BARRIER FREE CLE

WORKING TO ELIMINATE BARRIERS TO EVERYDAY LIFE IN CLEVELAND NEIGHBORHOODS
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INTRODUCTION
Barrier-free Cleveland examines barriers to everyday life experienced by seniors and people with disabilities. Barrier-free Cleveland focuses mainly on barriers to physical mobility, but also looks at neighborhood-level supports for people with cognitive disabilities, developmental disabilities, vision and hearing loss.

This guide is for residents, caregivers, business owners, designers, public officials, developers, and anyone interested in creating more accessible inclusive neighborhoods. Recommendations are organized into design strategies, policy recommendations, and individual actions that reduce barriers and improve accessibility in city neighborhoods.

According to the US Centers for Disease Control, over 61 million adults in this country live with a disability. In addition, the national population of people 65-and-older is growing rapidly. Neighborhoods need to be adapted to meet the changing needs of residents.

Disability impacts everyone. At some point in our lives, most people experience temporary or permanent disabilities due to illness, accidents or the effects of aging. Family members, friends, and neighbors may experience disabilities as well. Barrier-free Cleveland aims to make neighborhoods better, safer, and more inclusive for all.

Perhaps “disability” is not the right word. All human bodies have limitations of one kind or another. City neighborhoods and public spaces are designed for some bodies but not for others. A person isn’t disabled until they encounter a barrier or find themselves in an environment that is not designed to meet their needs. Barrier-free Cleveland aims to change the conditions that limit access to public spaces, public transit, and neighborhood destinations.
INTRODUCTION AND OBJECTIVES
Barrier-free Cleveland was made possible through the generous support of the Cleveland Foundation. The project is a partnership between Kent State University’s Cleveland Urban Design Collaborative (CUDC), DigitalC, and Cleveland State University.

- CUDC focused on urban design strategies, community engagement, and social equity.

- DigitalC led the research into assistive technologies and conducted interviews with residents of the Scranton Castle senior housing complex in the Clark-Fulton neighborhood, a public housing estate that is run by the Cleveland Metropolitan Housing Authority.

- Cleveland State University led the research into smart and accessible parks. CSU also developed a survey to better understand the accessibility needs of older residents and people with disabilities.

- Suzanne Seifert of HRS Consulting conducted individual interviews with people experiencing physical and developmental disabilities, vision and hearing loss, and other mobility challenges, including older residents aging in place in their neighborhoods.

- Maximum Accessible Housing of Ohio and ADA Cleveland offered guidance throughout the process. The Cuyahoga County Board of Developmental Disabilities and ADA Cleveland arranged focus groups so the project team could hear directly from people impacted by neighborhood barriers. MAHO led mobility experiences in Clark-Fulton and Hough.
Barrier-free Cleveland is an on-going effort to identify barriers to the activities of everyday life in Cleveland neighborhoods for older residents and people with disabilities. The work is based on the experiences of Cleveland residents who participated in the project through one-on-one interviews, focus groups, a community survey, and neighborhood activities.

Neighborhood barriers make it hard for people with physical impairments, vision loss, hearing loss, and cognitive challenges to feel safe in their neighborhoods and fully participate in the activities of everyday life. The project team worked with a Community Sounding Board to explore ideas for removing neighborhood barriers through urban design and infrastructure investments, digital technology, and community programs.

The goal of this work is to make it easier for people of all ages and abilities to:

- visit neighborhood destinations;
- socialize with family and friends;
- get to work, school, doctor’s appointments, shopping, and religious services;
- use public transit and public space; and
- access information, knowing what to expect and whether they will be safe and comfortable at their destination.
Barrier-free Cleveland focused on two Cleveland neighborhoods, Hough on the city’s east side and Clark-Fulton on the west side. These neighborhoods were developing master plans at the same time that community engagement efforts for Barrier-free Cleveland were taking place, so we looked for opportunities to integrate the principles of Barrier-free neighborhoods into the planning recommendations. But this guide is meant to be useful in any neighborhood, not only the two that were the focus areas for the work.
There are many kinds of barriers in city neighborhoods and many kinds of disabilities. While disabilities affect everyone, some people bear a greater burden. Not all people and all neighborhoods have equal access. People with lower incomes often live in neighborhoods with vacant buildings and land, poorly maintained streets and sidewalks, and few high-quality parks and public spaces. People of color have less access to healthcare and often receive lower quality care, which can lead to chronic health conditions and disabilities.

