

The terms of this Appendix 2 are the minimum requirements for any project awarded LIHTC.

Once final plans and specifications have been completed, owners must submit them to HHFDC (hard copy and on CD/DVD or through electronic transmission acceptable to HHFDC, in PDF format) and receive approval before commencing site work or construction.

At all times after award the owner is responsible for promptly informing HHFDC of any changes or alterations which deviate from the final plans and specifications approved by HHFDC at award. This includes changes required by local governments to receive building permits.

I. DESIGN DOCUMENT STANDARDS

All documents must be prepared by an engineer or architect licensed to do business in Hawaii. Drawings must be to scale, using the minimum required scale as detailed below.

A. APPLICATION PLAN REQUIREMENTS

Plans must in PDF format and indicate the following:

1. Street name(s) where site access is made, site acreage, planned parking areas, layout of building(s) on site to scale, any flood plains that will prohibit development on site, retaining walls where needed, and adjacent properties with descriptions.
2. Unit floor plans, front, rear and side elevations of all building types and identify all materials to be used on building exteriors.
3. Location of, and any proposed changes to, existing buildings, roadways, and parking areas. Handicap parking spaces with access aisles and regular parking spaces must be clearly depicted.
4. Locations of all site and common area features such as playground(s), gazebos, walking trails, refuse collection areas, postal facilities, picnic shelter(s), sitting areas, and site entrance signage. All interior common areas must also be located and labeled, including offices, computer room, exercise room, maintenance room, sitting areas, library, card room, screen porches, interior resident storage rooms, etc.
5. Gross building square footage, Gross unit square footage (following HHFDC's areas measurement guidelines attached to the QAP), and Net unit square footage.
6. For projects involving renovation and/or demolition of existing structures, proposed changes to building components and design and also describe removal and new construction methods.

B. AWARDED PROJECT PLAN REQUIREMENTS

All awarded projects must submit to HHFDC for review a full set of completed drawings (24" x 36" or larger) that must include the following.

1. A Page Index at the front of the plan set showing location of all pages within the plans.
2. The plan set must include Section 1106 (Accessible Parking) and Section 1107 (Accessible Dwelling Units). Tables must be accurately populated by project architect.
3. Unit Matrix: Must show unit type and location of all units per building and per floor level.
4. Accessible Route plan: Must show locations of all accessible parking spaces and access aisles. Must show accessible route(s) throughout the property and accessible sidewalk to public right-of-way.
5. Site accessory plans: Plans to include drawings and details for site structures including picnic shelters, garden plots, arbors, garages, mailbox kiosks and gazebos. Must have details for handicap parking spaces with access aisles, site entry signage and accessible (all) dumpster corals.
6. Foundation plans (dimensioned).
7. Structural plans: Must be prepared by a licensed engineer and be project specific.
8. Architectural plans: Must include dimensioned building floor plans (one detail per residential floor and per building), dimensioned unit plans for every type of unit (including Type A handicap units with roll-in showers and units with tub/showers, Type B (FHA) units and standard units).

Unit plans must be 1/4" = 1'-0" scale or larger.

II. BUILDING AND UNIT DESIGN PROVISIONS

A. EXTERIOR DESIGN AND MATERIALS

1. The use of very low maintenance materials is required for exterior building coverings on all new construction projects. These include but are not limited to high quality vinyl siding, brick, or fiber cement siding. The use of metal siding is prohibited. Vinyl siding must have a .044-inch thickness or greater and a limited lifetime warranty. Where band/ledger boards attach to and are part of a vinyl siding application, metal z-flashing must be installed behind, on top of, and below bands.
2. All exterior trim, including fascia and soffits, window and door trim, gable vents, etc. must also be constructed of very low maintenance materials.
3. All buildings must include seamless gutters (if the building has gutters) and aluminum drip edge on all gable rakes and fascia boards. Drip edge must extend a minimum of 2 inches under the shingles, if the building has shingles. Downspouts must be installed so as not to drain across pedestrian path of travel.
4. All building foundations must have a minimum of 12 inches exposed brick or masonry veneer above finished grade level (after landscaping). No exposed footings will be allowed.
5. Breezeway and stairwell ceilings must be constructed of materials rated for exterior exposure.
6. Anti-fungal dimensional (architectural) shingles with a minimum 30-year warranty are required for all shingle roof applications. All other types of roof coverings or installations must have a minimum 30-year warranty.

