



AGING IN PLACE GUIDE FOR BUILDING OWNERS:

Recommended Age-Friendly Residential Building Upgrades



Bill de Blasio
NYC Mayor
Melissa Mark-Viverito
NYC Council Speaker



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Commissioner



AIA
New York





THE CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK, NY 10007

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Dear Friends:

Protecting the health, safety, and well-being of all our residents, no matter their age, background, or the borough they call home, is one of my administration's greatest priorities. This means working to ensure that our city remains a safe place to grow old, and thanks to the efforts of the New York City Department for the Aging and Commissioner Donna Corrado, the Age-Friendly NYC Commission, and leaders such as City Council Speaker Melissa Mark-Viverito and Council Member Margaret Chin, we are making tremendous progress toward achieving this goal.

We are already taking steps to develop more affordable housing for older New Yorkers and increase civic participation, transportation options, and health and social services. To build on this momentum as our senior population continues to grow, we will need the support of communities across our city and from building owners like you.

Thousands of older individuals choose to "age in place," remaining in the homes and neighborhoods they have helped build and contributed to all their lives. This guide offers a wide range of recommendations for renovations and improvements that will protect the safety of older tenants and improve the quality of life for all residents.

I encourage you to review this guide and consider making some of these important modifications in your buildings. Our older residents play an important role in our communities, and by ensuring they can age with grace and dignity, we can build a brighter, stronger future for all New Yorkers.

Sincerely,

A handwritten signature in black ink that reads "Bill de Blasio".

Bill de Blasio
Mayor

Aging in Place Guide for Building Owners

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Introduction

This “Aging in Place Guide for Building Owners,” created through a collaboration of the New York City Department for the Aging and the American Institute of Architects New York Design for Aging Committee, recommends residential building upgrades to accommodate older tenants. By making these improvements, building owners can help residents remain in their homes as they age – safely, comfortably, and independently. While the recommendations are made with seniors in mind, many of the suggested improvements would make buildings and apartments more livable for residents of all ages.

“Aging in place” describes individuals who continue to live in their homes as they age, rather than relocating. Research suggests that a majority of older people prefer to age in place.¹ Ninety-six percent of older New Yorkers are currently aging in place.² As people age, they become predisposed to multiple chronic conditions that can lead to diminished functional capacity. For older people to remain independent, their housing must accommodate their changes in ability.

Many of the guide’s recommended upgrades are designed to help prevent falls. One in three Americans age 65 and older falls each year and one in five falls causes a serious injury.³ Annually, 2.5 million seniors are treated in hospital emergency departments for fall injuries.

Other recommendations address social isolation, which is common among seniors and can be detrimental to both physical and mental health. Making improvements to building entrances and common areas can address isolation by helping to increase tenants’ interactions with neighbors, family, and friends.

New York City Local Law 51

[Local Law 51 of 2015](#) – introduced as Int. No. 702 by Council Speaker Melissa Mark-Viverito, Chair of the Council Committee on Aging Margaret Chin, and several Council members – was signed by Mayor Bill de Blasio in June 2015. The law requires the Department for the Aging, in consultation with the Department of Buildings, the Department of Housing Preservation and Development, the Mayor’s Office for People with Disabilities, relevant businesses, and nonprofit organizations to create a guide for building owners regarding aging in place. As part of the Age-Friendly NYC initiative, the Department for the Aging contracted with the American Institute of Architects New York, in collaboration with housing experts from across the public and private sector, to produce this guide.

¹ [AARP, Aging in Place: A State Survey of Livability Policies and Practices \(2011\).](#)

² U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

³ Centers for Disease Control and Prevention. Important Facts About Falls.

Why Make Modifications?

Nearly 1.4 million adults age 60 and over live in New York City, a number projected to increase by 40.7% over the next 24 years to almost 2 million people in 2040. The need for age-friendly residential buildings has never been greater. Older tenants in residential buildings can increase neighborhood stability and provide “eyes on the street” during business and school hours. They are often vital members of building and neighborhood social networks and are reliable customers of local businesses. Since aging is a universal process, the building modifications suggested in this guide can benefit all long-term tenants as well as resident building owners.

Using the Guide

This guide offers recommendations for renovations to existing multi-unit residential buildings, with and without elevators, from two-family houses to apartment buildings of all sizes. Suggestions range from simple, do-it-yourself modifications to larger alterations requiring skilled expertise. Recommendations should be implemented where possible; some require sufficient space, budget, or staff.

The first section of the guide, *Throughout the Building*, outlines building modification strategies for all exterior and interior building areas. The following sections illustrate age-friendly retrofits for the three primary spaces of an apartment building: *Building Entry and Exterior Areas*, *Interior Common Areas*, and *Apartments*. For more information on financial incentives, design guidelines, and legal questions, please consult the *Resources* section at the back of the guide.

Older Adults in New York City

Of New Yorkers age 65 and over, 27% report ambulatory difficulty,⁴ yet in New York City, only 51% of units in multifamily buildings with elevators and 3% of units in multifamily buildings without elevators are fully accessible.⁵ Many households lack inexpensive improvements that can prevent falls, like bathroom grab bars.⁶ Of the New York hospitalizations due to falls, 53% (approximately 9,400) occur in the home, as compared to 7% in the street.⁷

⁴ U.S. Census Bureau. American Community Survey, 2008-2012 American Community Survey 5-Year Estimates (2013).

