HPD DESIGN GUIDELINES

for

NEW CONSTRUCTION

2026

Department of Housing Preservation & Development

DISCLAIMER

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The illustrations included within the HPD Design Guidelines for New Construction are intended merely to assist in navigating the various requirements and design standards; to aid staff during the plan review for projects participating in HPD programs and activities; and to add clarity and transparency to designers responding to HPD's Design Review comments. This document is not meant to offer a design template, but rather to document and illustrate some of the design controls and potential outcomes. Pertinent laws, rules, regulations, and codes take precedence over the Guidelines in the event of a conflict.

SPECIAL THANKS

This and previous versions of the HPD Design Guidelines for New Construction are the product of internal evaluations and community feedback and would not have been possible without the help of numerous individuals and organizations. In particular, HPD would like to thank the New York State Association for Affordable Housing (NYSAFAH), the Supportive Housing Network of New York (SHNNY), Kinetic Communities Consulting, Taitem Engineering, Steven Winter Associates, Cadence OneFive, the Citizens Housing and Planning Council (CHPC), the New York City Housing Development Corporation (HDC), the American Institute of Architects (AIA) New York Chapter, and our key sister city agencies including the Mayor's Office of Climate and Environmental Justice (MOCEJ) and the Office of Management and Budget's Climate Programs and Policy Team (OMB) for their contributions to this document and previous versions upon which it is based. Any errors or omissions are the sole responsibility of HPD.

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PART I

INTRODUCTION

INTENTION OF THE DESIGN GUIDELINES

The HPD Design Guidelines for New Construction (the "Guidelines") establishes the design criteria by which HPD will evaluate proposed developments upon application to HPD for financial assistance. The Guidelines represent an effort to meet housing demand, respond to market changes, promote affordability, and ensure that HPD projects are designed according to the best practices for environmental and social health and well-being across a variety of conditions. Cost containment shall also be a primary design objective, with all design decisions favoring simplicity, efficiency, standardization, and durable low-maintenance materials to minimize construction and lifecycle costs while meeting required code, safety, and performance standards. Development teams are encouraged to proactively identify and elevate design requirements or project conditions that materially increase costs, and to provide practical alternatives or value-engineering solutions for consideration.

APPLICABILITY

The New York City Department of Housing Preservation and Development (HPD) has issued the HPD Design Guidelines for New Construction for HPD-assisted multifamily new construction, home-ownership, supportive, and senior housing projects, and they may also be used to guide the design of 1-4 family homes. Compliance with the requirements of the Guidelines is a prerequisite to loan closing for any new construction projects developed under applicable HPD loan programs. Projects participating in Housing incentive programs (either MIH or UAP) that are not subsidized through any HPD Loan Programs shall not be subject to the Guidelines but are subject to HPD review of zoning incentives. Projects receiving only tax incentives and not subsidy are not subject to HPD Design Guidelines.

The HPD Design Guidelines 2026 apply to all projects developed under HPD loan programs and whose initial submission to HPD for design consultation are received on or after October 1, 2026.

HPD recognizes that the Guidelines cannot address all development scenarios: certain deviations from the baseline requirements will be considered via a **Design Waiver Request** when necessary to avoid costly structural changes or tenant hardship or when a proposed alternative results in a superior design solution. Waiver requests will be reviewed on a case-by-case basis and assessed for the appropriateness of the proposed alternative(s). Determinations will be based on the degree of technical infeasibility and/or financial infeasibility.

FRAMEWORK

The Guidelines are organized around two levels of criteria: Requirements and Reach.

Requirements establish the minimum standards that HPD requires all project must meet. These standards are mandatory and may vary by project type, Program, or population served.

Reach criteria represent aspirational best practices that exceed the baseline requirements. Development teams should consider reach criteria only where they provide sufficient material benefit to residents and/or the surrounding community, reduce ongoing maintenance or operating costs, or otherwise provide substantial value to the overall project relative to their cost. Reach criteria may be identified for revision in the event that projects exceed term sheet costs.

ACCESSIBILITY

HPD-assisted projects must comply with federal accessibility laws and regulations—including Section 504 of the *Rehabilitation Act of 1973*, the *Fair Housing Act*, and HUD's implementing Regulations (24 CFR Parts 8* and 100, respectively). HPD must also affirmatively further the goals of the *Fair Housing Act*. These, and related laws and regulations, prohibit discrimination based on disability and establish design requirements for program accessibility and physical accessibility in connection with housing programs. In addition, HPD projects must comply with the local accessibility requirements of Chapter 11 of the New York City Building Code.

To better support developers to provide accessible housing and meet the needs of New Yorkers with disabilities, HPD developed a supplementary document, the *HPD Accessibility Guide*, which outlines the accessibility requirements that apply to multifamily housing. This guide features a useful diagnostic tool to help design professionals navigate the multiple layers of accessibility regulations and includes an expanded library of accessibility sketches.

> **While 24 CFR Part 8 Regulations indicate that the minimum of 5% mobility impairment and minimum of 2% hearing or visual impairment requirements apply to project receiving federal assistance, subsequent civil rights laws broadened the requirement to all programs and activities of housing agencies, such as HPD, that accept federal assistance.*

HEALTH AND EQUITY

We are committed to advancing equity in multifamily residential developments by providing buildings and communities that support the health and well-being of all residents. Our approach integrates healthy building systems—such as high-quality ventilation, daylighting, and thermal comfort—with equitable access to safe outdoor spaces, recreation areas, and opportunities for everyday movement. By combining elements across the scales of a project, from thoughtful site design, inclusive building planning, and building systems that promote indoor environmental quality, we aim to create living environments that support physical and mental health for residents of all ages, incomes, and abilities. This commitment aligns with the principles outlined in the *Active Design Guidelines 2.0*, which encourage integrating active living, access to open space, and healthy building strategies into residential developments to foster more inclusive and health-promoting communities.

SUSTAINABILITY

In 2023, HPD committed to fast-tracking equitable decarbonization and releasing Design Guidelines that will ensure these goals can be met across our portfolio. This aligns with New York City's long-term strategic climate plan to protect New Yorkers from climate threats, improve quality of life, and build the green economy.

These Guidelines are intended to:

- Ensure new construction is fully aligned with the City's decarbonization trajectory and future carbon limits;
- Protect residents from climate risks including extreme heat, flooding, and grid disruptions;
- Reduce housing operating costs through high-performance design.
- Improve indoor environmental quality;
- Advance environmental justice;
- Support workforce development and growth of the green building economy.

The Guidelines ensure that HPD's new construction meets these ambitious goals and are poised to meet future requirements.

HPD New Construction Projects are subject to the following baseline requirements:

a. **Green Building Certification**
   All projects must certify with the current version of the NYC Overlay of Enterprise Green Communities (EGC) or LEED Gold or above, in accordance with NYC green building standards established under Local Laws 31 and 32 of 2016 (Capital Green Building Program).

b. **All-Electric Building**
   All buildings must be designed to be all-electric, consistent with LL154. Space heating, domestic hot water, cooking, and other uses shall be electric. Note that high-efficiency fossil fuel generators are permitted but may only be used in no load tests/exercise and for emergency purposes when the electric grid power fails.

c. **Energy Performance, Carbon Reduction, and Cost Control**
   All projects must minimize operational energy use, peak demand, and long-term operating and maintenance costs through high-performance envelope design, efficient all-electric systems, passive load reduction strategies, and proper commissioning, while also reducing embodied carbon, to support alignment with New York City's long-term decarbonization goals.

RESILIENCY

HPD's Design Guidelines take a holistic approach to climate resilience, addressing coastal flooding, stormwater and heat risks to protect buildings and residents with forward-looking climate data and best practices aligned with NYC's Climate Resiliency Design Guidelines (CRDG). These requirements represent HPD's commitment to building climate-resilient affordable housing that protects residents and preserves public investment for the long term.

DETERMINING FLOOD RISK

In accordance with guidance in the CRDG, the HPD Design Guidelines manage flood risk by accounting for sea level rise over a project's useful life. Projects are evaluated against current FEMA flood maps, as well as future coastal floodplain projections developed by the New York City Panel on Climate Change (NPCC).

Additionally, the Design Guidelines address emerging flood risks from extreme precipitation events by requiring enhanced stormwater management and building protection measures in areas identified by the NYC Stormwater Flood Maps as especially vulnerable to stormwater flooding.

DEFINING FLOOD-PRONE SITES AND CRITICAL EQUIPMENT

Coastal Flood-prone: Projects are considered *coastal flood-prone* if located within the 2080s 1% annual chance coastal floodplain in the NYC Coastal Flood Hazard Mapper. This geography is inclusive of the Special Flood Hazard Area, comprised of the 2007 effective Flood Insurance Rate Map (FIRM) and 2015 Preliminary Flood Insurance Rate Map (PFIRM).

Stormwater Flood-prone: Projects are considered *stormwater flood-prone* if located on sites within or adjacent to flooded areas as mapped in the Extreme Stormwater Flood scenario (100-year storm with 2080s sea level rise) in the NYC Stormwater Flood Maps.

Projects are considered at risk of stormwater flooding where any part of a project site touches a roadway or other public right of way shown as flooded on the Extreme Stormwater Flood scenario of the NYC Stormwater Flood Maps. For projects with interior buildings located on campuses or larger sites, or where available project and stormwater flood data can improve on the mapped conditions, HPD will utilize discretion.

Critical Utilities and Equipment: The Design Guidelines for New Construction identify the following building systems as critical utilities and equipment for the purposes of the resiliency requirements:

- HVAC systems
- Boilers, furnaces, water heaters
- Fuel storage tanks
- Fire-suppression sprinkler controls
- Elevator machine rooms
- Electrical panels and switch gear
- Backup generators, and other emergency backup systems
- Alarm controls and components
- Energy management systems
- Telecommunications equipment
- Electric and gas meters
- Utility shut-off switches

This determination is based on the CRDG definition for critical equipment as well as an understanding of the risks posed to building and resident life safety during a flood event. HPD may use its discretion to modify the above list for a proposal based on the available project, site and climate hazard information.

CALCULATING SEA LEVEL RISE ADJUSTED DESIGN FLOOD ELEVATION FOR COASTAL FLOOD-PRONE PROJECTS

Coastal flood-prone projects are required to use the 2080's Sea Level Rise-Adjusted Design Flood Elevation (SLR-Adjusted DFE) when determining required elevation for residential units, resident egress, and critical utilities and equipment to ensure projects are designed to withstand future coastal flooding conditions throughout their useful life. This calculation is based on methodology established in the CRDG, Chapter II, Section C (2022, Version 4.1).

End of Useful Life	BFE* in NAVD 88	+ Freeboard	+ SLR* Adjustment	= DFE* in NAVD 88
2080s (2070-2099)	**FEMA 1% (PFIRM)**	**24''**	**28''**	**= FEMA 1% + 52''**

BFE: Base Flood Elevation DFE: Design Flood Elevation SLR: Sea Level Rise

Where BFEs have not been established because a site exists beyond the FEMA 1% annual chance coastal floodplain or for other reasons, the nearest FEMA-mapped BFE from the City's Preliminary Flood Insurance Rate Map (PFIRM) should be referenced for the purposes of determining the SLR-adjusted DFE.

SHELTER IN PLACE AREAS

Expanded criteria for Shelter in Place Areas (formerly *Places of Refuge*) establish dedicated areas within buildings that can maintain safe and habitable areas for residents during outages or other climate-related emergencies, with heightened standards for senior housing.

ENVIRONMENTAL STANDARDS

All projects must demonstrate compliance with HPD's standards for hazardous materials and noise attenuation, as applicable.

HAZARDOUS MATERIALS

All projects must assess, investigate, and if necessary, remediate to the greatest extent practicable any contamination that exceeds levels to ensure a safe, healthy living environment for building residents and guests. A Phase I Environmental Site Assessment (ESA) in accordance with the most recent ASTM E1527 Standard conducted within the last 12 months shall be provided to HPD. If needed, a Phase II ESA Work Plan and Phase II ESA in accordance with the most recent ASTM E1903 Standard shall be submitted for HPD approval. If potential adverse hazardous materials impacts are identified, mitigation and/or remediation in accordance with a HPD approved Remedial Action Plan (RAP) would be required.

In the event the project site is undergoing hazardous materials assessment, investigation and remediation through another regulatory program such as the New York State Brownfield Cleanup Program, New York City Voluntary Cleanup Program, or under the requirements of an E-Designation, the Project Sponsor shall provide documentation as necessary to demonstrate participation in such program to HPD in lieu of the requirements above.

