

NORTH CAROLINA

HOUSING
FINANCE
AGENCY



Construction Field Guide For 2022 NCHFA-Financed Rental Properties

Foreword

The mission of the North Carolina Housing Finance Agency is to create housing opportunities for North Carolinians whose needs are not met by the market. One of our values is “stewardship”. In other words, our Agency emphasizes quality housing that improves the lives of people, and we promote long-term solutions.

Apartment communities are a major capital investment and we need to ensure that they are located thoughtfully and built well. If we all do our jobs properly, these developments will be a long-term asset that provides opportunities to a wide range of households.

I appreciate your interest in producing affordable housing and building it right. Working together, we can continue to build a better North Carolina and provide better homes for our fellow citizens.

*Scott Farmer
Executive Director*



Introduction

This Field Guide is intended to help architects, developers, and contractors to comply with the provisions of the North Carolina Qualified Allocation Plan and NCHFA Design Standards, and requirements of the N.C. State Accessibility Code, the Fair Housing Amendments Act, and Americans with Disabilities Act.

This guide also provides Agency mandatory building requirements related to multifamily construction. This document is not to be an all-inclusive resource, but rather to highlight areas that seem to cause the most questions and difficulties in the field. This Field Guide also has construction requirements that may not be found in the Agency's Appendix B of the Qualified Allocation Plan, or Design Standards. It is also important to note that there may be updates or addendums to multiple federal and state building codes that may become code before or after Agency funding announcements. These new mandates may not be available in this publication or in Appendix B, Design Standards. It is up to the hired licensed architects, engineers and contractors that are part of the development team to follow any code changes closely and make adjustments to the building plans or construction process.

Inspections

The Agency inspects all of the properties that it finances at least twice, one during the framing/rough-in phase and a final site visit at the completion of the project. The development team must inform the Agency about the current status of their projects on a monthly basis and for scheduling the required inspections. Because the Agency construction staff is often scheduled in the field throughout the state for months in advance, we ask that you not wait until the day or week before an inspection is needed.

As part of the cost certification and closing process, project owners are required to submit a signed copy of the final NCHFA Site Observation Form stating that all items noted during the final inspection have been corrected. The Agency also requires as-built building plans to be downloaded in the Agency's database. NCHFA will not close out a project until a final inspection has been completed and any necessary corrections have been made.



Accessibility

This Field Guide is based on the language in the North Carolina Accessibility Code and requirements of the 2009 ANSI A117.1 and 2009 ICC with North Carolina Amendments accessibility standards.

Unit Types

N.C. Code requires two different types of accessible units in multifamily development for new construction:

Type A Units:

These apartment units, often called “handicapped” units or “fully accessible” units, are somewhat different than a typical apartment. Type A units are required to have special features, including additional clear floor space in bathrooms and kitchens, wider doors, knee spaces at sinks, and workspaces beside ranges.

Type B Units:

These units, often called “adaptable” units or “Fair Housing” units, are very similar to a typical apartment yet with a few additional features to improve accessibility.

Number of Units

Type A Units:

N.C. Code (2009 IBC with NC Amendments, Section 1107) requires 5% of all units, and at least one of each “class” of unit, to be fully accessible. The “class” of unit is determined by the different bedroom types.

When calculating the number of **Type A** units required by the 5% rule, you must round up to the next whole unit.

Example: 5% of a 24-unit development is 1.2 units. To meet code requirements, the 1.2 must be rounded up, meaning the development would need at least 2 Type A units.

Example: A 24-unit development has 1-, 2-, and 3-bedroom apartments. While the 5% requirement only calls for 2 units, because of the different classes of units available, code requires the development to have at least 3 Type A units: one 1 BR, one 2 BR, and one 3 BR.

For new construction and adaptive re-use projects, NCHFA requires an additional 5% of units to be fully accessible Type A units with a roll-in shower. The easiest way to determine the number and type of units required is to double the number required by the state code with the 5% additional units containing roll-in type showers. See the Agency’s Qualified Allocation Plan, Section IV(F)(3) for reference.

Type B Units:

The N.C. Code does not require a certain number of Type B units. Instead, code requires all single story ground floor units in buildings with 4 or more units to follow the Type B guidelines. Also, in buildings with an elevator, every unit that is served by the elevator is considered a Type B unit. These units are also required under federal law and are described in HUD’s Fair Housing Act Design Manual.

Location of Type A Units

The fully accessible units must be distributed throughout a development to provide equal housing choice for all future residents. If a building is served by an elevator, then Type A units must be spread among all floors, including those with roll-in showers (required in the Agency’s Appendix B, Design Standards). As an example, if a residential building has three floors, then a Type A unit with tub/shower bathing fixture and a Type A unit with roll-in shower bathing fixture must be placed on each of the three residential floors, as a minimum. Type A units should not be those units located farthest from elevators.

