Accessible Design Reference Guide for EV Charging at Multifamily Housing Properties

This guide is intended to provide clarity for decision-makers on accessibility requirements for electric vehicle (EV) charging infrastructure at Multifamily Housing (MFH) properties and ensure EV charging infrastructure is usable for people with disabilities.

By: Alan Hejl (Spark Access) and Whitaker Jamieson (Forth)

With less than 1% of housing stock in the United States (US) designed for people with disabilities and considered barrier-free for full independence[1], due to a long history of forced institutionalization in the United States, people with disabilities face extreme hardship when looking for accessible housing. With progress in development for International Building Code (IBC) concerning Section 504 of the 1982 Rehabilitation Act, 1988 Fair Housing Amendments Act, and the 1990 Americans with Disabilities Act (ADA)[2], most accessible housing is found in multifamily units like apartments, condos, retirement communities, and many missing middle housing formats such as quadplexes[3], which increases the concentration of people with disabilities in MFH developments.

The primary goal of designing accessible EV charging is to make the systems available and usable by people with disabilities, who make up more than 1 in 4 adults in the US population and nearly 20% of all drivers. People with disabilities can have physical disabilities (i.e., wheelchair users, chronic pain, amputees), sensory disabilities (i.e., D/deaf and Hard of Hearing, colorblindness, low vision), and cognitive disabilities (i.e., autism, ADHD, dyslexia) that all require the incorporation of accessible design in EV charging.

Example of Accessible L2 charging at a Flo installation

[1] Harvard Joint Center for Housing Studies
[2] HUD Factsheet on Section 504
[3] Section 504 and FHSA apply to developments with 4 or more units (HUD).
[4] CDC Factsheet on Disability
[5] US Department of Transportation's Bureau of Transportation Statistics "Travel Patterns of American Adults with Disabilities"

Most EV chargers are subject to Title II (Government) or Title III (Business) categories of the ADA, due to either being publicly accessible or being built in part through public funding. There is a responsibility to ensure that we are creating an ecosystem that is not discriminating against people with disabilities by default or unintentionally as programs and installations are developed. This guide aims to educate decision makers in the MFH industry around proactive measures for improving accessibility while mitigating the risk of excluding existing and future residents. This document provides knowledge of the relevant standards and a summary of guidelines with real-world examples of the key elements of accessible EV charging.

A key consideration in planning for accessibility is the Fair Housing Act applying to new developments and reasonable accommodations[6] for current tenants at existing properties' "common areas" during renovations, such as parking. Traditionally, for most parking, the Fair Housing Act requires accessible routes from all parking areas to dwelling units, with at least 2% of parking spaces being accessible[7]. If there are different types of parking available (garage, surface parking, or covered spaces, for example), at least one space for each type of parking should be accessible. In addition, as states and cities adopt new iterations of the International Building Code (IBC), 2021 and later revisions all contain elements of accessibility that must be met by development teams.

