

2025 SRDP and Home ARP Application Workshop Session 2: Construction Requirements

SOUTH CAROLINA STATE HOUSING
FINANCE AND DEVELOPMENT AUTHORITY

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SC Housing Community Development

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SC Housing Community Development

Please Note:

The presentation is made up of excerpts from SC Housing Manuals, Exhibits, and Appendices that have been copied and pasted. This presentation is limited to the common application and plan deficiencies observed by SC Housing staff; it's not intended cover all thresholds or requirements. The SC Housing Manuals, Exhibits, and Appendices should be consulted for all thresholds and requirements. The manuals, exhibits, and appendices contain all items that appear in regular print, which are copied and pasted. All items in *Italics* and **blue** print are of great significance.

Architect Requirements

(Pages 37-38 of 2025 SRDP Application Manual)
(Page 55 of 2025 HOME-ARP Application Manual)

All projects must contract “Turn Key” design services with South Carolina licensed Architect, Landscape Architect, and Engineers that will complete the work in the following manner:

- **1.** Architect shall serve as the central design and design-document coordinator for all plans and specifications for the project - even if separate professional service agreements are held between the owner/developer and various members of the design team. The coordination includes, but is not limited to the Architectural plans, MEP plans, Civil plans, Landscape plans and Specifications.
- **2.** Architect will provide and/or coordinate with data and information provided by all of the project’s third-party professional design-related consultants and engineers including, but not limited to, the Exhibit 10 Estimator, Geotechnical, ADA, Energy Star, and Sustainable Building consultants.

Architect Requirements (cont'd)

- **3.** Architect shall provide consultation support to the owner with respect to procurement and contracting requirements.
- **4.** Architect will prepare and/or assemble for dissemination the entire bid package. Architect will manage the sealed bid process and support (through advice and comment) the owner/developer in developing an advertising statement and will provide bid results directly to SC Housing.
- **5.** Architect will prepare, provide or review as appropriate to the form involved, (i.e., GC will prepare AIA documents intended for contractor preparation) and process all AIA form documentation.

Architect Requirements (cont'd)

- **6.** Architect will provide submittal review and architectural onsite construction phase observation services at an interval appropriate to the project size and will be available to communicate, coordinate, and advise as needed with the SC Housing Inspector to resolve any issues revealed during construction.
- **7. The signed contract between the Applicant and Architect for providing these services must be provided with the application.** The contract must include language stating “All project plans, specifications and documents will be designed and provided to comply with the SC Housing’s 2025 SRDP/ HOME-ARP Manual and Appendices” and that the “contract going forward is subject to the Applicant successfully being awarded funding for the project in the 2025 funding cycle.” *The amount of the contract should be accurately reflected in the development budget. (TDC, page 8)*

Exhibit 10 – Construction Cost Addendum

- Architect will provide and/or coordinate with data and information for the **Exhibit 10**.
- Located under **Tab 6** in the Application checklist.
- Must match the **TDC** and **Exhibit 11**.
- Must be completed and signed by an independent 3rd party estimator, contractor or engineer who cannot bid on the project.
- Cost estimator must certify that the costs associated with **geotechnical recommendations, lead and/or asbestos abatement** if necessary, have been included in the estimate.
- Reviewed by SC Housing for cost reasonableness.

Exhibit 10 - Construction Cost Addendum (cont'd)

- **TURNKEY PRICING PER SECTION IS PROHIBITED AND WILL BE REJECTED**
- Multi Family Developments:
 - Provide one (1) **Exhibit 10** for the entire development, and
 - One (1) **Exhibit 10** for each building type.
- Single Family Scatted Site Developments:
 - Provide one (1) **Exhibit 10** for the entire development/award, and
 - One (1) **Exhibit 10** for each home plan and site.

Exhibit 10 - Construction Cost Addendum(cont'd)

Common Exhibit 10 Deficiencies:

- ***Geotechnical Requirements Not Included in Cost Estimate***
- ***Grade/Soil Cut, Grade/Soil Fill (Import), Grade/Soil Waste Off Site (Export)***
- ***Landscaping Including Irrigation***
- ***Mail Kiosk, Fencing, Site Lighting and Retaining Walls***
- ***Energy Star Zone South Central Windows and Doors***
- ***Disaster Mitigation/Hazard and or STC Rated Windows***
- ***Casement Windows for Mobility Type A Units***
- ***Insulation R-Value and STC Requirements***
- ***Drywall Finished Level 4, Moisture Resistant and Water Resistant Drywall***
- ***ANSI 117.1-2017 Compliant Roll in Showers and Tub/Shower***

Exhibit 11 – Construction Design Certification

SRDP & HOME-ARP Exhibit 11 Square Footage 10% Comparability:

- **Comparable Units:** Units are considered comparable if the project contains units of the same basic size, configuration, and amenities.
- Projects with different configurations types such as 1 br., 2 br., 3 br., 1 bath, 1.5 bath, 2 baths, etc. are acceptable if the key features of number of bedrooms, bathrooms and total rooms are identical.
- In regards to unit type square footage size, unit types of the same bedroom and bath count must be within a 10% variance of the square foot measurement for that unit type to be considered comparable.
- Amenities, finishes, fixtures and appliances must be of the same cost and quality in all units; assisted or unassisted.

Change Orders (Appendix B, page 1)

- At all times after award, the owner is responsible for promptly informing the Authority of any changes or alterations which deviate from the final plans and specifications approved by the Authority.
- The owners must not take action on any material change to the site layout, floor plan, elevations or amenities without a completed change order approved by the Authority. This includes changes required by local governments to receive building permits.
- *Change orders with plan revisions must include the redlined plan revision.*
- *Approved change orders must be included in the AIA G702 and G703.*

Submittals for Type A and B unit Shower and Tub/Showers (Appendix B, page 21)

- **N. 9. a.** Submittals for the Type A Mobility unit Roll in Showers must include and receive SC Housing Construction Inspection Manager approval.
- **N. 10. a.** Submittals for the Type B units Tub/Shower must include and receive SC Housing Construction Inspection manager approval.