⁵ U.S. Census Bureau. New York City Housing and Vacancy Survey. 2014:Table 96.

⁶ Office of the City Comptroller John C. Liu. *Housing in New York City: The Coming Crisis*. New York (2013).

⁷ [Epi Data Brief - Falls among Adults Age 65 Years and Older in New York City. New York City \(2012\).](#)

Additionally, half of older adults in New York live alone.⁸ Living alone is a risk factor for social isolation, which is associated with negative health outcomes.^{9, 10} Changes to the built environment that enhance safety and encourage social cohesion can mitigate these risks. This guide presents a series of low-cost improvements to housing that can improve the overall health and well-being of older New Yorkers and maximize their social, physical, and economic participation in their communities.

Senior tenants can be vulnerable to harassment and displacement. They are protected by regulations, including the New York City Commission on Human Rights Law, which calls for reasonable accommodations for people with disabilities.

This guide is an initiative of Age-Friendly NYC, a partnership of the Office of the Mayor, the New York City Council, and the New York Academy of Medicine to maximize the social, physical, and economic participation of older people and thereby improve their overall health and well-being. Access to safe, accessible, and affordable housing has been a priority for Age-Friendly NYC since its inception in 2007.

Guide recommendations may not achieve full-building accessibility for people with all types of disabilities, as this may not be feasible for many existing buildings. The guide also does not cover new construction.

The information contained in this publication is being provided for informational purposes only. This publication and the information contained herein should not be a substitute for the advice of a registered professional architect, a licensed contractor, a licensed attorney, or other licensed and accredited professional. Building retrofits must comply with all national, state, and local laws.



This guide covers multi-unit residences, from two-family houses to large apartment buildings. Photos courtesy of Christine Hunter.

⁸ U.S. Census Bureau

⁹ Steptoe A, Shankar A, Demakakos P, Wardle J. Social isolation, loneliness, and all-cause mortality in older men and women. *Proc Natl Acad Sci U S A*. 2013;110(15):5797-5801. doi:10.1073/pnas.1219686110.

¹⁰ Mistry R. Social isolation predicts re-hospitalization in a group of older American veterans enrolled in the UPBEAT Program. *Int J Geriatr Psychiatry*. 2001;16(10):950-959.

Throughout the Building

The strategies below can help make interior and exterior building areas more accommodating for aging residents. These overarching recommendations complement the information specific to different building areas in the sections that follow.

Flooring and Walking Surfaces

Slippery or irregular walking surfaces, including natural surfaces, can be unsafe for people who have difficulty walking or use mobility devices. By installing non-slip, evenly textured flooring and walking surfaces throughout the building and site, building owners can help prevent falls.

- Install soft, resilient interior flooring materials such as cork, rubber, or linoleum
 - *These surfaces are gentler under foot than harder materials and can lessen the impact of falls*
 - *For surfaces requiring floor wax, use a product that produces a non-glossy surface*
- If installing carpet, use a tight-looped version with a low profile (up to 1/2" high) and a thin pad (10-pound density) or no pad, and attach securely to the floor beneath with a direct glue-down application
 - *While carpet can absorb sound and feel warmer, thick carpet pile and paddings can be tripping hazards*
 - *Large areas rugs should be secured to the floor with non-slip mats or double-sided tape*
 - *Throw rugs should be avoided*
 - *Carpets should be kept taut and free of bumps*
- Signal floor material and level changes with a change in texture, color, or light
 - *Combining strategies helps accommodate multiple users*
 - *Avoid glare and excessive contrast and patterns on floors, which can be perceived as changes in level, or conceal actual changes in level*
 - *Level changes are potential trip hazards*
- For more information, see:
 - *International Code Council (ICC) A117.1-2009 Section 302: Floor Surfaces*
 - *American Speech-Language-Hearing Association: Preventing Falls*

Handrails and Grab Bars

To prevent falls and accommodate residents with difficulty walking, handrails should be installed along pathways and grab bars should be installed in bathrooms.

- Install dual handrails on both sides of stairs, ramps, and hallways, at high and low levels, to prevent falls for taller and shorter residents
 - *High handrails should be installed 34" to 38" above stair treads or floor; low handrails should be placed at 27" maximum*
 - *Handrails should be 1-1/4" to 2" in diameter with a slip-resistant surface for a secure grip, and should extend 1' beyond the edge of the top stair and 1' plus the depth of a tread at the bottom of the stair*
 - *Provide handrails even if the floor slope is not steep enough to require a handrail by code*
 - *A wainscot trim that protrudes from the wall and is securely fastened can also offer a frame of reference and a touchstone for balance*
- Install grab bars with wall reinforcement
 - *Grab bars must be installed by a professional and securely anchored to wall studs or masonry*
 - *Do not rely on towel bars or suction-cup grab bars, as these cannot support enough weight*
 - *See International Code Council (ICC) A117.1-2009*



Wide, wheelchair-accessible hallway with handrails and color-contrasting trim marking walkway edges and apartment entrances. Dual-height handrails (not pictured) are also recommended. Photo courtesy of Associated Blind H.D.F.C and Christine Hunter.

Lighting

By installing appropriate lighting, building owners can help prevent falls and increase building accessibility.