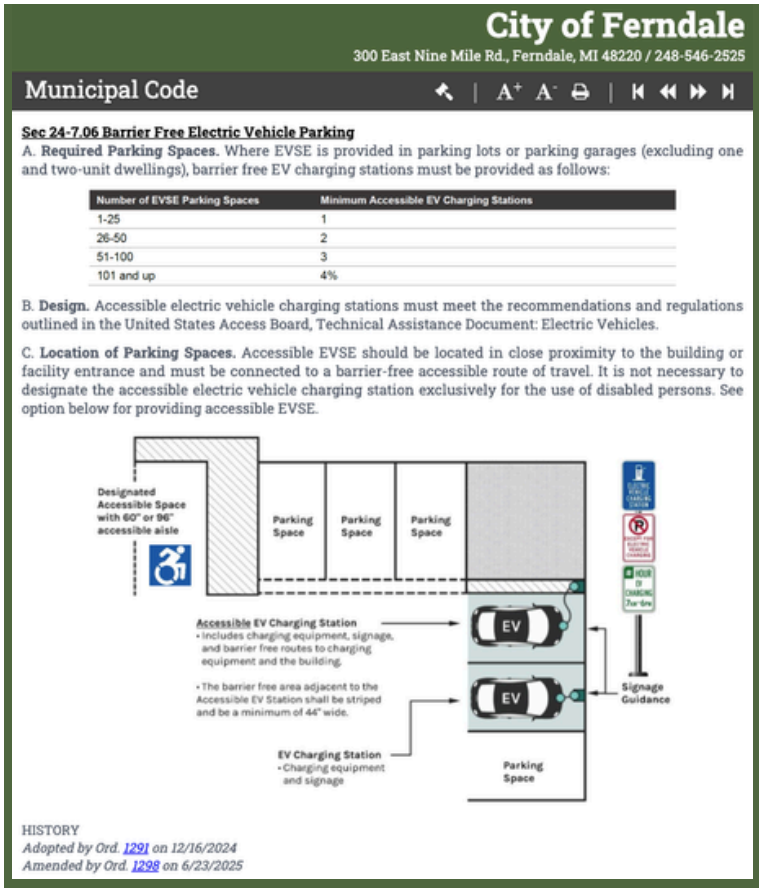
Laws and Regulations

Accessible design standards for accessible EV charging infrastructure are established by law in different contexts, and when accessibility is not accounted for in how a given site is functional for people with disabilities, enforcement actions may lead to costly litigation. The US Access Board EV Charging Design Recommendations provide a summary and best practices based on many existing laws, building codes, and regulations to be mindful of in several different contexts. Some are summarized in the list below:

- EV-Specific Guidelines
  - US Access Board Design Recommendations for Accessible EV Charging Stations
- Architecture Requirements:
  - International Building Code (IBC), Specific to State or City Adoption[8]
    - American National Standards Institute (ANSI) A117.1 "Accessible and Usable Buildings and Facilities"[9]
    - Example language: Chapter 11, section 1107 of the 2021 IBC 1107 states that 5% of EV charging spaces and no fewer than one shall be accessible.
- 2010 ADA Standards for Accessible Design
  - The 2010 Standards set minimum requirements – both scoping and technical – for newly designed, constructed, or altered facilities to be readily accessible to and usable by individuals with disabilities.
- Architecture Barriers Act (ABA)
  - The ABA applies to facilities designed, built, altered, or leased with federal funds (including CFI and NEVI[10])

[6] *Reasonable Accommodations in Fair Housing*
[7] *Parking 2.23 of Fair Housing Act Design Manual*
[8] *The IBC is written and updated by the International Code Council (ICC), which is a nonprofit that designs codes for the USA and Canada. Learn more here.*
[9] *History of the ANSI A117.1 Accessibility Standard*
[10] *Joint Office EV Charging Community Readiness Technical Assistance Help Sheet*

- Fair Housing Act
  - Design and construction requirements of the Fair Housing Act apply to all new multifamily housing consisting of four or more dwelling units.
  - Requirement 2: Accessible Common and Public Use Areas
- Digital Requirements:
  - Section 508 ICT of the Rehabilitation Act
    - All EV chargers that are procured or maintained by federal funding must comply with the Section 508 Standards because they are Information Communication Technology (ICT).
  - Web Content Accessibility Guidelines (WCAG) 2.1 AA
    - The rule applies to web content and apps that a state or local government provides or makes available. This includes when a state or local government has an arrangement with someone else who provides or makes available web content for them.[11]
- Local Zoning and Ordinances
  - Some of the most effective measures of accessibility are found with local zoning and ordinances that may apply to EV charging that meets or exceeds state or federal standards.
  - Examples:
    - Example 1: Ferndale, Michigan Sec24-7.06 Barrier Free Electric Vehicle Parking



City of Ferndale

300 East Nine Mile Rd., Ferndale, MI 48220 / 248-546-2525

Municipal Code

Sec 24-7.06 Barrier Free Electric Vehicle Parking

A. **Required Parking Spaces.** Where EVSE is provided in parking lots or parking garages (excluding one and two-unit dwellings), barrier free EV charging stations must be provided as follows:

Number of EVSE Parking Spaces	Minimum Accessible EV Charging Stations
1-25	1
26-50	2
51-100	3
101 and up	4%

B. **Design.** Accessible electric vehicle charging stations must meet the recommendations and regulations outlined in the United States Access Board, Technical Assistance Document: Electric Vehicles.

