arkansas for Medical Sciences, Partners for Inclusive Communities

Special gratitude goes to the many enthusiastic and dedicated staff and administrators who have worked in developing and fulfilling the goals of the Arkansas Universal Design Project. In addition, thanks goes to all those involved in providing insightful feedback on the design and content of this document. Finally, thanks to Zack Cooley, Matt Hagler, and Noah Updegraff (students and recent graduates of the School of Architecture at the University of Arkansas) for their dedicated assistance and insight in developing the content, formatting, and publishing of this document.
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# Part 1: Introduction

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Overview:

With the changing demographics of the United States (and much of the world)—i.e. the aging of the “baby-boom” generation and the increased prevalence of various disabilities—there has become an increasing importance (and demand) to develop affordable, user-friendly housing. The design and construction of inclusive housing has become most significant in the South and states such as Arkansas, where the aforementioned economic and demographic effects are most pronounced. This document serves as a guide for local, regional, and state governments, agencies, and housing authorities and for designers, developers, builders, architects, and engineers working with these organizations for designing and constructing more accessible, usable housing. This guide may be adopted or utilized (in part or in whole) by any of these organizations or individuals as a means to positively affect the quality of housing in the state of Arkansas.
HOW TO USE THIS DOCUMENT:

The Usability Standards contained herein provide guidance for designing and constructing more ergonomic, universally functional housing. The usability standards listed below are organized according to the traditional functions that take place within the home (e.g., sleeping, food preparation, etc.). Each category contains two components: (1) Levels of Usability (top) and (2) Usability Criteria (left). There are four types of usability: (a) mobility, (b) operability, (c) perceptibility, and (d) security. To the right of each usability criteria is a continuum of achievement levels—Level 1: Visitable through Level 5: All-Inclusive—where the usability standard is specified. The diagram below illustrates the two basic facets of the Usability Standards.

<table>
<thead>
<tr>
<th>Arkansas Usability Standards in Housing</th>
<th>Bathing &amp; Toileting Spaces</th>
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</thead>
<tbody>
<tr>
<td><strong>Level 1: Visitable</strong></td>
<td><strong>Level 2: Liveable</strong></td>
</tr>
<tr>
<td>Mobility within bathroom</td>
<td>Level 3: Liveable</td>
</tr>
<tr>
<td>Each “visitible” toileting space</td>
<td>All “visitible” bathroom</td>
</tr>
<tr>
<td>contains an area enabling diverse</td>
<td>and/or toileting space</td>
</tr>
<tr>
<td>occupants to rest and to turn 180</td>
<td>contains an area enabling</td>
</tr>
<tr>
<td>degrees.</td>
<td>diverse occupants to rest</td>
</tr>
<tr>
<td>Configuration of “visitible”</td>
<td>and turn 180 degrees.</td>
</tr>
<tr>
<td>toileting space or adjacent “visitible”</td>
<td>3.24, 3.25, or 3.26</td>
</tr>
<tr>
<td>“visitible” space enables side</td>
<td>Configuration of “liveable”</td>
</tr>
<tr>
<td>approach to and use of sink for</td>
<td>bathroom and/or toileting</td>
</tr>
<tr>
<td>diverse occupants.</td>
<td>space enables front and</td>
</tr>
<tr>
<td></td>
<td>side approach to and use</td>
</tr>
<tr>
<td></td>
<td>of all plumbing fixtures</td>
</tr>
<tr>
<td></td>
<td>for diverse occupants.</td>
</tr>
<tr>
<td><strong>Level 4: Liveable</strong></td>
<td><strong>Level 5: All-Inclusive</strong></td>
</tr>
<tr>
<td>Operability of fixtures</td>
<td>Every bathing and/or</td>
</tr>
<tr>
<td>Sink fixture in “visitible” toileting</td>
<td>toileting space contains an</td>
</tr>
<tr>
<td>space a) is operable with a closed</td>
<td>area enabling diverse</td>
</tr>
<tr>
<td>flat b) requires a minimum effort of</td>
<td>occupants to rest and to</td>
</tr>
<tr>
<td>operation.</td>
<td>turn 180 degrees.</td>
</tr>
<tr>
<td>All plumbing fixtures in “liveable”</td>
<td>Cabintery, fixtures, and</td>
</tr>
<tr>
<td>bathroom and/or toileting space a)</td>
<td>assistive devices can be</td>
</tr>
<tr>
<td>are operable with a closed flat and b)</td>
<td>reconfigured to facilitate</td>
</tr>
<tr>
<td>require a minimum effort of</td>
<td>diverse structural</td>
</tr>
<tr>
<td>operation.</td>
<td>adaptation or use of</td>
</tr>
<tr>
<td></td>
<td>various components.</td>
</tr>
<tr>
<td><strong>Level 5: All-Inclusive</strong></td>
<td>All plumbing fixtures a)</td>
</tr>
<tr>
<td>All cabinetry/fixture in all bathing</td>
<td>are operable with a closed</td>
</tr>
<tr>
<td>and/or toileting space a) is</td>
<td>flat and b) requires a</td>
</tr>
<tr>
<td>operable with a closed flat or a 50</td>
<td>minimum effort of operation.</td>
</tr>
<tr>
<td>open hand and b) requires a</td>
<td>All cabinetry/fixture in all</td>
</tr>
<tr>
<td>minimum effort of operation.</td>
<td>bathing and/or toileting</td>
</tr>
<tr>
<td></td>
<td>space a) is operable with</td>
</tr>
<tr>
<td></td>
<td>a closed flat and b) requires</td>
</tr>
<tr>
<td></td>
<td>a minimum effort of</td>
</tr>
<tr>
<td></td>
<td>operation.</td>
</tr>
<tr>
<td>Perceptibility of plumbing fixtures.</td>
<td>All plumbing controls (e.g.</td>
</tr>
<tr>
<td>All plumbing fixtures in “liveable”</td>
<td>sinks and bathing fixtures)</td>
</tr>
<tr>
<td>bathroom and/or toileting space a)</td>
<td>provide intuitive visual</td>
</tr>
<tr>
<td>provide security against scalding.</td>
<td>and tactile cues.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Security of plumbing fixtures.</td>
<td>All plumbing fixtures in all</td>
</tr>
<tr>
<td></td>
<td>bathing and/or toileting</td>
</tr>
<tr>
<td></td>
<td>spaces provide security</td>
</tr>
<tr>
<td></td>
<td>against scalding.</td>
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</table>
## ORGANIZATION OF THE DOCUMENT