Build America, Buy America Act (BABA)

Applies to SRDP Only

- Projects with 1-4 units are exempt.
- Projects with 5+ units must comply unless a waiver applies.
- HUD CPD Notice 25-01 Implementation Guidance for the BABA Act's Buy America Preference (BAP)

Build America, Buy America Act (BABA) (Cont'd)

- BABA applies to the entire project, not just the items being paid for with HUD CPD funds (HOME, NHTF).
- BABA applies to all developers, contractors, subcontractors, etc.
- If multiple funding sources trigger BABA compliance, the source with the largest investment takes the lead.
- Adding BABA compliant funding to a non-BABA triggered project after the project is underway triggers BABA.

Build America, Buy America Act (BABA) (Cont'd)

HUD General Applicability Waivers:

- Public Interest Exigent Circumstances – waiver applies when there is an urgent need by a CPD Grantee (SC Housing) to immediately complete a project because of a threat to life, safety, or property of residents and the community.
- De Minimis and Small Grants – waiver applies to projects whose total costs from all funding sources is equal to or less than the simplified acquisition threshold at 2 CFR 200.1 (\$250,000) and to projects where a *de minimis* portion of a project, meaning the cumulative total of no more than 5% of the total project cost of the iron, steel, manufactured products, and construction materials used, up to a maximum of \$1 million.

Build America, Buy America Act (BABA) (Cont'd)

Federal Government-Wide Project/Product Specific Waivers:

1. Non-availability Waiver – may be requested if covered materials are not produced in the US in sufficient and reasonably available quantities or of a satisfactory quality.
2. Unreasonable Cost Waiver – may be requested when the inclusion of BABA covered materials produced in the US will increase the total cost of the project by more than 25%.
3. Public Interest Waiver – may be requested if the use of US made products would be inconsistent with the public interest.

Build America, Buy America Act (BABA) (Cont'd)

All articles, materials, and supplies must be categorized into one of the below categories based on their status upon delivery at the project site:

1. Iron or Steel
2. Manufactured Products
3. Construction Materials
4. Section 7091(c) Materials

Build America, Buy America Act (BABA) (Cont'd)

Documentation of Compliance with BABA:

- Project records showing BABA language in Contracts, Procurement Documents, etc.
- Project Budget of the total project costs and a list of the project's Covered Materials subject to BAP with the costs of the identified Covered Materials.
- Documentation of the determination of BAP applicability to the covered materials, even if determined to be exempt.
- If subject to BAP, documentation that all Covered Materials subject to BAP were procured from BABA-compliant sources.

Build America, Buy America Act (BABA) (Cont'd)

Documentation of Compliance with BABA (cont'd):

- If a general waiver applied to the project, documentation of how it meets the waiver.
- If a project/product specific waiver was obtained a copy of the approved waiver and market research supporting the need for the waiver.
- Product Labels - US Made verification, if available (Made in the U.S.A. label, product specification, BABA vendor, manufacturer, or contractor certifications.
- Results of market research and product sourcing such as supplier scouting conducted by NIST MEP or other supply scouting service. Copies of web



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Plan and Specification Requirements (Located in Appendix B)

- Design Document Standards, page 1.
- Application Plan Requirements, page 2.
- Final Plans and Specification Requirements, page 3.
- Mandatory Design Criteria (MDC), page 5.

Design Document Standards

NEW Code Standards SRDP Only (Appendix B, page 1)

- A. 8. 2021 International Energy Conservation Code unamended applies to all new construction single family and low-rise multifamily up to three stories. **New HUD Requirement.** SC Housing will require third party certification that 2021 IECC (unamended) requirement have been meet.
- A. 9. ASHRAE 90.1 – 2019 unamended applies to all new construction mid- or high-rise multifamily four plus stories. **New HUD Requirement.** SC Housing will require third party certification that ASHRAE 90.1-2019 (unamended) requirement have been meet.
- **Note:** HUD has stated that they will also accept several high-performance building standards that meet or exceed the 2021 IECC and ASHRAE 90.1-2019 as alternative compliance pathways. This webinar and information has been postponed indefinitely by HUD. Therefore leaving the only known compliance pathway being the above mentioned codes.

Design Document Standards (cont'd)

Common Plan Deficiencies (Appendix B, page 1)

Plans don't meet the following:

- A. 12. ANSI 117.1 – 2017 Edition.
- A. 18. HUD National Standards for Physical Inspection of Real Estate (NSPIRE)

Application Plan Requirements

Key points for development of application preliminary plans

- *Ensure preliminary plans incorporate the requirements of the MDC such as:*
 - *Accessibility standards; accessible routes in units and on site, parking, ramps, kitchen and bath clear floor spaces and turning spaces, tubs and showers*
 - *Heated and unheated square footages for the total building and per unit*
 - *Dimensioned floor plans with room square footages with furniture and equipment layout*
 - *Unit size & base requirements*
 - *Development parking*

Application Plan Requirements (cont'd)

Key points for development of application preliminary plans (cont'd)

- Be mindful that the preliminary plans with their square footages must be accurate for underwriting staff to correctly evaluate federal cost allocation and cost reasonableness requirements. TDC (page 8), Exhibit 10, Exhibit 11, and the application must match to determine if the project is financially feasible and how much funding can be allocated to the project from each SRDP funding source.*
- Any significant changes to the overall design from initial application to submission of final plans and specs to the building and or unit square footages will render the Exhibit 10 cost estimate invalid, and require that the application, TDC, Exhibits 10 & 11 to be revised to match the revised plans, which will require the project to be re-underwritten. Projects that have to be re-underwritten may be determined to be financially unfeasible.*

Application Plan Requirements (cont'd)

Common Plan Deficiencies (Appendix B, page 2)

- B. 2. Each home/building/development must have a home/building plan name clearly identified on the plan; Lot 1, Lot 2, etc. is NOT acceptable, the “Townsend,” “Carson,” etc. are acceptable.
- B. 3. All new construction developments and additions or new buildings added in rehabilitation projects must submit a complete site-specific soils report and boring site plan with laboratory test results, not more than six months old at the time of application and not more than one year old with final plans.
- B. 3. a. The soils report and boring site plan must reflect the results of laboratory tests conducted on a minimum of:.... *Ensure Soil engineer receives these requirements as the location of, number of and depth of borings or CPT's are often deficiencies.*