- Provide sufficient, consistent light levels throughout the building and site, especially on pathways and at entrances
 - *Well-lit exterior and interior spaces can help prevent falls and create a safer home*
 - *Ensure adequate lighting on all stairs by installing overhead fixtures or wall sconces*
 - *25 to 30 foot-candles recommended for egress paths*
 - *Replace toggle light switches with glow-in-the-dark rocker panels at 36" to 44" above the floor*
- When purchasing new lightbulbs, consider the following
 - *LEDs use less energy and last longer than conventional or fluorescent bulbs*
 - *Buy bulbs with a warm color temperature, between 2,700 and 3,000 Kelvin*
 - *Look for a color rendering index (CRI) close to 100*
- Install indirect lighting
 - *Aim lights at a ceiling or wall surface to avoid direct eye exposure to light sources*
 - *Use two or more fixtures to avoid shadows; for example, use wall fixtures or sconces on each side of a bathroom mirror*
 - *Under-cabinet and task lighting can also reduce shadows*
- Avoid glare
 - *Glare is caused by a sharp contrast between a light source and its immediate background or by unevenly lit adjacent spaces*
 - *In entryways, balance interior and exterior brightness to provide consistent light levels*
 - *Newer dimming devices can balance brightness automatically*
 - *Provide sun louvers or window blinds*
- Install electrical outlets at 18" to 24" above the floor for easier access
- For more information, see
 - *Illuminating Engineering Society of North America*
 - *2014 New York City Building Code, Section BC 1006: Means of Egress Illumination and Section 1006.2.1: Sensors and Controls*

Doors and Entrances

Building and interior entrances should accommodate mobility devices. Residents with arthritis or mobility issues should be able to open all doors easily.

- Install easy-open doors throughout the building
 - *Force required to open a door should be 5 pounds or less*
 - *Install automatic door openers for heavy doors*
- Provide door openings of 32" minimum, with main entrance doors being at least 36" wide
 - *If the frame and door are inadequate, replace or provide offset hinges or install a pocket door*
- Remove or lower thresholds to accommodate mobility devices
 - *A no-step or compressible rubber threshold, instead of a raised or hard threshold, reduces tripping hazards and eases access for wheelchairs*
- Install lever-type hardware on all exterior and interior doors
 - *Lever-type hardware is easier to use than round knobs or handles, especially for people with arthritis*
 - *For doors that require locks, use lever hardware that can be operated by an electronic card, requiring only a single motion with one hand to unlock and open the door*
 - *If a traditional key is used, provide extra lighting or color contrast to make the keyhole visible*
- Install exterior and interior entry doors with dual-height peepholes, a viewing panel, or security technology
 - *Residents should be able to see who is outside*
 - *Upper peephole should be placed at 62", and the lower at 48" for use by people in wheelchairs*
- For packages, provide a shelf or other surface next to building and apartment doors and at mailroom or mailboxes



Lever-type door hardware. Photo courtesy of Eve Dilworth Rosen and Goddard Riverside Community Center.

Wayfinding

Wayfinding strategies can help residents with visual or memory impairments find their way around the building. These techniques work best when integrated with architectural and interior design.

- Use redundant visual cues to help residents find their way around the building
 - *Each floor can have a visual theme to allow residents with visual or memory impairments to remember a color or picture instead of just a floor number*
 - *For example, use changes in wall and floor color and texture, pictures, and furniture to differentiate areas*
- Use consistent surfaces for similar areas
 - *For instance, all corridors should have a similar treatment*
 - *Use a change from one material to another to signal the beginning of stairs or a ramp or changes in level*
- Select plants for fragrance, color, tactile qualities, movement, and seasonal color change
 - *Plantings should not only contribute to beautification and environmental benefits, but also residents' health and well-being*
 - *Avoid poisonous vegetation or vegetation that is irritating to the touch, as well as plants that tend to attract stinging insects*
- For more information, see
 - *New York City Inclusive Design Guide, Section 714*
 - *Font size, contrast, and location: International Code Council (ICC) A117.1-2009, Section 703; American Foundation for the Blind*
 - *Accessible entrance signage: 2012 NYC Local Law 47 and 2014 NYC Building Code Section 1110.2*
 - *Landscaping: The Horticultural Society of New York*



Apartment entry marked by redundant visual cues: hallway indentation, wall color change, door wreath, and shelf with distinct objects. Design by Perkins Eastman; photo courtesy of Eric Cohen.

Seating

Seating can encourage socialization and accommodate residents with limited mobility.

- Install a mix of benches, chairs, and tables in high-usage areas
 - *Tables should be 28" to 34" tall with an adjacent 30" x 48" clear floor space for wheelchair usage and 27" minimum knee clearance*
- Seating should have arms and backs
 - *Provide sturdy, comfortable seating*
 - *Seat height should be 17" to 19"; depth no more than 24"*
- Provide waste receptacles in seating areas

Technology and Communication

Building technology and communication systems can help accommodate residents with hearing, visual, or mobility impairments. Appropriate strategies depend on a building's size, budget, and staff.