### Mobility within bathroom
- Each “visible” toilet space contains an area enabling diverse occupants to rest and to turn 180 degrees.
- Configuration of “visible” toilet space or adjacent “visible” space enables side approach to and use of sink for diverse occupants.

### Operability of fixtures
- Sink fixture in “visible” space or adjacent “visible” space is operable with a closed flat and b) requires a minimum effort of operation.

### Perceptibility of plumbing fixtures
- All plumbing fixtures in “visible” bathroom and/or toilet space(s) provide security against scalding.

### Security of plumbing fixtures
- All plumbing fixtures in “visible” bathroom and/or toilet space(s) provide security against scalding.

### Usability Standards

<table>
<thead>
<tr>
<th>Level 1: Visible</th>
<th>Level 3: Livable</th>
<th>Level 5: All-Inclusive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility within bathroom</td>
<td>Each “visible” toilet space contains an area enabling diverse occupants to rest and to turn 180 degrees.</td>
<td>Every bathing and/or toilet space contains an area enabling diverse occupants to rest and to turn 180 degrees.</td>
</tr>
<tr>
<td>Configuration of “visible” toilet space or adjacent “visible” space enables side approach to and use of sink for diverse occupants.</td>
<td>Configuration of “visible” bathroom and/or toilet space enables front and side approach to and use of all plumbing fixtures for diverse occupants.</td>
<td>Configuration of each bathing and/or toilet space enables front and side approach to and use of sink for diverse occupants.</td>
</tr>
<tr>
<td>Operability of fixtures</td>
<td>Sink fixture in “visible” space or adjacent “visible” space is operable with a closed flat and b) requires a minimum effort of operation.</td>
<td>Cabinetry, fixtures, and adaptive devices can be reconfigured to facilitate diverse structural adaptations or purchase of additional components.</td>
</tr>
<tr>
<td>Perceptibility of plumbing fixtures</td>
<td>All plumbing fixtures in “visible” bathroom and/or toilet spaces a) is operable with a closed flat or a flat open hand and b) requires a minimum effort of operation.</td>
<td>All plumbing fixtures a) are operable with a closed flat and b) require a minimum effort of operation.</td>
</tr>
<tr>
<td>Security of plumbing fixtures</td>
<td>All plumbing fixtures in “visible” bathroom and/or toilet space(s) provide security against scalding.</td>
<td>All plumbing controls (e.g., sinks and bathing fixtures) provide intuitive visual and tactile cues.</td>
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ORGANIZATION OF THE USABILITY STANDARDS