NOISE

Site-specific or comparable noise readings are required for project sites that meet any of the following characteristics:

- Sites located on or substantially contiguous to streets that the New York State Department of Transportation (NYS DOT) classifies as Functional Class (FC) 11/ Urban Principal Arterial, FC 12/Urban Principal Arterial, FC 14/ Urban Principal Arterial, FC 16/ Urban Minor Arterial, FC 17/ Urban Collector;
- Sites located within 500 feet of an interstate, expressway and/or principal arteries, classified by NYS DOT as FC 11, 12, 14/ Urban Principal Arterial;
- Sites located adjacent or substantially contiguous to an exposed or elevated rail line, or within 500 feet of such rail lines and with a direct line of sight to such rail lines; or
- Sites within the official 65 dB(A) DNL noise contours for John F. Kennedy Airport or LaGuardia Airport.
- Sites within 200 feet or within a line of sight to a playground, ambulatory care facility, fire station or other significant atypical noise source.

If the project does not meet any of the above conditions, no site-specific or comparable noise readings are required. Site-specific noise attenuation features above standard construction measures are not required.

If the project site is the subject of an (E) Designation for Noise, the Project Sponsor shall provide such documentation as necessary to demonstrate the presence of the (E) Designation in lieu of the requirements above.

PART II

REQUIREMENTS

1. SITE PLANNING

The site is the first opportunity to shape the health, safety, and resilience of an affordable housing development — and for many residents, it may be their primary access to outdoor space, nature, and community life. This chapter addresses the design of the site exterior — including outdoor spaces, stormwater management, flood mitigation, heat island reduction, and landscaping — with the goal of creating safe, resilient, and welcoming environments. Affordable housing sites are disproportionately located in neighborhoods that face compounding climate risks, from the heat island effect to flooding, making thoughtful site design both an equity imperative and a long-term investment in building performance. HPD requires that all projects maximize the quality of outdoor space as an extension of the home, and that sites be designed to respond to existing and future climate conditions while contributing positively to the surrounding neighborhood.

Image Credits: Dunn Development

1.1 SITE CONDITIONS AND EXCAVATION

Requirements

1.1.1 Avoid excessive excavation. Particularly in areas with unknown subsurface conditions, and where rock or high-water tables are prevalent, proposed cellars may have to be reduced, relocated, or even eliminated.

Early planning for such contingencies may preserve essential design elements.

1.1.2 Avoid underpinning adjacent structures by locating excavation areas away from them when possible.

1.1.3 Avoid excessive lot-line windows.

Such fenestrations are subject to additional code requirements, as outlined in DOB Buildings Bulletin 2015-17.

1.1.4 All projects must assess, investigate, and if necessary, remediate to the greatest extent practicable any contamination that exceeds action levels to ensure a safe, healthy living environment for building residents and guests.

All projects must either:

Submit a Phase I Environmental Site Assessment prepared by a qualified professional dated within one year of initial submission to HPD Environmental Planning for review. As needed, projects shall submit a Phase II Site Investigation Work Plan for review and approval prior to the preparation of the Phase II Site Investigation Report. Following the submittal of the Site Investigation Report, as needed, the Project Sponsor shall submit a Remedial Action Plan and/or Construction Health and Safety Plan to be approved by HPD and/or the New York City Department of Environmental Protection. All documents must be prepared in accordance with the standards of the American Society for Testing and Materials; OR

Projects undergoing site remediation through other methods such as the New York State Brownfield Cleanup Program, New York City Voluntary Cleanup Program, or under the requirements of an (E)-Designation should provide such documentation as necessary to demonstrate remediation under such program. Prior to closing on financing, the Project Sponsor must submit documentation of approval of the project site's remedial activities by the relevant regulatory agency.

1.2 OUTDOOR SPACE

Requirements

1.2.1 Provide Outdoor Space for residents.

Outdoor Space shall include a shaded zone *with seating areas. Shading may be provided either through overhead coverage (such as pergolas, tree canopy, building overhangs, or solar panel structures) or through shadows cast by buildings (evaluated at 4pm on June 21st).*

1.2.2 All areas of programmed outdoor space must be fully mobility-impaired accessible, and changes in elevation must be shown on all plans.

1.2.3 Design outdoor spaces for year-round comfort with features such as wind protection (walls, plantings, glass screens), seasonal solar access (deciduous trees, adjustable shading), and covered areas protecting from rain and snow.

Reach

1.2.4 Provide shaded zones covering at least 50% of outdoor seating and gathering areas, providing protection during peak heat hours.

1.2.5 Integrate multiple shading typologies (tree canopy, architectural structures, solar canopies, and building overhangs) to provide varied microclimates and seasonal adaptability.

1.2.6 Provide outdoor areas that are sized, furnished, and landscaped for a variety of activities, such as active play, passive recreation, social gathering, contemplative space.

1.2.7 Locate outdoor spaces with direct visual and physical connection to indoor common areas (community rooms, lobbies) to encourage use and provide weather refuge.

1.3 HEAT ISLAND MITIGATION

Requirements

1.3.1 Provide low-maintenance heat-island-mitigating strategies for at least 75% of the total site area, as defined below. Eligible measures include:

- Landscape or vegetated areas, including vegetated (green) roofs.
- Shade from trees or other plantings located to shade hardscape. Shading must be calculated at solar noon on the summer solstice, based on projected canopy coverage at 10 years of growth.
- Engineered grass pavers.
- Open pavers, counting only the vegetated portion toward compliance. The paver portion can be counted if it complies with the high-albedo paving materials requirement.
- High-albedo paving materials with an initial Solar Reflectance (SR) ≥ 0.33 or a three-year aged SR ≥ 0.28.
- High-albedo roofing materials with an initial Solar Reflectance Index (SRI) ≥ 82 or a three-year-aged SRI ≥ 64.
- Photovoltaic (PV) panels, where the area of panels may be counted toward coverage.

For the purposes of this criterion, site area includes all ground-level exterior areas, rooftop terraces accessible to residents, and roofs and bulkheads that are inaccessible to residents.

For typical canopy dimensions of common landscape trees, refer to this resource.

1.4 SITE RESILIENCY

Requirements

1.4.1 Projects that disturb 20,000 sf or more of soil or create 5,000 sf or more of new impervious surface must demonstrate compliance with the NYC Department of Environmental Protection (DEP) Unified Stormwater Rule (USWR) by integrating stormwater management practices (SMPs) that maximize vegetated retention to the extent feasible.

USWR compliance can have significant implications for rooftop and site planning. Projects should begin working with DEP early during design to avoid conflict.

1.4.2 At the ground level, paved or impervious surfaces must be limited to where necessary for operational purposes in favor of landscaped or vegetated surfaces, and/or applicable stormwater management strategies.

Reach

1.4.3 All projects not otherwise subject to DEP's USWR, especially those located at stormwater- or coastal flood-prone sites, should provide stormwater management strategies for at least 20% of the total site area.

> *Enhanced on-site stormwater management strategies can be found in the Climate Resiliency Design Guidelines.*

1.4.4 For large coastal flood-prone projects where financially feasible and justifiable, provide additional site-scale coastal flood mitigation features incorporating natural systems-based approaches (e.g., living shorelines, restored wetlands, natural stormwater management practices) to better manage floodwater or perimeter protection (e.g. landscaped berms, floodwalls, deployable flood barriers) to protect against storm surge.

2. BUILDING ENVELOPE AND MATERIALS

How a building is assembled — its walls, windows, roof, and exterior materials — determines how it performs for decades, shaping resident comfort, energy costs, durability, and the building's contribution to its neighborhood context. This chapter addresses exterior massing and design, envelope performance, materials selection, and embodied carbon considerations. HPD requires that buildings be designed to perform well over the long term, minimizing operating costs for residents and owners while contributing to the quality of the streetscape and neighborhood. Materials should be durable, healthy, and appropriate to the building type and context, with reach goals encouraging low-carbon choices that reduce environmental impact over the building's lifecycle. Envelope design also carries growing regulatory significance under New York City's building energy and climate legislation, making upfront performance decisions increasingly consequential for owners and operators.

Image Credits: David Cunningham Architects

2.1 EXTERIOR DESIGN AND MASSING

Requirements

2.1.1 Define separate building elements through articulation of massing, material, color, and texture.

2.1.2 Create a sense of depth with light and shadow and avoid a flat, planar appearance of the building envelope.

Reach

2.1.3 Design facades with variation in type, color, texture, and depth of material.

2.1.4 Designs should relate to the human scale at the base level and activate the ground floor along the street frontage.

2.1.5 Distinguish the main residential entrance from the rest of the building and provide shelter from inclement weather.

2.2 ENVELOPE PERFORMANCE

Requirements

2.2.1 Lot line walls, including walls adjoining neighboring buildings, shall not be assumed to function as party walls and shall be designed and constructed as exterior wall assemblies unless a legally established party-wall condition is documented.

These wall assemblies shall incorporate continuous insulation and be detailed and constructed to provide a continuous, airtight barrier. Continuous insulation shall be installed exterior or interior to the structural wall and shall remain uninterrupted except at locations where penetrations or structural elements are required (e.g., floor slabs, beams, columns).

2.2.2 Provide thermal separation, continuous air-sealing, and appropriate acoustical insulation between residential units and any separately leased commercial or community facility spaces, treating separating walls as exterior wall assemblies for these purposes.

2.2.3 Provide a comfortable noise environment for residents in their dwelling units by selecting and incorporating the appropriate Outdoor-Indoor Transmission Class rated wall, window, door, and other façade elements as necessary to maintain an interior closed-window noise level of no greater than 45 dB(A) in project areas with excessive ambient noise.

Reach

2.2.4 Where cost-feasible, pursue high-performance building certifications that prioritize superior energy savings, balanced ventilation, and passive survivability. Eligible pathways include PHI (Classic, Plus, Premium, Low Energy Building), PHIUS (CORE, ZERO), the DOE Efficient New Homes Program (ZERH – Multifamily), and ENERGY STAR NextGen, or comparable standards with similar performance targets. Buildings must underwrite to PH standards.

Design teams new to Passive House must use Passive House consultants that have successfully certified at least one Passive House multifamily project in New York City and are strongly encouraged to provide training to applicable contractors and tradespersons. Contact HPD for available free or low-cost training opportunities.

All high-performance projects must underwrite to savings using HPD's Passive House M&O standards or another approved methodology.

2.2.5 Design facades to mitigate heat island effects and solar heat gain with a focus on southern and western walls. Strategies may include light-colored/high-albedo wall finishes (initial SR ≥ 0.60 and thermal emittance ≥ 0.75), vegetated wall systems, façade-mounted PV/BIPV systems that provide permanent shading, and exterior shading devices such as overhangs, fins, louvers, or screens.

2.3 FENESTRATION SYSTEMS DESIGN

Requirements

2.3.1 Avoid excessive glazing to reduce solar heat gain during summer months, improve the energy performance of the building envelope, and limit cost impacts associated with large window areas.

> *Prioritize moderate, well-distributed window areas rather than large, glazed façades, using glazing strategically to balance daylight, views, and occupant comfort while minimizing cooling and heating loads.*
>
> *Where higher glazing ratios are proposed, pair them with appropriate mitigation strategies such as exterior shading, high-performance glazing, daylight controls, and envelope trade-offs consistent with code requirements."*

2.3.2 Provide interior window shading for all in-unit living room and bedroom windows, as well as lobby spaces, corridors, and other common areas regularly used by residents. Interior shading may include solar shades, blinds, curtains with reflective backing, or the installation of curtain rod hardware (curtain not required). Shading devices shall be installed or accommodated in a manner that allows effective coverage of the window glazing while allowing airflow.

> *Refer to the DOE's Energy Efficient Window Covering resource.*

2.3.3 Provide and install window screens on at least one operable sash in each habitable room in every dwelling unit.

2.4 MATERIALS SELECTION

Requirements

2.4.1 Specify high quality, attractive, sustainable, and durable materials that minimize maintenance costs.

2.4.2 Use flood-resistant construction materials for all construction below the Sea Level Rise–adjusted Design Flood Elevation (SLR-adjusted DFE) that is susceptible to flooding.

2.5 LOW-CARBON MATERIALS

Requirements

2.5.1 Procure Type III Environmental Product Declarations (EPDs) for at least 90% of all ready-mix concrete and steel (structural and rebar) products used in construction, prioritizing facility-specific EPDs. Where a facility-specific EPD is not available, product-specific EPDs may be submitted; if neither is available, industry-wide EPDs shall be accepted.

Reach

2.5.2 Consider strategies that significantly reduce embodied carbon and construction waste, including:

- Structural system right-sizing, industrialized modular construction methods, and incorporating reusable or deconstruction-ready assemblies.
- Concrete with reduced embodied carbon, including products that meet or improve upon the latest applicable benchmark values published in the Carbon Leadership Forum (CLF) North American Material Baselines Report.
- Concrete Masonry Units (CMU) with high supplementary cementitious material (SCM) content (e.g., recycled glass pozzolans), carbon-sequestering additives or technologies (e.g., CarbonCure or equivalent) and/or use of lower-density CMUs, where structural and code requirements permit.