- Install and maintain an easy-to-use intercom system connecting the building front door to individual apartments
 - *A visual intercom system accommodates tenants who are deaf or hard of hearing and can increase security*
 - *Consider additional intercom units in bedrooms and kitchens*
- A public address (PA) system can be an inexpensive, effective means of communication, especially in emergencies
 - *Install small speakers in each apartment and larger ones in common areas to allow building staff to share information throughout the building, even during a power outage*
 - *A PA system can be installed using existing intercom wiring*
- If sufficient building staff, such as a 24-hour doorman, is available, consider installing:
 - *Help buttons or pull stations in isolated and hazard-prone building areas such as bathrooms*
 - *CCTV two-way communication units in apartments of tenants who need full-time observation*
- In addition to building systems, residents may wear medical alert devices
 - *Building owners may be able to purchase an alert system at a group rate*
 - *Medical alert devices without GPS capabilities may result in false alarms; for example, the fire department may arrive at a resident's apartment if she signals the device while away from home*
- For more information, see
 - *New York City Inclusive Design Guidelines, Section 702*

Emergency Planning

The following recommendations to building owners are adapted from New York Academy of Medicine's [Resilient Communities: Empowering Older Adults in Disasters and Daily Life](#).¹¹ New York City requires emergency plans for buildings located in flood zones.

1. Keep an updated registry of all tenants and their emergency needs
2. Consult residents on all aspects of disaster planning
3. Provide training to building staff on how to meet the needs of older people in an emergency
4. Plan for the reality that individual residents may not comply with mandatory evacuation orders
5. Support tenant organization
6. Utilize communal spaces to build social cohesion and promote residents helping each other
7. Get to know local emergency management personnel
8. Identify partners to help meet tenants' needs in an emergency (e.g. community- and faith-based organizations, local businesses) and formalize relationships through a memorandum of understanding or other mechanisms
9. Connect with nearby housing providers to pool resources
10. Consider resources for redundant power, such as a mobile or built-in generator
11. Provide tenants with advance notice if elevators or power will be turned off
12. Distribute emergency information and supplies to every floor
13. Install a symbol on the front door of every apartment in which a person with a disability or special needs resides to alert responders in case of emergency

¹¹ Goldman L, Finkelstein R, Schafer P, Pugh T. Resilient Communities: Empowering Older Adults in Disasters and Daily Life (2014).

Pest Management

Cockroaches and mice are common in New York City. These pests and others affect indoor air quality and can trigger allergic reactions or asthma attacks in some people. Asthma affects more than 1 million New Yorkers. Property managers and building owners can manage pests throughout the building to help keep residents healthy.

- Follow Integrated Pest Management (IPM) best practices to reduce health risks for older adults
 - *IPM is a prevention-based pest management method that provides long-lasting pest control, improves building conditions, and is less harmful to residents and pets than traditional pest control*

- To implement IPM at your building, please review the [New York City Department of Health and Mental Hygiene Integrated Pest Management Toolkit for Building Owners, Managers and Staff](#), which will
 - *Provide guidance on adopting building-wide IPM*
 - *Provide recommendations on hiring a pest management professional*
 - *Provide a sample scope of work for IPM services*
 - *Outline pest prevention measures that can be used at unit turnover or during building renovation*
 - *Outline pest-proofing tactics for residential units*
 - *Provide tenant guidelines for pesticide use*
 - *Provide guidance on waste management related to pests*

- For more information, see
 - [New York City Health Homes Guide: How to Control Pests Safely](#)
 - [U.S. Environmental Protection Agency Guidance on Pesticides](#)
 - [Stop Pests in Housing website](#)

Building Entry and Exterior Areas

All residents should be able to move comfortably and safely from outdoors to their apartments.

Site Areas

- Install slip-resistant walking surfaces outside and inside
 - *Avoid slippery or uneven materials*
 - *Check walkways for loose pavers and keep paths clear of debris*
- Mark safe walking areas with contrasting textures and colors
 - *Use color and/or texture to identify potential trip hazards such as sidewalk and ramp edges*
- Maintain the sidewalk adjacent to the building
 - *New York City property owners are responsible for installing, repairing, and maintaining sidewalks adjoining their property*
- Provide well-lit parking with a pedestrian path to the building entry
 - *Provide accessible parking spaces close to the entry*
- Include plantings to promote residents' well-being



Outdoor common space with brightly colored seating, some with armrests; clear, wide pathways with an even, hard surface; and ample lighting. Photo courtesy of Encore Community Services.

Lighting

- Provide and maintain adequate lighting at signs, stairs, pathways, doors, and vestibules
- Eliminate dark spots, even on public sidewalk
 - *Locate light fixtures to avoid dark spots and shadows*
 - *Pay special attention to the transition from sidewalk to entry, where falls often occur*