For everyone to participate in public life, we need to design and build public spaces that are accessible to all. Barriers in city neighborhoods limit access and can make people feel invisible. While it is important to remove barriers that impact everyone, it is especially important to help people who are experiencing the biggest challenges. Ignoring accessibility issues or meeting the bare minimum for access isn’t working for many people with disabilities, who continue to encounter barriers everyday.

There are three questions at the center of the Barrier-free Cleveland initiative:

1. What does a barrier-free city look like and how does it function?
2. How do we build equity into neighborhoods and address barriers present in the public realm?
3. What kinds of investments will produce the greatest benefits for the most people, and especially for people most in need of support.
The recommendations in this guide are in response to these questions. But this is just the beginning. Barrier-free Cleveland is about making investments to advance human potential, especially for residents who have been held back by racism or poverty, creating conditions for healthier and economically stronger neighborhoods.

The COVID-19 pandemic has exposed long-standing issues of inequity. In this moment, increased federal funding has become available for COVID recovery and investments in America's urban infrastructure. We have an opportunity to rebuild the infrastructure of city neighborhoods to better meet the needs of all residents, and to enable people to age in place more comfortably.

But it can’t just be a moment, it needs to become a movement. This is an opportunity to make big changes and to redesign public spaces and city streets from a healthier and more inclusive point of view. Now is the time to recognize that good design is accessible design.

SMART CITY VISION

The City of Cleveland uses Smart City technologies to connect people, places, and opportunities. The city’s main focus has been on smart street lights and security cameras to reduce energy costs and make neighborhoods safer and more sustainable.

Moving forward, Smart City tools can put data and digital technology to use to improve the lives of city residents. This is especially important for older residents and people with disabilities, since technology can help to provide more options for people who need them the most.
A Smart City works at three levels:

1. Smartphones, tablets, and wearable devices (like smart watches) are connected to sensors in city neighborhoods by a high-speed communication network. Sensors send signals to smartphones or other digital devices to give people personalized information about transportation, navigation, neighborhood conditions, and safety issues.

2. Specific applications are designed for smartphones, tablets, and wearable devices that people can use in a variety of ways, like crossing streets safely, seeing in advance whether a destination is wheelchair accessible, or navigating around road construction projects or other barriers. People can install the applications on their personal devices to meet their specific needs.

3. As neighborhood sensors are installed and more people use phone-based applications, the system responds better to users’ needs. This enables the city to make street repairs and infrastructure improvements in places where they will do the most good.
Smart City technologies can eliminate barriers and make neighborhoods more accessible by:

- Reducing crime and improving safety through the remote monitoring of public spaces
- Identifying and addressing barriers, like flooding and damaged pavement as they arise, rather than waiting for someone to make a complaint.
- Monitoring and communicating neighborhood conditions that put people's health at risk, like poor air quality, high heat days, storm and flash flood warnings, and beach alerts for water quality.
- Creating digital meeting places to bring people together.

Greater Cleveland has a large and growing number of older residents. Research by the AARP shows that most people prefer to continue to live in their own homes and communities as they get older. Smart City technologies can make neighborhoods safer and more comfortable for people as they age in place. These technologies can help to reduce the cost of care, as some conditions can be monitored remotely rather than by an in-home care provider. Technology can also help older residents maintain their independence when they are no longer able to drive and help people get around in their neighborhoods more safely.

Technology needs to be simple and reliable. Overly complex devices and applications may be rejected by community members and exclude people with cognitive disabilities. For example, driverless cars will be able to offer cost effective transportation and robots may offer convenient grocery deliveries. But it will take time for people to understand and accept these new technologies.
ACCESSIBLE NEIGHBORHOOD DESIGN
This section is for designers, planners, and community development corporations looking to eliminate barriers to access in city neighborhoods.
1. Start with the fundamentals

- Accessible streets and sidewalks are important, since this is the basis for how people get around. Consistent standards are needed for sidewalk widths, curb ramps, and the height and location of crosswalk buttons so people know what to expect, even when they are in unfamiliar neighborhoods.

- Curb ramps should be designed so that they don’t pool with rain, snow, and ice in the winter.

- Sidewalks should be free of obstructions, like telephone poles, trash cans, and outdoor cafes. Maintaining a clear right-of-way is essential for pedestrian safety and comfort.
Outdoor lighting is essential for safety, visibility, and comfort. Well-designed lighting can also help people find their way, which is especially important for people with vision loss and for those dealing with dementia and other cognitive impairments.

Lighting should be bright enough that people can see where they are going, but not so bright to create glare.

Continuous, well-maintained sidewalks of a standard and generous width are essential.