3. BUILDING PLANNING

The arrangement of spaces, circulation, and structure within a building shapes both how it functions and how it is experienced. This chapter covers the design of lobbies, corridors, vertical circulation, common amenities, waste and recycling areas, and program-specific spaces such as community rooms and management offices. Thoughtful building planning promotes safety, dignity, accessibility, and a sense of community — qualities that are especially important in affordable housing, where shared spaces often extend the functionality of individual units. Efficient planning can also help contain construction and long-term operational costs, supporting the delivery and preservation of high-quality affordable housing. Requirements in this chapter reflect HPD's commitment to equitable unit distribution, active design principles, and operational efficiency.

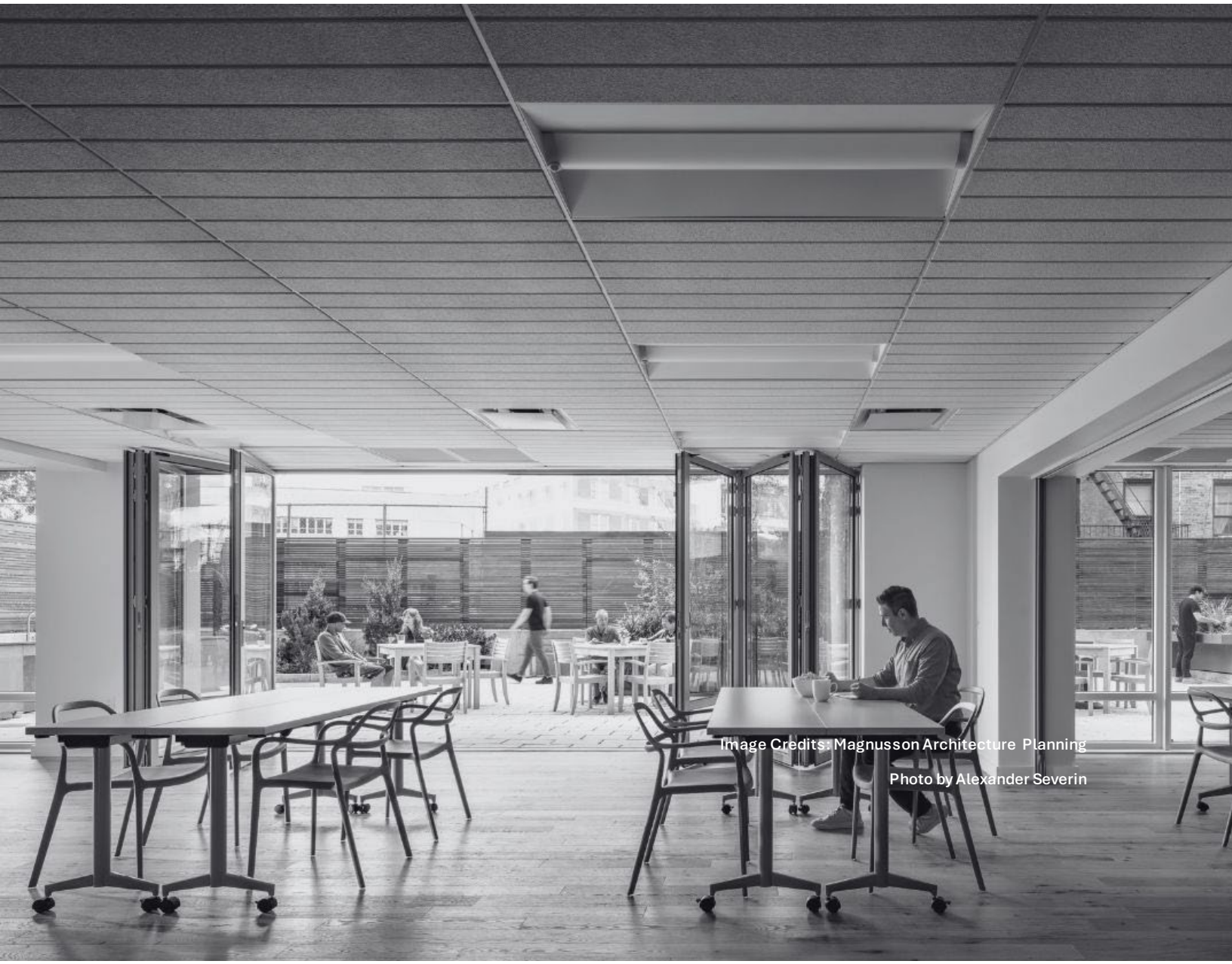

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Photo by Alexander Severin

3.1 COMMON SPACES

Requirements

3.1.1 Children's Play Room, when provided, must be furnished with safe, durable, and aesthetically pertinent finishes.

3.1.2 When the building contains excess cellar space, and the elimination of such space does not result in cost savings, prioritize secured resident bulk storage areas for such spaces.

3.1.3 When provided, Bicycle Storage should be located near circulation and easily accessible by the tenants.

> *At the discretion of HPD, up to 50% of NYC Zoning Bicycle Storage requirements can be waived if the team can demonstrate material benefit to the project.*

Reach

3.1.4 Storage Area should be provided when possible and located in a secure, fully accessible location for residents. The storage area should be close to the elevator core.

3.1.5 Children's Play Room to be visible from other common spaces, such as the laundry room or Recreation Space.

3.1.6 Laundry and Exercise Rooms to be located in areas with direct access to fresh air and natural light.

3.1.7 Provide a Recreation Room that is adaptive to various uses, has a kitchenette and access to natural light.

3.1.8 Provide a variety of seating and table configurations.

3.2 SHELTER IN PLACE AREAS

Requirements

3.2.1 Buildings that are already providing backup power (required or voluntary) and a Recreation Room should include a Shelter in Place Area in the event of prolonged loss of utility service. Senior housing must meet expanded requirements outlined in 3.9.4.

> *Shelter in Place Area consists of one or more resident-accessible rooms wired to backup power and includes, at minimum: i) Backup power for heating, cooling, lighting, outlets, and WiFi; ii) Operable Windows; iii) At least one accessible bathroom with potable water source.*

Reach

3.2.2 Where funding is available, provide a Resilience Hub that incorporates Shelter in Place Area features (as defined in Section 3.2.1) into a community-accessible interior space or exterior plaza. Suitable locations for resilience hubs should be determined in consultation with HPD and prioritized in or near flood-prone or high heat areas.

> *Resilience Hubs are resilient spaces that provide essential services (like power, potable water, internet, or shade), distribution of goods, and safe refuge to the public before, during or after emergencies. They should be accessible to the public without requiring entry through resident-restricted building areas. Resilience hubs are intended to be operated in coordination with NYCEM and other City or community emergency response partners.*

3.3 LOBBY AND CORRIDORS

Requirements

3.3.1 Provide a ground floor residential entrance lobby that is distinctly articulated and clearly visible from the street.

This lobby must be restricted exclusively to residential use and must be entirely separate from the circulation of non-residential uses.

3.3.2 Provide an inviting residential lobby, distinguished from other circulation by materials, ceiling height, communal seating, or other design strategies.

3.3.3 Maintain a 5'-0" width in all public corridors with minimal interruption.

3.3.4 Completely separate residential circulation, including secondary means of egress, from that of non-residential uses, except for Use Group III(A) Community Facilities, to ensure resident security.

Where building conditions and programming require a shared circulation path or connection point between residential and non-residential uses, a security plan must be submitted for HPD review and approval demonstrating that residential access and safety are not compromised. Acceptable security measures may include, but are not limited to: controlled-access doors with key fob, card reader, or intercom systems at all shared thresholds; 24-hour CCTV coverage of shared areas; and clearly defined wayfinding that does not expose residential circulation to non-residential users. The security plan must address both day-to-day operations and emergency egress conditions.

3.3.5 The primary vertical circulation/elevator must be visible and accessible from the lobby.

3.3.6 Provide a parcel room to store delivered packages.

Design parcel rooms with adequate square footage (minimum 0.1 SF per unit), shelving and organization systems, paper recycling storage, security measures (cameras, controlled access), climate control, and notification system. Consider automated package lockers for buildings with 75+ units.

3.3.7 Building services, including waste management, utilities, janitorial, and mechanical rooms, should not open directly into the lobby.

3.3.8 Mailroom or mail alcove should be located in an area that is visible and accessible from the lobby.

Reach

3.3.9 Provide natural lighting throughout public circulation spaces and corridors.

3.3.10 Separate common corridors from the trash route.

3.3.11 On each floor, the public circulation space should be minimal. Long corridors are strongly discouraged except when designed to capture natural light.

3.4 ELEVATORS AND VERTICAL CIRCULATION

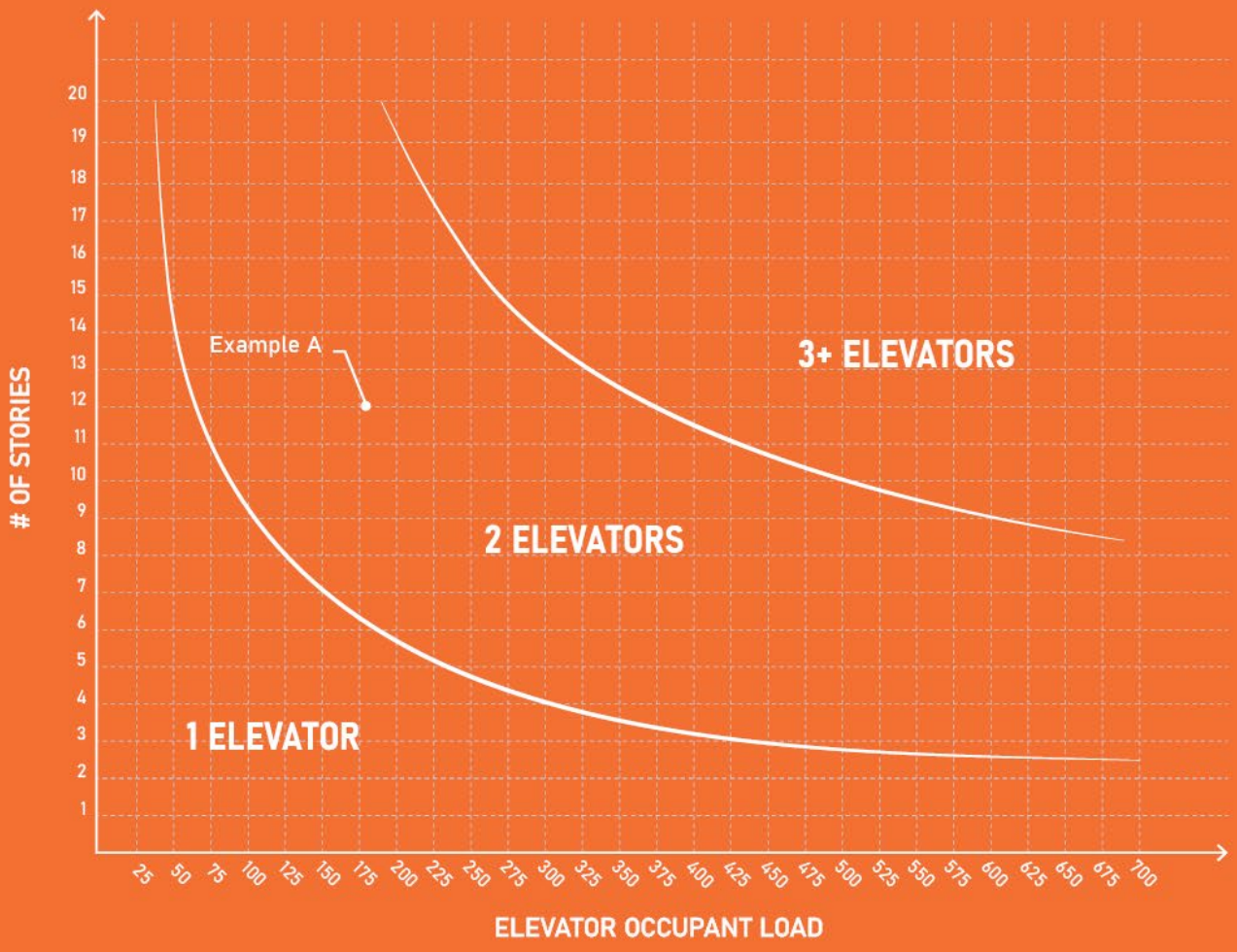
Requirements

3.4.1 If a building requires more than one passenger elevator, group elevators together to minimize the impact of service and repair on traffic.

3.4.2 Each building segment must be served by at least two elevators, unless the building requires fewer than two elevators in total.

Reach

3.4.3 Walking distance from the elevators to the farthest unit should not exceed 180 feet.



EXAMPLE A

If a multifamily building is 12 stories and has a mix of (60) 0-bedrooms, (25) 1-bedrooms and (10) 2-bedroom units, the required number of elevators should be calculated as follows:

0-bedroom: 60 x 1.5 = 90

1- bedroom: 25 x 1 x 2 = 50

2-bedroom: 10 x 2 x 2 = 40

total elevator occupant load = 90 + 50 + 40 = 180

Per the chart above, the building requires (2) passenger elevators.