B. INTERIOR DESIGN AND MATERIALS

1. All residential units must meet minimum unit size requirements. The square footage measurements below will be only for square footage which is exclusively for the use of that unit and is fully enclosed, conditioned, and secured, measured as Net square footage from interior finish face of demising wall to interior finish face of demising wall, and do not include exterior wall square footage. Unconditioned, unenclosed, or unsecured areas such as lanais, patios, decks, porches, stoops, or unattached storage rooms cannot be included.

Studio	300 net square feet
1 BR	400 net square feet
2 BR	600 net square feet
3 BR	800 net square feet
4 BR	950 net square feet
5 BR	1,100 net square feet
2. All units must have a separate dining area, except for Studio units. Dining areas may not be positioned in kitchens within a 60-inch clear floor space of any cabinets or appliances.
3. A room can only be considered a bedroom if, in addition to all other statutory and regulatory requirements governing bedrooms, it is a distinct room, fully physically separated from the rest of the unit (excepting HVAC penetrations), offering full physical and visual privacy, with a lockable door.
4. Sliding doors may not be used for bedroom or bathroom entry doors. Bedroom and bathroom entries must use swinging doors.
5. Carpet and pad must meet FHA minimum standards. Carpets in Type A units must be glue-down type without padding.
6. Kitchens, dining areas, and entrance areas must have vinyl, VCT or other non-carpet flooring.
7. The minimum width of interior hallways in residential units is 42 inches.
8. The following areas must contain moisture resistant drywall: ceilings and walls of bathrooms, laundry rooms, mechanical closets, exterior storage closets, and behind kitchen sink base.
9. All Type A handicap units must be proportionately distributed to all buildings and on all accessible floor levels.

C. BATHROOMS

1. All bathrooms must include an exhaust fan rated at 70 CFM (minimum) vented to the exterior of the building using hard ductwork along the shortest run possible. Bath fans may only be installed in ceilings.
2. In all Type A units, the grab bars must be installed in compliance with ANSI A117.1, Sections 607 and 608 for bathing fixture specifications and Section 604 for toilet specifications around toilets.
3. Wood blocking must be installed for bathroom accessories, including towel bars, towel rings, toilet tissue holders, robe hooks, etc.
4. In Type A units, the 67 inches clear floor space may not include floor spaces under toilets or vanities.

D. KITCHENS

1. All residential units must have a frost-free Energy Star rated refrigerator with a freezer compartment. The following are the minimum sizes:

0-2 Bedroom	14 cubic feet
3 Bedroom	16 cubic feet
4 Bedroom	18 cubic feet
2. All residential units must have an Energy Star rated dishwasher and be installed beside the kitchen sink. In Type A units:
 - a. kitchen sinks must be rear-draining and have sink bottoms insulated if bottom of sink is at or below 29 inches above finished floor;
 - b. workstations must be installed beside the range with no wall to the left or right of the workstation;
 - c. the wall cabinet mounted over the work station must be 48 inches maximum above finished floor to the top of the bottom shelf; and
 - d. both the range hood fan and light must have separate remote switches mounted over the work station;
 - e. pantry cabinets/closets must have 30 inches x 52 inches clear floor space centered on the door.
3. In Type A units and common areas, kitchen ranges with cooktop can be no higher than 34 inches above floor.

III. MECHANICAL, SITE AND INSULATION PROVISIONS

A. PLUMBING PROVISIONS

1. All rental units require at least one full bathroom.
2. Three and four bedroom units require at least 2 bathrooms (including one bath with step-in shower and one bath with full tub).
3. All electric water heaters must have a Uniform Energy Factor of 0.93 efficiency 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). This cannot be achieved by using an insulated water heater jacket. Water heaters may not be installed under HVAC air handlers. They may be installed beside the air handler or in separate closet.
4. Provide lever faucet controls for the kitchen and bathroom sinks.
5. All bathroom faucets, shower heads, and toilets must be EPA WaterSense rated.