Seating

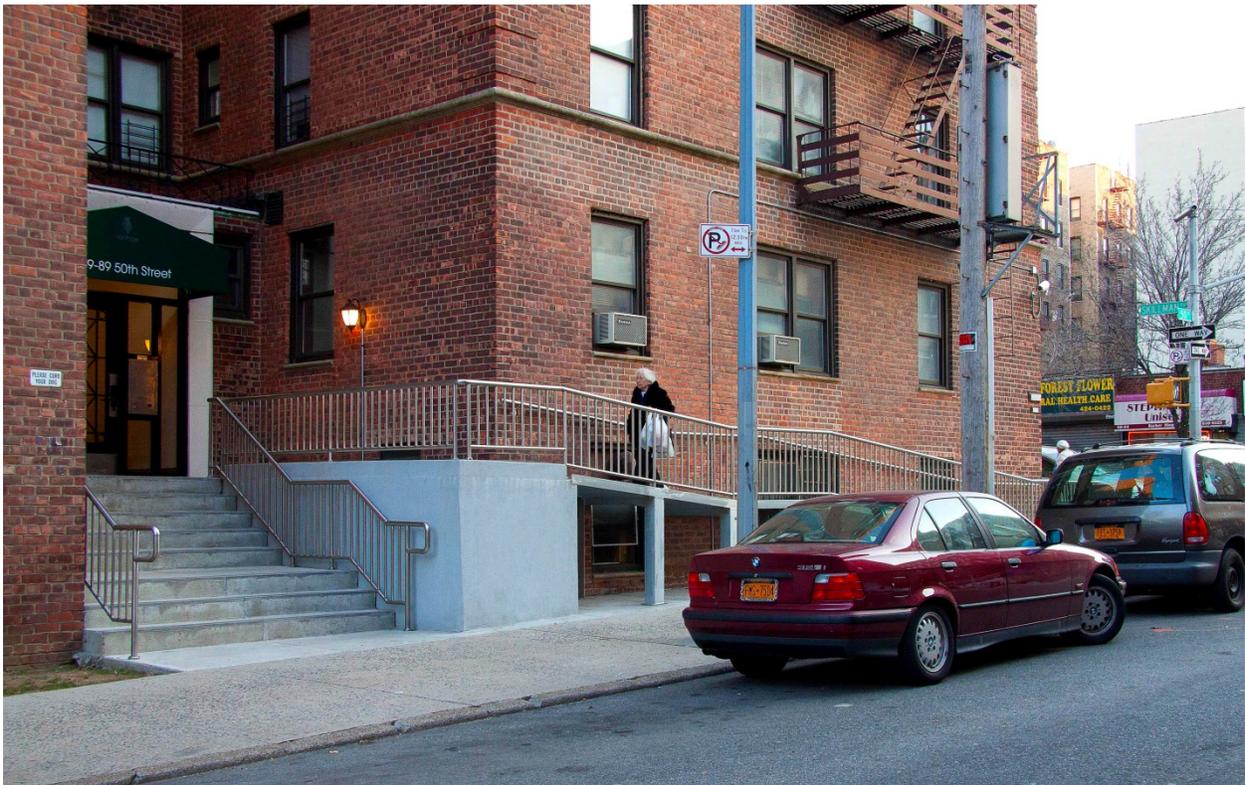
- Install seating and tables in shady and sunny areas near the building entrance
 - *Place in level, paved areas*
 - *Avoid sloped zones*
- Locate seating in high-usage exterior and interior areas
 - *Arrange in clusters to encourage socialization*

Stairs

- Provide dual handrails (high and low) on both sides of stairs
 - *See Throughout the Building*
- Provide slip-resistant adhesive strips in a contrasting color at the edge of each stair tread
- Keep stairs and landings clear of debris and obstructions
- Provide weather protection for exterior stairs
- Install identifying signage at each floor level
- Provide ramps with dual handrails for people using wheelchairs or walkers
- When replacing stairs, provide an easier rise and run than required by code
 - *For interior stairs, risers should be 4" to 7" and treads 11" to 14"*
 - *Exterior stairs should have risers no more than 6" tall and treads at least 12" deep*
- Provide a level landing at top and bottom of each stair
 - *Slope should not exceed 1:48*
 - *Landings should be the width of the stair and 5' clear*



Stairs with slip-resistant adhesive strips in a contrasting color at the edge of each step. Photo courtesy of Eve Dilworth Rosen.



Building exterior with ramp and handrails on both sides of the stair and ramp. Dual-height handrails (not pictured) are also recommended. Photo courtesy of Christine Hunter.

Signage and Wayfinding

- Add easy-to-read house numbers and directional signage
 - *Signs should be visible from the street and sidewalk*
- Use big lettering in a contrasting color
 - *Minimum character height: 5/8" for text that will be read up close and 1-1/4" for text that will be read from up to 6' away*
 - *Light-colored lettering on a dark background is generally most legible*
- Define entryway with contrasting materials, finishes, and colors
- Illuminate signage with down-lighting to make it visible at night
- Add emergency exit signage
 - *Aids in emergency egress in case of fire or loss of power*
- Use pictograms such as wheelchair symbols
- Add Braille signage

Entrance

- Provide easy-open doors with lever handles and viewing panels
 - *Install automatic door operators for heavy doors*
 - *Viewing panels allow users to see inside and outside*
- Provide no-step thresholds
 - *Use no-step or compressible, rubber thresholds to reduce tripping hazards*
 - *Thresholds should be no more than 1/2" tall with 1:2 max bevel edges*
- Provide shade and weather protection on approach to entry
- Provide signage directing toward the nearest accessible entrance, if applicable, including a phone number for building staff
- If no other accessible entrance option is available, consider installing a stair lift
- Maintain sidewalk and paths free of snow, ice, leaves, and debris
 - *Electric/radiant and similar sidewalk heating systems can melt ice and make a safer walking path*



Building entry with an easy-to-read building sign; seating; overhead shade and weather protection; automatic glass doors with an adjacent handrail; a well-maintained, wide path; and plants. Photo courtesy of Encore Community Services.

Communication

- Install and maintain an easy-to-use intercom system
- Provide an easy-to-read tenant directory

Interior Common Areas

Well-designed common areas can encourage socializing and reduce feelings of isolation. The recommendations below are for the most typical apartment building common areas. Where space allows, rec rooms, gyms, community gardening areas, communal kitchens, and other common rooms can also promote active use and recreation.