<table>
<thead>
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<th>Mobility Criteria</th>
<th>USABILITY CRITERIA</th>
<th>Bathing &amp; Toileting Spaces</th>
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</thead>
<tbody>
<tr>
<td>Level 1: Visible</td>
<td>Each &quot;visible&quot; toilet room contains an area enabling diverse occupants to rest and to turn 180 degrees.</td>
<td>Each &quot;visible&quot; bathing and/or toiletting space contains an area enabling diverse occupants to rest and to turn 180 degrees.</td>
</tr>
<tr>
<td>Level 2: Operability</td>
<td>Configuration of &quot;visible&quot; toiletting space or adjacent &quot;visible&quot; space enables side approach to and use of sink for diverse occupants.</td>
<td>Configuration of &quot;visible&quot; bathing and/or toiletting space enables front and side approach to and use of all fixture for diverse occupants.</td>
</tr>
<tr>
<td>Level 3: Perceptibility</td>
<td>Sink fixture in &quot;visible&quot; toiletting space or adjacent &quot;visible&quot; space is operable with a closed fist or a flat open hand and b) requires a minimum effort of operation.</td>
<td>All plumbing fixtures a) are operable with a closed fist and b) require a minimum effort of operation.</td>
</tr>
<tr>
<td>Level 4: Security of fixture</td>
<td>All fixture packaging for &quot;visible&quot; bathing and/or toiletting spaces a) is operable with a closed fist or a flat open hand and b) requires a minimum effort of operation.</td>
<td>All cabinet/storage in all bathing and/or toiletting spaces a) is operable with a closed fist in a flat open hand and b) requires a minimum effort of operation.</td>
</tr>
</tbody>
</table>

USABILITY STANDARDS WITH REFERENCED EXAMPLES

- Level 1: Visible
- Level 2: Operability
- Level 3: Perceptibility
- Level 4: Security of fixture
- Level 5: All-Inclusive
## Levels of Usability

**Level 1: Visitable**
Accommodates the brief stay of diverse visitors.

**Level 3: Livable**
Accommodates the needs of diverse visitors as well as most residents, and is easily adaptable to accommodate future needs.

**Level 5: All-Inclusive**
Accommodates the needs of all visitors and residents throughout their life spans with minimal adaptation.

### Usability Criteria

1. **Mobility.**  
   *Can you get to it?*

2. **Operability.**  
   *Can you operate it?*

3. **Perceptibility.**  
   *Does it communicate with you?*

4. **Security.**  
   *Does it provide safety/protection?*
PRIMARY DEFINITIONS:
Definitions are provided below for each level of usability and each usability criterion.

LEVELS OF USABILITY

**Level 1: Visitable**
“Visitable” is the enabling of:
- ambulatory visitors,
- visitors utilizing assistive technologies, and
- visitors utilizing wheeled mobility devices.

to:
- access, move to and through, and
- remain safe and secure in

at least one connected set of spaces, including a
minimum of:
  a. one visitable approach and entry,
  b. one entry-floor visitable bathroom, and
  c. one entry-floor visitable interior space (other than the entry and bathroom).

In addition, all Level 1 (or higher) standards must be fulfilled.

**Level 3: Livable**
“Livable” is the enabling of:
- ambulatory residents,
- residents who utilize assistive technologies,
- residents utilizing wheeled mobility devices,
- residents with a wide range of strengths and dexterities, and
- residents with diverse sensory abilities.

to:
- access, move to and through,
- operate the fixtures within,
- receive and interpret sensory cues in, and
- remain safe and secure in

at least one connected set of spaces, including a
minimum of:
  a. a visitable and operable main entry,
  b. one livable bathroom,
  c. one livable kitchen,
  d. and one livable bedroom.

In addition, all Level 3 (or higher) standards must be fulfilled.

**Level 5: All-Inclusive**
“All-Inclusive” is the enabling of:
- ambulatory residents,
- residents who utilize assistive technologies,
- residents utilizing wheeled mobility devices,
- residents with a wide range of strengths and dexterities.

to:
- access, move to and through,
- operate the fixtures within,
- receive and interpret sensory cues in, and
- remain safe and secure in

all connected spaces of the home, including a
minimum of:
  a. all approaches and entries, and
  b. all interior spaces.

In addition, all Level 5 (or higher) standards described below must be fulfilled.

1. Mobility.
   Mobility is the enabling of ambulatory occupants, users of assistive technologies, and occupants utilizing wheeled mobility devices to access and move to and through various spaces.

2. Operability.
   Operability is the enabling of users with a wide range of strengths and dexterities to properly and efficiently use fixtures, mechanisms, and controls.

3. Perceptibility.
   Perceptibility is the enabling of users with diverse sensory abilities to receive and interpret a variety of sensory cues, including visual, auditory, and tactile information.

   Security is the enabling of diverse users to remain safe and protected from injury, harm, and discomfort caused by the design of the dwelling or its immediate surrounds.
ADDITIONAL DEFINITIONS:
Definitions are provided below for terms used in this document.

**All-Inclusive.** Any space or feature that meets or exceeds the criteria of Level 5.

**Diverse Occupants.** Visitors and/or residents who may: (a) be ambulatory or non-ambulatory, or use wheeled mobility devices, (b) have motor impairments or reduced physical dexterity, (c) have cognitive or developmental disabilities, or sensory impairments, or (d) have no disabilities.

**Egress.** Any interior or exterior path of travel to or from any interior or exterior space.

**Emergency Egress.** Any means of travel that can be legally defined (by applicable national and local codes/regulations) as a safe, effective means of travel in the case of fire or other emergency.