Include clear, highly visible crosswalks at every intersection. Avoid highly decorative crosswalks that could be confusing for people with visual impairments, dementia or autism.

Provide accessible public restrooms in parks, public spaces, and commercial districts.
2. Recognize existing problems

- The Americans with Disabilities Act was passed in 1990. It’s easy to assume that most accessibility issues have been addressed over the past 30 years. But in every city neighborhood, there are many examples of intersections that are unsafe, buildings that are inaccessible, parks that exclude some users, and transit that doesn’t meet the needs of all. Most neighborhoods are a confusing patchwork of accessible and inaccessible places.

- Better conditions are only possible when we notice the hard and ugly realities that many people have to live with everyday. Then we can visualize better and more inclusive neighborhoods.
3. Make improvements in phases

- Aim for complete accessibility but recognize that this will be an ongoing process.

- The Barrier-free Cleveland team conducted interviews with older residents and people with disabilities. Some noted that they have found routes that work for them. Once they have their route down, they stick with it, for safety and predictability.

- When working in a neighborhood, start by identifying a few key routes in places where people already need and want to be. Invest in excellent crosswalks, good lighting, accessible transit, and other improvements to these routes. The goal should be to make each route as seamless and predictable as possible. These initial barrier-free routes will set the standard for additional investments, creating a network of accessible connections across an entire neighborhood, street by street over time.

- Identify the most important routes through community engagement and on-site observation. Use color coding or wayfinding signage so accessible connections are easy to find.

- Provide seating and rest areas so people can take breaks. Ideally, seating should be provided every 200 to 300 feet on main pedestrian routes, to make walking more comfortable and possible for older people and people with mobility limitations.

- Offer multiple forms of wayfinding, including text-based signage, verbal, and visual cues. Murals, statues, and paving colors can be used to help direct people to their destinations. But avoid designing places that are overwhelming to the senses.
4. Co-design with people who are impacted by barriers

- Reach out to people who have disabilities. They are experts in navigating their neighborhoods.
- Avoid a top-down approach to making design decisions and never presume that professional design expertise is more important than lived experience.
- Seek input and collaboration with people who have different kinds of disabilities.
5. Find in-roads into the design professions for people with disabilities

- A fundamental principle of disability justice is, “Nothing for us without us,” but people with disabilities are very rare in the design fields. The design professions need designers who have experienced barriers in the built environment. Architecture and design programs need to do a much better job of recruiting and training a diverse range of people for the design fields.

- Meaningful partnerships are needed between designers and people with disabilities.

- Design fees should budget for inclusion and compensate people for their knowledge and lived experiences in helping to create better and more accessible places.

Alexa Vaughn, landscape architect who is deaf

Vaughn pioneered the concept of “DeafScape,” to make streets more accessible for people with hearing loss. The American Society of Landscape Architects consulted with her to create universal design guidelines for streets, parks, plazas, playgrounds, and gardens.
1. **TEXTURED TRANSITION** to provide cues between sidewalks, planting areas, and the street.
2. **SHOULDER ZONE** to create a buffer zone between the sidewalk and the street.
3. **DEGREE OF ENCLOSURE** to create a secure, semi-private space to see and be seen.
4. **NIGHT LIGHTING** to create safer, more visible streets after dark.
5. **FLEXIBLE SEATING** to accommodate small to large groups joining in conversation.
6. **WIDER PATHWAY** a minimum of 10 feet to provide space for conversation and circulation.
7. **RHYTHM** to create visual patterns along sidewalks, aiding in spatial understanding.
8. **VISUAL CUE** to increase awareness and safety, especially at busy intersections.

**AN URBAN DEAFSCAPE** is a critique of the planning profession itself. Many of these guidelines appear to be standard practice in streetscape design, as per the ADA. However, they are often overlooked or treated as an afterthought. Applying these simple guidelines to streets has the potential to go beyond the ADA in creating space for the deaf community, increasing safety, improving circulation, and making better urban landscapes for all.

Graphic created by
Aleza Vaughn and Courtney Ferris
6. One size does not fit all

• Learn all you can about the different disabilities people live with. Design spaces that benefit a wide range of users while also addressing specific disabilities. Meaningful partnerships are needed between designers and people with disabilities.

1. Barriers experienced by people with mobility impairments.
   **Case study:** *Smart Mobility Hubs* City of Columbus
   Smart Mobility Hubs are designed to bring the city’s many transit options together at a single, convenient location so that you can get where you need to go efficiently and affordably.