Encouraging and enabling tenants to become acquainted with one another and develop an intra-residential community is likely to increase safety and security, and can help improve building maintenance.



Social space providing a mixture of moveable chairs with arms and backs, benches, and tables in bright colors with ample lighting, and a view of the outdoors. Photo courtesy of Redtop Architects and Andrew Ruge.

Lobby

- Install slip-resistant surfaces
- Add contrasting colors at material and level changes
 - *Signal level changes to help prevent falls*
- Add handrails along circulation routes
 - See Throughout the Building
- Avoid slippery floors in wet weather
 - *Install a non-slip entrance floor mat*
 - *Provide umbrella bags*
- Provide a shelf or other surface at the front door and mailroom or mailboxes for bags and packages
- Provide a ramp or platform lift at level changes
- Stock lobby storage closet with accessible and emergency items
 - *Items stored may include mobility device, portable stair climber, evacuation chair, dedicated power outlet, emergency phone charging station, and small lockers for tenants' devices and valuables*

Lighting

- Provide and maintain adequate lighting at signs, stairs, pathways, mail rooms, entrance, directories, and unit entrances
 - See Throughout the Building
- Provide emergency lighting with battery pack along egress routes



Before-and-after hallway renovation images. Renovated hallway (right) incorporates increased lighting, clearer signage, new carpet, and wall treatments differentiating the hallway from the elevator area. Photo courtesy of Ethelind Coblin Architect.

Signage and Wayfinding

- Add signage for apartment directory, elevator, and apartment door numbers
- Use big lettering in a contrast color
 - *Minimum character height: 5/8" for text that will be read up close and 1-1/4" for text that will be read from up to 6' away*
 - *Light-colored lettering on a dark background is generally most legible*
- Use pictograms, such as wheelchair symbols
- Use color identification for wayfinding
 - *Use different door colors for apartment entrances, service, elevator, and stairs*
- Add Braille signage

Seating

- Locate seating and tables in high-usage areas
 - *Place close to building entry, with views to outside, in common areas, and near elevators*
 - *Arrange in clusters to encourage socialization*

Communication

- Install a bulletin board or digital display
 - *Post tenant notifications in large, easy-to-read font*
 - *Post information on local senior programs, such as a local senior center program calendar*

Laundry Room

- Provide front-loading washers and dryers on a raised platform
 - *Bottom of washer and dryer openings should be 19-1/2" to 34" above the floor (IDG 611.4)*
 - *Ensure appliance controls can be easily reached*
 - *Many manufacturers offer ADA compliant appliances*
- Avoid accidents by installing non-slip flooring
 - *Laundry room floors are often damp or wet*
- Add dual-height counters or tables for folding clothes
 - *Providing folding surfaces at 28" and 34" allows residents to sit or stand*
- Provide a bulletin board and shelving for book exchange or other in house programs
 - *Encourages socialization*
- Install task lighting to illuminate washers and dryers and areas for folding clothes
- Install an overflow water sensor alarm
- Provide accessible storage for tenants' detergents and other supplies
- Provide wheeled laundry carts



Not renovated (left) and renovated (right) laundry rooms. Renovated laundry room shows front-loading washers and dryers on a raised platform, a table with room for a wheelchair, and bright lighting. Dual-height counters, storage, and a bulletin board (not pictured) are also recommended. Photos courtesy of Susan Wright (left) and Eve Dilworth Rosen and Goddard Riverside Community Center (right).

Apartments

Apartment renovations can help improve quality of life, especially for residents who are not fully mobile, and can prevent falls in the bathroom and other areas.

Living Areas and Throughout the Apartment

- Install slip resistant surfaces
- Provide no-step thresholds
 - *Use no-step or compressible rubber thresholds to reduce tripping hazards*
 - *Thresholds should be no more than 1/2" tall with 1:2 max bevel edges*
 - *Providing a threshold in a contrasting color improves visibility and can reduce falls*
- Provide clear, wide paths of travel
 - *Keep hallways and pathways clear of furniture and protruding objects*
 - *Avoid throw rugs and clutter*
- Add grab bars or handrails along circulation routes
 - See Throughout the Building
- Add contrasting colors at material and level changes
 - *Avoid strong patterns and shiny surfaces*
- Provide a ramp or platform lift at level changes
- Install doors to swing into rooms
 - *Bathroom doors are an exception and should swing out*
- Provide a shelf or other surface at the front door for bags and packages
- When replacing windows, consider awning-type units, which are easiest to operate
- Provide more electrical outlets than required by code, at 18" to 24" above the floor
- Install smoke and carbon monoxide detectors and test regularly, as required by NYC law

Lighting

- Provide and maintain adequate lighting along pathways and at entrances
 - See Throughout the Building
- Provide motion-sensor night lights in all rooms and hallways
- Provide lighting in all closets with a protective fixture to avoid bulb breakage
 - *Lighting can be programmed to turn on automatically when the closet door opens*
- Provide multiple lighting options, including dimming, to increase user control

"Switching to energy-efficient LED lighting saved us money, allowing us to make other building improvements."