**Interior Space(s).** Any environmentally-controlled space of a residence, including, but not limited to bathing, toileting, food preparation, living, eating, and sleeping spaces.

**Liv able.** Any space or feature that exceeds the criteria of Level 3.

**Main Entry.** The most visually prominent and/or most proximal entry to the public right-of-way or parking.

**Occupant.** Any visitor, resident, or other person who temporarily or permanently inhabits a residence.

**Occupants/residents of Various Heights.** Visitor, residents, or other persons who temporarily or permanently inhabit a residence who (a) may be ambulatory, nonambulatory or may use wheeled mobility devices, (b) may be standing or seated, (c) may be a child or adult and male or female, and (d) may be 42-75” in height.

**Parking Space.** Any interior or exterior space in which the primary function is for the storage/parking of automobiles; this may be either privately owned or public.

**Resident.** One of the primary, permanent or semi-permanent occupants of a residence; or a person whose temporary or permanent address is at said residence. This may be an owner, a renter, or a family member/friend of the owner or renter.

**Public Right-of-Way.** The non-privately-owned space most proximal to an entry of a residence that is accessible to either pedestrians or vehicular traffic.

**Visitable.** Any space or feature that meets or exceeds the criteria of Level 1.

**Visitor.** Any non-resident occupant of a residence.
REFERENCES


*Universal Design New York*, vols. 1 & 2. Gary Scott Dandford and Beth Tauke, eds. in conjunction with the University at Buffalo *Center for Inclusive Design and Environmental Access*.


...
Part 2: Usability Standards

Parking, Approach & Entry  2.01
Interior Spaces (general)  2.02
Bathing & Toileting Spaces  2.03
Sleeping Spaces  2.04
Food Preparation Spaces  2.05
Exterior Spaces  2.06
Miscellaneous  2.07
### Level 1: Visitable

<table>
<thead>
<tr>
<th>Mobility at parking/right-of-way</th>
<th>Egress from parking (or public right-of-way) to the interior of one <strong>visitable entry</strong> can be easily traversed by diverse visitors.</th>
<th>Security against slipping/tripping.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility to entry (approach).</td>
<td>An interior space and an exterior space, which enable diverse occupants to rest and to turn 180 degrees, are provided immediately adjacent to <strong>visitable entry</strong>.</td>
<td>Mobility at entry (int. &amp; ext.).</td>
</tr>
<tr>
<td>Operability of entrance.</td>
<td><strong>Visitable entry</strong> (a) is operable with a closed fist and (b) requires minimum effort for operation.</td>
<td>Security from weather.</td>
</tr>
<tr>
<td>Perceptibility of entry signals.</td>
<td><strong>Visitable entry</strong> enables visual access (interior to exterior) or auditory communication (between interior and exterior occupants).</td>
<td>Mobility at entry (int. &amp; ext.).</td>
</tr>
<tr>
<td>Security against slipping/tripping.</td>
<td><strong>Visitable entry</strong> provides security against slipping and tripping.</td>
<td>Mobility to entry (approach).</td>
</tr>
</tbody>
</table>

### Level 3: Livable

<table>
<thead>
<tr>
<th>Mobility at parking/right-of-way</th>
<th>A minimum of one parking space is easily adapted to accommodate a full-size car and side loading of diverse occupants.</th>
<th>Security against slipping/tripping.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility to entry (approach).</td>
<td>Egress from parking (or public right-of-way) to the interior of the main entry can be easily traversed by diverse visitors.</td>
<td>Mobility at entry (int. &amp; ext.).</td>
</tr>
<tr>
<td>Operability of entrance.</td>
<td>Main entry (a) is operable with a closed fist and (b) requires minimum effort for operation.</td>
<td>Security from weather.</td>
</tr>
<tr>
<td>Perceptibility of entry signals.</td>
<td>Main entry provides a call device that provides visual, auditory, or tactile cues to the visitor.</td>
<td>Mobility to entry (approach).</td>
</tr>
<tr>
<td>Security against slipping/tripping.</td>
<td>Main entry provides security against slipping and tripping.</td>
<td>Mobility at entry (int. &amp; ext.).</td>
</tr>
</tbody>
</table>

### Level 5: All-Inclusive

<table>
<thead>
<tr>
<th>Mobility at parking/right-of-way</th>
<th>A minimum of one parking space accommodates a full-size van and side and rear loading of diverse occupants.</th>
<th>Security against slipping/tripping.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility to entry (approach).</td>
<td>Egress from parking (or public right-of-way) to the interior of all entries can be easily traversed by diverse visitors.</td>
<td>Mobility at entry (int. &amp; ext.).</td>
</tr>
<tr>
<td>Operability of entrance.</td>
<td>All entries (a) are operable with a closed fist and (b) requires minimum effort for operation.</td>
<td>Security from weather.</td>
</tr>
<tr>
<td>Perceptibility of entry signals.</td>
<td>All entries enable visual access (interior to exterior) for residents of various heights.</td>
<td>Mobility to entry (approach).</td>
</tr>
<tr>
<td>Security against slipping/tripping.</td>
<td>All entries provide appropriate day- and night-time illumination.</td>
<td>Mobility at entry (int. &amp; ext.).</td>
</tr>
</tbody>
</table>