2. Barriers experienced by people with vision impairments.
   **Case study:** *Tactile and Braille Street Signs User Guide* City of Sydney
   Pedestrian navigation in braille and large, raised lettering accessible to people who are blind or have low vision.

   **Case study:** *DeafScape Streetscape*
   The DeafScape Streetscape, created by Alexa Vaughn Brainard and Courtney Ferris calls for streets with public seating, vegetation, night lighting, tactile cues, and wide sidewalks.

4. Barriers experienced by people with dementia, autism, and other cognitive impairments.
   **Case study:** *A City for Marc: An Inclusive Urban Design Approach to Planning for Adults With Autism* Elizabeth Decker, Kansas State University Master’s degree project, 2014
   A toolkit that helps designers and planners make cities more inclusive for adults with autism that proposes knitting together urban opportunities such as public transportation and affordable housing.
7. Planning ahead for better design and lower costs

- Inclusive design needs to be part of a project from the beginning, not as an afterthought or only to meet minimal legal requirements.
- It can be difficult and expensive to retrofit inaccessible spaces, so learn to recognize exclusion and eliminate barriers in the design phase, rather than after a project is built.

In the last three fiscal years, New York City has spent more than $125 million on ramp upgrades, and has another $1.55 billion budgeted for the work for the next 10 years, according to a spokesperson. “Under this settlement, we continue that progress with a long-term, comprehensive plan to survey and upgrade ramps citywide, including the completion of installations.”
8. Visual impact versus low-key functionality

- Some things are designed to be useful without being noticed. For accessibility features like ramps and lifts, one design approach might be to attract as little attention as possible. People who use these features should be able to easily locate them and count on them being available, but not feel like they are in the spotlight when they are moving around.

- However, discretion doesn’t require invisibility. Accessible design can be beautiful and understated. And sometimes accessible features are meant to be very visible, to bring attention to neighborhood barriers and the ways that streets and public spaces include and exclude different people. Highly visible accessibility features can be useful for public education, but prominent features might also draw unwanted attention to people who use them. It’s important to work with people experiencing neighborhood barriers and to take their needs and preferences into account.

*Case study: Sensory Street Scape*

*Autism Planning And Design Guidelines 1.0*

Planning through the lens of autism can benefit everyone. Sensory streetscapes create spaces and infrastructure that help people feel more connected, safe, and calm.
9. Pilot projects and temporary installations

- Pilot projects and temporary installations provide opportunities to work through accessibility challenges and test new approaches. Long-term changes often start with small experiments, testing, and patience. A successful small project can then be refined, expanded, and replicated in other areas.

- Avoid temporary projects that make neighborhoods less predictable and therefore harder to navigate. Talk to people about temporary projects in the planning stages. More importantly, involve older residents and people with disabilities in the design and implementation of a project, to make sure that it is truly meeting the needs of community members.

- Help people navigate through changes in their neighborhoods, including construction sites. Design accessible temporary paths around construction zones, so pedestrians aren’t forced into the street when construction blocks the sidewalk.

Case study: Toronto StopGap Foundation

The StopGap Foundation creates colorful, temporary ramps wherever needed. The ramps are custom designed to fit the height of a step. They are made of wood, are lightweight, treated with high-grade exterior paint with a non-slip additive. An average sized ramp weighs around 30 pounds and can be easily transported. The design has gone through years of trial and error and results in a ramp that most find easy to manage and use.
10. Smart City technologies

- 5G technology and the Internet of Things is increasing the speed and amount of data available through smartphones and other personal devices. This will create new opportunities for accessibility. For example, driverless cars will offer seniors and people with disabilities new levels of mobility, a critical issue given the patchwork of paratransit options currently available.

Case study: UCLA Smart Parks Toolkit

UCLA’s Luskin Center for Innovation created a Smart Park toolkit describing technology tools that can be incorporated into park spaces to make them accessible to a wider range of users. The toolkit describes each technology, how it fits into a park setting, why a park manager may decide to use the technology, and challenges that may occur during implementation. The toolkit also provides specific examples to explain how technology can be applied in park settings.
• Incorporate the knowledge of people with different kinds of disabilities into smart city investments. Smart city tools will only work if they are designed with a deep understanding of the needs and preferences of people who will use them.

• Sensors and other technology can be designed into streets and public spaces. New technologies offer greater independence and provide opportunities for spontaneous interactions.

• Focus on ways that digital technologies can improve social interactions. For example, Smart Parks can be designed to be safe and accessible to all, while helping to bridge the digital divide.

• Smartphone applications can be designed to improve the efficiency of Paratransit, so people who use this service don’t experience the long delays which are currently very common.