-- JASA Housing staff

Bathroom

- Provide slip-resistant flooring and an anti-slip bathtub or shower mat
 - *Use a contrasting color for the bath or shower*
 - *Base-row wall tiles should provide a clear contrast from floor tiles, so that the distinction between floor and wall can be readily perceived*
- Install the bathroom door to swing out or use a sliding pocket door
 - *Consider clear offset or expandable hinges to provide a wider door opening*
 - *Install hardware that allows the door to open easily*
- Install grab bars at tubs, showers, and toilets
 - *Install vertical grab bars at the tub or shower threshold*
 - *Towel racks do not provide enough support*
 - *See Throughout the Building*
- Install sink with removable cabinet below and a reachable mirror and medicine cabinet
 - *Sink height should be 34" maximum*
 - *Medicine cabinets should be placed at 35" to 40" from the floor to the bottom of the cabinet*
 - *Install an anti-fog mirror or use anti-fog spray*
- Provide easily reachable, lever-type hardware for sink, shower or bath, and toilet
 - *Lever handles are easier to use than round knobs or handles*
 - *Locate shower or bath controls for caregiver access or provide two sets of controls*
- Install a walk-in or no-threshold shower with appropriate drainage
 - *Install curbless shower doors or provide a shower curtain rod*
 - *Shower-door tracks should not be installed on the bathtub rim as they can impede entry*
 - *Bathtub enclosures should not obstruct controls, faucets, shower and spray units*
- Install handheld and adjustable shower head
 - *Allows shower to be used while standing or sitting*
 - *Use non-positive shutoff and 59" minimum hose*
- Install a shower seat
 - *Avoid a flip-down type to prevent injury*
- Install an ADA compliant toilet
 - *Or use a toilet seat riser to provide 17" to 19" height*
 - *Consider a bidet toilet seat unit*
 - *Look for easily visible, lever-type flush controls rather than push button or rounded*
 - *Locate the toilet paper holder so it can be easily reached from the toilet*
- Install glow-in-the-dark light switches
- Install anti-scald water devices
 - *Water temperature should be 120 degrees maximum*
- Install a water overflow detection alarm
- Insulate exposed pipes
- Install ground fault circuit interrupter (GFCI) outlets



Left: Shower with grab bars, shower seat, shower curtain in a contrasting color, and adjustable showerhead, allowing use while sitting or standing. A vertical grab bar at the shower or tub threshold (not pictured) are also recommended. Photo courtesy of Bestbath.

Right: Flexible shower threshold. Photo courtesy of Eric Cohen and Bestbath.



Bathroom featuring grab bars, lever-type hardware, low-level bath enclosure, and a sink with space for a wheelchair underneath. Mirror, medicine cabinet, and outlets are reachable, and there are no exposed pipes. Grab bars provided above and next to toilet to aid in use of toilet. A walk-in or no-threshold shower (not pictured) is also recommended. Photo courtesy of Eve Dilworth Rosen and Goddard Community Center.

"The new shower with the hose is much more convenient."
 -- JASA Housing senior tenant

Bedroom

- Provide clear paths of travel
 - *Maintain a clear floor space adjacent to the bed*
- Install two-way switches controlling lights at the bedroom entrance and by the bed
 - *Install general and task lighting adjacent to the bed*
- Provide remote controls adjacent to the bed
 - *For lighting, fan, video, audio, phone, and other types of wireless controls*
- Install smoke and carbon monoxide detectors and test regularly, as required by NYC law
- Provide a fire extinguisher

Kitchen

- Install ADA appliances
 - *Locate controls at the front of the stove*
- Provide lever-type hardware for sink and storage closet doors
 - *Lever handles are easier to use than round knobs or handles*
 - *Install a faucet spray unit, soap dispenser, and a water filter with a remote (accessible) switch*
- Install soft-closing cabinets and a removable under-sink cabinet
 - *Provide D-type pulls on cabinets and drawers to allow easier opening*
 - *Install drawers instead of base cabinets*
 - *Install at least one upper cabinet so that bottom shelf is at 48" above the floor*
- Do not install cabinets over the stove
 - *Locate cabinets so that they do not require reaching over hot surfaces*
- Provide anti-tip brackets on appliances, especially stove
 - *Brackets are installed on the back of a stove to keep it from tipping over*
- Provide adequate work surfaces and pull-out cutting boards if necessary
 - *Provide a countertop section or table at 34" to create a work area accessible from a seated position*
- Locate wall ovens and microwaves at countertop level, adjacent to an accessible horizontal surface
- Install an exhaust hood, ducted where possible
- Install task lighting at the sink, stove, and other work areas
- Insulate exposed piping
- Install smoke and carbon monoxide detectors and test regularly, as required by NYC law
- Provide a fire extinguisher



Kitchen with adequate counter space and room for a wheelchair beneath the countertop. Also showing an exhaust hood, lever-type hardware, easy-open cabinets, front oven controls, and no exposed pipes. Cabinets above the stove (shown here) are not recommended. Photo courtesy of Associated Blind H.D.F.C. and Christine Hunter.

Storage

- Provide at least one wheelchair-accessible closet
 - *Maximize closet door openings to allow easy access to contents*
 - *See Inclusive Design Guide Section 1005.1 Closets*
- Provide an adjustable-height clothes rack
- Install a closet light with a control switch located outside the closet
- Provide dedicated storage for mobility devices
- Provide trash and recycling receptacles with secure lids and adjacent plastic bag storage

Communication

- Install and maintain an easy-to-use intercom system connecting to the building front door
- Install a doorbell with a strobe signaler or adjustable volume
 - *Redundant cues accommodate residents with sight and hearing disabilities*
 - *Wireless doorbells with a strobe feature can be plugged into an electrical outlet*
- Provide peepholes at two levels
 - *Upper peephole should be placed at 62", and the lower at 48" for use by people in wheelchairs*
- Add symbol or decal designator at unit entrance
 - *Alert first-responders to check unit in an emergency*
- For apartments with two or more levels, consider a stair lift

"I like the new closet with lower shelving, which they renovated according to my requests."