3.5 WASTE MANAGEMENT

Requirements

3.5.1 Provide dedicated organics (compost) collection in waste storage areas, with containers sized and configured to meet DSNY organics-storage requirements.

3.5.2 Disposal of covered electronics with regular trash or recycling is prohibited under DSNY regulations and New York State regulations. Buildings with 10 or more units must provide a dedicated area to store a bin to collect e-waste, accessible to all residents and to DSNY for servicing, and are required to enroll in DSNY's free in-building ecycleNYC program to facilitate convenient and compliant e-waste recycling for residents.

3.5.3 Incorporate DSNY-approved off-street containerization infrastructure into large-scale, multi-building, or campus-style developments consisting of multiple buildings under a coordinated site plan or masterplan, totaling more than 150 dwelling units, and sharing common site features such as courtyards, open spaces, or other shared outdoor areas. Permitted solutions may include loading docks, waste storage enclosures, or dedicated collection areas designed to support dumpsters or roll-on/roll-off containers for DSNY servicing. Develop final design specifications in consultation with DSNY to verify compliance with vehicle maneuverability and collection requirements.

Reach

3.5.4 Participate in DSNY's free in-building textile recycling for residents, and/or partner with donateNYC to support on-site or facilitated donation of reusable goods.

3.5.5 Locate a cardboard breakdown area within waste storage areas of the building.

3.6 FLOOD-RESISTANT CONSTRUCTION

For flood-prone definitions and standards, see Introduction: Resiliency on Page 8

Requirements

3.6.1 For coastal flood-prone projects, elevate all residential units, critical residential-serving utilities and equipment, and at least one point of egress for each required egress pathway above the 2080s SLR-adjusted DFE.

> *Where elevation to SLR-adjusted DFE is infeasible, critical utilities and equipment that cannot be fully elevated may be dry floodproofed, ensuring that the top of floodproofing treatment is at or above 2080s SLR-adjusted DFE levels and able to withstand anticipated flood load. Alternative mitigation via dry floodproofing is at the discretion of HPD and requires a Design Waiver.*

3.6.2 For stormwater flood-prone projects, elevate all residential units and critical residential-serving utilities and equipment above site grade. Where site grade varies widely, residential units and critical equipment should be sited at or above highest-adjacent grade.

> *Where elevation above site grade is infeasible, critical utilities and equipment that cannot be elevated may be dry floodproofed, ensuring that any utility rooms and/or subgrade spaces where critical equipment is sited are substantially impermeable to the top of the foundation walls. Alternative mitigation via dry floodproofing is at the discretion of HPD and requires a Design Waiver. HPD may permit waiving floodproofing requirements where available project and stormwater flood data can improve on the mapped conditions.*

3.6.3 For all flood-prone projects, install automatic backwater valves or other automatic backflow devices where plumbing systems and components have openings below grade. Such system must demonstrate a capacity to prevent sewage backflow and water contamination during a flood event.

3.6.4 For all flood-prone projects, install sump pumps in basement or cellar (where applicable), ideally with internal drainage systems, and wire system to backup power system or emergency panel.

Reach

3.6.5 Where financially feasible and justifiable, elevate or floodproof resident supportive services, community facilities, and non-critical residential ancillary uses or critical equipment to the SLR-adjusted DFE.

3.7 HPD PROGRAM REQUIREMENTS - SUPPORTIVE HOUSING

Requirements

3.7.1 Provide one dwelling on-site for a building superintendent.

3.7.2 Provide Recreation Room for building residents.

3.7.3 Provide space for social services when appropriate.

3.8 HPD PROGRAM REQUIREMENTS - SENIOR HOUSING

Requirements

3.8.1 Provide one dwelling on-site for a building superintendent.

3.8.2 Provide space for social services.

3.8.3 Provide Recreation Room for building residents.

3.8.4 Senior housing (including but not limited to SARA projects) is required to include a Shelter in Place Area as defined in 3.2.1 that also meets the following design and operational standards:

- Sized equal to 15 SF per bedroom. 0-bedrooms and Efficiency units count as 1 bedroom.
- Consists of one or more rooms that include backup power for heating, cooling, lighting, outlets, WiFi, at least 0.25 cubic feet of refrigerator space per bedroom, natural ventilation and lighting, signage designating usage as a Shelter in Place Area(s), and at least one accessible bathroom with potable water source.
- If located at a coastal flood-prone site, must be elevated to SLR-adjusted DFE.
- If located at a stormwater flood-prone site, must be elevated above site grade.

3.8.5 Provide handrail on at least one side of all common and public corridors.

Reach

3.8.6 Provide slip-resistant floors, with soft, resilient interior flooring materials such as cork, rubber, or linoleum.

3.8.7 Distinguish frequently used doors and passageways by use of different colors and textures for guidance.

3.9 HPD PROGRAM REQUIREMENTS - INCLUSIONARY HOUSING

Requirements

3.9.1 Common laundry facilities must be provided if individual apartment washer/dryers are not provided.

4. APARTMENT DESIGN

Research consistently shows that up to 40% of a person's health is shaped by their environment and daily behaviors — both of which are directly influenced by how their home is designed. This chapter establishes minimum standards for unit layout, room dimensions, natural light and ventilation, accessibility, storage, and finishes, with reach goals encouraging higher-quality outcomes where feasible. Drawing on the evidence-based framework of the Active Design Guidelines 2.0 — which links the built environment to physical activity, mental wellbeing, social connection, and equity — HPD's apartment design standards are grounded in the principle that affordability should never come at the expense of livability. Requirements reflect both the spatial realities of New York City housing and the diverse needs of residents across income levels, household types, and programs including senior housing, supportive housing, and homeownership.

Image Credits: COOKFOX Architects

Photo by Frank Oudeman

4.1 UNIT DISTRIBUTION AND EQUITABILITY

Requirements

4.1.1 Amenities and resources must be equitably distributed among the dwelling units in a project. For instance, if any units have in-unit washer/dryers, then all units must have in-unit washer/dryers.

4.1.2 All units must have the same level of access to common areas.

4.1.3 In the event that a project comprises multiple buildings, building segments, or otherwise duplicative building elements, such elements must be designed and operated similarly.

4.1.4 If a project includes multiple categories (by intended population, financing, accessibility types, or income band), these categories must be distributed throughout the building and/or project to the maximum extent feasible to maximize options and choice.

> *Examples include but not limited to: intended population (senior, supportive housing), financing (mixed market and Inclusionary projects), types of accessibility (Section 504' designated units for mobility impaired / hearing and visually impaired).*

4.1.5 Such categories must be distributed both horizontally and vertically.

> *Note that Inclusionary projects have separate specific requirements.*

4.1.6 Any benefits or amenities that are not equally available to all units (for instance, direction of exposure, proximity to circulation, access to private outdoor space, etc.) must be distributed equitably among units of different categories (for instance, units of different bedroom count or different designated populations) to the maximum extent feasible.

4.2 UNIT ADJACENCY

Requirements

4.2.1 Design and locate unit entrances to preserve the privacy of residents: they should not abut common areas, should not be visible from prominent windows, and should not directly face high circulation areas.

4.2.2 Unit windows (especially bedroom windows) must not face common areas, public areas, or mechanical equipment without adequate screening, sound attenuation, and/or vertical separation.

Reach

4.2.3 Stagger window placement to avoid unit windows facing directly into other unit windows or common area windows.

UNIT AREA CALCULATION

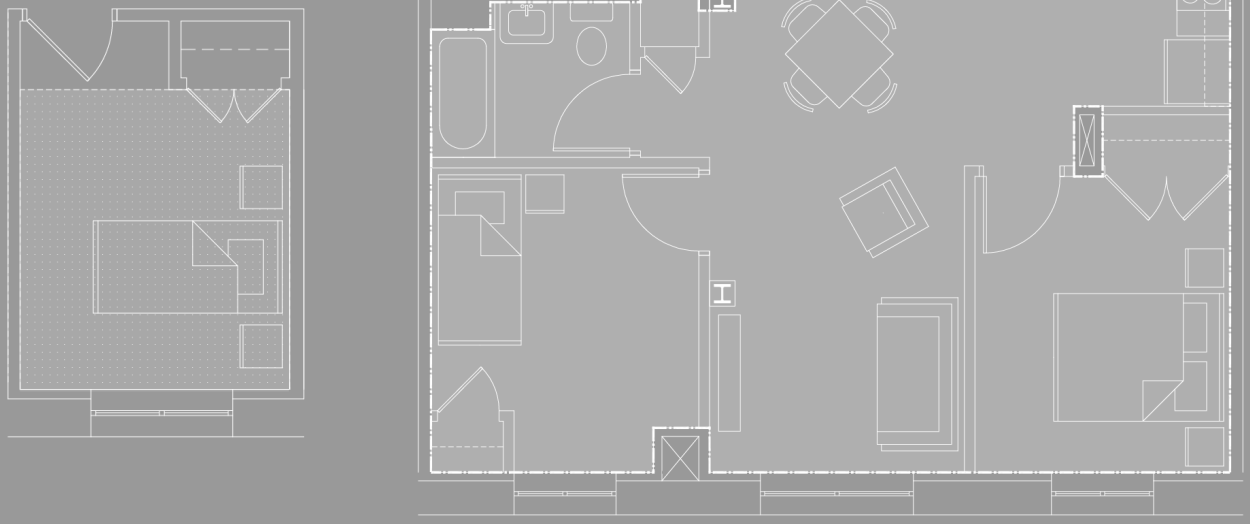
- Dwelling unit area is measured within the perimeter walls, from the finished face of all exterior walls and demising partitions.
- Structural members that are integral components of exterior walls or demising partitions, as well as all mechanical and plumbing chases, are excluded from unit area calculations. All other structural members — including freestanding columns and columns attached to interior partitions — are included in unit area calculations.
- PTACs, PTHPs, or similar through-wall equipment protruding less than 16” into the space under a window are not deducted from area calculations. Deeper units shall reduce the measured room dimension by the depth in excess of 16". In any case, this equipment must be considered for maneuvering clearances.

ROOM AREA CALCULATION

- Room area is calculated to include only the portion of a space that meets the minimum dimensions stipulated in the unit design requirements.
- Room area must maintain a minimum 8’-0” ceiling height. BLDS will accept a soffit that reduces ceiling height to no less than 7’-0” at the perimeter of a room only, provided that the remaining space maintains sufficient area and the minimum room dimension at 8’-0” ceiling height to comply with Building Code and other applicable requirements.
- The minimum room dimension must be measured clear of any column or mechanical equipment enclosure. Where a room includes a portion with a reduced dimension due to structural, mechanical, or geometric conditions — such as a column, mechanical equipment enclosure, or alcove — that portion may be counted toward the total required room area at a minimum clear dimension of 8’-0”, subject to BLDS discretion, provided that:

  1. The required minimum room area for that room type is met in aggregate

  2. A furniture layout is provided demonstrating that the room as a whole accommodates the required furniture arrangement for that room type



4.3 UNIT LAYOUT AND DIMENSIONS – EFFICIENCY

Requirements

4.3.1 Efficiency units must have a target net area of 300-350 sf and may be used throughout Supportive Housing buildings in lieu of 0-Bedrooms. Buildings may not include both Efficiency and 0-Bedroom units.

4.3.2 Provide a Living Room/Dining Area/Sleeping Area no smaller than 160 sf, with no dimensions below 9'-0".

Units designed to UFAS per Section 504 may exceed target net area by up to 25 sf. Units in buildings containing any AIRS units must be minimally 325 sf.

4.3.3 Provide a Kitchenette with min. 24" range, 24" refrigerator, 24" sink with 30" removable base cabinet, one continuous 30" work surface with removable base cabinets underneath, and adequate wall hung cabinets.

Requirements for appliance sizes listed as absolutes, but nominal sizing may be applied for high-quality appliances.

4.3.4 Provide a Bathroom with bathtub and/or shower with showerhead, sink, toilet.

4.3.5 Provide min 10 sf storage (clothing closets, linen closets, pantry, and/or bulk storage). All clothing closets must be at least 2' deep, total no less than 4' wide, with no segment less than 2' wide.

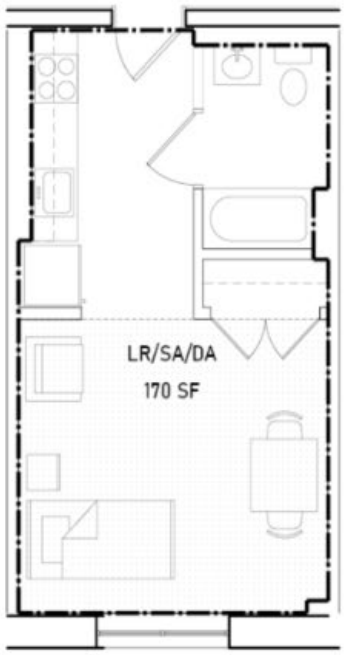
Reach

4.3.6 Provide office/workspace (4'x5' minimum with electrical outlet).

Units with such spaces may exceed the maximum target net area by up to 25 sf.