C. **Location of Parking Spaces.** Accessible EVSE should be located in close proximity to the building or facility entrance and must be connected to a barrier-free accessible route of travel. It is not necessary to designate the accessible electric vehicle charging station exclusively for the use of disabled persons. See option below for providing accessible EVSE.

HISTORY
Adopted by Ord. 1291 on 12/16/2024
Amended by Ord. 1298 on 6/23/2025

    - Example 2: California Green Building Code (2022, 2025), Section 4.106.4.2.2.1.2 for Accessible EV Charging Station Spaces in new multifamily dwellings, hotels, and motels.

[11] *ADA.Gov Fact Sheet: New Rule on the Accessibility of Web Content and Mobile Apps*

- Example 3: Colorado HB24-1161 in effect Jan 1st, 2026
  - "*The energy code board must include in its model low energy and carbon code accessibility requirements related to electric vehicles that consider design recommendations from the United States Access Board and any applicable federal regulations.*"
  - *"For an electric vehicle charging station constructed or replaced on and after January 1, 2026, the act specifies that no fewer than 5% or one vehicle charging space should incorporate the standards from the Access Board until applicable regulations are issued by the Federal Department of Justice or the Federal Department of Transportation."*

Strategies to Address Accessibility Requirements

The section above cites specific laws to be aware of for incentive program design and for installation partners. The next section will detail and help define specific elements of accessible design criteria of specific interactive elements in EV charging to be used in building a framework for referencing and adapting in program structures. Having a scalability system-minded approach will help you succeed in not only meeting standards required by law but also creating usable infrastructure that is mindfully designed.

If designed from the start, accessibility is almost always readily achievable and inexpensive[12], and becomes easier to implement with proper planning and consideration. When accessible design is not considered and is handled reactively, costs can increase with late design changes or site retrofits, which further create stigma on accessible design through negative experiences with higher cost, legal impact, and other variables.

Federal, state, and utility incentive programs that fund EV charging installations typically have language requiring "ADA Accessible" installations or reference the Design Recommendations for Accessible EV Charging Stations. However, these programs often rely on trust between charging providers, host sites, electricians, electrical contractors, city permitting and inspection departments, and other ecosystem partners to ensure an approved plan is truly accessible upon installation. In the context of these incentive programs, typical language around accessibility in the context of "ADA Compliance" is often too vague to articulate which requirements must be met. Steps should be taken by incentive providers to prioritize the most important design elements to ensure that all charging infrastructure in shared environments intended to be accessible is usable for people with disabilities.

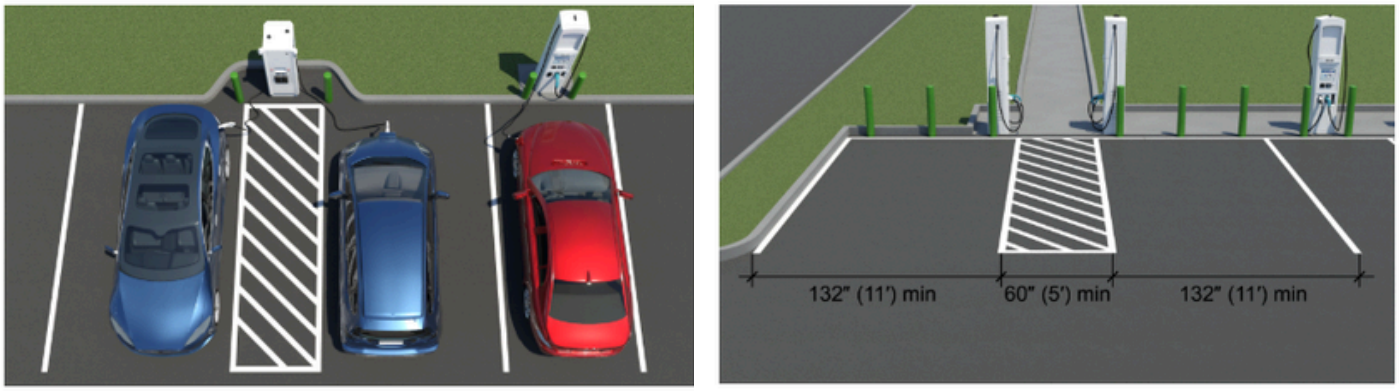
Standards for accessibility, and in the context of civil rights through the ADA, always follow the strictest standards. For example, where the 2010 ADA Standards for Accessible Design are rigorous and set a minimum for harmony with other standards, the International Code Council (ICC) takes extreme care in harmonizing its standards for Building Code and, in many cases, exceeding the federal minimums for better usability and practical implementation.