-- JASA senior tenant

Resources

Financial

Many of the building upgrades in this guide are low- or no-cost. Some, such as converting to LED lighting, can help save money over time. For more information on construction costs, see the AARP HomeFit Guide and RSMeans construction cost estimating books.

One in eight New Yorkers is identified as having a disability. Many seniors fall into this category, making some senior-friendly building upgrades eligible for the federal and New York State financial incentives listed below. Consult the resources below and a tax professional to determine for which incentives you may qualify.

Federal Tax Incentives for Businesses

The U.S. government provides two business tax incentives to cover the costs of making access improvements for customers with disabilities. The two incentives below may be used together by eligible businesses, if expenditures qualify under both.

Disabled Access Tax Credit

Small businesses with 30 or fewer employees, or with a total revenue of \$1 million or less in the previous tax year, that remove access barriers from their facilities, provide accessible services or take other steps to improve accessibility for customers with disabilities may use the Disabled Access Credit (IRS Code Section 44; form 8826).

Any small business that falls within the definition and removes barriers (for example, constructing a ramp at a building entrance or providing tenant information in alternate formats such as Braille) can take advantage of the credits. Eligible small businesses may take a credit of up to \$5,000 (one-half of eligible expenses up to \$10,250 with no credit for the first \$250) to offset their costs for access improvements. Examples include:

- Removal of barriers, by widening doors, building a ramp, installing a lift, and making toilet room accessible with handle bars and ample space
- Provision of accessibility services such as hiring a sign language interpreter or a Communication Access Realtime Translation (CART) transcriber
- Provision of printed material in alternate formats such as large-print, Braille, and audio
- Implementation of screen-reader technology

Business Expenses Tax Deduction

Businesses of all sizes may take a Business Expenses Tax Deduction for removing access barriers to individuals with disabilities or the elderly in their facilities and vehicles of up to \$15,000 (See: IRS Code Section 190; publication 535). Barrier removal could include widening doors, building a ramp, installing a lift, making toilet rooms accessible, installing an induction loop or other assistive listening system, or installing an automatic door.

For more information about these tax incentives, visit the IRS website or call 800-829-3676 (voice); 800-829-4059 (TTY).

New York State

The following are descriptions are excerpted from New York State Homes and Community Renewal (HCR) online program statements.

Access to Home Program

The New York State Homes and Community Renewal (HCR) Access to Home Program provides financial assistance to property owners to make dwelling units accessible for low- and moderate-income persons with disabilities. Homeowners and renters may qualify for loan assistance through the municipality or nonprofit entity under the following criteria:

- The occupant is physically disabled or has substantial difficulty with an activity of daily living because of aging;
- The dwelling unit is a permanent residence; and,
- Total household income does not exceed 80% of area median income, or 120% of area median income if person in need of modifications is a disabled veteran (proof that person was disabled due to service is required).

Weatherization Assistance Program

The New York State Homes and Community Renewal (HCR) Weatherization Assistance Program may provide financial assistance for building improvements that are energy-related, such as the installation of energy-efficient lighting. Households with incomes at or below 60% of state median income are eligible for assistance. Program services are available to both homeowners and renters, with priority given to senior citizens, families with children, and persons with disabilities. Applications are accepted from renters, homeowners, and rental property owners.

Design

For further design guidelines and remodeling assistance, see

- International Code Council (ICC): Inclusive Design Guidelines, New York City, 2nd Edition (available July 2016)
- International Code Council (ICC): Code Source Accessibility: Codes, Standards, and Guidelines
- AARP: HomeFit Guide
- New York City: Active Design Guidelines and Shaping the Sidewalk Experience
- Enterprise Community Partners, Inc.: 2015 Green Communities Criteria, Aging-in-Place Recommendations; Aging in Place Existing Conditions Checklist; and Aging in Place Prioritization Charrette Tool
- National Association of Home Builders (NAHB): Certified Aging-in-Place Specialist program
- American Occupational Therapy Association: Resources for the Aging
- NCARB: Accommodations for Seniors
- Lighthouse International: Designing for People with Partial Sight and Color Deficiencies
- [Center for Inclusive Design & Environmental Access: The NYC Guidebook to Accessibility and Universal Design](#) (p 8-10)

Reasonable Accommodations for People with Disabilities

Under the New York City Commission on Human Rights Law, a building owner is responsible for providing a “reasonable accommodation” at the owner’s expense as long as the accommodation requested is technically feasible and does not cause an “undue hardship.” The owner is obligated to provide desired accommodations both in the common areas of the building and within a disabled person’s apartment.

For more information on New York City regulations, see

- New York City Commission on Human Rights
- 2014 New York City Building Code

For more information on Federal Regulations, see

- [United Spinal on the Federal Fair Housing Act](#)
- ICC A117.1-2009 Accessible and Usable Buildings and Facilities
- 2010 ADA Standards
- ASME A18.1 Safety Standards for Platform Lifts and Stairway Chair Lifts

Tenants’ Rights

The New York City Human Rights Law and the Federal Fair Housing Act outline tenants’ rights. To file a complaint, call 311.

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