World Disability Union

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Designing homes for people with disabilities involves a range of modifications to ensure accessibility, safety, and comfort. Each type of disability requires specific adaptations. Below, I will outline the key differences in engineering design between homes for people with disabilities and regular homes for various types of disabilities:

 1. **Mobility Impairments**

- Entrances and Doorways:

  - Regular Homes: Standard door widths and steps at entrances.

  - Accessible Homes: Wider doorways (typically at least 32 inches clear width), ramps instead of steps, level thresholds, and automatic door openers.

- Interior Layout:

  - Regular Homes: Standard corridor widths and room layouts.

  - Accessible Homes: Open floor plans with wide hallways (36 inches or more), spacious rooms for maneuverability of wheelchairs, and clear space around furniture.

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- Bathrooms:

  - Regular Homes: Standard fixtures and dimensions.

  - Accessible Homes: Roll-in showers, grab bars, lower sinks and countertops, accessible toilets, and enough turning space for wheelchairs.

- Kitchens:

  - Regular Homes: Standard counter heights and layouts.

  - Accessible Homes: Lower countertops, accessible cabinets (pull-out shelves, lazy Susans), appliances with front controls, and space underneath counters for wheelchair access.

 2**. Visual Impairments**

- Lighting:

  - Regular Homes: Standard lighting.

  - Accessible Homes: Enhanced and adjustable lighting, non-glare surfaces, and task lighting in specific areas.

- Contrasts and Signage:

  - Regular Homes: Standard contrasts and signage.

- Accessible Homes: High-contrast color schemes, tactile indicators, Braille labels on appliances, and larger, high-contrast signage.

- Flooring and Obstacles:

  - Regular Homes: Standard flooring and potential obstacles.

  - Accessible Homes: Consistent, non-slip flooring, clear pathways without obstructions, and tactile walking surface indicators (TWSIs).

3. **Hearing Impairments**

- Alarm Systems:

  - Regular Homes: Standard auditory alarms.

  - Accessible Homes: Visual alarms (flashing lights), vibrating alarms for beds, and visual doorbells.

- Communication Systems:

  - Regular Homes: Standard telecommunication setups.

  - Accessible Homes: Video relay services, amplified phones, and visual alert systems for phone and doorbell notifications.

4. **Cognitive Impairments**

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- Design Simplicity:

  - Regular Homes: Standard complexity in design.

  - Accessible Homes: Simple, intuitive layouts, clear and consistent signage, color-coded areas, and easy-to-use controls and switches.

- Safety Features:

  - Regular Homes: Standard safety measures.

  - Accessible Homes: Additional safety features like automatic shut-off for stoves, door alarms, and secure locks that prevent wandering.

 5. **Elderly (often a combination of several needs)**

- General Adaptations:

  - Regular Homes: Standard features.

  - Accessible Homes: Combination of the above features, such as grab bars, non-slip flooring, lever-style door handles, stair lifts, and home automation systems for easy control of lighting, heating, and security.

 6. **Universal Design (for multiple disabilities)**

- Inclusive Features:

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- Regular Homes: Standard design not necessarily accommodating all disabilities.

- Accessible Homes: Universal design principles that cater to a wide range of abilities, such as adjustable-height counters, multi-height work surfaces, and lever handles for doors and faucets.

 Summary

In essence, homes designed for people with disabilities incorporate a wide array of adjustments to standard homes to enhance accessibility, safety, and usability. These adjustments will tailored to the specific needs of individuals with various types of disabilities, ensuring that the home environment is as accommodating and supportive as possible.

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