#### Arkansas Usability Standards in Housing

- **Parking, Approach & Entry**
- **Level 1: Visitable**
- **Level 3: Livable**
- **Level 5: All-Inclusive**

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2.01
## Interior Spaces

### Level 1: Visitable

- **Mobility within interior.**
  - Each “visitable” space contains a minimum of one area enabling diverse occupants to rest and to turn 180 degrees.
  - Passage between each “visitable” space is enabled for diverse occupants.

- **Operability of doors.**
  - All doors connecting “visitable” spaces are operable with a closed fist.

- **Operability of windows.**

- **Operability of electrical fixtures.**
  - All lighting controls along “visitable” means of egress are operable with a closed fist and a push-stick.

- **Operability of storage units/spaces.**

- **Perceptibility of exterior**

- **Perceptibility of controls & alarms.**

- **Security against slipping/tripping.**
  - All interior materials, assemblies, and transitions provide security against slipping and tripping.

### Level 3: Livable

- **Mobility within interior.**
  - Each “livable” interior space contains a minimum of one area enabling diverse occupants to rest and to turn 180 degrees.
  - Passage between each “livable” space is enabled for diverse occupants.

- **Operability of doors.**
  - All doors connecting “livable” spaces are operable with a closed fist.

- **Operability of windows.**

- **Operability of electrical fixtures.**
  - All lighting controls in “livable” spaces are operable with a closed fist and a push-stick by residents of various heights.
  - All electrical outlets are operable by residents of various heights.

- **Operability of storage units/spaces.**

- **Perceptibility of exterior**

- **Perceptibility of controls & alarms.**

- **Security against slipping/tripping.**
  - All interior materials, assemblies, and transitions provide security against slipping and tripping.

### Level 5: All-Inclusive

- **Mobility within interior.**
  - Every interior space (excluding storage spaces) contains a minimum of one area enabling diverse occupants to rest and to turn 180 degrees.
  - Passage between each space is enabled for diverse occupants.

- **Operability of doors.**
  - All doors are operable with a closed fist.

- **Operability of windows.**

- **Operability of electrical fixtures.**
  - All lighting controls in “livable” spaces are operable with a closed fist and a push-stick by residents of various heights.
  - All electrical outlets are operable by residents of various heights.

- **Operability of storage units/spaces.**

- **Perceptibility of exterior**

- **Perceptibility of controls & alarms.**

- **Security against slipping/tripping.**
  - All interior materials, assemblies, and transitions provide security against slipping and tripping.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Level 1: Visitable</th>
<th>Level 3: Livable</th>
<th>Level 5: All-Inclusive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility within bathroom</td>
<td>Each “visitable” toileting space contains an area enabling diverse occupants to rest and to turn 180 degrees.</td>
<td>Every bathing and/or toileting space contains an area enabling diverse occupants to rest and to turn 180 degrees.</td>
<td>Configuration of each bathing and/or toileting space enables front and side approach to and use of all plumbing fixtures for diverse occupants.</td>
</tr>
<tr>
<td>Operability of fixtures</td>
<td>Configuration of “visitable” toileting space or adjacent “visitable” space enables side approach to and use of sink for diverse occupants.</td>
<td>All plumbing fixtures a) are operable with a closed fist and b) require a minimum effort of operation. 3.24</td>
<td>All plumbing fixtures a) are operable with a closed fist and b) require a minimum effort of operation.</td>
</tr>
<tr>
<td>Perceptibility of plumbing fixtures</td>
<td>Sink fixture in “visitable” toileting space a) is operable with a closed fist and b) requires a minimum effort of operation.</td>
<td>All plumbing fixtures in “livable” bathing and/or toileting spaces a) is operable with a closed fist or a flat open hand and b) requires a minimum effort of operation. 3.24</td>
<td>All plumbing controls (e.g. sinks and bathing fixtures) provide intuitive visual and tactile cues.</td>
</tr>
<tr>
<td>Security of plumbing fixtures</td>
<td>All plumbing fixtures in “livable” bathing and/or toileting space(s) provide security against scalding. 3.22</td>
<td>All plumbing fixtures in all bathing and/or toileting spaces provide security against scalding.</td>
<td>All plumbing fixtures in all bathing and/or toileting spaces provide security against scalding.</td>
</tr>
</tbody>
</table>

2.03
### Sleeping Spaces

#### Level 1: Visitable

- **Mobility** within sleeping spaces:
  - A “visitable” sleeping space is provided which meets all Level 3 criteria for sleeping spaces.