The Agency requires 2% of all units in new construction to be equipped with sight and hearing impaired features. See Appendix B (design Standards) for clarification.

Agency Handicap Parking Requirements

It is important to address all applicable building codes in determining the number of accessible parking spaces required per project. The Agency will determine the number of accessible parking spaces that we will be anticipating and inspecting for. The following breakdown will be used in determining the number of accessible parking spaces. Accessible parking spaces must be located on the shortest accessible route of travel from adjacent parking to an accessible building entrance. The Agency will calculate the number of Type A units required for Agency funded projects at 5% of the total number of units, no matter how many units are proposed or funded. Then the additional 5% of Type A units with roll-in showers added. Remember to round up if not a whole number. Often the total number of Type A units exceeds 10%.

Accessible Parking Spaces For TYPE A Units.

There must be at least one accessible parking space per Type A unit. This includes Type A units required under the North Carolina building code and those added by the Qualified Allocation Plan with the Agency. **For example: A property has sixty-four total units. Five percent of the sixty-four units would be 3.2 units. The Agency would require 4 “TYPE A” units. Because the Agency requires you to add additional “TYPE A” units with roll-in showers that are consistent in number to those required by the North Carolina building codes, than the number of “TYPE A” units would be 8. The Agency will require 8 accessible parking spaces for the all of Type A units alone.**

Accessible Parking Spaces For “TYPE B” or Fair Housing Units and Visitors.

To understand how many accessible parking spaces we need for Type B, Fair Housing units and visitors you have to subtract the accessible parking spaces required for Type A units first from the total number of parking spaces dedicated to the project. Then we need to calculate 2% of all remaining parking spaces. If a fraction of a space occurs you have to round up. **For example: A property has 64 total units with 112 total parking spaces. This will require 8 accessible parking spaces for the Type A units. This leaves 104 remaining parking spaces. 2% of the 104 remaining parking spaces equals 2.08 spaces, or 3 total. We will require 3 accessible parking spaces for the Type B, Fair Housing units and visitors.**

Per our example above, the following accessible parking spaces would be required:

Accessible parking spaces for “TYPE A” units	8	North Carolina Building Code plus Agency mandates
Accessible parking spaces for “TYPE B” units	3	2018 IBC Code, Section 1106.2
Total Number of Accessible Parking Spaces:	11	

North Carolina building code requires 1 of every 6, or a percentage of 6, be van accessible. In the example above, the property would have 2 van accessible and 9 standard accessible parking spaces.

Accessible Parking Spaces For Public Facilities.

If the property has a leasing office than there must be at least one accessible parking space available to serve the office. The Agency further requires an additional accessible parking space to serve the Office/Clubhouse per ADA requirements. This additional accessible parking space **must be van accessible.**

Project Total Accessible Parking Requirements For Agency Funded Properties

Accessible spaces for Type A units =	8
Accessible spaces for Type B units =	3
<u>Accessible spaces to meet ADA =</u>	<u>1 (must be van accessible)</u>

There must be 12 accessible parking spaces, 3 must be van accessible

When accessible routes are not provided from all residential buildings to site designated common use areas (dumpsters, mail kiosk, pool, playground, tot lot, picnic shelter, gazebo, etc) the Agency will require van accessible parking spaces with access isle, signage and accessible route to those amenities. If the amenities are “recreational” by nature than only one of each similar type must be accessible. The Agency will require all dumpster locations to be on a accessible route or served by an adjacent accessible parking space with access isle and signage.

Site and Parking

Site Issues

- All storm water from roofs and gutters must be piped away from buildings. Storm water from gutters may not run across sidewalks.
- All new construction properties must have lighted entry sign with brick or stone columns.
- No sidewalks may exceed a 2% cross slope regardless of location.
- Mailboxes require 60" clear floor space with locks centered on a 48" minimum parallel approach.
- Accessible sidewalks must maintain a 48" clear path of travel.
- No parking space can exceed a 5% cross-slope.
- Sitework changes after application award are not permitted without Agency approval.

Designated Handicap Parking Spaces

- The slope of all handicap parking spaces and access aisles cannot exceed 2% in any direction.
- There must be at least one handicap parking space for every Type A unit and must be the closest space available to accessible route to building entrances. Minimum size is 8' x 18'.
- Handicap parking spaces and adjacent access isles must be installed with concrete.
- Must have additional handicap parking spaces equal to 2% of remaining parking spaces.
- There must be one van accessible parking space at site office locations for public accommodation.
- 1 of 6 handicap spaces, with a minimum of one, must be van accessible.
- All site amenities, including all dumpsters, must have either designated handicap parking spaces or be served by an accessible route.
- All property entrances must have a monument sign with brick or stone columns and lighting.
- When measuring slopes, the digital level must be set to measure percent (%) rather than degree.