Application Plan Requirements (cont'd)

Common Site & Civil Plan Deficiencies (Appendix B, page 2)

- B. 4. i. Location of any proposed/new utility easements, ingress/egress easements and right of ways.
- B. 4. k. LOD (Limits of Disturbance) shall be provided and shall include on and off site functionally dependent areas. *This includes Domestic Water and Sanitary Sewer lines that run off the site/parcel.*
- B. 4. n. Building(s) layout with **locations of proposed specialty units including but not limited to handicapped and sensory impaired locations.**
- B. 4. t. Underground utilities; sanitary sewer, water, **gas, electric, cable, internet and telephone.**

Application Plan Requirements (cont'd)

Common Architectural Plan Deficiencies (Appendix B, page 3)

- B. 5. c. Building plans to include **total square footage and heated total square footage**.
- B. 5. d. Dimensioned floor plans for all unit types using a scale of $\frac{1}{4}'' = 1''$ that **include heated square footage, total square footage**, individual Primary Bedroom, Bedroom(s), Living Room, Dining Room, Kitchen, Balcony, Sunroom, Patio, Porch and Deck square footage. **Plan is to include furniture and equipment layout**.
- B. 6. Safe Drinking Water – Applications proposing the rehabilitation of structures built 1988 or earlier must have the pipes, solder, and flux tested for lead and include a copy of the report with the Application. Items testing positive for lead must be included in the PNA for replacement. See Section II, P, 16 for details.

Final Plans and Specification Requirements

Common Final Plan and Specification Deficiencies (Appendix B, page 3)

- C. 1. Plans must include, incorporate and show all Mandatory and Optional Design Criteria on the plans. [Pasting the MDC or referencing the MDC in a note on the plan is not acceptable.](#)
- C. 2. [The Mandatory Design Criteria must be bound with in the project specifications.](#)
- C. 3. [Accessibility reports as required in Section II, A.](#)
- C. 4. [Energy Star National Rater Design Review Checklist.](#)
- C. 5. [Sustainable Building Design Review Checklist](#), if awarded these points.

Final Plans and Specification Requirements (cont'd)

Common Final Plan and Specification Deficiencies (cont'd)

(Appendix B, page 4)

- C. 8. **Geotechnical, Accessibility, Energy Star and Sustainable Building reports and or reviews** and checklist must be signed and or sealed by the Engineer or Consultant that completed the plan, design, review and or checklist
- C. 9. Geotechnical Soil Report submitted with application, not more than one year old, **must be bound within the project specifications.**
- C. 10. **If any sections of the plan and specification package submitted do not meet the above requirements in items 1-9, the entire plan and specification review will be denied.**

Final Plans and Specification Requirements (cont'd)

Common Final Plan and Specification Deficiencies (cont'd) (Appendix B, page 4)

- C. 12. a. Must incorporate all geotechnical recommendations included in the soil report(s).
- C. 12. b. Must provide Life Safety Plan Page, Accessibility Diagram/Standards Page and Accessible Route Page. These must be provided on separate pages.
- C. 12. d. Plans must provide maximum accessibility and shortest routes possible.
- C. 12. e. Civils must provide complete plans, sections, details and elevations in $\frac{1}{4}'' = 1'$ for all amenities including but not limited to Playgrounds, Playground Equipment, Gazebos, Picnic Shelters, Seating, Picnic Tables, Bicycle Racks, Dumpster Areas, Compactor Areas, Mail Kiosks, Mailbox Area, Parking Spaces, Sidewalks, Retaining Walls, Fencing, Development Signage, Maintenance Buildings and Bus Stops.

Final Plans and Specification Requirements (cont'd)

Common Final Plan and Specification Deficiencies (cont'd) (Appendix B, page 4)

- C. 12. f. Architectural must provide completed Schedules for Windows, Doors, Cabinetry, **Appliances**, **Flooring** and **Room Finishes**.
- C. 12. g. Architectural must provide complete plans sections, details and elevations in $\frac{1}{4}'' = 1'$ including but not limited to Foundations, Floor Systems, Exterior and Interior Walls, Roof Systems, Facia, Soffits, Gutter, Exterior Ceilings, Balcony, Sunroom, Patio, Porch, Deck, Breezeways, Exterior Stairways, Kitchens, **Bathrooms**, **Closets**, **Mechanical Rooms**, **Laundry Rooms**, **Interior Stairways**, Community Room Kitchen, Computer Room, Exercise Room, **Gazebos**, **Picnic Shelters**, **Mail Kiosks**, **Mailbox Area**, **Development Signage**, **Maintenance Room/Buildings**.

Final Plans and Specification Requirements (cont'd)

Common Final Plan and Specification Deficiencies (cont'd)

(Appendix B, page 4)

- C. 13. c. HVAC, manuals J, S & D must be included in the plans.
- C. 13. d. Natural air calculations.
- C. 13. e. Outside air calculations, shall include Outside Air (OA) system and controller such as “AprilAire” that meets ASHRAE 62.2.
- C. 14. g. There must be 20’ minimum of sod extending out from each exterior building wall. A lesser amount will be permitted if sod extends from building wall to property line or road.

Final Plans and Specification Requirements (cont'd)

Common Final Plan and Specification Deficiencies (cont'd)

(Appendix B, page 5)

- C. 14. h. A permanent irrigation/sprinkler system designed with drawing's serving all landscaped areas. A note or noted on the plans or specifications is not acceptable.
- C. 15. Development Site Lighting plans with representative photometrics shown on plan reflecting **an average maintained foot candles of 1.5** for all development **parking, sidewalks and exterior common areas**.



**ANY
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Mandatory Design Criteria

Common Accessibility Deficiencies (Appendix B, page 5)

- A. Developments must provide maximum accessibility and shortest possible routes, meet all federal, state and local accessibility standards, as well as all Authority accessibility requirements.
- A. SC Housing prohibits the use of T shaped turning space; designs must utilize the sixty-seven (67) inch radius turning space.