Example of "Community Readiness Guide" accessibility language from the former Joint Office of Energy and Transportation in 2022:
"*The U.S. Access Board has also released Design Recommendations for Accessible Electric*

[12]ADA National Network Estimates that Accessibility Constitutes Less than 1% of Construction Costs

Vehicle Charging Stations, which covers Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Standards that include requirements applicable to EV charging stations. Those provisions refer to access to sites, facilities, buildings, and elements, as well as specific requirements for operable parts and accessible routes. For a high-level overview of opportunities for communities to deploy EV charging in underserved communities, read this white paper from the American Council for Energy Efficient Economy."

A good example of an incentive program requirements that articulate accessibility criteria can be found in the Colorado Charge Ahead Grant Application Guide, Appendix A: Accessible Design (page 28 of the linked document).



Images of accessible design standards for an EV charging site as provided by the U.S. Access Board in the Colorado Charge Ahead Frant Application Guide Appendix A.

Key Elements of EV Charger Accessibility

Accessible Routes: Key Summary and Dimensions

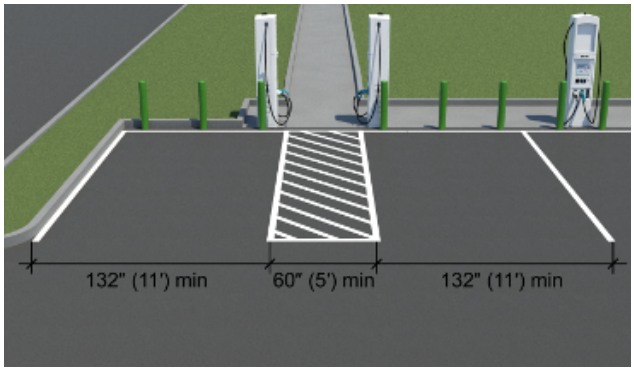
At least one accessible route within the boundary of the site originating from an EV charging site must connect all accessible buildings, facilities, elements, and spaces on a site. Generally, this is a path of travel 36" wide with a minimal slope of 1:20 and barrier free surface transitions.

US Access Board Diagram of Accessible Routes and EV charging spaces (§206.2.2, §402)

Accessible route example, using the existing route from the entrance to the trash collection location

Accessible EV Charging Spaces and Access Aisles: Key Summaries and Dimensions

At least one charger, or 5% of chargers at a site must be accessible. Accessible EV charging spaces should provide a vehicle space with a minimum width of at least **132 inches (11 feet)** and a minimum length of at least **240 inches (20 feet)**. Adjacent to the vehicle charging space should be an access aisle that is at least **60 inches (5 feet)**.

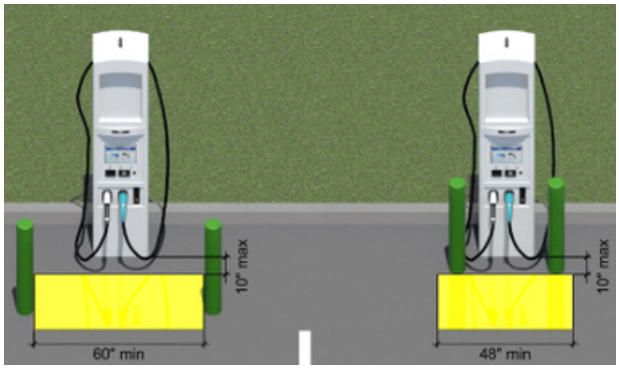


US Access Board Diagram of Access Aisle and parking width (§502)

Example of van accessible EV charging spaces. Flo site in Warren, MI

Barrier-Free Approach: Key Summary and Dimensions

Barrier-free approach, or clear floor ground space, must be a **minimum of 30" x 48"** and not sloped more than **1:48** to provide a level surface for operation. Additional space may be required for side approach if obstructed by bollards or curbs. Bollards and wheel stops should be placed to not impede the clear floor ground space needed for approach and use.



