How Can Architecture Reduce Barriers?

“When something can't be fixed then the question is what can we build instead?”

— Alice Wong, "Year of the Tiger"

A section of the Perkins&Will Disability Inclusion series

Note: Color choices have been reviewed for accessibility and this document uses alt text. The document's font, Atkinson Hyperlegible, was chosen due to its demonstrated increased accessibility for readers.

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The Built Environment Has Contributed to Disablement

The design and policies that govern our built environment have a disabling impact on individuals by reinforcing physical barriers that limit access, mobility, independence and participation in daily life.[1] Public spaces are an amenity intended for everyone regardless of disability. Unfortunately, the built environment has a legacy of creating segregated and exclusionary spaces with the intent of keeping groups like racial minorities and people with disabilities out. [2] [3]

Similarly, **hostile architecture** known as "defensive architecture" or "exclusionary design" is an urban design strategy that prevents and restricts access to public spaces.[4] This has negatively impacted minority groups, people with disabilities, and individuals experiencing homelessness the most.

Disablement is an action. Disablement is systemic.

This document highlights how disablement occurs in our:

- Public policies
- Social attitudes
- Workforce and education
- Architecture

Read on to learn why we should care and how we can reduce barriers.

Interior of a modern library with large floor to ceiling windows that let in natural light. A wooden stairway is the main feature with several tiers of wooden bookshelves filled with books at stair landings.

Case Study: Queens Borough Public Library

In 2019 a lawsuit was filed challenging the inaccessibility of a new public library. The new library featured barriers at multiple scales: reading stacks that only have stair access, a children's section with multi-level lounging that is inaccessible, roof terrace without access for individuals with mobility impairments, and a single elevator that does not stop on every floor.[5] These architectural features are blatant examples of how the built environment can further disable individuals. The United States Attorney's Office, Eastern District of New York, cited remediation efforts to include: adding a platform lift to access library stacks, adding a skybridge, wheelchair accessible spaces in the children's area, and an accessible entry to the rooftop terrace.[6]

How Do Public Spaces Keep the Public Out?

Outdoors

- Adding spikes on ledges or railings to prevent people from resting on them. Dividers on public benches which prevent unhoused individuals from sleeping on them and different body sizes from using them.
- Street bollards, thorny plants, or fences placed between adjacent neighborhoods to prevent organic movement of individuals.
- Lack of a solid wheelchair accessible surface for public outdoor venues.

Entry/ Exit

- Historic and older buildings with only stairs. No ramp or elevators.
- Accessible entrances at the rear of the building away from the main entrance.
- Lack of signage for accessible routes. No clear wayfinding for locating restrooms, main entrances, and other key spaces.
- Entry spaces without a canopy for those that need additional time entering a building.

Circulation

- Placing elevators away from main grand staircases. Providing stair lifts that require an attendant to operate.
- Narrow spaces that limit movement for wheelchairs, walkers, scooters, or service animals.[7] [8]
- Uneven, shiny, or slippery surfaces that are hard to navigate for those with balance issues, prosthetics, wheelchairs or visual impairments.

Glass-walled elevator entrance with a green "Elevator" sign above mounted on a concrete roof. A curb with yellow edges is in front of the elevator enclosure. It is flanked by parked cars and a fire extinguisher on the left. In the background is an office building under clear skies.

Lack of a curb cut and proper door clearances makes this "accessible" elevator inaccessible.

What Can You Do?

Design standards are the minimum.

Design standards and checklists do not encompass all disability communities. Be curious, acknowledge ignorance and embrace learning. The disability communities are the experts. We should consult and listen to them to make our designs better for all.

Let's look at an example for designing WITH the DeafSpace community.

- **Incorporate accessibility audits.** Measure and describe any barriers. Establish check points during the design process to review inclusive designs and discussions. [9] [10]
- **Consult established design guidelines.** For example, DeafSpace as outlined by Gallaudet University considers sensory reach; space and proximity; mobility and proximity; light and color; acoustics. [11] [12]

A circular bench made out of wood on a polished concrete floor serves as a conversation circle at Gallaudet University. It sits within a multi-height atrium space surrounded by white wall.

> **"Good design enables, bad design disables"**
>
> — Paul Hogan, European Institute for Design and Disability

- **Consider assistive tools and accessible meetings**: sign language interpreters, hearing loop, seating arrangements in a conversation circle to maintain clear visuals for everyone, live captions, image descriptions, and tactile materials amongst others. Provide clear wayfinding to an accessible venue for design discussions.
- **Engage with and learn from disabled communities.** Question the ideological underpinnings and be inquisitive. Ask "who am I excluding?" "What can I learn from disabled communities?" "What assumptions and biases am I making?".

Why Should We Care?

The built environment has a legacy excluding people with disabilities. We can take cues from the phrase “Nothing about us, without us”. As designers and architects we can and should do better. We should take the time to **listen, respond, and act.**

How can we create inclusive designs when even our imagined futures are shaped by ableist perspectives? Why does the portrayal of the future through sci-fi, a theoretical “improved” society, present itself with little attention toward accessible architecture? If we imagine a future that still contains simple barriers like stairs, how can we even begin to design for today?[14] A start is to look to and ask for advice from disability-led communities.

"Crip Technoscience"

An experimental practice of knowing-making, stemming from the disability community, that challenges “hierarchies and power relations within the field of access-knowledge by shifting expertise to those with lived experiences of disability and away from the outside experts often designing in their name”.[13]

Design does not need another form of disablement.

Design needs to provide inclusive and equitable access. Increased access benefits everyone regardless of disability status. Here is what we gain when we remove barriers -

- **Stronger communities.** When people are systematically excluded, our communities fracture. A society that leaves some behind cannot call itself whole.
- **Economic stability.** Inaccessible infrastructure sidelines talent, limits employment, and weakens entire sectors. When cities invest in their commuities , rather than retro fitting later, producitivy increases, innovation flourishes, and we build long-term economic health.
- **Healthy living.** When our buildings, transportation, and care systems don’t meet the needs of all bodies and minds, we don’t just inconvenience individuals - we actively harm them.
- **Mental wellbeing**. Adults with disabilities report frequent mental distress at a rate five times more often than those without disabilities . Our built environment should not contribute to increasing mental stress.
- **Joy itself.** Inclusion isn’t just about access - it’s about belonging. When people see themselves reflected in the spaces around them, it affirms their place in the world.

Dig Deeper

Check out these resources to learn more!

- **Disability, Space, Architecture: A Reader**
  Edited by Jos Boys

- **The DisOrdinary Architecture Project**
  A podcast created by Disabled, Deaf, and Neurodivergent creators to reimagine built environment practice through radically inclusive and imaginative design.

- **Design With Disabled People Now**
  An evolving online resource and toolkit authored by a Deaf landscape designer to equip architects, planners, and designers to go beyond ADA compliance.

- **Critical Design Lab**
  A multidisciplinary arts and design collective rooted in disability culture and crip techno-science.

Author's Notes

This document is primarily US-centric. This is in part due to the authors' lived experience and knowledge base. We acknowledge that disability inclusion is a global issue, and hope that this work can be expanded upon and applied from an international perspective.

We welcome feedback! If you have any questions or insights to add, or you are interested in learning more, please reach out to the primary author: **Larissa Sattler** (Human Experience Team, Perkins&Will).

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Endnotes

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Image Credits

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