- **Perceptibility** of alarms:
  - Emergency alarms in “livable” sleeping space(s) provide both visual and auditory cues.

- **Security** of egress:
  - A minimum of one window in each “livable” sleeping space enables emergency egress or rescue of diverse occupants.

#### Level 3: Livable

- **Mobility** within sleeping spaces:
  - All “livable” sleeping spaces contain areas enabling diverse occupants to rest and to turn 180 degrees.

- **Perceptibility** of alarms:
  - Emergency alarms in “livable” sleeping space(s) provide both visual and auditory cues.

- **Security** of egress:
  - A minimum of one window in each “livable” sleeping space enables emergency egress or rescue of diverse occupants.

#### Level 5: All-Inclusive

- **Mobility** within sleeping spaces:
  - All sleeping spaces contain areas enabling diverse occupants to rest and to turn 180 degrees.

- **Perceptibility** of alarms:
  - Emergency alarms in all sleeping space(s) provide both visual and auditory cues.

- **Security** of egress:
  - A minimum of one window in each sleeping space enables emergency egress or rescue of diverse occupants.
## Food Preparation Spaces

### Level 1: Visitable
- Mobility within food prep spaces.

### Level 3: Livable
- Each “livable” food preparation space contains a minimum of one area enabling diverse occupants to rest and to turn 180 degrees. 3.29, 3.30, 3.31, or 3.32
- Configuration of “livable” food preparation space(s) enables front or side approach to and use of sink(s), appliances, and cabinetry/storage for diverse occupants. 3.26, 3.30, 3.31, or 3.32

### Level 5: All-Inclusive
- All food preparation spaces contain a minimum of one area enabling diverse occupants to rest and to turn 180 degrees.
- Configurations of all food preparation spaces enable front and side approach to and use of sink(s), appliances, and cabinetry/storage for diverse occupants.

### Mobility of fixtures.
- Operability of fixtures.
- Operability of electrical fixtures.

### Perception of plumbing fixtures.
- Perceptibility of appliances.
- Security against scalding.
### Arkansas Usability Standards in Housing

#### Exterior Spaces

<table>
<thead>
<tr>
<th>Level 1: Visitable</th>
<th>Level 3: Livable</th>
<th>Level 5: All-Inclusive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility</strong> at exterior.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mobility</strong> to neighborhood/vicinity.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operability of doors.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operability of exterior.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operability of exterior lighting.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operability of exterior lighting.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Perceptibility of exterior controls and signage.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Security</strong> against slipping/tripping.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>An exterior space including a minimum of one area enabling diverse occupants to rest and to turn 180 degrees is provided.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Passage between “livable” interior and exterior spaces is enabled for diverse occupants.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Egress from main entry of home to neighborhood amenities (e.g. shopping, public transportation, employment, etc.) is easily traversed by diverse visitors.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All doors connecting “livable” interior spaces to exterior spaces are operable with a closed fist.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exterior landscaping, finish materials, and assemblies are easily maintained.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All lighting controls in “livable” exterior spaces are operable with a closed fist and a push-stick.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All doors and drawers to storage units and spaces in exterior “livable” areas are operable with a closed fist.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All materials, assemblies, and transitions in “livable” exterior spaces provide security against slipping and tripping.</strong></td>
<td></td>
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<td><strong>All doors and drawers to exterior storage units and spaces in exterior “livable” areas are operable with a closed fist.</strong></td>
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<td><strong>All exterior lighting controls are operable with a closed fist and a push-stick.</strong></td>
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<tr>
<td><strong>All doors and drawers to exterior storage units and spaces are operable with a closed fist.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All exterior controls (e.g. light switches) and neighborhood signage provides visual, auditory, and tactile cues.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All exterior materials, assemblies, and transitions provide security against slipping and tripping.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility at electrical panels.</td>
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</tr>
<tr>
<td>--------------------------------</td>
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<td>Level 3: Livable</td>
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</tr>
<tr>
<td></td>
<td>Electrical panels enable access for diverse occupants and users of various heights. 3.38</td>
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</tr>
<tr>
<td></td>
<td>Electrical panels provide security against electrical shock. 3.38</td>
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</tr>
</tbody>
</table>
Part 3: Examples

I: Parking, Approach & Entry  3.01 - 3.08
II: Interior Spaces (general)  3.09 - 3.19
III: Bathing & Toileting Spaces  3.20 - 3.25
IV: Sleeping Spaces  3.26 - 3.28
V: Food Preparation Spaces  3.29 - 3.37
VI: Miscellaneous  3.38
Parking Space / Public Right-of-Way with Walkway, Slope 0 - 1:20

- 5' diameter tuning space at entry
- 5' diameter tuning space for every change of direction
- Slope = 0 - 1:20
- Slope = 2% max
- 8'8" min
- 11' min
- 5' min
Parking Space / Public Right-of-Way with Ramp, Slope 1:20 - 1:12