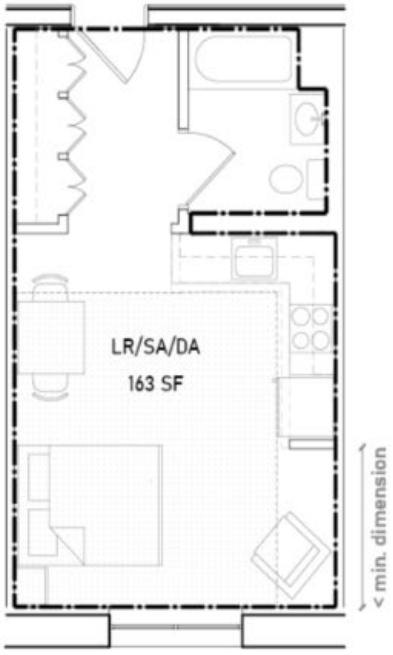
UNIT EFF-a

326 SF



UNIT EFF-b

335 SF

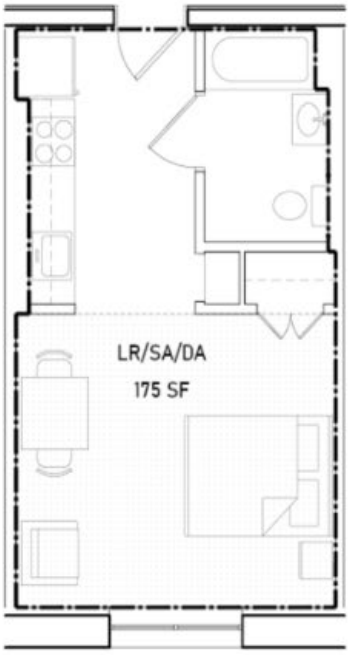


UNIT EFF-c

343 SF

UNIT EFF-d Section 504 Mobility Impaired Unit

343 SF



DWELLING UNIT AREA

ROOM AREA

EFFICIENCY UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

4.4 UNIT LAYOUT AND DIMENSIONS - 0BR

Requirements

4.4.1 0-Bedroom units must have a target net area of 350-400 sf.

Units designed to UFAS per Section 504 may exceed target net area by up to 25 sf.

4.4.2 Provide Living Room/Dining Area/Sleeping Area no smaller than 200 sf, with no dimensions below 9'-0".

4.4.3 Provide a Kitchenette with min. 24" range, 24" refrigerator, 24" sink with 30" removable base cabinet, one continuous 30" work surface with removable base cabinets underneath, and adequate wall hung cabinets.

Requirements for appliance sizes listed as absolutes, but nominal sizing may be applied for high-quality appliances.

4.4.4 Provide a Bathroom with bathtub and/or shower with showerhead, sink, toilet.

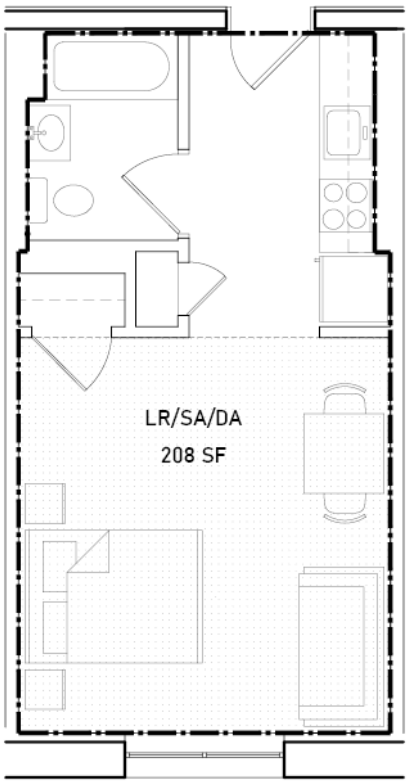
4.4.5 Provide min 10 sf Storage (clothing closets, linen closets, pantry, and/or bulk storage. All clothing closets must be at least 2' deep, total no less than 4' wide, with no segment less than 2' wide.

Reach

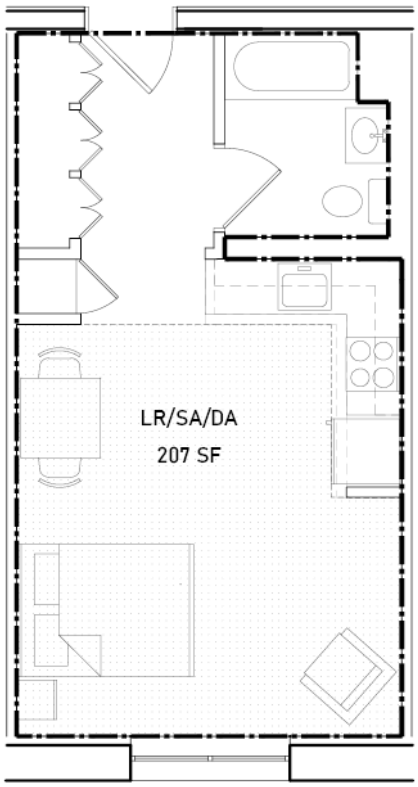
4.4.6 Provide office/workspace (4'x5' minimum with electrical outlet).

Units with such spaces may exceed the maximum target net area by up to 25 sf.

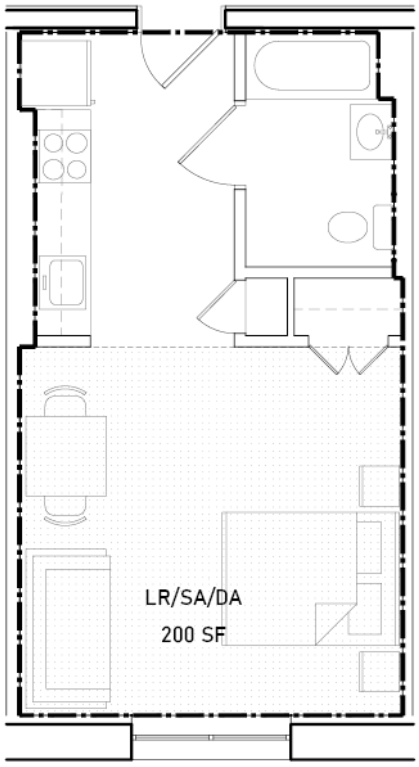
UNIT 0-a
359 SF



UNIT 0-b
351 SF



UNIT 0-c Section 504 Mobility Impaired Unit
361 SF



DWELLING UNIT AREA
ROOM AREA

0-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

4.5 UNIT LAYOUT AND DIMENSIONS - 1BR

Requirements

4.5.1 1-Bedroom units must have a target net area of 500-550 sf.

Units designed to UFAS per Section 504 may exceed target net area by up to 25 sf.

4.5.2 Provide a Living Room/Dining Area no smaller than 170 sf, with no dimensions below 9'-0".

4.5.3 Provide a Bedroom with closet and allowing flexible furniture arrangement.

Requirements for appliance sizes listed as absolutes, but nominal sizing may be applied for high-quality appliances.

4.5.4 Provide a Kitchen/Kitchenette with min. 30" range, 24" refrigerator, 24" sink with 30" removable base cabinet, base cabinets with at least 3 linear feet of countertop including one continuous 30" work surface with removable base cabinets underneath, and adequate wall hung cabinets.

4.5.5 Provide a Bathroom with bathtub and/or shower with showerhead, sink, and toilet.

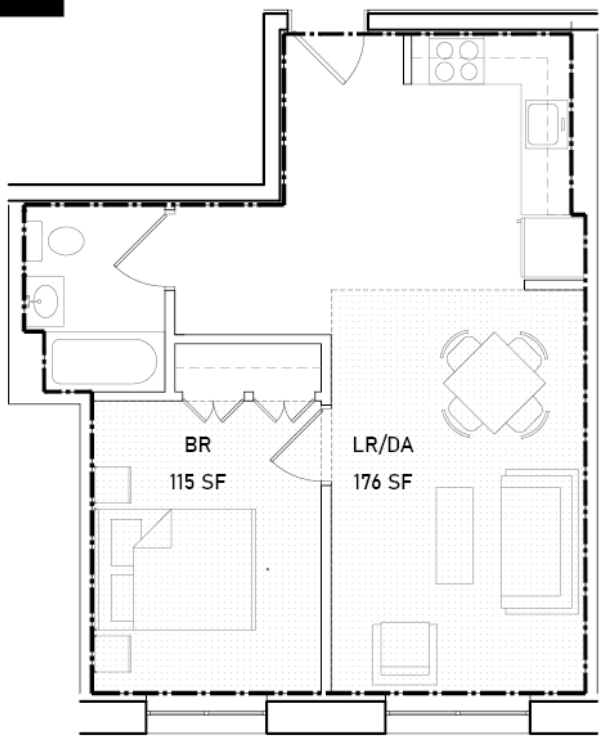
4.5.6 Provide min 12 sf Storage (clothing closets, linen closets, pantry, and/or bulk storage). All clothing closets must be at least 2' deep, total no less than 4' wide, with no segment less than 2' wide.

Reach

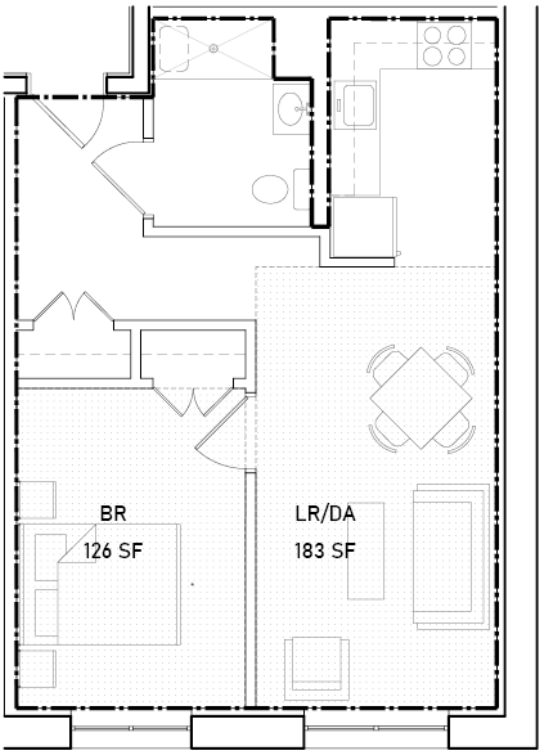
4.5.7 Provide Office/Workspace (4'x5' minimum with electrical outlet).

Units with such spaces may exceed the maximum target net area by up to 25 sf.

UNIT 1-a
514 SF



UNIT 1-b Section 504 Mobility Impaired Unit
513 SF



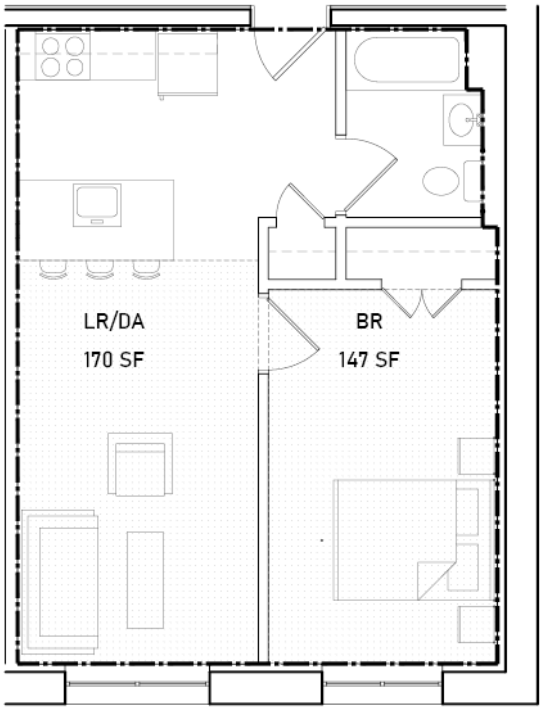
DWELLING UNIT AREA
ROOM AREA

1-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

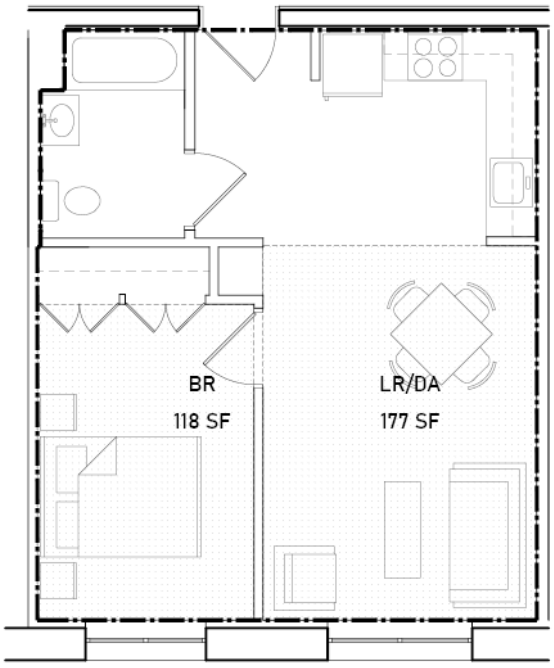
UNIT 1-c

518 SF



UNIT 1-d

504 SF



DWELLING UNIT AREA

ROOM AREA

1-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

4.6 UNIT LAYOUT AND DIMENSIONS - 2BR

Requirements

4.6.1 2-Bedroom units must have a target net area of 650-725 sf.