B. ELECTRICAL PROVISIONS

1. Provide overhead lighting, a ceiling fan, telephone jack, and a cable connection in every bedroom and living room. If using ceiling fans with light kits, the fan and light must have separate switches.
2. Switches and thermostats must not be located more than 48 inches above finished floor height.

3. Receptacles, telephone jacks, and cable jacks must not be located less than 16 inches above finished floor height.
4. Initially-installed bulbs in residential units and common areas must be compact fluorescent, LED or pin-based lighting in 80% of all fixtures.

C. HEATING, VENTILATING AND AIR CONDITIONING PROVISIONS

1. All non-residential areas and residential units which are provided with air conditioning must have their own separate air conditioning systems. HVAC equipment must have a minimum SEER2 15.0 performance rating.
2. Through the wall HVAC units are prohibited in all but Studio units. They are allowed in laundry rooms and management offices where provided.
3. HVAC interior air handlers must be enclosed from return air grille to blower motor/filter.
4. The use of duct board is prohibited. Galvanized metal must be used for plenums and mixing boxes.
5. Fresh air returns must be a minimum of 12 inches above the floor.
6. Range hoods and micro-hoods must be vented to the exterior of the building.
7. All units 1,100 square feet or greater using heat pumps must use a minimum of 2-ton equipment.
8. HVAC systems must provide outdoor air into conditioned building common areas and apartment units to meet ASHRAE 62.2 per Energy Star Multifamily certification requirements by introducing filtered fresh air into return air duct at air handler. Electrical control boxes with mechanical dampers that limits humidity and temperature extremes must be used. Fresh air ducting must use insulated galvanized piping.

D. BUILDING ENVELOPE AND INSULATION

1. Framing must provide for complete building insulation including the use of insulated headers on all exterior walls, framing roofs, and ceilings to allow the full depth of ceiling insulation to extend over the top plate of the exterior walls of the building, and framing all corners and wall intersections to allow for insulation.
2. Seal at doors, windows, plumbing and electrical penetrations to prevent moisture and air leakage.

IV. ADDITIONAL PROVISIONS FOR REHABILITATION OF EXISTING HOUSING

The following requirements apply to rehabilitation of existing units. Other than as described below, existing apartments do not need to be physically altered to meet the design standards for new construction specified herein.

- A. Design documents must show all proposed changes to existing and proposed buildings, parking, utilities, and landscaping. An architect or engineer must prepare the design drawings.
- B. Any replacement of existing materials or components must comply with the design standards for new construction specified herein. In addition to needs identified by HHFDC, the rehabilitation scope of work must include/address the following:

Unit Interiors

- All mechanical and storage closets must have painted, moisture resistant drywall and finished flooring.
- Splash panels must be installed behind all ranges.
- Interior painting must include the entire unit.

Plumbing

- Water heaters under kitchen countertops must be relocated.
- All polybutylene (“Quest”) piping must be replaced.

- All original cast iron p-traps must be replaced.
- Tub/shower valves over twenty-five years old must be replaced.

Electrical

- All receptacles, switches, and cover plates must be replaced.
- In bathrooms, overhead ceiling light must be switched with the exhaust fan and the vanity light wired to a separate switch. Unless the vanity light is the only light source, in which case it then must be switched to the exhaust fan.

Heating and Air

- If range hoods were previously vented to the outside, the replacement hoods must be similar.
- Hard duct all new and existing bathroom exhaust fans where possible (in attics).
- Replacement air handlers must have enclosed air returns where possible.
- All outdoor HVAC condensers must have 410A refrigerant or better and properly sized line sets.

Miscellaneous

- Attic and roof insulation must meet R-30 minimum value.
- All Type A accessible units must be brought to current building standards to the greatest extent feasible.
- Existing fire walls in attics between units must be intact and solid.

C. Applicants must submit the following:

1. For properties built prior to 1978, a hazardous material report that provides the results of testing for asbestos containing materials, lead based paint, Polychlorinated Biphenyls (PCBs), underground storage tanks, petroleum bulk storage tanks, Chlorofluorocarbons (CFCs), and other hazardous materials. Professionals licensed to do hazardous materials testing must perform the testing.
2. A report assessing the structural integrity of the building(s) being renovated from an architect or engineer. Report must be dated no more than 12 months from the application deadline.
3. A current termite inspection report. Report must be dated no more than 12 months from the application deadline.