Building Ramps That Work

- The minimum clear width of an accessible route is 48". This includes sidewalks and ramps. If ramps have handrails then handrails may not reduce the inside clear travel width below 48" and include edge protection.
 - An accessible route with a slope that is 5% (1:20) or less is considered a sidewalk. If the slope is between 5% (1:20) and 8.33% (1:12) the sidewalk becomes a ramp. No accessible route can exceed the 8.33% slope.
 - If the slope of the ramp is between 5% (1:20) and below 6.3% (1:16), the maximum horizontal run shall be 30 feet. If the slope is between 6.3% (1:16) and 8.33% (1:12), the maximum horizontal run shall be 20 feet.
 - Ramps shall have level 60" minimum landings at the top and bottom of each ramp and each ramp run. Where the ramp changes direction there must be a minimum 60" by 60" landing.
 - Handrails are required on both sides of any ramp.
 - Ramps are not allowed in interior corridors/hallways or in exterior breezeways/corridors. No cross slopes or running slopes over 2% is allowed. Primary building entrances may not be accessed by switchbacks or ramps from handicap parking.
- **Digital levels must be set to measure percent (%) rather than degree.**

Framing

- Blocking for grab bars must be installed at all toilets and tub/shower areas in both Type A and Type B units. Blocking must be either 2x10 or 2x12 lumber with bottom edge at 30" AFF.
- Tub/shower units with built-in support for grab bars (OSB/plywood molded into unit) still require additional blocking in the wall framing.
- Laundry room closets must be 36" minimum depth measured from back wall to back of laundry room door in the closed position. Must have required clear floor space at each appliance.
- All lumber must be #2 stamped and graded. Finger jointed lumber will not be allowed.
- Buildings should be completely dried-in with moisture levels in framing members at equilibrium before insulation and drywall are installed.
- All framing lumber must be labeled #2 or better.
- Blocking must be installed in walls behind bathroom accessories, including grab bars, towel bars, toilet tissue holders, etc.
- Exterior hallways, corridors, breezeways or interior hallways and corridors may not have a slope greater than 2% in any direction.

Doors and Windows

- All exterior doors must be 36" and have composite or non-rotting brick molding. Type A unit exterior entry doors must have spring hinges.
- Single lever deadbolts and entry lockset are required on all exterior entry doors to all residential units.
- All door locks in Office/Clubhouse, Type A units and Senior designated apartments must have lever handle hardware. Locking mechanisms must be push-button, not pinch and turn.
- All primary unit entry doors in Type B units must have lever handle hardware at least on the exterior of the unit.
- Bi-fold, by-pass, hollow core, pocket, and louvered doors are not allowed.
- All interior doors must have a minimum of three hinges.
- Insulated vinyl windows must be Model Energy Code compliant. Windows with 0.35 U-Factor and 0.30 SHGC compliant values or better are required for all new construction projects or when replacing windows in renovation projects.
- Windows must be installed per manufacturer's specifications, including the installation of silicone caulk behind nail fins and rubber window flashing around exterior side of nail fins.
- Window screens must be installed at time of Certificate of Completion/Occupancy and before resident moves in.



Apartment Units

- The minimum width of interior hallways in residential family units is 40". In senior residential units it is 42".
- All ceilings and walls in all bathrooms, laundry rooms, mechanical closets, exterior storage closets and wall behind kitchen sink base must utilize mold and water resistant drywall.
- All signage for apartments and in common areas must have raised characters and Braille.
- All clothes washer and dryer connection boxes must be installed directly behind appliance.
- All bedroom closets, interior storage rooms/coat closets and laundry rooms/closets must have a 4" tall by 8" wide minimum transfer grille above doors for air circulation.
- There must be a minimum of 3/4" air space under all interior doors for air circulation.
- All interior and exterior mechanical and storage closets must have finished floor coverings. All interior closets must have either carpet, sheet vinyl or VCT flooring. Exterior storage closets may have sealed/painted concrete floors. All closets must have drywall and baseboard painted.
- All under sink/vanity cabinet penetrations must be sealed.
- All non-carpeted flooring must have shoe molding installed.
- Baseboard and shoe molding must be installed behind all ranges and refrigerators.
- Dining room tables may not be designed for or positioned in paths of travel from hallways to kitchens. They may not have table positioned within 60" of any kitchen cabinets or appliances.

