

## **Exhibit D**

### **Arizona Department of Housing (ADOH) Year 2008**

### **Mandatory Design Guidelines for Multifamily Rental Housing**

The following Design Guidelines have been developed to assist architects and developers to understand the factors considered by the Arizona Department of Housing (the "ADOH") in the evaluation of multifamily rental housing. The ADOH generally yields to the local jurisdiction in all matters pertaining to development and construction standards. Therefore, if a local jurisdiction has published more restrictive standards than those stated below; the standards of the local jurisdiction will apply. The ADOH will expect the finished product to be substantially similar to what was represented in the Application. This representation pertains to building materials, amenities, and equipment. The ADOH must approve any Material Change or it may result in a reduction or recapture of tax credits.

The ADOH values excellence in design because well-designed housing meets the needs of tenants, attracts market renters and promotes community acceptance of housing financed by the ADOH. All projects must meet or exceed each of these standards, as well as the minimum requirements of all applicable building codes and regulations. In addition, projects must meet ADA and Fair Housing Requirements.

Where the ADOH's minimum standards are in conflict with HUD or State Housing Fund requirements for the design and construction of manufactured housing, the HUD or State Housing Fund requirements will prevail. For items not covered by the HUD or State Housing Fund requirements, e.g., site drainage and site lighting, the ADOH's minimum standards will prevail.

#### **GENERAL DESIGN**

Provisions must be made for handicapped access in conformance with the requirements of federal and state law including the Fair Housing Act and the Americans with Disabilities Act.

The building design should be appropriate and integrated into the topography and neighborhood.

The density characteristics and building design should conform to those of the surrounding area.

Amenities should reflect the desires of the target market. Amenities should be shown clearly on the plans and should be fully described within the narrative portion of the application package. Laundry facilities and community rooms should be proportioned to the total number of units.

#### **BUILDING CODE STANDARDS**

1. All projects financed and built under the program are to meet or exceed the following development standards:
  - Uniform Building Code, Uniform Mechanical Code, Uniform Plumbing Code (1994 Editions), International Building Code
  - National Electrical Code (1993 Edition)
  - 2006 International Energy Conservation Code (IECC)
  - Federal Fair Housing Act (42 U.S.C. § 3601 *et seq.*), *Arizona Fair Housing Act* (A.R.S. § 41-1491 to 41-1491.37), and the HUD Fair Housing Regulations (24 C.F.R. Part 100, Subpart D)
  - Uniform Federal Accessibility Standards (Section 504 of the 1973 Rehabilitation Act) and the Americans with Disabilities Act, as applicable.

**INTERIOR DESIGN**

All residential dwelling units must meet minimum unit size requirements. The square footage measurements below will be for heated square feet only. They are measured finished interior wall to finished interior wall, and do not include exterior wall square footage. Unheated areas such as patios, decks, porches, stoops, or storage rooms cannot be included.

Efficiency	450 net square feet
1 bedroom	650 net square feet
2 bedroom	800 net square feet
3 bedroom	1,050 net square feet
4 bedroom	1,200 net square feet

1. The minimum bedroom size is 120 net square feet.
2. Kitchens must be equipped with pantries or broom closets.
3. Other features which must be provided include:
  - Linen closets outside bathrooms
  - Bulk storage for items like snow tires, suitcases and sport equipment. (This may be located outside each unit.)

**LARGE UNIT DESIGN (applicable to units having three or more bedrooms)**

The common spaces of units should be proportionately larger as the number of bedrooms increases.

Three-bedroom units must have at least 1.75 baths and four-bedroom units must have 2 full baths.

**EXTERIOR DESIGN**

Low maintenance exteriors should be planned.

A complete landscape plan, designed by an EPA Water Sense Certified Professional which maximizes existing natural features or otherwise enhances open space, is required. Wherever possible, native plants should be used. Maintenance systems (e.g. sprinkler and irrigation systems) must be installed to maintain landscaping.

“Xeriscape Landscaping”, by definition, is landscaping designed specifically for areas that are susceptible to drought, or for properties where water conservation is practiced.

Trash removal areas must be screened.

Buildings and dwelling units must be individually marked with visible, contrasting identifying devices to minimize the response time for receiving aid by police and/or emergency personnel. The building identifying devices must be well lighted from dusk till dawn.

Single lever deadbolts and eye viewers are required on all entry doors to residential units.