Units designed to UFAS per Section 504 may exceed target net area by up to 25 sf.

4.6.2 Provide a Living Room/Dining Area no smaller than 170 sf, with no dimensions below 10’-0”.

4.6.3 Provide two Bedrooms with closet and allowing flexible furniture arrangement. First Bedroom to be 110 sf or larger with min. 9'-6" min dimensions. Second Bedroom to be 100 sf or larger with min. 9'-0" dimensions.

Required area in excess of 80SF in second bedroom can be allocated to Living Room/Dining Area. In such cases, the minimum dimension of the affected bedroom can be reduced to as little as 8’-0”.

4.6.4 Provide a Kitchen/Kitchenette with min. 30" range, 30" refrigerator, 24" sink with 30" removable base cabinet, base cabinets with at least 3 linear feet of countertop including one continuous 30" work surface with removable base cabinets underneath, and adequate wall hung cabinets.

Requirements for appliance sizes listed as absolutes, but nominal sizing may be applied for high-quality appliances.

4.6.5 Provide a Bathroom with bathtub and/or shower with showerhead, sink, and toilet.

4.6.6 Provide min 20 sf Storage (clothing closets, linen closets, pantry, and/or bulk storage). All clothing closets must be at least 2' deep, total no less than 4' wide, with no segment less than 2' wide.

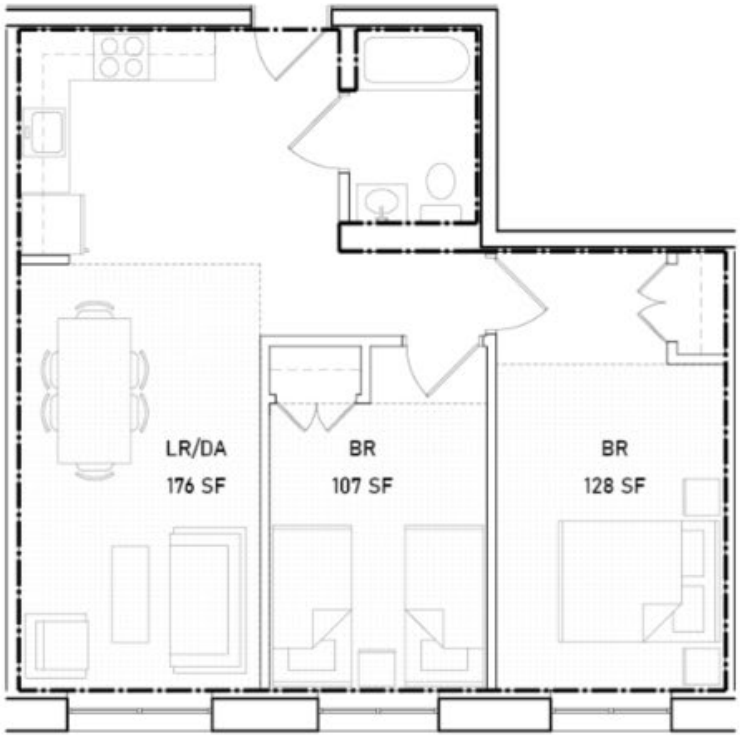
Reach

4.6.7 Provide Office/Workspace (4'x5' minimum with electrical outlet).

Units with such spaces may exceed the maximum target net area by up to 25 sf.

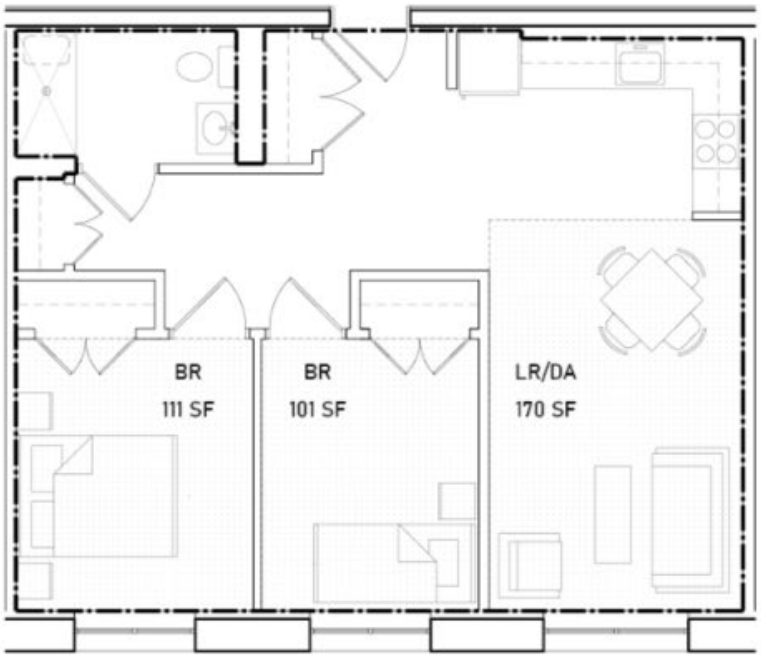
UNIT 2-a

705 SF



UNIT 2-b Section 504 Mobility Impaired Unit

719 SF



DWELLING UNIT AREA

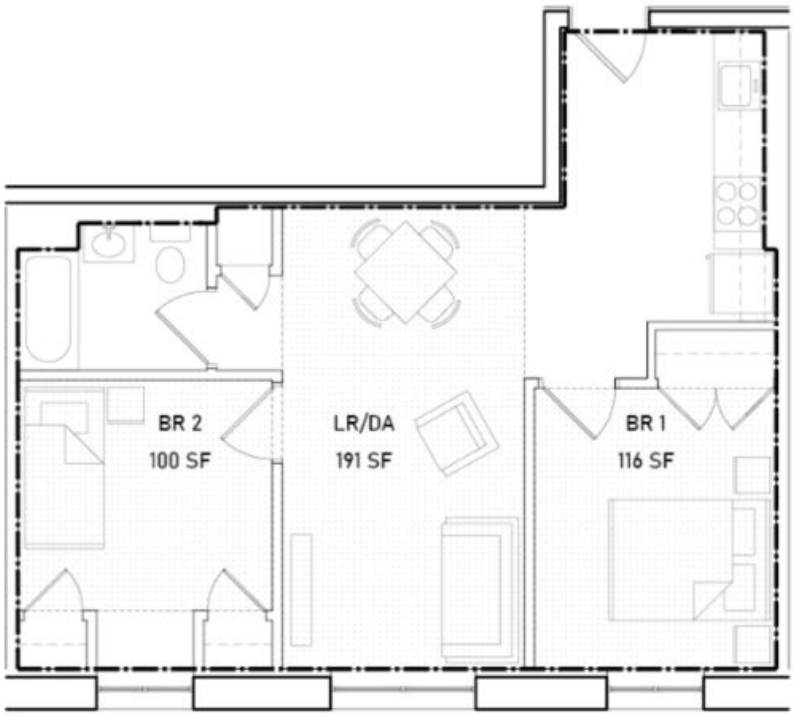
ROOM AREA

2-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

UNIT 2-c

653 SF



UNIT 2-d

679 SF

DWELLING UNIT AREA

ROOM AREA

2-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

4.7 UNIT LAYOUT AND DIMENSIONS - 3BR

Requirements

4.7.1 3-Bedroom units must have a target net area of 850-950 sf.

Units designed to UFAS per Section 504 may exceed target net area by up to 25 sf.

4.7.2 Provide a Living Room/Dining Area no smaller than 170 sf, with no dimensions below 10'-0".

4.7.3 Provide three Bedrooms with closet and allowing flexible furniture arrangement. First Bedroom to be 110 sf or larger with min. 9'-6" min dimensions. Second and third Bedroom to be 100 sf or larger with min. 9'-0" dimensions.

Required area in excess of 80SF in second and third bedrooms can be allocated to Living Room/Dining Area. In such cases, the minimum dimension of the affected bedrooms can be reduced to as little as 8'-0".

4.7.4 Provide a Kitchen/Kitchenette with min. 30" range, 30" refrigerator, 24" sink with 30" removable base cabinet, base cabinets with at least 3 linear feet of countertop including one continuous 30" work surface with removable base cabinets underneath, and adequate wall hung cabinets.

4.7.5 Provide a Bathroom with bathtub and/or shower with showerhead, sink, and toilet.

4.7.6 Provide a secondary Bathroom or Half-bath, minimally containing sink and toilet.

4.7.7 Provide min. 26 sf Storage (clothing closets, linen closets, pantry, and/or bulk storage). All clothing closets must be at least 2' deep, total no less than 4' wide, with no segment less than 2' wide.

Reach

4.7.8 Provide Office/Workspace (4'x5' minimum with electrical outlet).

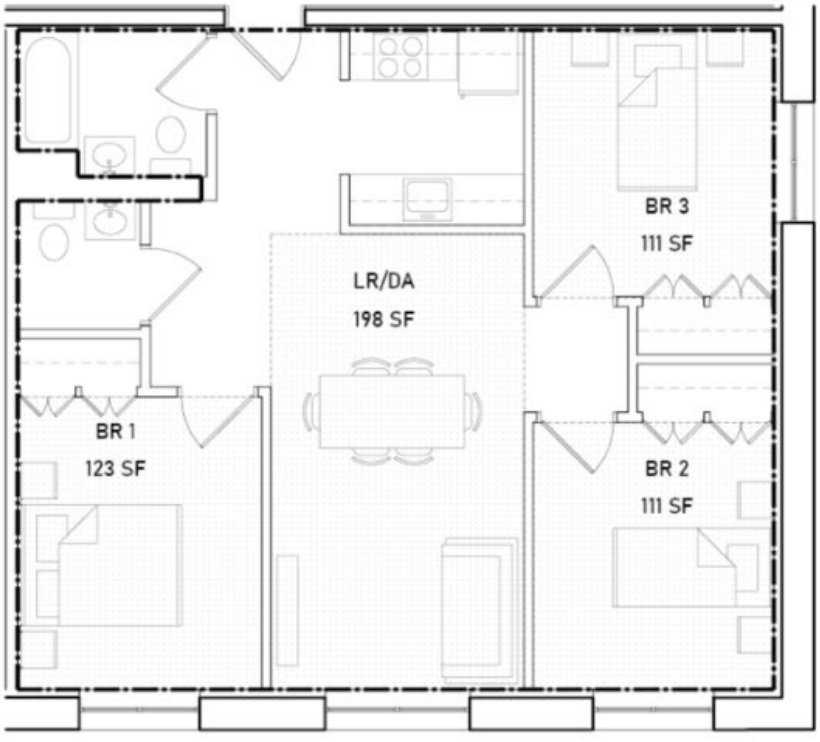
Units with such spaces may exceed the maximum target net area by up to 25 sf.