Mandatory Design Criteria (cont'd)

Common Accessibility Deficiencies (cont'd) (Appendix B, page 5-6)

- All owners must contract with a third party Qualified Accessibility Consultant to conduct the following:
 - A.1. Pre-construction plan and specification review.
 - A.2. Provide at minimum two training sessions.
 - A.3. Framing and MEP rough-in inspections.
 - A.4. Final inspection
 - A.5. Certificate of accessibility compliance.
 - *All reports must be provided via email to the SC Housing Community Development Construction Inspections Manager and the Project Coordinator immediately upon completion.*

Mandatory Design Criteria (cont'd)

Common Accessibility Deficiencies (cont'd) (Appendix B, page 7)

- B. 1. The Authority requires that all accessibility modifications be in place upon completion of new construction and/or completion of substantial rehabilitation, including kitchen and closet shelving, grab bars, and appliances.
- **C. 1. Mobility Disabled Units:** Shall be Type A, at least 5% of the total units (but no less than one unit) must be equipped for the mobility disabled, including for wheelchair restricted residents. [ADA/ANSI 117.1-2017](#) compliant 36" x 60" minimum useable floor space roll-in showers must be incorporated into all of the Type A mobility equipped units. Mobility units with more than one bathroom must provide the primary bedroom bathroom with the roll-in shower.

Mandatory Design Criteria (cont'd)

Common Accessibility Deficiencies (cont'd) (Appendix B, page 7)

- **C. 2. Hearing and Sight-Impaired Units:** Shall be Type B in multifamily buildings and new developments; Shall be Standard units in infill housing, at least an additional 2% of the total units (but no less than one unit) must be equipped for hearing and sight-impaired residents including compliance with ICC/ANSI A117.1-2017 Section 1106, which includes audio and visual notification on fire alarms and at the primary unit entrance
 - a. Type B units shall have tub/showers that are ANSI 117.1-2017 complaint with the tub/shower seat, tub/shower grab bars and toilet grab bars installed at completion of project.

Mandatory Design Criteria (cont'd)

Common Accessibility Deficiencies (cont'd) (Appendix B, page 7)

- **C. 3. Fair Housing Units:** Type B units required by Fair Housing /ADA / Section 504/ANSI 117.1-2017 requirements shall have tub/showers that are ANSI 117.1-2017 compliant with the tub/shower seat, tub/shower grab bars and toilet grab bars installed at completion of project.
- **C. 4. 5% and 2% requirement:** The same unit(s) cannot be used to satisfy the 5% and 2% requirement.
- **C. 5. Signage for designated common areas and all units must be in Braille and meet ANSI A117.1-2017, Section 703 standards.**

Mandatory Design Criteria (cont'd)

Common Base Requirements Deficiencies (Appendix B, page 10)

- E. 10. Moisture resistant gypsum board must be installed on all ceilings and walls of bathrooms, on all walls of laundry rooms, mechanical closets and exterior storage closets, and behind kitchen sink base and dishwasher.
- E. 11. Water-resistant gypsum board or equivalent shall be provided behind any tub/shower unit located on an exterior wall.

Mandatory Design Criteria (cont'd)

Common Postal Facilities Deficiencies (Appendix B, page 12)

- *Ensure accessibility reach ranges, clear floor spaces and turning spaces.*
- F. 5. a. iv. USPS; All new or remodeled apartment houses must install USPS-approved 4C centralized mailbox equipment. There must be at least 1 parcel locker for every 5 mailbox compartments. The Postal Service requires no maximum number of parcel lockers to be installed—only the 1:5 parcel locker/mailbox minimum.
- F. 5. a. v. USPS; Exterior centralized mailboxes may also be an option. The Postal Service may authorize the installation of standard, approved apartment receptacles (4C or CBU) in exterior walls of buildings provided they are not installed directly on the street or a public sidewalk. Provide a canopy for outdoor mailbox installations. The canopy design and location must provide maximum protection from the weather, including driving rain, and provide adequate nighttime lighting.

Mandatory Design Criteria (cont'd)

Common Sidewalk Deficiencies (Appendix B, page 12)

- F. 7. g. All **sidewalks, crosswalks and walkways** shall be a minimum of **48” in width**, must be made of concrete, and must comply with the following requirements:
 - i. Provide access to all parking spaces
 - iii. Sidewalks that are included in the “Accessible Route” may not exceed 2% cross slope or 5% running slope.
 - v. Be accessible and compliant as required within the development with clearly marked ramps, crosswalks, signage, etc. in accordance with all accessibility regulations.
 - vi. The developments sidewalks must be placed to the property line of the entrance and or join the local existing sidewalks if they exist.

Mandatory Design Criteria (cont'd)

- F. 8. **Common Parking Spaces Deficiencies (Appendix B, page 13)**
- a. All developments require a minimum number of parking spaces per unit size as follows:
 - i. One-bedroom units are 1.0 parking spaces per unit.
 - ii. Two-bedroom units are 1.5 parking spaces per unit.
 - iii. Three- and four-bedroom units are 2.0 parking spaces per unit.
- F. 8. b. There must be at least one handicap parking space for each designated accessible unit, **and each development amenity** such as the community room, **postal facilities or refuse collection** as required that must be the nearest available parking space to the unit and or the amenity.
 - i. **All handicap parking spaces and associated aisles must be concrete and may not exceed 2% slope in all directions.**

Mandatory Design Criteria (cont'd)

Common Refuse Collection Deficiencies (Appendix B, page 13)

- F. 9. c. Dumpsters / trash compactors and recycling area must be ADA accessible and located on an ADA accessible route with ADA parking near the collection area(s).
- F. 9. d. Provide a collection and storage area of non-hazardous material for recycling.
- F. 9. e. The pad and approach pad to the dumpster must be concrete. The approach pad must be 12" thick minimum. At a minimum, the dumpster pad must include two painted pipe bollards installed behind each dumpster.
- F. 9. f. Pedestrian paths of accessible travel must be marked/identified (painted in yellow or white) on dumpster pad surfaces.