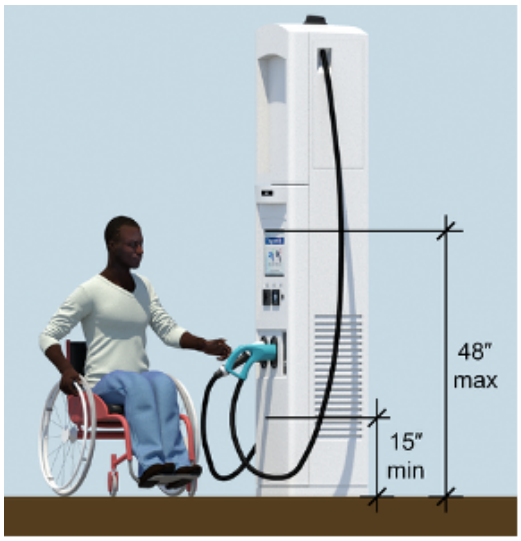
US Access Board Diagram on Clear Ground Space (§302) (§305)

Clear Ground space as part of an access aisle; ChargePoint in Ann Arbor, MI, using sheathing instead of bollards for unobstructed reach.

Bollards overused to impede Barrier-free approach and clear floor & ground space for EV Charger, Ann Arbor, MI

Key Operable Parts: Key Summaries and Dimensions

"Operable parts" is defined by unobstructed reach for a range of **15"-48"**, and to a **maximum inset of 10"**, and is also defined by **force of operation (5lbs)** of the connector, which should take into consideration cable and connector maneuverability.

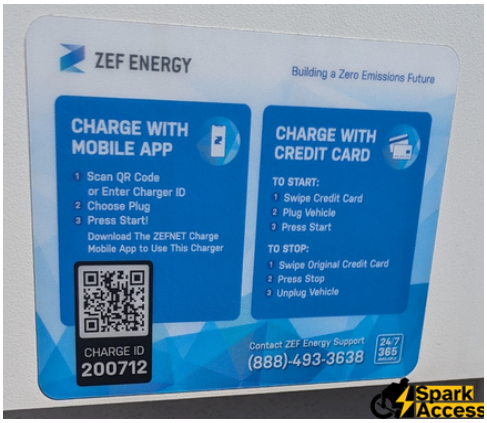


U.S. Access Board Diagram depicting Unobstructed Side Reach (§308) and Operable Parts (§309)

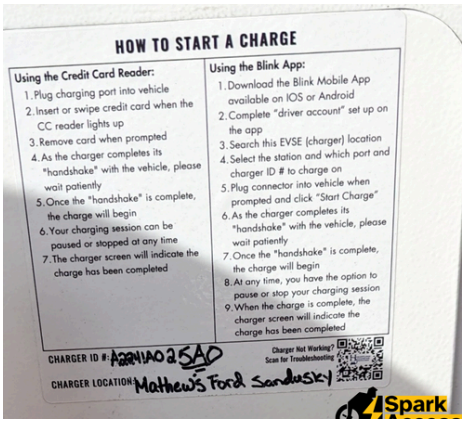
A woman using a wheelchair attempting to reach an L2 charger that is beyond 48"

Communication and Digital Features: Key Summary and Dimensions

Screens should be visible from **40"** within the clear ground space, audio and color-coded indicators should all have alternatives for conveying information, any timed events should have the function to extend before timeout, and customer service/call center availability should be made available for deaf customers through **RTT (real time text)** compatibility.



ZEF Energy Simple Instructions with High Contrast for visibility and clarity (Accessible Communication Features)



Blink Charger with small font, low contrast signage and complex digital experience steps (Accessible Communication Features)

ChargePoint+ Screen Interface with Physical Buttons (Section 508 §408 Display Screens, Communications and Video Accessibility Act (CVAA))

Signage: Key Summaries and Dimensions

Signage should indicate "Use Last" signage for open EV charging infrastructure unless every charger location is barrier-free. Use of the International Symbol of Accessibility (ISA) could mistakenly classify the parking space as a primary accessible parking space per state laws, allowing ICE (internal combustion engine) vehicles to use it if registered with proper plates and placards