UNIT 3-a

887 SF

UNIT 3-b

857 SF



DWELLING UNIT AREA

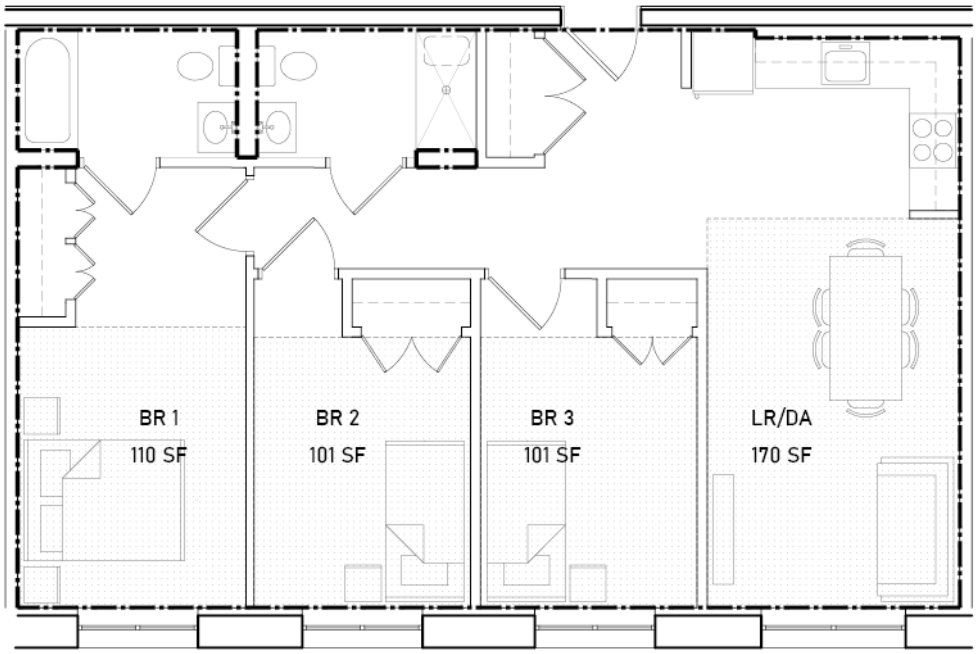
ROOM AREA

3-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

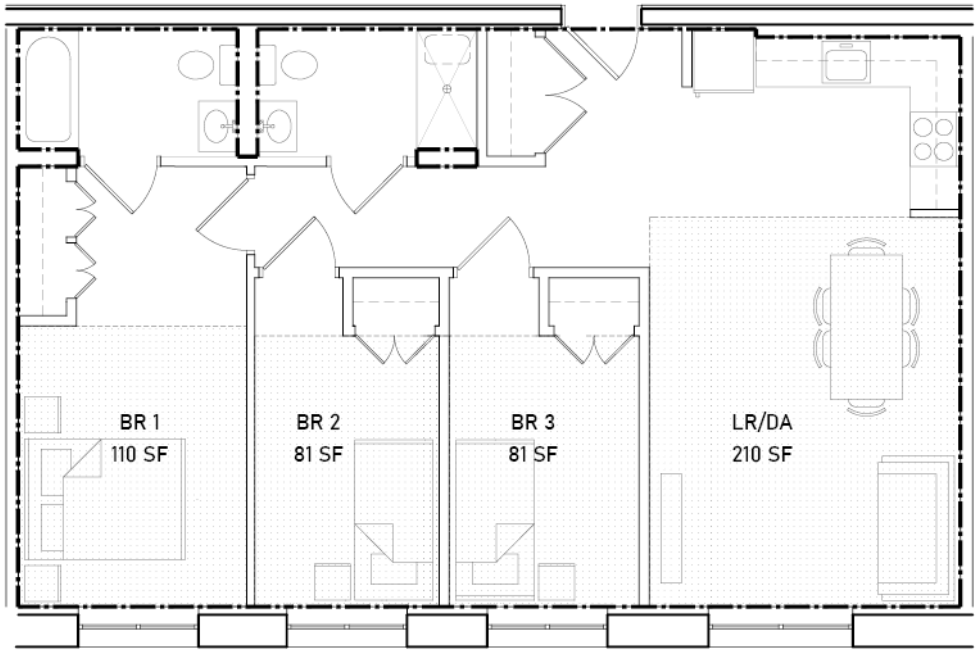
UNIT 3-c Section 504 Mobility Impaired Unit

937 SF



UNIT 3-d Section 504 Mobility Impaired Unit

937 SF



DWELLING UNIT AREA

ROOM AREA

3-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

4.8 UNIT LAYOUT AND DIMENSIONS - 4BR

Requirements

4.8.1 4-Bedroom units must have a target net area of 950-1075 sf.

Units designed to UFAS per Section 504 may exceed target net area by up to 25 sf.

4.8.2 Provide a Living Room/Dining Area no smaller than 170 sf, with no dimensions below 10'-0".

4.8.3 Provide four Bedrooms with closet and allowing flexible furniture arrangement. First Bedroom to be 110 sf or larger with min. 9'-6" min dimensions. Second and third Bedroom to be 100 sf or larger with min. 9'-0" dimensions. Fourth Bedroom to be 88 sf or larger with min. 9'-0" dimensions.

Required area in excess of 80SF in second, third, and fourth bedrooms can be allocated to Living Room/Dining Area. In such cases, the minimum dimension of the affected bedrooms can be reduced to as little as 8'-0".

4.8.4 Provide a Kitchen/Kitchenette with min. 30" range, 30" refrigerator, 24" sink with 30" removable base cabinet, base cabinets with at least 3 linear feet of countertop including one continuous 30" work surface with removable base cabinets underneath, and adequate wall hung cabinets.

4.8.5 Provide a Bathroom with bathtub and/or shower with showerhead, sink, and toilet.

4.8.6 Provide a secondary Bathroom or Half-bath, minimally containing sink and toilet.

4.8.7 Provide min. 32 sf Storage (clothing closets, linen closets, pantry, and/or bulk storage). All clothing closets must be at least 2' deep, total no less than 4' wide, with no segment less than 2' wide.

Reach

4.8.8 Provide Office/Workspace (4'x5' minimum with electrical outlet).

Units with such spaces may exceed the maximum target net area by up to 25 sf.

UNIT 4-a Section 504 Mobility Impaired Unit

1,016 SF

UNIT 4-b

1,070 SF

DWELLING UNIT AREA

ROOM AREA

4-BEDROOM UNIT DIAGRAMS

Drawings for illustrative purposes; refer to Guideline text and other applicable regulations for requirements

UNIT SIZE SUMMARY CHART

EFF.	LR/SA/DA	STORAGE	TARGET NET
Area	160 sf	10 sf	300–350 sf
Min. Dim.	9'-0"	–	–

0-BR	LR/SA/DA	STORAGE	TARGET NET
Area	200 sf	10 sf	350–400 sf
Min. Dim.	9'-0"	–	–

1-BR	LR/DA	STORAGE	TARGET NET	BR
Area	170 sf	12 sf	500–550 sf	110 sf
Min. Dim.	9'-0"	–	–	9'-6"

2-BR	LR/DA	STORAGE	TARGET NET	BR	BR2*
Area	170 sf	20 sf	650–725 sf	110 sf	100 sf
Min. Dim.	10'-0"	–	–	9'-6"	9'-0"

3-BR	LR/DA	STORAGE	TARGET NET	BR	BR2*	BR3*
Area	170 sf	26 sf	850–950 sf	110 sf	100 sf	100 sf
Min. Dim.	10'-0"	–	–	9'-6"	9'-0"	9'-0"

4-BR	LR/DA	STORAGE	TARGET NET	BR	BR2*	BR3*	BR4*
Area	170 sf	26 sf	950–1075 sf	110 sf	100 sf	100 sf	88 sf
Min. Dim.	10'-0"	–	–	9'-6"	9'-0"	9'-0"	9'-0"

* Required area in excess of 80SF in second, third, and fourth bedrooms can be allocated to Living Room/Dining Area. In such cases, the minimum dimension of the affected bedrooms can be reduced to as little as 8'-0".

** The minimum room dimension must be measured clear of any column or mechanical equipment enclosure. Where a room includes a portion with a reduced dimension due to structural, mechanical, or geometric conditions — such as a column, mechanical equipment enclosure, or alcove — that portion may be counted toward the total required room area at a minimum clear dimension of 8'-0", subject to BLDS discretion, provided that:

1. The required minimum room area for that room type is met in aggregate

2. A furniture layout is provided demonstrating that the room as a whole accommodates the required furniture arrangement for that room type

*** For unit size requirements in homeownership projects, refer to 4.9.2.

4.9 HPD PROGRAM REQUIREMENTS – HOMEOWNERSHIP

Requirements

4.9.1 Include the necessary infrastructure and hook-ups for dishwashers and clothing washers and dryers in the units.

4.9.2 All homeownership units must comply with minimum unit size requirements:

- 400 sf for 0-BR
- 550 sf for 1-BR
- 725 sf for 2-BR
- 950 sf for 3-BR
- 1075 sf for 4-BR

4.10 HPD PROGRAM REQUIREMENTS - SENIOR HOUSING

Requirements

4.10.1 Bathrooms must be outfitted for the mobility-impaired use at the time of construction. Grab bars must be installed for all apartment bathrooms (Senior Housing).

4.10.2 Provide walk-in or no-threshold showers instead of bathtubs.

Collapsible shower lips are accepted only if they do not obstruct required maneuvering clearances in bathroom.

4.10.3 Provide accessible appliances (self-cleaning ranges with front controls and accessible refrigerators) for all units.

4.10.4 Provide hardware that is lever-type for doors, sinks, showers/baths, and toilets.

4.10.5 Provide self-closing cabinets with D-type pulls.

Reach

4.10.6 Provide under-cabinet lighting in all dwelling units.

4.10.7 Provide a sleeping alcove for a live-in resident health aide.

4.10.8 Provide light switches that are easily identifiable in the dark or illuminated.

4.10.9 Provide a master or three-way switch adjacent to the bed.

5. BUILDING SYSTEMS

Buildings account for approximately 70% of New York City's greenhouse gas emissions, and space heating and domestic hot water alone represent 70% of energy use in multifamily residential buildings, making systems design the single most consequential decision set for long-term building performance and carbon reduction. This chapter establishes requirements and aspirational standards for heating, cooling, ventilation, domestic hot water, electrical systems, broadband connectivity, backup power, and renewable energy.

HPD prioritizes all-electric building systems to support New York City's decarbonization goals while ensuring reliable, healthy, and affordable conditions for residents. Projects should be designed to reduce system complexity and focus on operational ease and efficiency. System maintenance requirements should be considered during the design stage and shared with the owner as part of decision-making process.

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Photo by Alexander Severin

5.1 SPACE HEATING AND COOLING

Requirements

5.1.1 All primary space heating and cooling equipment shall be high-efficiency, all-electric heat pump systems, selected and designed to minimize the risk of refrigerant leaks, reduce system complexity and focus on operational efficiency. System maintenance requirements should be considered during the design stage and shared with the owner as part of decision-making.

Acceptable systems include but are not limited to:

- Packaged Terminal Heat Pumps (PTHPs) meeting cold-climate performance thresholds;
- Cold Climate Mini-Split and Multi-Split Heat Pumps;
- Centralized or distributed hydronic heat pump systems, including air-to-water and water-to-water heat pump plants;
- Ground-source heat pump systems;
- Cold-Climate Variable Refrigerant Flow (VRF) systems without heat recovery (2-pipe) or with heat recovery (3-pipe).

Other all-electric heating and cooling systems may be considered where the project team demonstrates comparable or superior energy efficiency and performance and receives HPD approval.

Refer to HPD's Technical Requirements webpage for best practices for heat pumps.

5.1.2 Cold-climate air-source heat pump equipment shall be listed on the Northeast Energy Efficiency Partnership (NEEP) Cold Climate Air Source Heat Pump Product List or shall comply with NEEP's Cold Climate Air Source Heat Pump Specification (Version 4.0, effective January 1, 2023, or subsequent version).

Where applicable, AHRI labels must be affixed to the equipment.

Cold-climate air-source heat pumps shall have variable speed compressors.

5.1.3 Where cold-climate Packaged Terminal Heat Pumps (PTHPs) are installed:

a. Electric Resistance used as auxiliary and integrated within the PTHPs is not permitted.
b. Provide thermal breaks to mitigate thermal bridging at PTHP sleeves or unit penetrations.
c. Provide continuous air sealing at all PTHP penetrations through the building envelope.
d. Provide a condensate management strategy that addresses collection, drainage, and freeze protection, as applicable.
e. Construct a physical mock-up or each unique type of room heat pump demonstrating compliance with the Technical Requirements for attachment, insulation, wiring, condensate management, and air-sealing. Verify air tightness using an approved pressure test or visual inspection. Incorporate details of approved mock-up into contract requirements.
f. The equipment shall have a minimum 12-month parts and labor warranty, with minimum extended 4-year warranty on the closed refrigeration system.

5.1.4 Due to high cost and complexity, VRF systems should only be used when other strategies are not feasible. Where installed:

a. Design systems with appropriate thermal zoning to optimize performance:
  i. VRF systems with heat recovery (i.e., capable of simultaneous heating and cooling) shall be thermally zoned to maximize heat recovery potential.

ii. VRF systems without heat recovery shall only be permitted where the project demonstrates that thermal zoning is based on similar heating and cooling load profiles, taking into account occupancy patterns, space type, exterior wall exposure, internal heat gains, and other relevant design factors.

b. Document the control strategy used to switch between heating and cooling modes (e.g., manual switchover, outdoor air temperature-based control, thermostat mode selection, or equivalent).

c. Provide BACnet-compliant controls that enable remote monitoring of apartment temperatures and temperatures setpoints and support centralized system oversight.

d. Where applicable, comply with section 5.4 Refrigerants requirements, including leak protection.

e. The equipment shall have Minimum 10-year parts warranty and 1-year warranty on labor.

5.1.5 Heating equipment must be properly sized in compliance with applicable NYC building and energy codes and the HPD's Equipment Right-Sizing Guidelines. HPD may perform additional review or request written justification when projects select non-default or otherwise unusual values for load calculations and system sizing.

Refer to HPD's Technical Requirements webpage.