Kitchens

- A pantry cabinet or closet (with 24" minimum door) in or near each kitchen must be provided in all apartments. Pantry must be 24" minimum in depth.
- Removable fronts are required on accessible sink bases and work stations. The floor must be finished underneath, the rear wall under the knee space is finished, and there are finished side panels on each side of the knee space. Removal of fronts must be done so with screwdriver only.
- Cabinets with removable fronts must be manufactured for that purpose. The Agency will not allow field altered cabinets. Cutting side panels, cabinet bottoms or backs and removal of plumbing and or electrical wires will not be allowed.
- Pull-out worktops are prohibited. Roll-under work stations must be beside ranges and in usable part of kitchen, not against sheetrocked walls, and have left, right and front approaches.
- All apartment units must have a dishwasher and must be Energy Star rated. All dishwashers must be installed beside the kitchen sink.
- All accessible "Type A" units must have a side by side refrigerator or one with a bottom freezer drawer. The refrigerator doors must be able to open enough for storage bin removal.
- All residential units must have a dry chemical fire extinguisher, a fire suppression canisters mounted under range hoods or temperature limiting sensors built into kitchen ranges.
- In Type A units one lowered kitchen wall cabinet must be installed over the work station and with the top of bottom shelf at 48" maximum above the finished floor.
- In Type A units the kitchen sinks must be rear draining and have two compartments.
- Anti-tip devices must be installed under all kitchen ranges and be securely fastened to the floor.
- In Type A units the 60" clear floor space must be available throughout the entire kitchen.
- Walls behind and/or beside the range must be covered with a splash panel.
- Range hood exhaust ducts must have trim rings inside finished cabinets and be completely sealed.
- In Type A units kitchen ranges must be "drop-in" with cooktop no higher than 34" above floor.

Bathrooms

- Controls in all tubs and showers in all units must be offset toward the front of the bathing unit.
- For new construction projects all tub/shower bathing fixtures must be one-piece and have a minimum usable inside space of 30" wide and 58" long.
- In all Type A and Type B units the wood/OSB/plywood blocking for grab bars must be molded into the bathing fixture. They must also have flat back walls for grab bar installations per 2009 ANSI A117.1, Section 607 and 608. Solid wood blocking in walls behind bathing fixture is still required.
- In Type A units the roll-in showers and tub/showers must have permanently mounted seats and have shower head with wand on a sliding bar. Showers may have a maximum 1/2" curb with half of it being beveled. Curbless showers require a collapsible water dam installed prior to occupancy. All roll-in showers must have a 36" x 60" minimum clear inside "usable" floor space and have a shower rod and weighted shower curtain installed. There must be a diverter on the shower control that diverts water to a separate shower head that is mounted on the end wall opposite the fold down seat.
- The Agency will allow 3' x 5' step-in showers in residential units. This will not be allowed for Type A units. Refer to Appendix B, Design Standards for restrictions.
- In all Type A units the grab bars must be installed in tub/showers per ANSI 607 and roll-in showers per ANSI 608. Toilets must be installed per ANSI 604.5.1 and 604.5.2 (36" grab bar behind toilet mandatory).
- All faucets, shower heads, and toilets must be EPA "Watersense" certified.
- Vanities in all units, including Type A units, must average 36" wide. Wall-hung sinks not permitted in units.
- All vanities in Type A units must have removable fronts and have floors and walls finished underneath. The Agency will not allow field altered cabinets.
- All full bathrooms must have recessed medicine cabinets and a full height mirror over all vanities.

Plumbing

- Electric water heaters must have a Uniform Energy Factor of at least 0.93 or an Energy Factor of at least 0.95 efficiency and be a minimum of 40 gallons (50-gallon minimum for 3 bedroom and larger). Water heaters may not be installed in unconditioned spaces or in exterior storage closets.
- All water heaters must be in an overflow pan that is piped to exterior, and must be placed in closets to allow for their removal and inspection through a closet door. Pressure relief valves must be piped to the exterior. Water heaters must have minimum nominal 40 gallon rating, with 3-bedrooms or more with 50 nominal gallons.
- All plumbing pipes must be installed inside wall cavities. Connections to water and sewer lines may not be made through floors or cabinet bottoms.
- Unit water shut-off valves must be located in a reachable location and be clearly marked with signage. Shut-offs may not be locked in mechanical closet.
- Hub/floor drains must be piped to the outside or piped to sanitary sewer with mandatory primed p-trap. Drain lines may not drain against exterior brick veneers or siding materials.
- Offset toilet flanges are prohibited for use under toilets.
- Refrigerator water line boxes must be installed with cold water supply line in the wall behind refrigerator and connected.
- Seal all wall and ceiling penetrations with appropriate and like sealants to prevent moisture and air leakage.