Mandatory Design Criteria (cont'd)

Common Radon Deficiencies (Appendix B, page 14)

- H. 1. All projects/buildings will require Radon Resistant New Construction Practices. Rehabilitation projects must meet the Radon Mitigation Standards.

Common Building Exterior Deficiencies (Appendix B, page15)

- I. 1. e. Siding applications require all exterior penetrations to be installed in plastic J-boxes.

Mandatory Design Criteria (cont'd)

Common Building Signage Deficiencies (Appendix B, page 16)

- I. 2. f. Buildings and units must be identified using clearly visible signage and numbers. Building and unit identification signage must be well lit from dusk till dawn and meet ANSI A117.1, Section 703 standards.

Common Roof Deficiencies (Appendix B, page 16)

- J. 1. Asphalt Shingles
 - a. Roof pitch to be a minimum of 4/12.



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Mandatory Design Criteria (cont'd)

New HUD Insulation Requirements SRDP Only, 2021 IECC (Appendix B, page 17)

- K. 5. Framing of roof and ceiling systems to allow the full depth of R-38 ceiling insulation to extend over the top plate of the exterior wall.
- K. 6. Exterior walls (Wood Framed) R-20 or R13 & 5ci insulation.
- K. 7. Attics R-49 insulation.
- K. 8. Floors R-19 insulation, See 2021 IECC Section R402.1.3
- K. 9. Slab-on-grade floors R-10ci @ 2foot, See 2021 IECC Section R402.1.3 & R402.2.9
- K. 10. Mass Wall R-8/13, See 2021 IECC Section R402.1.3 & R402.2.5
- K. 11. Crawl Space Walls, See 2021 IECC Section R402.1.3 & R402.2.10
- K. 12. Basement Walls R-5ci or R13, See 2021 IECC Section R402.1.3 & R402.2.8
- K. 13. Access Hatches and Doors, See 2021 Section R402.2.4

Mandatory Design Criteria (cont'd)

Common Sound Proofing Deficiencies (Appendix B, page 18)

- K. 14. Unit party walls and floor assemblies require sound proofing (sound batt insulation) to achieve a rating of **STC 54**.
- K. 15. Noise - All projects must have an interior noise level of no more than 45 decibels (db) in prescriptive with the outside noise level. **Plans must identify the STC ratings to achieve HUD's acceptable interior level of 45 decibels. Sites with Exterior noise levels of 75 decibels or higher are not eligible for funding.**

Mandatory Design Criteria (cont'd)

Common Window & Door Deficiencies (Appendix B, page 19)

- L. The project Architect is responsible and must confirm that the specified windows and doors including plan call out sizes meet all egress and accessibility requirements. Plans and or specifications that state or call out that being the responsibility of the contractor will be rejected.
- L. Windows and exterior doors must be Energy Star rated for zone south central.
- L. 3.c. Be single hung, double hung, casement or awning. Sliding windows are prohibited.
 - i. For Type A&B Units windows must be Casement windows that are **ADA** compliant.
 - ii. In Type A&B units, all windows must meet or exceed all State and Federal accessibility requirements.
- L. 3.e. Metal blinds are prohibited.
 - i. For Type A&B units manual and or electric blinds of any material type are permitted to meet accessibility requirements.

Mandatory Design Criteria (cont'd)

Common Kitchen Deficiencies (Appendix B, page 19)

- M. 1. All kitchen cabinets shall be constructed with solid wood or plywood stiles, rails, doors and drawer fronts. All cabinets will conform to the performance and fabrication requirements of current year [ANSI/KCMA A161.1](#) and bear the ICC-ES or KCMA Certification Seal.
 - a. [Drawers must have dual slide tracks.](#)
 - b. [Accessible cabinets with removable fronts must be manufactured to be removable with only a screwdriver.](#)
- M. 7. a. A backsplash panel must be installed behind the cooktop and cover the entire wall behind the cooktop.

Mandatory Design Criteria (cont'd)

Common Kitchen Deficiencies (Appendix B, page 20) (cont'd)

- M. 8. All units must have a Fire Stop or comparable extinguishing system over the stove. Alternatively, the range must have SmartBurner elements installed in the range.
- M. 9. Each unit must be equipped with a 5 lb. ABC rated dry chemical fire extinguisher readily accessible in the kitchen and mounted to accommodate handicapped accessible height in accessible units. **If contained in the cabinet/pantry area must have proper signage, 4"X3" minimum identifying the location.**

Mandatory Design Criteria (cont'd)

Common Kitchen Deficiencies (Appendix B, page 20) (cont'd)

- M. 11. Fluorescent lighting or LED lighting is required in the kitchen which must provide **30 footcandle minimum on all counter tops**.
- M. 12. The aisle width between cabinets and/or appliances is 42” minimum in **U-Shaped kitchens it is 67”**.
- M. 13. g. The wall cabinet mounted over the work station must be 48 inches maximum above finished floor to the top of the bottom shelf.

Mandatory Design Criteria (cont'd)

Common Bathroom Deficiencies (Appendix B, page 20)

- N. 1. All bathroom vanities/cabinets shall be constructed with solid wood or plywood stiles, rails, doors and drawer fronts. All cabinets will conform to the performance and fabrication requirements of current year [ANSI/KCMA A161.1](#) and bear the [ICC-ES or KCMA Certification Seal](#) and:
 - a. [Drawers must have dual slide tracks.](#)
 - b. [Accessible cabinets with removable fronts must be manufactured to be removable with only a screwdriver.](#)
- N. 7. Tub/shower units must be [32" x 60" minimum](#) one piece fiberglass based units with slip resistant floors.
 - a. [Shower head to be mounted 80" above finished floor.](#)
- N. 8. Toilets must be centered, at a [minimum, 18 inches](#) from sidewalls, vanity/lavatories and bath tubs and be clearly marked on the plans.