5.1.6 Resident-paid electric heating is only allowed in certain HPD New Construction Programs and for certain types of projects in HPD's Preservation Programs. Any project proposing resident-paid heating, must be pre-approved by HPD Program and HPD Sustainability and must follow the strict protocols of HPD's Resident-Paid Heat Policy.

5.1.7 Non–heat pump electric space heating (e.g., electric resistance or radiant) may be used with HPD pre-approval in spaces such as common stairwells, utility rooms, basements, vestibules, and other non-occupiable spaces where heat pumps may not be appropriate. Heating capacity shall not exceed 3.5 kW per enclosed space; in multi-story or unenclosed stairwells, capacity shall be limited to 3.5 kW per stair level.

Heaters located in bathrooms shall have timer controls; all other heaters shall have automatic controls with setpoint of 50°F. Electric resistance space heating is not permitted in garages, plenums, or for snow or ice melting. Electric resistance heating is permitted in high-volume applications such as laundry make-up air, but not for ventilation air.

Reach

5.1.8 For heating systems with higher-than-average maintenance needs, provide owner with maintenance estimates during the design phase.

5.2 VENTILATION

Requirements

5.2.1 Provide balanced mechanical ventilation for all dwelling units, with outdoor air supplied through in-unit or central Energy Recovery Ventilation (ERV) systems equipped with MERV-13 or higher filtration.

5.2.2 If the system includes Constant Air Regulators (CAR) at exhaust registers for vertical exhaust systems, provide access for servicing or repairs of CAR and Fire Damper devices. CARs need to be field adjustable and designed/ installed to limit noise in the unit.

5.3 PLUMBING AND DOMESTIC HOT WATER

Requirements

5.3.1 All projects must utilize Cold-Climate Heat Pump Water Heaters. Acceptable systems include:

- Integrated tank type (hybrid) heat pump water heaters (<120 gallons storage) must be Energy Star certified and listed, with a minimum Uniform Energy Factor (UEF) of 3.7 as listed and tested under conditions as defined in the Energy Star Residential Water program.
- Split Systems must meet or exceed Tier 2 SysCOP for Mild Climate system efficiency standard set by NEEA in their Advanced Water Heating Specification (SysCOP of 2.00).

Electric resistance heating shall not be used as the primary means of domestic hot water generation.

5.3.2 Comply with all applicable provisions outlined in HPD's Heat Pump Water Heater (HPWH) Technical Requirements.

Refer to HPD's Technical Requirements webpage.

5.3.3 Resident-paid electric Domestic Hot Water is only allowed in certain HPD New Construction Programs and for certain types of projects in HPD's Preservation Programs. Any project proposing resident-paid Domestic Hot Water must be pre-approved by HPD Program and HPD Sustainability and must follow the strict protocols of HPD's Resident-Paid Heat Policy.

5.4 REFRIGERANTS

Requirements

5.4.1 Design to minimize the use, amount and length of field-installed refrigerant piping (e.g., hydronic loop systems, packaged systems). Equipment location shall be coordinated during design to minimize refrigerant piping length and vertical risers while maintaining compliance with manufacturer limitations. Designers shall confirm that equipment siting has been developed to support an efficient system layout and minimize excessive field installed piping.

For Split Systems, the contract drawing set shall include manufacturer-generated refrigerant piping documentation (e.g., riser diagram, equipment selection report) confirming compliance with maximum equivalent piping length, allowable height differential, and total system refrigerant charge limitations.

5.4.2 Where field-installed refrigerant piping is present, it shall be properly protected during installation and installed, tested, insulated, and charged in accordance with HPD Technical Requirements for Refrigerant Charging and Leak Prevention, as well as applicable NYCECC and manufacturer requirements.

Refer to HPD's Technical Requirements webpage.

5.4.3 Refrigerant-based HVAC and DHW systems shall comply with all applicable federal, state, and local regulations including the EPA SNAP program, New York State GWP limits, and NYC Mechanical Code requirements for refrigerant safety (including A2L refrigerants). Refer to governing codes and standards for detailed requirements.

Design teams are encouraged to utilize HPD technical requirement documents for guidance on A2L refrigerant system design and implementation and to consider system configurations that minimize refrigerant volume within occupied spaces, where feasible.

Refer to HPD's Technical Requirements webpage.

5.4.4 Where automatic refrigerant leak detection is required, integrate monitoring and alarm functions into the building management system, where provided.

> *All refrigerant-based systems shall comply with all applicable federal, state and local regulations including the EPA Aim Act, New York State Part 494/495, and NYC Mechanical Code requirements for refrigerant leak detection, inspections, documentation, reporting and repair requirements.*

5.5 CONTROLS, COMMISSIONING AND DEMAND MANAGEMENT

Requirements

5.5.1 For dwelling units, preset reasonable, code-compliant heating and cooling temperatures. Typical settings include heating at 70°F daytime and 66°F nighttime and cooling at 76°F when occupied and 80°F when away.

Where central heating and cooling equipment is provided and includes BACnet capability, the building automation system shall be capable of setting, monitoring, and limiting in-unit thermostat setpoints consistent with these limits.

5.5.2 For common areas, place publicly accessible thermostats in locked enclosures and ensure they are controlled exclusively by the building staff.

5.5.3 All projects must comply with the commissioning requirements of the applicable NYCECC. Additionally, the following provisions shall be followed:

- **f.** 2025 NYCECC C408.2 system-size and dwelling unit exemptions for commissioning shall not apply to HPD-assisted projects, and commissioning shall be required regardless of installed heating, cooling, or domestic hot water system capacity.
- **g.** At a minimum, sampling shall include 3 instances per building Where the NYCECC or applicable programs (e.g., ESMFNC, EGC, PHIUS) require greater sampling, those requirements shall apply.
- **h.** The Final Commissioning Report must be produced prior to loan conversion, showing all Commissioning Issues resolved, or a clear and funded action plan for resolution must be documented.
- **i.** The above items shall be included as requirements in the Construction Documents and submitted to the building owner.

Reach

5.5.4 Reduce building peak electrical demand by designing and installing infrastructure that enables building to participate in utility or building-led demand response.

5.6 BACKUP POWER

Requirements

5.6.1 Senior housing must provide adequate backup power generation, in addition to service for emergency loads, to ensure that at least one elevator remains functional during an emergency.

5.6.2 Where backup power is not otherwise required, provide a dedicated emergency panel that can be safely and easily connected to an efficient generator, mobile generator or island-able solar system to power critical/emergency loads. Emergency loads should support at least three of the following: Device charging (at least one outlet for every 250 SF of occupiable space), internet access, emergency lighting, heating and/or cooling of an accessible common space, medical refrigeration.

5.7 APPLIANCES

Requirements

5.7.1 All refrigerators, dishwashers and clothes washers must meet or exceed ENERGY STAR where available.

Reach

5.7.2 Utilize induction cooking in lieu of electric resistance cooktops.

5.8 SOLAR

Requirements

5.8.1 Where feasible, projects shall integrate cost-effective solar that complies with HPD's Solar Technical Requirements and underwriting requirements.

5.8.2 For projects with favorable roof conditions but where current incentives don't support solar, design the building to be solar-ready:

- **a.** Choose a solar-compatible roofing system such as TPO, EPDM, or PVC membranes.
- **b.** Run conduit large enough to enable low-cost wiring from the rooftop to the electrical service room.
- **c.** Increase the size of the common-area electrical distribution panel and leave space for an additional breaker to simplify future solar integration.
- **d.** Ensure there is space for the inverter(s) (typical dimensions are 13" W, 31" H, 11" D with 6" between inverters) in the electrical rooms or rooftop closets or another room proximate to areas of production, and the disconnect switch (typical dimensions are 16"W x 25"H x 12" D).

Reach

5.8.3 Consider Community Shared Solar that provide at least 20% savings to benefit residents, either onsite or by subscribing residents to offsite Community Solar Projects. Solar One can help owners explore onsite community solar options or connect residents with community solar projects.

5.8.4 Design Building to be Battery Storage-Ready by:

- **a.** Referring to the ESS Planning Guides on the NY Solar Map website
- **b.** Identifying current NYSERDA incentives
- **c.** Consulting with Solar One for free technical assistance

5.9 BROADBAND

Requirements

5.9.1 Comply with all applicable HPD Broadband General Requirements and Installation Requirements.

5.10 ELECTRIC VEHICLE CHARGING

Requirements

5.10.1 For projects that include parking, provide Level 2 EV chargers or Level 2-ready outlets for at least one and no less than five percent (5%) of all parking spaces equitably distributed throughout the project. Level 2–ready outlet must allow for future EV charger installation without electrical upgrades.

Where permitted, a single Level 2 EV charger may serve two adjacent parking spaces, provided the total number of spaces served meets or exceeds the required percentage.

All spaces may utilize an Automatic Load Management System (ALMS) to reduce the maximum required electrical capacity to each space.

Locate EV charging equipment, outlets, and associated electrical components to minimize flood risk, including placement above anticipated flood elevations where applicable, and install all equipment in accordance with manufacturer requirements and industry best practices for flood-prone or wet locations.

5.10.2 For projects with 20 or more parking spaces, at least 10% of the total number of parking spaces must either be EV capable, EV ready, or have Level 2 EV chargers installed. EV-capable spaces have electrical capacity and conduits installed to support a Level 2 EV charger but lack the wiring and outlet.

Reach

5.10.3 For projects that include bicycle storage areas with more than 50 bicycle parking spaces, provide e-bike charging infrastructure for resident use, with a minimum of one (1) and no more than five (5) chargers provided at any single location.

Charging may be provided on-site (outdoors preferred, or within designated indoor areas such as bike rooms) or via publicly accessible e-bike charging facilities located on the public sidewalk immediately adjacent to the building. Public sidewalk charging may include participation in NYC DOT's sidewalk e-bike charging program, including installation of DOT-permitted charging or battery-swapping cabinets pursuant to a revocable consent.

All charging installations, whether on-site or in the public right-of-way, shall comply with applicable NYC Fire Code requirements and FDNY safety guidance for lithium-ion battery charging.

6. BUILDING OPERATIONS

A well-designed building that is poorly commissioned, inadequately documented, or operated without sufficient guidance will underperform from day one — with consequences borne disproportionately by residents through discomfort, higher utility costs, and deferred maintenance. HPD recognizes that affordable housing developments often have limited ongoing maintenance budgets, and that design and documentation decisions made early in a project can significantly reduce operational burden and extend building life. This is especially urgent for electric buildings.

The Smooth Operator: Effective O&M in Electric Buildings resource by Urban Green Council, provides additional guidance to ensure long-term efficiency, cost control and tenant comfort in affordable multifamily buildings.

Image Credits: Dattner Architects

6.1 RESIDENT RESOURCES

Requirements

6.1.1 Install Resident Resource Signage that provides access to HPD resources through a QR code.

Provide the signage using the HPD template or project-specific graphics, provided the QR code is clearly incorporated. The display may be provided in the form of a poster, plaque, or other durable, wall-mounted, or affixed medium, as appropriate for the location.

Install signage at a minimum in the following locations: the lobby, elevator banks, resident common areas designed for gatherings or activities, trash rooms, and laundry rooms. Projects are encouraged to also install signage in each apartment and include in the Resident Manual.

6.2 OPERATIONS AND MAINTENANCE PLAN

Requirements

6.2.1 Include the following items in the Operations & Maintenance (O&M) Plan and Manual(s):

a. Heating and DHW Plants:

- Provide procedures for staff orientation and turnover training covering system layout, normal operation, maintenance requirements, and basic troubleshooting for the Central Heating Plant and DHW heat pump system.
- Provide equipment and system manuals, seasonal maintenance checklists, and DHW system shop drawings.
- Post simplified DHW system diagrams in mechanical rooms reflecting the final Sequence of Operations and identifying major equipment, piping, valves, sensors, and control interfaces in a durable and readily accessible format.
- Label equipment and key components to correspond with posted diagrams.

b. Refrigerant Log:

- Provide a refrigerant inventory log and service records for all refrigerant-containing equipment that is aligned with all Federal, State and Local requirements including system location, refrigerant type, total charge quantity, additions/ removals of refrigerant, leak inspection and verification test records, and leak test results. Inventory shall be maintained by the Owner for the life of the equipment.

c. Water and/or Refrigerant Leak Detection Systems:

- Include leak detection systems in the project-specific O&M Manual, including manufacturer-recommended inspection, testing, maintenance, and calibration procedures.
- Identify the party responsible for ongoing oversight of monitoring and leak detection systems, including maintaining account access, configuring notifications and alerts, and annually verifying that systems remain functional and accessible.
- Establish procedures for reviewing monitoring data and system alerts at least monthly to identify abnormal water use, leaks, refrigerant loss, or system malfunctions, and for investigating and addressing identified issues in a timely manner.

6.3 BENCHMARKING

Requirements

6.3.1 Projects with buildings containing five or more dwelling units are required to benchmark energy and water use per HPD's Benchmarking Protocol.