• 5G technology and the Internet of Things is increasing the speed and amount of data available through smartphones and other personal devices. This will create new opportunities for accessibility. For example, driverless cars will offer seniors and people with disabilities new levels of mobility, a critical issue given the patchwork of paratransit options currently available.
GOVERNMENT ACTIONS AND POLICIES
This section is for cities and public agencies working to make neighborhoods safer and more accessible for all residents at every stage of their lives.
1. Planning and infrastructure

Neighborhood plans, infrastructure investments, and new developments should focus on accessibility from the beginning. Encourage and incentivize development projects that go beyond the Americans with Disabilities Act (ADA) for truly inclusive communities.

- Accessibility should be an integral part of all neighborhood plans, not an afterthought.
- Housing tax abatement should be linked to the creation of accessible housing units and site features.
• Require public sidewalks to be code complying and in good repair before issuing an occupancy permit for a new or rehabbed building.

• Conduct accessibility audits to identify and address barriers in the built environment.

• Rehabilitate or demolish vacant buildings and maintain vacant lots so these properties don’t become barriers and safety hazards.

• Outdoor shopping centers can be particularly challenging for seniors and disabilities. Make sure sidewalks are continuous and extend from bus stops to and parking lots directly to store entrances. Require or suggest awnings and other features that protect pedestrians in bad weather.

**Case study: Walkability Audit - Scores and Comments**

*Walkability-Audit-Scores-and-Maps-PDF (trpc.org)*

The U.S. Environmental Protection Agency (EPA) provided technical assistance to Thurston Regional Planning Commission (TRPC) to conduct a walkability audit in the cities of Lacey, Olympia and Tumwater. This occurred on Saturday, August 11, 2012. The daylong event began with a presentation on what makes streets great and training on the use of a walkability audit survey tool. This tool assisted the participants to document the existing conditions along the audit route and record their impressions about aspects of the built environment that are important for walkability.
2. Existing tools and ordinances

- Roadway, streetscape, and transit infrastructure projects should fully comply with the city’s updated Complete & Green Streets ordinance and Vision Zero standards.

- The city’s zoning ordinances can help expand the supply of safe and flexible housing for older residents and people with disabilities. Zoning policies may need to change to encourage more multi-generational housing and accessory dwelling units where on-site caregivers can live.

- Give parks and public spaces street addresses so people can get there by Paratransit and ridesharing services, which require a street address for pick up and drop off when scheduling a ride.

Case study:
Complete Streets policy implementation - Smart Growth America
Complete Streets policy implementation - A Resource Appendix
3. Consistent streetscape standards

Adopt consistent citywide streetscape standards, including:

- Pedestrian signal buttons should be at the same height and placement and must be accessible to people in wheelchairs.
• Minimum pedestrian clearances should be maintained; sidewalk dining should only be permitted in areas where sufficient sidewalk width can be maintained.

• Maintain street trees so their roots don’t damage sidewalks and their branches don’t block the right-of-way.

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1 The frontage zone defines the section of the sidewalk that functions as an extension of the building, whether through entryways and doors or sidewalk cafés and sandwich boards. The frontage zone consists of both the façade of the building facing the street and the space immediately adjacent to the building.

2 The pedestrian clear path defines the primary, dedicated, and accessible pathway that runs parallel to the street. The clear path ensures that pedestrians have a safe and adequate place to walk and should be 1.8-2.4 m wide in residential settings and 2.4-4.5 m wide in downtown or commercial areas with heavy pedestrian volumes.

3 The street furniture zone is defined as the section of the sidewalk between the curb and the clear path, in which street furniture and amenities such as lighting, benches, newspaper kiosks, transit facilities, utility poles, tree pits, and bike parking are provided. The street furniture zone may also contain green infrastructure elements such as rain gardens, trees, or flow-through planters.

4 The enhancement or buffer zone is defined as the space immediately next to the sidewalk, and may consist of a variety of different elements. These include curb extensions, parklets, stormwater management features, parking, bike racks, bike share stations, and curbside cycle tracks.
• The length of time a traffic signal allows for pedestrians to cross the street should also be consistent, based on street width. “Smart” traffic lights can use cameras and sensors to detect when a pedestrian needs more time to cross the street. But until that technology is available citywide, a simpler approach would be to make the pedestrian signal longer at all intersections in the city. This would slow down traffic and prioritize the needs of pedestrians.

Case Study:  
Crossing Guard: A Smart Intersection for Vulnerable Pedestrians
4. Community engagement

Ensure that the community engagement process for public projects includes older residents, people with disabilities, and others with mobility limitations. Encourage inclusive engagement efforts for private sector development projects as well.