Mandatory Design Criteria (cont'd)

Common Type A Bathroom Deficiencies (Appendix B, page 21)

- N. 9. a. Submittals for the Type A Mobility unit Roll in Showers must include and receive SC Housing Construction Inspection Manager approval.
- N. 9. b. Must contain an ADA/ANSI compliant roll in shower and:
 - i. Be one piece fiberglass based unit with slip resistant floor.
 - ii. Be ADA/ ANSI 117.1 - 2017 compliant from manufacture such as the “Aquatic” 16037BFSD/ANSI Compliant.
 - iii. Have factory installed grab bars.
 - iv. Have a 36” x 60” minimum useable floor space.
 - v. Have a collapsible water dam or beveled threshold that meets code
 - vi. Approaches to roll-in showers must be level, not sloped
 - vii. Have adjustable shower rod and weighted curtain installed before occupancy
 - viii. Shower floor may not be used for code required 67” clear floor space in bathrooms.
 - ix. The shower head with wand must be installed on a sliding bar and within code required reach ranges by the seat.
 - x. An additional diverter must be installed to provide water to a shower head on the short shower wall in front of the seat, mounted 80” above finished floor.
- N. 9. c. Accessible cabinets with removable fronts must be manufactured to be removable with only a screwdriver.
- N. 9. d. All cabinets in designated handicap accessible units must be installed at ADA mounting heights.
- N. 9. e. Provide ADA compliant cabinet handles/pulls on cabinet doors and drawers. Knobs are prohibited
- N. 9. f. Provide solid blocking at all toilets and tub/shower units for grab bar installation.

Mandatory Design Criteria (cont'd)

Common Type B Bathroom Deficiencies(Appendix B, page 21)

- N. 10. a. Submittals for the Type B units Tub/Shower must include and receive SC Housing Construction Inspection manager approval.
- N. 10. b. Must contain an ADA/ANSI complaint tub/shower.
 - i. Be a 32" x 60" minimum one-piece fiberglass-based unit with slip resistant floor.
 - ii. Be ADA/ ANSI 117.1 - 2017 compliant from manufacture such as the "Aquatic" 2603SMTE/ANSI Compliant.
 - iii. Have factory installed grab bars.
 - iv. The shower head with wand must be installed on a sliding bar.
 - v. Provide solid blocking at all toilets and tub/shower units for grab bar installation.

Mandatory Design Criteria (cont'd)

Common Closet Deficiencies (Appendix B, page 22)

- O. 3. Every bedroom must have a closet at a minimum of 24" deep and contain a 5' long minimum wire shelf and closet rod. Closet width of 5' does not apply to rehabs; however, a 24" deep closet is required for each bedroom.

Common Laundry Room Deficiencies (Appendix B, page 22)

- P. 5. In Type A and Type B units,
 - a. Each clothes washer and dryer must be centered for a side approach only. *Rehabilitation projects can utilize front or side approach.*
 - c. All electrical, plumbing, and venting rough-ins must be centered behind each washer and dryer to allow them to be centered for side approach.

Mandatory Design Criteria (cont'd)

New HUD Mechanical HVAC Requirements SRDP Only (Appendix B, page 23)

- Please refer to 2021 IECC
 - HVAC Equipment must be **16 SEER / 15.3 SEER2**.
 - *Envelop Air leakage (Blower door) testing, **2021 IECC R402.4***
 - *Duct Leakage Testing both Rough-in and Post-Construction. All duct within thermal envelope must be tested, **2021 IECC R403.3***
 - *Whole- House Mechanical Ventilation, **2021 IRC M1505.4***
 - *Whole-House Dwelling Ventilation Efficacy, **2021 IECC R403.6***
 - *Whole-Dwelling Ventilation System testing including bath fans and range hoods, **2021 IECC R403.6***

Mandatory Design Criteria (cont'd)

Common Mechanical Deficiencies (Appendix B, page 23)

- R. 3. All HVAC air handlers must be contained within the conditioned space of the unit.
- R. 4. Ductwork must be contained within the conditioned space of the unit.
- R. 6. All openings in duct work at registers and grilles must be covered after installation to keep out debris during construction.
- R. 12. All bedroom closets, interior storage rooms, coat closets, and laundry rooms/closets must have a 4 inch tall by 8 inch wide minimum pass-thru grille above doors for air circulation in those areas that do not get conditioned.
- R. 14. All bath exhaust fans shall be rated at **70 CFM minimum** vented to the exterior of the building **using hard ductwork** along the shortest run possible. *See 2021 IECC requirements that include duct blasting.*

Mandatory Design Criteria (cont'd)

Common Plumbing Deficiencies (Appendix B, page 24)

- S. 3. Individual water meters are required for all units in multifamily single story designs, Single Family homes, Townhouses and Duplex Developments.
- S. 6. All domestic water line cut off valves must have **metal handles**, not plastic.
- S. 10. Water sense fixtures must be used:
 - **Toilets 1.28 GPM or less.**
 - **Showerheads, Kitchen faucets and Bath faucets 1.5 GPM or less.**
- S.13. Toilets must be centered, at a minimum, **18 inches** from sidewalls, vanity/lavatories and bath tubs and be clearly marked on the plans.

Mandatory Design Criteria (cont'd)

New HUD Plumbing Requirements SRDP Only (Appendix B, page 24)

- S. 5. R-3 water pipe insulation required on all hot water piping. 2021 IECC 403.5.2.
- S. 14. Water heater for each unit:
 - a. Gas Tankless (instantaneous) water heaters to be equal to or greater than (\geq) 0.90 UEF.
 - b. Electric Heat Pump Water Heaters (HPWH) to be equal to or greater than (\geq) 2.20 UEF.
 - c. Gas Storage water heaters to be equal to or greater than (\geq) 0.86 UEF.