**ON-SITE PLAYGROUND AREAS**

Recreational facilities must be provided for different age groups. (For example, sandboxes within sight of units for children under 5, “tot lots” for ages 5 to 12, and a basketball court for ages 12 and older.)

Play areas and playgrounds for children should be located away from high automobile traffic patterns, and situated so that the play area is visible from the maximum number of dwelling units possible for safety.

Designated play areas and playgrounds are considered “common areas”, and must be on an accessible route per accessibility codes.

A bench must be provided at playgrounds to allow a child’s supervisor to sit and rest comfortably. The bench must be anchored permanently, must be on an accessible route, and must be weather resistant. All benches must have a back.

A “warning” sign must be posted to advising residents and guests that using the playground is at their own risk. The sign must be posted at a visible location, and use contrasting colors for better identification.

### **HOUSING FOR SENIORS**

Projects that are intended to serve 80% or more elderly individuals (persons that are 55 years of age or older) must consist of single story buildings or multi-level buildings with elevators serving all levels of the building.

### **REHABILITATION PROJECTS**

Applications must propose a scope of work appropriate to the building(s), as reflected in the Physical Needs Assessment, but should not involve unnecessary work. Proposals must address the following elements:

All Additions, Alterations or Renovations shall comply with IECC 2006 [EB] 101.2.2.2

HVAC replacements and new installations shall include:

- Seal all accessible duct connections including the drywall to boot connections with duct mastic or approved equivalent.
- Installation of new duct systems shall comply with the new construction Energy Conservation Air Distribution Systems standard.
- Room Pressures shall comply with the new construction Energy Conservations standard.

Insulation

- Insulation must be installed such that there are no gaps, voids, compression or wind intrusion of the insulation. The insulation and air barrier (e.g. sheetrock) must be continuous and aligned in all cases.

Making “common areas” handicapped accessible.

Improving site and exterior dwelling lighting, landscaping/fencing, and installing finish material that will withstand extended weathering in the project’s location.

Adding porches or other aesthetic features to enhance the exterior quality and interest of the project.

Use energy-efficient related products to replace inferior ones, including insulated windows and doors, and adding additional insulation.

Improving heating and cooling units, plumbing fixtures, water heaters, toilets, sinks, faucets and tub/shower units, especially with use of water conserving equipment and systems.

Improving quality of interior conditions and fixtures, including carpet, vinyl, interior doors, painting, drywall repairs, cabinets, appliances, light fixtures and mini-blinds.

Where possible, upgrading bathrooms and kitchens.

### **COMMON AREA FACILITIES**

#### **On-Site Laundry Facilities**

Laundry facilities are required at all developments with twenty or more residential dwelling units.

There must be a minimum of one washer and one dryer per twelve dwelling units if washer/dryer hookups are not available in each dwelling unit. If hookups are available in each dwelling unit, there must be a minimum of one washer and one dryer per twenty dwelling units.

A "folding" table or countertop must be installed.

The laundry room must have a window and adequate entrance lighting, which must be on from dusk to dawn to assist in greater security during evening hours.

#### **Community/Office Space**

All special needs and elderly developments must have a community room on site or immediate access to such space on an adjacent property.

All developments consisting of twenty (20) residential dwelling units or more must have a site office of at least 200 square feet (inclusive of handicapped toilet facility) and a maintenance room of at least 100 square feet.

#### **Community Service Facility**

A Community Service Facility must be designed to serve primarily individuals whose income is 60 percent or less of AMGI, under Section 42(d)(4)(c)(iii). This requirement will be satisfied if the following conditions are met:

First, the facility must be used to provide services that will improve the quality of life for community residents. Second, the taxpayer must demonstrate that the services provided at the facility will be appropriate and helpful to individuals in the area of the project whose income is 60 percent or less of AMGI. This may, for example, be demonstrated in the market study required to be conducted under section 42(m)(1)(A)(iii), or another similar study. Third, the facility must be located on the same tract of land as one of the buildings that comprise the qualified low-income housing project. Finally, if fees are charged for services provided, they must be affordable to individuals whose income is 60 percent or less of area median income.

The project must be located in either a QCT or DDA area, and services must be provided throughout the compliance period.

### Specific Construction Features

The following represent minimum design standards to be met by each tax credit project. These minimum requirements (or alternatives of equal or greater quality and durability) will be imposed on every Applicant, regardless of project size, amenities, or geographic location, unless the standards required by a local jurisdiction exceed those established by the ADOH.