- Meeting in person can increase a sense of belonging. Make sure that all meeting spaces are fully accessible. Provide accessibility information on meeting invitations and offer a telephone number and email address where people can get information about the meeting space and share their specific needs. But don’t assume older residents and people with disabilities will come out for meetings. Create more than one way for people to participate.
- Conduct targeted outreach through interviews, focus groups, and community surveys.
- Guided walks allow people to experience a neighborhood together, identify barriers as they are encountered, and brainstorm solutions together.
- Communicate with people with disabilities and their care partners, not just the latter.
- Build relationships with local organizations that serve older adults and people with disabilities. Include financial support to these organizations into project budgets.
- Build relationships with local organizations that serve older adults and people with disabilities. Include financial support to these organizations into project budgets.
5. Post-occupancy evaluation

- Conduct post-occupancy evaluations of new or improved roadways, parks, and public spaces to ensure that accessibility features are working as intended.

**Case Study: ADA-plus Assessments**

Maximum Accessible Housing of Ohio offers ADA+ Assessments for businesses, organizations, and government entities wanting to go above and beyond ADA compliance. The MAHO team analyzes building and site layouts, as well as details and finishes to help eliminate barriers and improve accessibility. ADA+ assessments can occur:

- In the pre-construction phase of a project, to identify and correct for accessibility issues before construction begins,
- During the construction process, and/or
- For a completed building or public space, as a post-occupancy evaluation.

**Case Study: Post-Occupancy Evaluation of Two Chinatown International District Parks**

This report summarizes the results from a Post-Occupancy Evaluation of two neighborhood parks in Seattle’s Chinatown-International District (CID). As completed projects that have been in use for some time, the two parks offer excellent opportunities for examining how the design is performing to support social and recreational activities in the neighborhood. As projects with extensive community outreach and engagement during the planning and design process, it is also important to examine how the parks are meeting the community expectations and design intentions.
6. On-going maintenance

- Consider issues of maintenance and wear. Monitor parks, public spaces, and streetscapes through routine inspections and sensors to detect maintenance needs as they arise.

- Invite the public to participate in the maintenance of streets, sidewalks, parks, and public spaces by reporting problems through crowd-sourced tools accessed through their smartphones or a telephone hotline.

- Crowd-sourced tools can provide information to help people anticipate and avoid barriers. But as Aimi Hamraie, Director of the Critical Design Lab at Vanderbilt University has noted, crowd-sourcing can create as many problems as it creates. For example, people who move primarily by walking might not recognize a barrier that would impact a person using a wheelchair. Someone who uses vision to navigate might not know how to assess whether a location is accessible to someone with a vision impairment. For digital accessibility maps and other crowd-sourced tools to work, they need to be designed by cross-disability coalitions—people who have experienced barriers in their everyday lives and can recognize them in their neighborhoods.

*Case Study: Park Inspection Volunteers - Parks | seattle.gov*

The Parks Inspection Volunteer program invites community members to assist Seattle Parks and Recreation in surveying our parks in a systematic and transparent way. Volunteers will be working with Parks resources staff and will be trained to carry out inspections of our city’s parks.
**Case Study: SeeClickFix**

SeeClickFix is a phone-based application that allows users to post a complaint about problems in their neighborhood on a Google Map. For example, a resident could post a complaint about a broken sidewalk, a pothole on their street, or snow piled up in a crosswalk. The site communicates the problem to the appropriate government agency and marks the problem on the map. Users can comment on the issue or label it resolved. Government agencies can post on the site to respond to residents and to see what issues are creating the most concern.

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**Case Study: AXS Map**

AXS Map is a smartphone application that allows users to map accessible areas and barriers in their communities and determine at a glance how other users have rated an area or destination for accessibility.
7. Transportation

- Work with and expand paratransit programs. Paratransit is a lifeline for people with physical disabilities, especially in the winter months when accessing fixed route bus lines can be difficult and dangerous. Paratransit is also essential for older adults with dementia who might have difficulties navigating various bus routes to reach their destinations. But paratransit services are often inconvenient, since rides need to be booked far in advance. Also, riders can’t rely on paratransit to get them to their destination on time, even when they build in extra time when scheduling a ride. Increased funding for paratransit and more frequent service is needed to get people where they need to go.

- Section 5310 funding from the Federal Transit Administration provides cities and states with support for transportation to serve older adults and people with disabilities. Funds can be used to support drive cessation programs, volunteer driver programs, paratransit equipment, mobility management programs, and other support services.