EV Charging, Van Accessible Signage. Belle Isle, Detroit, MI

US Access Board Recommends Accessible Charging and "Use Last" Signage[13] that does not use the ISA to avoid conflict with other federal and state regulations. Ohio Turnpike

Common Conflicts

1. Accessible Routes

Accessible routes in parking areas are intended to provide access both to the chargers and from accessible parking spaces to the nearby buildings and destinations. In the MFH EV charging context, accessible routes connect from accessible parking spaces to buildings, but could also refer to common areas, such as recreation facilities, trash and recycling collection areas, or other amenity spaces. While designing to minimize the distance accessible routes follow from parking spaces to the entry way is required[14], constraints such as proximity to available power supply and other barriers may force the lengthening of the route. Regardless of the distance from accessible parking or charging spaces to the destination, clear route markings to ensure pedestrian safety should always be prioritized.

2. Multiple EV Charger Locations at a Property

Often, a property has multiple sets of EV chargers across large or multiple parking lots, or on multiple levels of a parking garage. Accessible EV spaces should be considered for each separate set of EV chargers at a property as part of distributing accessible EV charging appropriately, defined as 2% of different parking formats in the Fair Housing Design Manual[15].

[13] US Access Board "Use Last" Approach to EV Chargers with Accessible Mobility Features
[14] US Access Board: 2010 ADA Accessible Design Standards 208.3
[15] Parking 2.23 of Fair Housing Act Design Manual

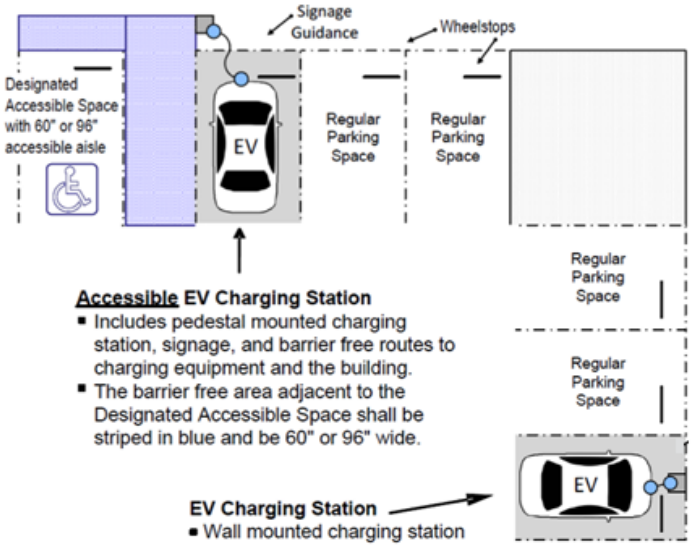
In many MFH developments, this can mean that distribution of accessible EV charging spaces should be thoughtfully spread between covered and uncovered EV parking spaces, assigned and unassigned spaces, and distribution among garage levels.

3. Parking Garages

Parking Garages can be challenging with a fixed environment, structural variables, and more space constraints, but EV Charging spaces should be made accessible where readily achievable in line with accessibility laws, codes, and guidelines.

Creative use of endcaps, shared access aisles with existing non-EV accessible parking, and placement of bollards and curb stops can all help ensure there are accessible EV Charging options in a closed environment like a parking garage.

A reference diagram is below from a 2014 guidance from the US Department of Energy[16] that recommended a shared access aisle. This is not a best practice, but it demonstrates a viable option when dealing with constraints.



More information can also be found through the ADA National Network Parking Fact Sheet[17].

4. Digital Accessibility Application

EV charging ecosystems typically have three (3) major interfaces of digital interaction that may be present:

1. Screens and payment systems at the EV Charger unit
2. Phone Apps
3. Websites

If present for any charging system, these digital interfaces used by customers are considered part of digital services that must be accessible in the context of public funding and both Section 508 ICT (Federal Government and funding) and WCAG 2.1 AA (State and Local Government Funding)[18].

[16] Guidance in complying with the ADA from the Department of Energy 2014 Guide
[17] ADA National Network Parking Fact Sheet
[18] US Access Board Design Recommendation for EV Charging: Accessible Communication Features

Some common example elements to be considered are screen visibility, avoiding the use of red/green indicators for colorblind users, ensuring that any timed events can be extended[19], and any audio indicators should have visual cues as well.