- 5' diameter tuning space
- 12'' min extension
- 36'' min
- slope = 1:20 - 1:12
- 5' min
- 5' diameter tuning space for every change of direction
- slope = 2% max
- 8'8'' min
- 11' min
- 5' min

Parking Space / Public Right-of-Way

- 34''-38''
- 4'' min
- 34''-38''
- 12'' min
- < 4''
- 34''-38''
Arkansas Usability Standards in Housing

Parking, Approach & Entry: Mobility

Passageways with Doors

possible combinations

push side  pull side

54" min
56" min
54" min*

42" min

34" - 48"

48" min
48" min
54" min
60" min
60" min

50" min*
56" min*
68" min*
74" min*

push side  pull side

= approach direction

★ = with minimal doorway (32") and doorbell, deadbolt, alarm panel, etc.

passageway width = 32" min clearance w/ door in 90° open position (typically 32" of clearance is achieved w/ the use of a nominal 36" or greater door)

maneuvering space with a diameter of 5' is required in all entry preparation spaces
Arkansas Usability Standards in Housing

Parking, Approach & Entry: Mobility

Recessed Doors

possible combinations

push side | pull side

- push side
- pull side

= approach direction

★ = with minimal doorway (32") and doorbell, deadbolt, alarm panel, etc.

passageway width = 32" min clearance w/ door in 90° open position (typically 32" of clearance is achieved w/ the use of a nominal 36" or greater door)

maneuvering space with a diameter of 5' is required in all entry preparation spaces

44" min*

32" min

48" min

60" min

50" min*

34"- 48"

48" min
Main Entrance: Door Handles

Arkansas Usability Standards in Housing

Parking, Approach & Entry: Operability

4" min O.C.

90° max handle rotation
Perceptibility of Entry Signals

Arkansas Usability Standards in Housing
Parking, Approach & Entry: Perceptibility

- Visual access to interior for residents of various heights
- Auditory communication between interior and exterior
- Appropriate day- and night-time illumination

- 34" max
- 15" - 48"
- 34" max
Arkansas Usability Standards in Housing

Parking, Approach & Entry: Security

Entry Thresholds

- **Vertical change in level**: 1/4" max
- **Beveled change in level (A)**: 1/2" max
- **Beveled change in level (B)**: 1/4" max

Approach Surface Openings

- **1/2" max openings in floor surface**
- **1/2" max before and after carpet is compressed**

3.07
Arkansas Usability Standards in Housing

Parking, Approach & Entry: Security

Weather Protection at Entrance
Clear Floor Space for All Interior Spaces

5’ diameter clearspace connected to path of travel into/through space
Clear Floor Space for Alcoves

Forward Approach

- ≥ 24”
- 48” min*
- 36” min*

Parallel Approach

- ≥ 15”
- 30” min*

* = conditions apply where the alcove depth exceeds 24”
* = conditions apply where the alcove depth exceeds 15”
Passageways without Doors

passageway width
36” min

possible combinations
push side | pull side

passageway width = 32” min clearance w/ door in 90° open position (typically 32” of clearance is achieved w/ the use of a nominal 36” or greater door)
Passageways with Doors

Arkansas Usability Standards in Housing

Interior Spaces: Mobility

Passageway width = 32" min clearance w/ door in 90° open position (typically 32” of clearance is achieved w/ the use of a nominal 36” or greater door)
Arkansas Usability Standards in Housing

Interior Spaces: Mobility

Passageways with Sliding / Folding Doors

passageway width = 32” min clearance w/ door in 90° open position (typically 32” of clearance is achieved w/ the use of a nominal 36” or greater door)

= approach direction
Arkansas Usability Standards in Housing

Interior Spaces: Mobility

Recessed Doors

possible combinations
push side  pull side

passageway width = 32" min clearance w/ door in 90° open position (typically 32" of clearance is achieved w/ the use of a nominal 36" or greater door)
Interior Door Handles

90° max handle rotation

4” min O.C.
Arkansas Usability Standards in Housing

Operable Light Controls

Electrical Outlets at Varying Heights

15” min
48” max

15” min
48” max

15” min
48” max

15” min
48” max
Arkansas Usability Standards in Housing

Interior Spaces: Operability

Storage Unit / Drawer Handles

1” min interior clearance

4” min interior clearance

Note: the maximum force required to operate storage units shall not exceed 5 lbs.
Windows at Various Heights

Arkansas Usability Standards in Housing

Interior Spaces: Perceptibility

Windows at Various Heights

Windows may not be located:

- 12” min
- 60” min
- 34” max

3.18
Arkansas Usability Standards in Housing

Door Thresholds

1:2 max slope
1/4" max

1/2" max

vertical change in level
beveled change in level (A)
beveled change in level (B)

Interior Spaces: Security

Floor Surfaces

1/2" max openings in floor surface
1/2" max before and after carpet is compressed

3.19
Arkansas Usability Standards in Housing

Bathing & Toileting Spaces: Mobility

Water Closets

- dispenser location

Maneuvering space with a diameter of 5’ which intersects the centerlines of all plumbing features is required in all toileting spaces.