Mandatory Design Criteria (cont'd)

New HUD Electrical Requirements SRDP Only (Appendix B, page 25)

- T. 4. Electrical and communication boxes on exterior walls must have an air leakage rate at or less than (≤ 2) cfm @ 75 Pa per NEMA OS 4, Requirements for Air-Sealed Boxes for Electrical and Communication Applications. Marked as “NEMA OS 4” or “OS 4”. **2021 IECC R402.4**
- T. 8. Permanently installed interior lighting fixtures shall be controlled with either a dimmer, an occupant sensor control or other control that is installed or built into the fixture. **2021 IECC R404.2**
 - Exception: Lighting controls shall not be required for the following: Bathrooms, Hallways, Exterior lighting fixtures and lighting designed for safety or security. **2021 IECC R404.2**
- T. 9. All lighting fixtures to be High-Efficacy LED, equal or greater than (\geq) 45 lumens per watt. **2021 IECC R404.1**
- T. 10. All lamp/bulbs to be 100% High-Efficacy LED, equal or greater than (\geq) 45 lumens per watt. **2021 IECC R404.1**

Mandatory Design Criteria (cont'd)

New HUD Energy Star Requirements (Appendix B, page 26)

- U. 1. New Construction Multi Family Developments will:
 - U. 1. a. Be built to meet and receive the Multi Family New Construction **Version 1.2** Energy Star Certification. This includes all mandatory measures; MFNC Rater Design Review Checklist, MFNC Rater Filed Checklist, MFNC HVAC Functional Testing Checklist, MFNC Water Management System Requirements.
- U. 2. New Construction Single Family, Townhouses and Duplex Developments will:
 - U. 2. a. Be built to meet and receive the **Version 3.2** Energy Star Certification. This includes all mandatory measures; National Rater Design Review Checklist, National Rater Checklist, National HVAC Design Report, National HVAC Commissioning Checklist, National Water Management System Builder Requirements.

Mandatory Design Criteria (cont'd)

New MANUFACTURED HOMES, HOME ARP Program Only. Home ARP Appendix B, page 26.

- W.1. All manufactured homes must be in compliance with HUD's March 17, 2025 Manufactured Home and Construction standards 24 CFR Parts 3280, 3282, 3285, and 3286 for the specific site location.
- W.2. Must be installed with a Real Property Permanent Foundation that:
 - W.2.a. Meets the U.S. Department of Housing and Urban Development (HUD), Federal Housing Administration (FHA) standards and designed by a SC licensed professional engineer,
 - W.2.b. Be constructed to meet site specific flood, wind and seismic requirements.

Mandatory Design Criteria (cont'd)

New MANUFACTURED HOMES, HOME ARP Program Only. Home ARP Appendix B, page 26. (cont'd)

- W.2.c. Foundation shall consist of concrete Wall and Colum footings per geotechnical reports and code.
- W.2.d. Foundation walls shall consist of concrete or masonry and be:
 - Poured concrete walls with hard coat stucco or,
 - CMU block with hard coat stucco or,
 - CMU block with rock or brick veneer or,
 - Brick veneer.
 - Have metallic crawl space door (s),
 - Foundation vents and vapor barrier.
 - Pony walls, or composite materials are prohibited

Mandatory Design Criteria (cont'd)

New MANUFACTURED HOMES, HOME ARP Program Only. Home ARP Appendix B, page 26. (cont'd)

- W.3. Installers and Contractor must be appropriately licensed by SC LLR.
- W.4. The manufactured home must have Energy Star classification.
- W.5. Must have concrete driveways, curbing at street and front entry walkways. Curbing at street will be waived for scattered site developments.
- W.6. May use “Herbie Curbie” container if the locality provides such and:
 - Must provide enclosed storage at each unit for the “Herbie Curbie”.
 - Must have one for each unit.
 - Must provide letter stating this service is available.



**ANY
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Certifying Compliance with the 2021 IECC

SRDP Only. The information below was provided by HUD. SC Housing will require third party certification that 2021 IECC unamended requirements have been met.

- HUD requires Developer-builder to certify that homes meet the 2021 IECC
- Architect-Engineer-Consultant to verify that construction documents meet the requirements of R103.2 *Information on Construction Documents* and that the home is designed to meet the 2021 IECC
- Architect-Engineer-Consultant to verify that homes are built to meet the 2021 IECC per R105.2.1 through R105.2.5 of R105.2 *Required Inspections*
- Assessing code compliance requires individuals with specialized knowledge and/or equipment. For example...
 - Duct leakage testing
 - Envelope air leakage testing
 - Air sealing and insulation installation criteria
- There are a variety of certifications requiring demonstration of knowledge and skills. For example... Home Energy Rating System (HERS) Rater
 - Ratings Field Inspector (RFI)
 - IECC/HERS Compliance Specialist
 - Building Performance Institute (BPI) Infiltration and Duct Leakage (IDL)

ASHRAE 90.1-2019 Compliance

SRDP Only. The information below was provided by HUD. SC Housing will require third party certification that ASHRAE 90.1-2019 (unamended) requirements have been met.

Section 4.2.1 Compliance

Highlights of new ASHRAE 90.1-2019 requirements, Section 4.2.5.

- Each building system section identifies specific requirements for verification, testing and commissioning (5.9.1, 6.9.1, 7.9.1, 8.9.1, 9.9.1, and 10.9.1)
- Each Performance Path option also lists verification, testing, and commissioning requirements (11.2(d) and G1.2.1(c))
- Verification and Testing provider must be identified in permit application.
- Verification and Testing provider must review drawings prior to permit application to confirm appropriate equipment is specified and proper maintenance clearance is provided for all applicable equipment.
- Verification and Testing report as well as Functional Performance Testing results must be provided to Owner or Owner's Representative.