Case Study: Self-Driving Shuttles SMRT Columbus
This project will educate community on autonomous vehicle technology and use self-driving shuttles to connect residents to jobs and community resources to help them live their best lives.
8. Accessibility during construction

- Temporary obstructions pose serious hazards, especially if people have no way to anticipate and avoid a barrier or hazard. When a contractor applies for a sidewalk obstruction permit, they should be required to provide a detailed plan for maintaining pedestrian access. This is important for all construction projects, but especially for those that last for weeks or months.

- The City of Cleveland can vigorously enforce its Safe Passage Ordinance to protect pedestrians in construction areas. Other cities can adopt similar ordinances.

Case Study:

**Pedestrians Checklist and Considerations for Temporary Traffic Control Zones**

This document provides a checklist and overview of pedestrian-related considerations during planning, design, and construction phases for a project and is designed to enhance pedestrian safety and accessibility, maintain Americans with Disabilities Act of 1990 (ADA) compliance, and provide positive guidance to avoid pedestrian confusion throughout each phase live their best lives.
9. Funding

- Expand financial assistance programs for sidewalk repairs and enforce sidewalk maintenance and snow removal ordinances. Consider developing a Barrier-free Cleveland fund to address problems and barriers quickly.

10. Weather issues and emergency preparedness

- Enforce snow removal ordinances.
- Remove snow quickly after a snowfall, eliminate puddles that form at street crossings and curb ramps, and focus on ice prevention to maintain a safe, accessible, and comfortable pedestrian environment in the winter.
- City public works staff and snowplow drivers in privately-owned companies should be trained not to pile snow in crosswalks, on sidewalks, and in parking spaces designated for people with disabilities.
• In most US cities, no public agency is responsible for clearing sidewalks. Sidewalk maintenance and snow removal is the responsibility of property owners. Many landlords do not live in their buildings and often do not hire someone to shovel snow. Relying on residents to shovel their sidewalks in freezing weather results in a scattershot approach to sidewalk clearance. This creates unpredictable conditions for people in wheelchairs and for people who sometimes feel unsteady on their feet.

• The City of Cleveland takes care of roads and crosswalks. Perhaps the city could also provide snow removal as a city service, at least along key routes that have a lot of pedestrian traffic.

**Case Study: Syracuse Sidewalk Takeover**

Syracuse, New York has taken an ambitious approach to snow removal from city sidewalks. Syracuse, like in many cities, requires property owners to keep sidewalks clear after a snowstorm. But getting thousands of property owners to shovel their walks just doesn’t work, especially in Syracuse where it snows more than 10 feet a year, on average. As a pilot project in 2018, the city took over the shoveling responsibilities for 40 miles of sidewalks. The program was controversial at first, but in 2021, it was expanded to cover 100 miles of sidewalks. The city also took over maintenance responsibilities for all city sidewalks, funded by a modest fee on property owners.
• Develop emergency response plans for floods, heatwaves, storms, and other disasters that take into account the needs of seniors and people with disabilities.

• Incorporate the needs of people with autism and dementia in emergency planning. People with these conditions are at increased risk during emergencies and may not be able to follow evacuation plans that were developed without taking their needs into account.

**Case Study: Tokyo Disaster Prevention Guide**

*Importance of self-help, mutual assistance, and public assistance*

Self-help, mutual assistance, and public assistance are important for improving the ability to respond and cooperate in the event of a disaster in order to minimize the disaster damage.

**Section 2 Preparation for Natural Disasters**

Volunteer disaster prevention
EVERYDAY ACTIONS

Everyday actions are things we all can do to make our neighborhoods safer and more inclusive for everyone.
Shovel sidewalks when it snows and make sure that if your driveway is plowed, the snow pile doesn't block sidewalks or intersections. Help shovel your neighbors' sidewalks if you're able to. Also, keep leaf piles from blocking sidewalks.
Shovel sidewalks when it snows and make sure that if your driveway is plowed, the snow pile doesn’t block sidewalks or intersections. Help shovel your neighbors’ sidewalks if you’re able. Also, keep leaf piles from blocking sidewalks.