HVAC

- HVAC air handlers must be entirely enclosed (ducted) from return air grille to blower motor.
- Clothes dryer vent connections may not exceed 2” maximum AFF in laundry rooms.
- Dryer vents may not be installed on a side wall. They must be centered behind the clothes dryer.
- Total clothes dryer vent runs may not exceed 35 feet, including deductions for elbows.
- For new construction clothes dryer vent ducts may not be piped and vented to/onto roof or to/through the roof soffit. Dryer vent connection box must be galvanized metal.
- Exterior exhaust vents must be mechanically secured to siding and/or brick veneer and may not be terminated through the roof or through roof soffits.
- Bath fans must be wired to the overhead light and must be vented to the exterior with metal duct.
- Range hoods, micro-hoods and bathroom exhaust fans must be vented to exterior with metal duct.
- Range hood exhaust ducts inside wall cabinet above must be sealed with metal trim rings. You may not seal them with foil or duct tape.
- Galvanized sheet metal ductwork is required. Duct board is not allowed.
- All interior common areas, hallways and enclosed corridors must be conditioned with heating and cooling.
- Seal all wall and ceiling penetrations with appropriate and like sealants to prevent moisture and air leakage.
- Any rooms or closets deeper than 48” must be conditioned with HVAC supply register.

Electrical

- Walk-in closets (36” or deeper from wall to back of closet door) must have a switched overhead light.
- Ceiling fans with light kits must have separate switches.
- In Type A and Type B units and common areas the switches to be no higher than 48” AFF.
- Remote switches for range hoods (one switch for fan, another for light) are required in all senior and Type A units. Switches must be at accessible locations and may not be installed under work stations.
- Overhead lighting, ceiling fans, telephone and cable jacks required in all bedrooms and living rooms.
- All full bathrooms must have an overhead ceiling light and also a vanity light centered over the sink. Exhaust fan must be wired to the overhead light fixture. Vanity lights must be on a separate switch.
- Electrical panels in Type A and Type B units must be installed no higher than 48” maximum AFF to top breaker.
- In all Type A units a hard-wired emergency pull station with visual/audible alarm is required in all bathrooms and all bedrooms, and must be installed close to ceiling light switches.
- All exterior storage closets and front entry doors must have a switched overhead light.
- Each building exterior must have a cable termination and demarcation box for cable vendor connection.
- Light fixtures in breezeways, corridors and hallways may not create a protruding object issue.

ENERGY STAR Multifamily New Construction

The North Carolina Housing Finance Agency now requires all new construction projects that makes initial application for Agency funding beginning in 2021 to meet all current versions and revisions of the ENERGY STAR Multifamily New Construction guidelines and requirements. Adaptive re-use and also rehabilitation projects must comply to the extent doing so is economically feasible and as allowed by any historic preservation rules. Single-family, duplex (two-family dwelling) and townhome units may be eligible to earn the ENERGY STAR certification through the Single-Family New Homes program.

The ENERGY STAR Multifamily New Construction certification program requires the builder or developer for the project to sign an ENERGY STAR Partnership Agreement and complete the online “Builder/Developer Orientation”. The HVAC installing contractor must also be credentialed by an EPA-recognized HVAC Quality Installation Training and Oversight Organization. Energy rating companies are required to sign an ENERGY STAR Partnership Agreement. Raters are required to complete EPA-recognized training.

All projects seeking ENERGY STAR Multifamily New Construction certification are required to meet certain mandatory requirements. These requirements impose certain constraints on the efficiency measures selected (e.g., insulation levels, insulation installation quality, window performance, duct leakage). Mandatory requirements apply to all dwelling units, sleeping units, and common spaces in the building. They do not apply to commercial or retail space.

Builder/Developer constructs the project with the mandatory requirements and the measures described by the project design to achieve the performance target. Throughout the construction process, a number of inspections and diagnostic tests are required to verify the proper installation of the selected energy-efficient features and overall energy performance of the project

In addition to the meeting certain mandatory requirements, the project must meet a performance target using one of the three paths. Regardless of which path is chosen, the minimum mandatory requirements must be verified in the field by an approved Rater. Each path has varying levels of flexibility to select a custom combination of measures for each project. There are three paths to earning the ENERGY STAR for multifamily new construction projects. Builders/developers may choose:

ERI Path: Use an approved rating tool software to determine unit-by-unit energy savings based on the ERI target and follow a prescriptive package of energy efficient measures developed by EPA in common spaces; OR

ASHRAE Path: Use an energy modeling software approved to determine energy cost savings of the building’s energy efficient design compared to ASHRAE; OR

Prescriptive Path: Use a prescriptive package of energy efficient measures developed by EPA.

Builders, Developers, Raters, ASHRAE Path Modelers, and Functional Testing Agents (“FT Agents”) must meet the program requirements prior to certifying multifamily buildings.