5. Retrofits in Existing Properties

Installing EV chargers at existing properties is nearly always more difficult than at new developments. While designing and constructing accessible EV charging spaces may be more complex than making a parking space accessible or adding a charger to a parking space, in many situations, EV chargers installed in existing parking spaces may not require a full repaving and extensive tear-up to be made accessible. Accessibility should always be implemented when **readily achievable**.[20]

"Grandfathering" can be a common myth in accessibility laws for existing properties from before the passing of the ADA in 1990, but it seldom applies unless there is a state or local approval process or law that accounts for safe harbor or historic preservation exemptions.[21]

With the complexity of civil rights laws for infrastructure, cost is often a factor for consideration in updating properties. Case law around accessibility has long upheld a definition of "**undue burden**"[22] for accommodations and modifications to existing environments for an accessible route at **20% of the full project cost.**[23] This means that if making the site accessible with an accessible route would not exceed 20% of the project cost, the site should be made accessible as designed and permitted. Many other factors can influence what may make accessibility infeasible, and this is often very site-specific to find a proper exemption, but it can almost always be achieved in a cost-effective manner with due diligence and planning.

While existing properties have their complications around accessible EV charging parking spaces, new properties require full adherence to current building codes and regulations, including accessible design for EV chargers.

6. Accommodation Requests

If a MFH property has parking and EV charging as amenities, accessible charging spaces will need to be arranged or constructed if accommodations are requested.

Accommodation requests, as defined by the Fair Housing Act, can come from new or existing residents, whether they are parking in assigned or unassigned parking spaces. Development teams should plan for accessible parking spaces in assigned parking sections, if assigned parking is being considered, so that when accommodation is requested, the resident can be accommodated in an existing assigned space and avoid having to construct a new accessible space. This becomes even more important when factoring in EV charging accommodation requests and can help ensure accessible parking minimums remain in compliance with code. Residents could experience disability at any time in their lives and require accommodations to support their independence. Designing for that eventuality is both part of why the code exists and part of designing for a quality resident experience.

[19] Section 508 ICT §407.5 Time Response
[20] ADA National network Small Business & ADA Readily Achievable Requirements
[21] ADA national Network FAQ on Grandfathering
[22] Northeast ADA Center: Undue Burden
[23] US Access Board Definition of Disproportionate Cost

For assigned accessible spaces with dedicated EV charging, it is recommended to remove accessible charging signage and avoid the use of the ISA for indicating an accessible space, as exempted by ADA standards.[24] This can avoid conflict with registered users of accessible parking attempting to use the space despite assignment to an individual resident or unit. Assigned accessible charging spaces must still have accessible elements as determined by the accommodation request, and removal of signage is subject to state and local laws.

To understand Reasonable Accommodations and more scenarios that parking accommodations may fall under, please reference the "The Right to an Accessible Parking Space" Fact Sheet from the Fair Housing Center for Rights and Research.

Here are some options available for property managers and owners needing to work with a resident requesting accommodations for EV charging:

- **Communal Charger[25] and Unassigned Parking Scenarios:**
  - If all chargers are communal chargers, make at least one communal charger accessible and enforce "use last" rules.
  - Alternatively, keep the communal chargers as they are and make a new assigned accessible parking space with accessible EV charging for the specific resident.
- **Assigned Parking Scenarios:**
  - If available, assign or reassign an existing accessible assigned space with an EV charger to the resident upon accommodation request. This option assumes that the parking space is currently taken by an EV driver without accommodation needs or is available. If this is not the case, use a different option.
  - If the person requesting accommodation already has an assigned accessible parking space, add an accessible charger to their space, if feasible. If the person requesting accommodation does not have an accessible parking space yet, then reassigning parking spaces may be necessary.
- **Flexible Scenarios:**
  - Add an accessible communal charger to an unassigned existing accessible parking space. Beware that adding a charger to an existing accessible parking space may cause the property to fall out of code compliance for the minimum number of accessible parking spaces. Check with relevant code officials.
  - If none of the existing communal chargers can be made accessible and an assigned accessible charging space is not viable, then a new accessible charging space must be created, even if it necessitates restriping two parking spaces.
  - Alter an existing EV charging space in a visitor lot to make a communal accessible charging space. As EV adoption increases, and particularly in larger or more spread-out properties, this approach will be inadequate for serving the needs of most EV drivers, let alone accommodation requests for property residents, but for low EV adoption sites can be a good early step.