The Applicant will be required to certify in the Applicant Affidavit, Release and Oath (see Form 3, "Low-Income Housing Tax Credit Application") that these minimum design features will be complied with in the construction of the project and that, if they are not, credits will be surrendered to the ADOH. The Applicant will also be required to certify full compliance with these standards prior to issuance of IRS Forms 8609.

All construction features in the LIHTC project should conform to goals of attractiveness, utility, efficiency, and long-term durability. All features should be designed for long-term extended use (50-year minimum). A specific goal of the program is to minimize monthly tenant Operating Costs.

The project architect should provide relief on all surfaces by designing varied building heights and rooflines and distinctive window and entry door detail. The architect should vary building orientations along the street as well as building masses, clusters, and colors.

#### 1. Site Work

- Termite treatment is required as part of site work.
- Site planning for drainage. Minimum slopes required for proper drainage are:
  - Slopes away from foundations: 5% first 10 feet (6 inches in first 10 feet)
  - Slopes on paved areas: can be a minimum of 0.7% for asphalt, 0.5% if a concrete valley gutter is installed; 1% (1/8 inch per foot)
  - Exterior grade should be shown a minimum of 6-8 inches below the top of slabs on grade.

#### 2. Foundation and Slabs

- Soils report required by an Arizona Registered Engineer
- Cast in place concrete foundations suited to specific locations (design for local frost depth where applicable), designed by a registered professional.
- Four-inch minimum concrete slab on four inches of ABC aggregate, or as designed by an Arizona Registered Structural Engineer. Concrete slabs, including carports and driveways, should be reinforced if directed by the soils report using the following methods or equivalent:
  - 6x6 10/10 WWF wire mesh, centered in the slab vertically, OR
  - Polypropylene fibers in the concrete mix for slabs (Fibermesh is a typical manufacturer). Application of the product should be in the proportions and according to the recommendations of the manufacturer.
  - Post-tensioned tendons as designed by an Arizona Registered Structural Engineer following the additional recommendations of a Geotechnical

Report of the soil conditions by an Arizona Registered Geotechnical Engineer.

**Note: All slabs and foundations must be designed by an Arizona Registered Structural Engineer.**

3. Frame and Stucco Construction

- Stucco: three coat cement stucco with metal expansion joints or 3/8" fiber-reinforced stucco on wire lathe, on one-inch foam insulation board.
- Frame: 2x4 or 2x6 wood or metal studs in exterior and party walls, 2x4 in other walls. The choice of 2x4 or 2x6 will be dictated by the methods selected to meet International Energy Conservation Code requirements, sound barrier requirements, and engineer's specifications. Exterior walls should be designed to achieve a U-value of .056. Wood floor framing with 3/4" or 5/8" plywood sheathing and lightweight concrete or equivalent gypsum topping.

4. Roof

- Concrete tile roof or architectural grade shingles with a minimum life of 40 years on one layer 40 lb. felt with wood truss framing, minimum slope 3:12. Flat roofs must have a minimum 3/8"/1' slope.
- In rehab work where existing flat roofs are present properly drained, built-up roofs should be constructed with a minimum of 72# fiberglass cap sheet with mineral surface over three layers of at least 30# felt with the base layer nailed to the plywood decking.
- An Arizona Registered Structural Engineer must design roof trusses.
- Roof Sheathing should be called out on the Roof Framing Plan. Required: minimum 1/2 inch exterior grade plywood or 1/2 inch exterior grade OSB (oriented strand board). All sheathing must be gapped 1/8 inch on the edges and ends with metal clips appropriately installed on the trusses.

5. Electrical

- All standard basic service and lighting must conform to National Electric Code (1993 or later) and local codes. Smoke detectors must be hard-wired.

6. Plumbing

- Copper, CPVC or PEX for domestic water, PVC outside and for sanitary (polybutylene piping is prohibited).
- Durable fixtures. All bathroom sinks and toilets to be porcelain. Enamel finish steel tub with PVC tile or cultured marble surrounds, prefinished wall panels or a one-piece epoxy resin tub/shower unit or four-piece acrylic tub/surround or shower/surround
- Durable toilet accessories; medicine cabinet with mirror.
- Water Conservation devices, e.g., alternative and low-flow toilets, low-volume showerheads, aerator or flow restrictor devices in the faucets, and front-loading or horizontal axis washers

7. Energy Conservation

Project must comply with the 2006 International Energy conservation Code (IECC). Compliance with this code shall be determined in accordance with Sections 101.3.1 and 101.3.2 of the IECC.