All ENERGY STAR certifications are subject to the oversight of a Multifamily Oversight Organization, which include Home Certification Organizations (HCOs) or Multifamily Review Organizations (MROs). After the final inspection the Rater must submit all of the documentation to a Multifamily Oversight Organization to ensure that the program prerequisites and energy conservation measures are installed to the specifications. Once submittals have been approved the oversight organization will provide documentation to the builder/developer notifying them that the units in the project have earned the ENERGY STAR.

Each certified unit must be issued a completed ENERGY STAR certification label to be affixed to the circuit breaker box (or other suitable location) and an ENERGY STAR certificate. Certificates and labels are issued to the Rater by their Provider or MROs. Whole building certificates are to be made available to certified projects upon request.

N. C. Accessibility Code and NCHFA Design Guidelines

	Type A Units	Type B Units	NCHFA Requirements
Entry Doors			
Hardware	Lever handles	Lever handles	Lever handles
Exterior Door Size	Min. 3/0		Min. 3/0
Exterior Thresholds	Max. ½” at all doors	Max. ½” at main entry	Max. ½” at all doors for senior designated units.
Security Viewer 1st view at 60” all units	2 nd viewer at 48”	Viewer at 60” AFF	2 nd viewer at 48” in all units of senior designated units.
Clear Floor Space	Min. 18” on pull side	Min. 18” on pull side	
Interior Doors			
Door Size	Min. 3/0	Min. 2/10	Min. 3/0 in senior units.
Hardware	All lever handles	No Requirement	All lever handles in senior units.
Clear Floor Space	18” on pull side	No Requirement	
Bathrooms			
Clear Floor Space	<ul style="list-style-type: none"> ♦ 60” clear turning circle in all usable areas. ♦ Clear floor space at door may not use knee and toe spaces. ♦ 30” x 48” space at all fixtures. 	<ul style="list-style-type: none"> ♦ 30” x 48” space inside room and beyond swing of door. ♦ Clear floor space at door may not use knee and toe spaces. ♦ 30” x 48” space at all fixtures. 	Clear floor spaces may not include areas under base and shoe moldings.
Grab Bars	Must be installed around tubs, showers and toilets. 36” grab bar behind toilet mandatory. 24” not allowed.	No Requirement	18” bar at 48” AFF and offset on end wall opposite controls required in tubs in all senior designated units
Lavatories			
Height (maximum) Wall-hung sinks not allowed.	34”. Must have removable front.	Option B Bathroom is 34” Option A Bathroom is 36”	
Knee Space (minimum)	30” wide x 27” high under sink. The 27” height must extend at least 8” minimum under sink.	When using a forward approach to vanity the 48” clear floor space may extend under the vanity top. Sink base must have a removable front.	In Type A units lavatories must have removable front. Clear floor spaces and knee spaces per code must be available.
Controls	Lever handle required in all A and B units.		All units must have lever handle faucets.
Tub / Shower			
Usable dimensions	NCHFA requires 36” x 60” minimum in roll in showers and 30” x 58” in tub/showers.		
Controls	Offset to front of fixture required for all fixtures in all apartments.		
Blocking for Grab Bars	Required at all tubs and showers in all A and B units.	Blocking must be molded into bathing fixtures.	
Toilets			
Location	Toilet centered 16” to 18” from adjacent wall.	Toilet centered 16” to 18” from adjacent wall.	Common-use toilets must have 18” from adjacent wall.
Seat Height	15” to 19”	15” to 19”	
Blocking for Grab Bars	Required at all toilets and tub/showers in all A and B units.		Type A units, 36” grab bar behind toilet mandatory.