Note that parking fees and pricing structures may differ among renters, provided the difference is not based on a protected class, such as disability.

[24] 2010 ADA Accessible Design Standards 216.5
[25] Note that communal chargers are often referred to as first-come, first-served or shared chargers

Community-Based Demonstrations with People with Disabilities

When EV charging designers (electricians, electrical contractors, general contractors, etc.), and incentive providers have questions or concerns around accessibility, it is always recommended to involve a local disability organization, residents with disabilities, or experts in accessibility for testing and feedback. The spirit of the Americans with Disabilities Act (ADA) and considerations of compliance are focused on people with disabilities and how they interact with barriers. Firsthand experience can sometimes provide the easiest answers as well as justification for variance requests, and find efficiency in costs with common-sense accessibility solutions when standards may conflict.

To accomplish this, we recommend the following:

- Disability-Centered Community-Based Organizations (CBO)
- City ADA Coordinator[26]
- Centers for Independent Living[27]
- State or Municipal Accessibility Offices and Commissions

Accessibility Checklist

- **Accessible Parking Space:** An accessible vehicle charging space is at least 11 feet wide and 20 feet long.
- **Access Aisle:** An adjoining access aisle to an accessible parking space is at least 5 feet wide.
- **Barrier-Free Approach:** Clear floor ground space should be provided at the same level as the vehicle charging space and positioned for an unobstructed side reach that provides a 30”x48” maneuvering space. Bollards and curb stops should never impede this.
- **Operable Parts:** All operable parts should be within reach between 15-48” with no more than a 10” inset to provide “unobstructed reach”, including on the charger and connector
- **Accessible Route:** The accessible route should be a barrier-free 48” wide path of travel with a slope of no greater than 1:20 that connects to an accessible route that navigates to the host site (main entrance, common areas, etc.).
- **Digital Features:** Screen should be viewable and instructions easy to understand, any timed events should have extension options, apps, and call centers should be accessible.
- **Signage:** Signage should be clearly marked, indicating an accessible space with “use last” language, but without using the traditional ISA, to avoid confusion and legal applicability for placard and plate limited accessible parking.

More Information

To review more detailed requirements and best practices for incorporating accessible design features, please visit the U.S. Access Board’s Design Recommendations for EV Charging Spaces website.

[26] ADA National Network: Role of an ADA Coordinator
[27] National Council on Independent Living (NCIL): Find Your CIL

Contact Us & Learn More

Forth and Charge at Home
If you have questions or feedback, or need help with interpretation on site-specific design, please connect with **Forth** through **www.chargeathome.org**. Forth provides technical assistance and support to state and local governments, utilities, multifamily and commercial property representatives on EV charging, electric carshare, E-micromobility, E-farming and and other electric transportation-related efforts.
Connect with Forth at www.Forthmobility.org/contact.

Development of this Resource
This guide was prepared through a partnership between Forth and Alan Hejl of Spark Access, an accessible mobility consultant specializing in sparking growth for zero-emission and autonomous transportation to deliver technical excellence through community engagement to ensure that people with disabilities can see themselves in and be part of building a clean energy future. Whitaker Jamieson, Senior Specialist at Forth, supported in the development of this guide.

If you wish to contact Alan and Spark Access directly for assistance in strategies for making your programs and community engagement more accessible and engaging for people with disabilities, contact Alan:
Email: alan@sparkaccess.io
Web: Spark Access Website (www.sparkaccess.io)
Social Media: LinkedIn

Additional Support

For more information and for technical assistance from the U.S. Access Board:
- The Access Board provides technical assistance on the ADA accessibility guidelines and on accessible design through its helpline at 1-202-272-0080, extension 3, from 10:00 a.m. to 5:00 p.m. (ET) on weekdays
- **Email**: ta@access-board.gov

For more information and for technical assistance on the Fair Housing Act and from the Department of Housing and Urban Development (HUD):
- **Phone:** Fair Housing Accessibility First at 1-888-341-7781
- **Email:** FairHousingFirst@hud.gov