Water Closet Location (a)
- Forward Approach (a)
- Parallel Approach (b)

Parallel or Forward Approach (b)
Arkansas Usability Standards in Housing

Bathing & Toileting Spaces: Mobility

Bathtub Seating

Fixed Seating

3.21

Removable Seating

maneuvering space with a diameter of 5’ which intersects the centerlines of all plumbing fixtures is required for all bathing spaces

= tub controls

9” = tub controls

maneuvering space with a diameter of 5’ which intersects the centerlines of all plumbing fixtures is required for all bathing spaces
Roll-in

A maneuvering space with a diameter of 5' which intersects the centerlines of all plumbing fixtures is required for all bathing spaces.

Transfer

A maneuvering space with a diameter of 5' which intersects the centerlines of all plumbing fixtures is required for all bathing spaces.

---

Arkansas Usability Standards in Housing

Bathing & Toileting Spaces: Mobility

**Showers**

- Roll-in
- Transfer

**Shower Controls**: 
- 30" min
- 34" max
- 38" min
- 48" max
- 27" max
- 15" max
- 15" max
- 36" min
- 36" min
- 36" min
- 36" min
- 48" max
- 48" max
- 48" min
Sinks

- 9" min toe clearance
- 17" - 25"
- 11" min knee & toe clearance
- 27" min
- 20" max
- 8" min

5' diameter maneuvering space
Shower, Bathtub or Sink Faucets: One Handle

- 4" min clearance
- 180° max handle rotation

Shower, Bathtub or Sink Faucets: Two Handles

- 3" min clearance
- 90° max handle rotation
- 4" min clearance

Storage Unit / Drawer Handles

- 1" min interior clearance
- 4" min interior clearance

The maximum force required to operate storage units shall not exceed 5 lbs.
Plumbing Fixtures Prevent Scalding

water temperature less than 115° F
5' diameter clearspace connected to path of travel into/through space
Emergency Alarms Provide Visual and Auditory Cues

installed according to manufacturer's specifications and local/national fire codes; hard-wired installation recommended
Window Egress

5.7 sq. ft. minimum net clear operable opening; installed according to manufacturer’s specifications and local/national fire codes; egress hardware and ability to open outward 90° recommended.
Arkansas Usability Standards in Housing

Food Preparation Spaces: Mobility

Pass-Through Type 1

30" min
28" - 34"
27" min
8" min
9" min
toe clearance
11" min
17" - 25"

maneuvering space with a diameter of 5’ is required in all food preparation spaces
Pass-Through Type 2

A maneuvering space with a diameter of 5’ is required in all food preparation spaces.
maneuvering space with a diameter of 5’ is required in all food preparation spaces
A maneuvering space with a diameter of 5' is required in all food preparation spaces.
Arkansas Usability Standards in Housing

Food Preparation Spaces: Operability

Work Surfaces at Varying Heights

- **knee & toe clearance**
  - 8” min
  - 9” min toe clearance
  - 11” min
  - 17” - 25”
  - 20” max
  - 30” min

- **34” min**
  - 34” min
  - 48” max

- **48” min**
  - 48” min

- **Food Preparation Space**
  - 20” - 25”

- 20” max

* = if counter width is 20” or less, then height is 48” maximum
** = if counter width is 20” - 25”, then height is 34” minimum

Maneuvering space with a diameter of 5’ is required in all food preparation spaces
Arkansas Usability Standards in Housing

Food Preparation Spaces: Operability

Kitchen Faucets: One Handle

4” min handle rotation

90° max handle rotation

3” min

Kitchen Faucets: Two Handles

Storage Unit / Drawer Handles

1” min interior clearance

4” min interior clearance

the maximum force required to operate storage units shall not exceed 5 lbs.
Arkansas Usability Standards in Housing

Food Preparation Spaces: Operability

Operable Light Controls

Electrical Outlets at Varying Heights

- Operable Light Controls
  - 44" max
  - 20" - 25"
- Electrical Outlets at Varying Heights
  - 48" max
  - 20" max
  - 44" max
  - 15" min
Arkansas Usability Standards in Housing

Food Preparation Spaces: Perceptibility

All Devoted Outlet Appliances Provide Intuitive Visual and Auditory or Tactile Cues

- Stove / range controls are labeled and within easy reach
- Refrigerator / freezer controls are labeled and within easy reach
- Dishwasher controls are labeled and within easy reach
Plumbing Fixtures Prevent Scalding

Water temperature less than 115°F
Electric Panel

Installed by a licensed electrician to current industry standards and federal/local codes.