	Type A Units	Type B Units	NCHFA Requirements
Kitchens			
Clear Floor Space	<ul style="list-style-type: none"> ♦ 60" clear turning circle into and through usable areas of kitchen ♦ 30" x 48" space at all fixtures ♦ T-turns not allowed. 	<ul style="list-style-type: none"> ♦ Min. 42" between cabinets ♦ Min. 60" in U-shaped kitchens ♦ 30" x 48" space at all fixtures 	Minimum 42" between cabinets in all units.
Cabinets	Loop hardware required	No Requirements	<ul style="list-style-type: none"> ♦ One lowered wall cabinet mounted over work stations in Type A units. ♦ Loop handles required for all cabinets in all "senior" designated units.
Range/Controls	<ul style="list-style-type: none"> ♦ Front controls required ♦ Range cooktop may not exceed 34" above floor. 	No Requirements	<ul style="list-style-type: none"> ♦ All anti-tip devices must be secured to the floor. ♦ Range fits flush to wall.
Remote Switches for Range Hood	Switches installed on wall behind work station.	No Requirements	Required in all senior designated units.
Dishwasher	<ul style="list-style-type: none"> ♦ Push button controls with café handle required ♦ Must be located beside sink 	Required and Energy Star rated.	Required in all units and be Energy Star rated.
Work Station	<ul style="list-style-type: none"> ♦ 34" max. height. ♦ Under counter knee space min. 30" wide and 27" high. ♦ Must have removable front, with floor, sides and rear wall finished. 	No Requirement	<ul style="list-style-type: none"> ♦ Must be beside range in Type A units. ♦ Work station must have removable front. ♦ Pull-out work tops are not allowed. ♦ May not be installed next to sheetrock wall.
Kitchen Sinks			
Height	34" Max. Must have removable front. Floor and walls finished.	36" Max.	All units must have double bowl kitchen sinks.
Knee Space	Min. 30" wide and 27" high. The 27" minimum height must be able to extend 8" minimum under sink.	No Requirement	<ul style="list-style-type: none"> ♦ Type A unit kitchen sinks must be rear draining. Must also have removable fronts.
Parking			
Handicap Parking and Access Aisles. (Must be installed with concrete).	<ul style="list-style-type: none"> ♦ Max. 2% in any direction ♦ Min. size is 8' wide by 18' deep 	<ul style="list-style-type: none"> ♦ Max. 2% in any direction ♦ Min. size is 8' wide by 18' deep 	1 in every 6 handicap parking spaces, or a minimum of one, must be van accessible.
Required Number of Handicapped Parking Spaces	<ul style="list-style-type: none"> ♦ One space for each H/C unit ♦ Required space must be the one closest to the unit. 	2% of the parking spaces serving Type B units	One van space required for office per ADA guidelines. No slopes over 5%
Decks and Patios			
Clear Floor Space	60" minimum clear floor space required.	No requirement	

New Construction Framing Inspection Checklist

Kitchens

- Make sure the handicap Type A kitchens have at least 9'3" wall-to-wall space to allow for 5' clear floor space.
- Make sure work station is beside range in Type A units. Work stations should not be installed beside a sheetrock wall.
- In Type B units, make sure the finished cabinet-to-cabinet distance in walking paths is at least 42".
- Make sure Type A units and all senior units get dual remote wall switches to the range hood.
- Make sure the range receptacle is mounted in such a way as to allow the range to fit flush against the kitchen wall.

Bathrooms

- Door swings may not include knee and toe clearances in meeting the clear floor space requirements at doors.
- All Type A and Type B bathroom doors may not overlap into the 30" x 48" clear floor space beyond swing of door.
- Make sure roll-in showers have a inside clear usable floor space of at least 36" x 60".
- Be sure shower or tub have a clear floor space of 30" x 60" at the approach.
- Make sure toilet and shower/tub grab bar blocking is available and covering 31" to 37" above finished floor.
- Make sure bathing fixtures are one-piece. Type A and Type B units must have blocking molded to the fixture.
- Be sure towel bars, toilet tissue, medicine cabinets, grab bars and wall hung sinks are blocked. In Type A units the rear grab bar behind toilet must be 36".
- Talk about shower curb height and approach.
- Make sure that roll-in shower drain is centered.
- In Type A units the permanently mounted seats in roll-in showers and tub/showers are mandatory. Shower controls must be within 27" reach range of seat.
- Make sure toilet is centered at 16" to 18" off adjacent wall. No tolerances accepted.
- All bathing units must have offset tub controls in all bathrooms.
- Make sure there will be 30" x 48" clear floor space at all bathroom fixtures in Type A and Type B units.
- All full bathrooms must have recessed medicine cabinets as well as full-width vanity mirrors.
- In Type A and Type B units the clear floor space must be centered on the bathroom lavatories.
- In Type A units the 60" clear floor space for turning circle must be in all usable areas of the bathrooms.

Common Areas

- Make sure hallways have 40" minimum width in family housing and 42" minimum width in senior housing.
- All Type A units usable doors are 36" wide with 18" minimum clear floor space on pull side of door.
- All pantry doors must have a minimum width of 24". Pantry cabinets/closets must be 24" minimum in depth.
- Reach-in closets must not be deeper than 24".
- Thermostats must be at 48" maximum above finished floor. Reach ranges above this will not be allowed.
- Look for slab cracks.
- Check threshold heights.
- Type A entrance and secondary doors allow for 1/2" max threshold
- Type B entrance doors allow for 1/2" max. threshold. Rear sliding glass door threshold 3/4" max. height.
- Type B patio doors may have up to 4" max. step if floor is slab, a 3/4" maximum if floor is wood decking.
- Check for required tempered window glass where required.
- Check for hallway handrail heights and blocking.
- Check to be sure laundry rooms are usable (36" minimum depth) and allow for the required clear floor space in all Type A and Type B units. Adjacent walls, doors or door openings may not block the clear floor spaces.
- Any senior building with more than one floor must contain a minimum of one elevator.