ASHRAE 90.1-2019 Compliance (cont'd)

SRDP Only. New ASHRAE 90.1-2019 Compliance Documentation Requirements:

- Regardless of which compliance path, ASHRAE 90.1-2019 explicitly requires the following documentation:
 - Operation and maintenance (O&M) manuals for each building system regulated by the standard. The manuals should meet industry standards as identified by references specific for each section identified in Appendix E. O&M manual requirements are required as defined in each of the following sections:
 - **Section 5.7.3.2 – Building envelope system and components**
 - Section 6.7.3.2 – HVAC system and components
 - **Section 7.7.3.2 – Service Water Heating system and components**
 - Section 8.7.3.2 – Power system and components
 - **Section 9.7.3.2 – Lighting system and components, and**
 - **Section 10.7.3.2 – Other systems.**



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Rehabilitation Guidelines Appendix C

Rehabilitation projects utilize Fannie Mae standards for assessment (Appendix C, page1)

Applicable Forms Fannie Mae (FM) Forms:

- FM-Instructions for Performing a Multifamily Property Condition Assessment (PCS) Form 4099
- FM-Appendix A Form 4099.A, Streamlined Property Condition Assessment Guidance.
- FM-Appendix B Form 4099.B, Pre-Site Visit Questionnaire for Property Condition Assessment.
- FM-Appendix C Form 4099.C, Structural Risk Evaluation Questionnaire.
- FM-Appendix D Form 4099.D, Guidance on Preparing PCA Report Schedules and Tables.
- FM-Appendix E Form 4099.E, Fannie Mae PCA, Property Condition Assessment Data Supplement.
- FM-Appendix F Form 4099.F, Estimated Useful Life Tables.
- FM-Appendix G Form 4099.G, Known Problematic Building Materials and Property Design Issues.
- FM-Appendix H Form 4099.H, Analysis Tool for a High-Performance Building Report.
- FM-Appendix I Form 4099.I, Analysis Tool for a Technical Solar Assessment.

Rehabilitation Guidelines Appendix C (cont'd)

Applicable SC Housing forms:

- 11. Appendix E SC Housing Rehabilitation Work Scope Form.

SC Housing Rehabilitation Work Scope Form (Appendix C, page 9)

- The SC Housing Rehabilitation Work Scope form must address future property marketability, durability, and energy efficiency which will add to the residential quality of life.
- The SC Housing Rehabilitation Work Scope Form must be compiled by the Applicant/Owner, Architect/ Engineer, and Construction Contractor in SC Housing's required format to include materials, quantities and unit costs.
- The SC Housing Rehabilitation Work Scope Form shall be based on:
- Requirements for the replacement of components with an Effective Remaining Useful Life of less than 15 years, building code and health/safety violations, and immediate needs from the PCA;

Rehabilitation Guidelines Appendix C (cont'd)

SC Housing Rehabilitation Work Scope Form (Appendix C, page 9) (cont'd)

- Requirements for the replacement of components in order to comply with SC Housing's Design Criteria Standards and Specific Systems Replacement Guidance;
- All applicable Threshold and Scoring upgrades as indicated in the SC Housing Application including amenities construction;
- All costs that will be incurred in bringing the property into compliance with federal, state, local, and SC Housing accessibility regulations;
- Remediation of all issues identified in the Phase I and II environmental reports and NEPA reviews.
- SC Housing must be able to determine that all major issues identified in the PCA and Environmental Reports are addressed in the SC Housing Rehabilitation Work Scope form.

Rehabilitation Guidelines Appendix C (cont'd)

- A. All work scopes must propose A minimum “dwelling unit” per unit hard cost budget of \$25,000. (Appendix C, page 3)
- I. Compliance with SC Housing Appendix B Development Design Criteria, all current South Carolina building codes, SC Housing accessibility requirements, and NSPIRE, subject to inspection, upon completion of work. (Appendix C, page 3)
- SC Housing may determine the need to perform its own Property Condition Assessment (PCA) or decline any application for rehabilitation if it is determined that the rehabilitation work scope: (Appendix C, page 4)
 - Is inadequate or excessive;
 - Does not address the issues of the Physical Conditions Assessment;
 - Does not address major structural issues, building codes, health, safety, marketing or any other conditions observed on the site; or
 - Will not result in safe, decent housing.

Rehabilitation Guidelines Appendix C (cont'd)

- **Specific Systems Replacement Guidance (Appendix C, page 9)**
- **Fire and Life Safety (Appendix C, page 11)**
- Through strict code compliance, the property design shall provide a safe environment for all tenants. Compliance with the Life Safety Code for new construction is required for the following regardless of local building authority enforcement: stairs, handrails, guardrails, smoke detectors, carbon monoxide detectors, fire alarms, and unit fire separation (attic draft stops, fire/smoke separations, rated party walls and floor/ceiling components, and caulking of all penetrations in the fire assemblies). Life Safety items that do not meet current codes will not be 'grandfathered' in. Adherence to the most recently adopted editions of the South Carolina State Codes is required. This includes but is not limited to:

Rehabilitation Guidelines Appendix C (cont'd)

Fire and Life Safety (Appendix C, page 11) (cont'd)

- Smoke detectors must be hard-wired and located per code for all construction, either rehabilitation or new. SC Housing will not waive this requirement for rehabilitation proposals. Carbon Monoxide Detectors shall be in accordance with NFPA 101 Life Safety Code and NFPA 720.
- Fire alarms and sprinklers must meet fire department, state and local code requirements.
- Attics must be constructed or rebuilt to meet all current fire and life safety codes, regardless of the requirements of the local building authority. These include draft stop walls, and rated ceiling, floor, and wall assemblies.
- All through-penetrations of smoke walls, draft stops, and rated assemblies must meet current fire codes.

Rehabilitation Guidelines Appendix C (cont'd)

Fire and Life Safety (Appendix C, page 11) (cont'd)

- Existing exterior wooden stair systems may not be repaired. Instead they must be replaced in their entirety with new galvanized steel (field painted) and or concrete stair systems.
- Projects shall comply with all disaster mitigation-related requirements of the latest editions of the applicable mandatory State Minimum Standards as adopted and amended by South Carolina, and with all local ordinances regarding disaster mitigation.
- Life Safety items that do not meet current codes will not be 'grandfathered' in. SC Housing may allow an outcome at a standard lower than new construction requirements based on documentation from the authorized local code enforcement official(s).

Rehabilitation Guidelines Appendix C (cont'd)

- **Historic Rehabilitation (Appendix C, page 11)**
- Applicants must follow the *Secretary of the Interior's Standards for Rehabilitation* (36 CFR Part 68) to rehabilitate the property's interior and exterior features and complete SC Housing's environmental requirements, including the testing and abatement of lead and asbestos. These exterior and interior guidelines can be found at <http://www.nps.gov/tps/standards/rehabilitation.htm>.



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