SIDEWALK MAINTENANCE AND REPAIR

DIY

Keep sidewalks in good repair. Replace or relevel sidewalks as needed. Take advantage of the city's financial assistance programs for sidewalk repairs.
Plant trees to provide shade for pedestrians, but trim overgrown tree branches and shrubs so they don't block the sidewalk.
DIY SAFE DRIVING

Drive with care through communities, at intersections, and in high pedestrian areas.
If you own a store, a restaurant, or other business, make sure your entrances, parking lots, and indoor spaces are fully accessible to seniors and people with disabilities. This is an on-going process, not something you can do just once when you open your business. Ask your customers if they are experiencing any accessibility issues. And if you’re a customer and you notice a problem, raise it with the owner or the manager even if it doesn’t directly affect you.
Report problems you see even if they don't directly affect you. Broken sidewalks, inaccessible construction areas, access issues with parks and public spaces, and snow piles can be reported to the city's public works department (or through a mobile app service like SeeClickFix, if the city implements this technology)
Never block the sidewalk with trash cans or your car.
ADVOCATE FOR ACCESSIBILITY

Participate in community meetings for neighborhood plans and development projects. Voice your support for accessibility and inclusion.
BIKES & SCOOTERS

Ride bikes and scooters on bicycle lanes. Never leave scooters in the middle of the sidewalk where they pose danger for people with limited vision or those using wheelchairs. Move scooters onto the treelawn and out of the way.

BARRIER-FREE
BARRIER-FREE

SHARE YOUR KNOWLEDGE

Publicize and share these actions to make our community safer for everyone.

DIY
IMAGINING A BARRIER-FREE CITY
Inclusion is imperfect. Inclusion is ongoing...

Since the Americans with Disabilities Act (ADA) was passed in 1991, many buildings have added ramps, lifts, and other accessibility features. Public agencies and private property owners have invested in accessibility improvements. Transit agencies have worked hard to offer inclusive services. But there is much work left to do.

Too many people in our communities can’t access the activities of daily life and are denied access to buildings, public spaces, and events that were not designed to be inclusive. We can do much better. And we need to.

Barrier-free Cleveland is about moving beyond ADA compliance to envision beautiful, accessible, neighborhoods that are welcoming to all, and where people can comfortably age in place. This section includes examples of inspiring projects for barrier-free neighborhoods.

If you know of an inspiring project, small or large, please consider sharing it with Barrier-free Cleveland for inclusion in future editions of this tool kit. Send your ideas to www.barrierfreecle.org or call 216.357.3434.
Concept for Clark-Fulton Neighborhood - Cleveland, Ohio
Flexible public space with Smart lighting and traffic signals for pedestrian safety and access.
ACCESSIBLE PLAYGROUNDS

Madison’s Place Universal Access Playground - Woodbury, Minnesota
A fully inclusive playground designed to allow children to play together regardless of their abilities. Kids can explore the entire structure through ramps, decks and poured-in-place surfacing.

Image: ©Madison’s Place
Preston's H.O.P.E Accessible Playground Park - Beachwood, Ohio

Preston’s H.O.P.E. is a playground for children with all levels of abilities and disabilities operated by the Mandel Jewish Community Center and open to the public. It includes the Imagination Village, with make-believe houses connected by a raised walkway; play theatre, sand area, and swings, tunnels, and slides.

*Image: ©Preston's H.O.P.E.*
RESOURCES
Aging in Place

- Dementia Friendly America (2022) *Community Toolkit*
- International Council on Active Aging *Model and Resources*
- Stanford Center on Longevity (2021) Build Longevity Ready Communities in *The New Map of Life: 100 Years to Thrive*

Design Approaches

- Global Campaign on Accessible and Inclusive Cities. *Building Cities For All Training Program*
- National Association of City Transportation Officials (NACTO) *Urban Street Design Guide*
Smart Cities

- **Effortless City** San Francisco Neighborhood Sidewalk Maps for Walkers, Rollers and Strollers, universally designed for pedestrians of all abilities
- **Smart City for All Toolkit** Contains four tools to help Smart Cities include a focus on accessibility and the digital inclusion of older people and people with disabilities.
- **UCLA Smart Parks Toolkit**

Crowd-sourced Tools

These tools are not currently available to Cleveland residents but could be worthwhile accessibility investments.

- **SeeClickFix** SeeClickFix is a 311 request and work management app bridging the communication gap between residents and their local governments. A SeeClickFix user reports an issue (like a pothole or a missing curb ramp) uploads the information to the site through their smart phone. SeeClickFix sends this information the city who now knows exactly where the problem is located and can fix it. When the repair is complete, that information is relayed back to the person who reported the problem.

- **Project Sidewalk** Smartphone application that allows users to explore city streets virtually to find and label accessibility issues. The app is designed as a game, where users walk through city streets in Google Streetview, labeling the barriers they see and checking the accuracy of labels applied by other users. Project Sidewalk is available in several cities, but not currently available in Cleveland.