Site

- Check for grades at handicap units for slope issues.
- Make sure weep holes in brick veneers are at or below slab grade.
- Check for mold/mildew. Make sure materials are stored properly.
- Make sure lumber has grade stamps at #2 or better.
- All sill plates on concrete must be treated and sealed.
- Check for broken floor and roof trusses.
- Look at flashing to be sure it is installed properly.
- All Dumpsters must have an minimum 18' long concrete approach pad.

This checklist is not inclusive of all items inspected during the North Carolina Housing Finance Agency's visit. This report does not convey in any manner that the property inspected meets all federal, state, city or local building codes or regulations. If building code issues are mentioned, it is only suggesting to the property owner to investigate possible code violations and to correct the violations if existing. The North Carolina Housing Finance Agency accepts no liability in interpreting any building codes and/or regulations in this report.

Accessibility Codes To Consider

- ♦ In congregate buildings, 60% of building entrances must be made accessible.
- ♦ All apartment units must have raised characters and Braille signage at entry doors, mounted on latch side of door.
- ♦ Min. door clearances at the pull side of doors may not use knee/toe clearances.
- ♦ Main house panels in Type A and Type B units cannot be installed over 48" AFF to top breaker.
- ♦ Thermostats and telephone jacks cannot be over 48" in Type A and Type B units.
- ♦ Clear floor space is "on the floor". Clear floor space will not include base and shoe molding.
- ♦ Closets 48" or deeper must have the 60" clear floor space in Type A units.
- ♦ See ANSI Standards 604.5.1 and 604.5.2 for grab bar locations.
- ♦ In Type A kitchens the 60" min. clear floor space is mandatory. You can't use the T-turn option.
- ♦ For Type B bathroom sink heights, an Option A bathroom may have a 36" maximum sink height. For bathroom Option B the sink height is 34" maximum AFF.
- ♦ The clear floor space at lavatories must be centered on the bowl/faucet.
- ♦ Type A units must be disbursed among the various classes of units, meaning bedroom types.
- ♦ Laundry rooms require a 48" clear floor space for a parallel approach that is centered on the clothes washer and dryer. This will require additional space in front of/in the laundry room.
- ♦ In Type A kitchens the wall cabinets do not have to be mounted at 48" to the top of the lowest shelf. The Agency does require one wall cabinet, next to the range and over the work station, to be mounted at such height.
- ♦ Mailboxes for all units may not exceed 48" AFF to mailbox lock.
- ♦ Edge protection must be available along accessible routes per ANSI 405.9.
- ♦ Beware of protruding objects on accessible routes. They include fire extinguisher cabinets and wall hung light fixtures.
- ♦ Toilets in Type A and Type B units must be centered 16" to 18" from adjacent wall.
- ♦ Make sure accessible sidewalks are not blocked by vehicle overhangs.

Accessible Playgrounds

Playground surface conditions and materials must meet certain guidelines and standards which include:

- ♦ ASTM F1951 (Accessibility Surface Systems)
- ♦ ASTM F1292 (Impact Determination)
- ♦ ASTM F1487 (Consumer Safety Performance)
- ♦ ASTM F2017 (Engineered Wood Fiber)
- ♦ ASTM F2479 (Poured-In-Place Products)

The Agency requires a letter from the playground floor material provider stating the material meets or exceeds the above ASTM requirements.

The Agency requires a certificate from a third-party firm licensed to perform playground surface testing stating the installation of approved floor coverings was installed per manufacturer's requirements and that the finished floor surface meets the above ASTM standards.



Sitework Issues To Remember

No changes in sitework permitted after application award without Agency approval.



Switchbacks between handicap parking and building entrances will not be allowed.



Handicap parking spaces and adjacent access isles must be installed in concrete.



Contact Information

North Carolina Housing Finance Agency

3508 Bush Street
Raleigh, NC 27609-7509
Main Phone Line: 919-877-5700
www.nchfa.com

Russell Griffin

Senior Construction Specialist
919-971-5008 (cell)
rgriffin@nchfa.com

Toby Sutherland

Construction Specialist
919-427-7306 (cell)
wtsutherland@nchfa.com

Don Messer

Construction Specialist
910-818-4038
dwmesser@nchfa.com

DISCLAIMER: Although this guidebook contains legal information and graphic depictions, it is intended only as a reference. Architects, contractors, developers, owners and others must refer to applicable rules, regulations and statutes. This guide is not intended to serve as a substitute for legal advice or to establish any lawyer-client relationship.

A SELF-SUPPORTING PUBLIC AGENCY



No tax dollars were used for this publication.