Construction documentation shall be submitted for review in accordance with Section 104 of the IECC.

- Insulation:
  - Insulation must be installed such that there are no gaps, voids, wind intrusion or compression of the insulation. The insulation and the air barrier (e.g. sheetrock) must be continuous and aligned in all cases. Sound insulation is required in party walls.
- Minimum HVAC efficiencies
  - AC: 13 SEER
  - Heat Pump: 13 SEER and 7 HSPF
  - Combustion furnace: 80% AFUE

**Note:** Electric resistance heating can be used only if the Owner documents, utilizing the IECC Systems Analysis (Chapter 4) approach that the utility costs for the structure are equal to or less than the IECC standards design of like architectural characteristics. The analysis will be completed utilizing a combustion furnace for the standard design with an efficiency value of 80% AFUE.

- Air Distribution Systems:
  - All joints in the air distribution system shall be sealed with duct mastic or approved equivalent.
  - For duct systems located outside the conditioned space, total duct leakage in CFM, measured at 25 Pascals pressure, shall be less than or equal to 3% of the square footage served by the system (e.g., 1,000 sq. ft. unit x 3% + 30 CFM allowable leakage).
  - Airflow to each room will match design airflow calculations to within +/- 10%.
- Room Pressure

Under normal operating conditions, an air handler cannot create room pressures with a magnitude greater than +/- 3.0 Pascals, with reference to outside, anywhere in the Unit.
- Indoor Air Quality
  - Exhaust hoods above gas ranges must be vented to the outside.
  - Unvented combustion appliances (fireplaces, heaters or gas logs) are not allowed.
  - A carbon monoxide detector, hardwired, shall be installed in all Units with an attached garage or with any combustion appliance located in the conditioned space.

#### **Inspections of Energy Conservation Features-**

**Contact Zachary Stewart at (602) 771-1149**

Inspections of energy features are to be carried out by AEO or approved agent. The initial inspection will be on the building plans approved by the local governing body and then will be carried out randomly, on approximately 10% of the Units. The Developer must notify AEO of the construction schedule to facilitate inspections that need to be completed at various phases of construction. AEO will document all items that pass inspection and will consult with the Construction Superintendent on items that do not pass.

Inspections will include:

- Building plan review: after the local government body has approved the building plans, one set of construction plans must be submitted to the AEO prior to the beginning of construction.
- Insulation inspection (pre-sheetrock) to verify R-value and that there are no gaps, voids or compression of the insulation.
- Verification of HVAC equipment efficiency.
- Duct testing of completed system (pre-sheetrock) to verify leakage amounts and duct R-values.
- Room airflow on completed Units.
- Room pressures on completed Units.
- Window Inspection..
- Verification of carbon monoxide detector installation where required.

#### 8. Doors

- Solid wood, hollow wood when used with exterior-rated glue, fiberglass or insulated metal outside doors with wood or metal frame. Paint grade pre-hung hollow-core interior doors with residential grade finish hardware.

#### 9. Floors

- Carpet, VCT and sheet vinyl.
- Base of painted wood, vinyl, rubber or MDF compressed wood.

#### 10. Walls & Ceilings

- Painted ½" gypboard, moisture resistant at wet areas, type 'X' at areas required by prevailing building code.

#### 11. Appliances

- Range/oven, exhaust hood above range, refrigerator, disposal, dishwasher.

#### 12. Cabinets

- Solid wood or particleboard with durable laminate; durable laminate counter tops.

#### 13. Exterior Stairs, Entrance Landings, and Balconies

- Should be constructed of precast concrete treads on painted steel framing with painted steel handrails or according to a system of equivalent or greater durability and quality.

#### 14. Exterior Fencing.

- Fence the property (masonry preferred) to limit access of non-residents, as appropriate and desired by the affected jurisdiction. Gates are not required unless specified by the local jurisdiction.

15. Exterior Finish

- Select a finish material that will withstand extended weathering in the project location.
  - Desert and mountain localities: three-coat cement stucco with metal expansion joints, or 3/8 inch, fiber-reinforced stucco on wire lath, on 1-inch foam insulation.
  - Mountain localities at higher elevations; various siding products (fiberboard, mineral board or vinyl) may be substituted for stucco if warranted by the manufacturer for a minimum of 40 years.

16. Site Lights

- For security purposes, provide adequate site lighting, especially at the rear of the buildings and for walkways, parking, corridors and stairways.