



# Arizona Department *of* Housing

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## State Rehabilitation Standards CDBG & HOME Handbook

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Date Issued: November 18, 2013

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I.	INTRODUCTION.....	1
	A. Local Decisions .....	1
	B. Rehabilitation Priorities .....	4
II.	OVERVIEW .....	5
III.	LIFE EXPECTANCY OF SYSTEMS ① .....	7
IV.	HAZARDOUS MATERIALS ① .....	8
	A. Asbestos .....	8
	B. Lead-Based Paint .....	8
V.	OTHER REQUIREMENTS.....	8
	A. Energy Efficiency .....	8
	B. Housing Facilities ②.....	12
VI.	SITework.....	13
	A. Pest Control.....	13
	B. Walls and Fences .....	13
	C. Siting of building(s) ② .....	13
	D. Pedestrian Traffic.....	13
	E. Accessory Buildings.....	13
	F. Landscaping .....	14
VII.	CONCRETE ②.....	14
VIII.	MASONRY ②.....	14
IX.	METALS.....	14
X.	CARPENTRY ② .....	15
XI.	ENERGY CONSERVATION AND WEATHERIZATION .....	15
	A. Insulation and Weather-stripping.....	15
XII.	ROOFING ①.....	15
	A. General.....	15
	B. Flashing.....	16
	C. Built-up Roofs .....	16
	D. Rolled Roofs .....	16
	E. Foam Roofs.....	16
	F. Shingle Roofs.....	17
	G. Wood Shake.....	17
	H. Tile Roofs .....	17
	I. Metal Roofs.....	17
	J. Gutters.....	18
XIII.	EXTERIOR FINISHES/SURFACES .....	18
XIV.	DOORS AND WINDOWS .....	18
	A. General.....	18
	B. Doors .....	18
	C. Windows.....	18
	D. Hardware.....	19
	E. Security Doors and Screens.....	19
XV.	FINISHES.....	19
	A. General.....	19
	B. Paint.....	19
	C. Walls and Ceilings.....	19

XVI.	FLOORING.....	20
	A. General.....	20
	B. Resilient Flooring.....	20
	C. Wood Flooring.....	20
	D. Carpet.....	20
	E. Ceramic Flooring.....	20
XVII.	SPECIALTIES.....	20
	A. Bath Accessories.....	20
	B. Closets.....	20
	C. Fireplaces.....	20
XVIII.	EQUIPMENT.....	21
	A. Cooking Units ②.....	21
	B. Refrigerators ②.....	21
	C. Miscellaneous Appliances.....	21
XIX.	FINISH CARPENTRY.....	21
	A. Cabinetry.....	21
	B. Countertops.....	21
XX.	PLUMBING ①.....	22
	A. General.....	22
	B. Domestic Water Supply.....	22
	C. Drain, Waste, Vent.....	22
	D. Gas.....	22
	E. Fixtures.....	23
	F. Valves.....	23
	G. Water Heaters.....	23
XXI.	HVAC ①.....	23
	A. General.....	23
	B. Heating.....	24
	C. Ventilation.....	24
	D. Air Conditioning.....	24
	E. Evaporative Coolers.....	25
	F. Combustion Air.....	25
XXII.	ELECTRICAL ①.....	25
	A. General.....	25
	B. Service Entry and Equipment.....	26
	C. Branch Circuiting.....	26
	D. Evaporative Coolers.....	26
XXIII.	DEVICES.....	26
	A. General Lighting and Outlets.....	26
	B. Ground Fault Circuit Interruption.....	27
	C. Low Voltage and Miscellaneous Systems.....	27
XXIV.	Appendix A – Inspection Checklist.....	28

## I. INTRODUCTION

This document consists of housing rehabilitation standards and specifications applicable to owner-occupied rehabilitation projects funded by the State of Arizona HOME or Housing Trust Fund (HTF). The document consists of two sections. The first section is comprised of rehabilitation standards. These standards represent the State's expectations regarding the standard of a unit upon completion of rehabilitation of all items. When a local program will not completely rehabilitate a unit, these standards represent the State's expectations regarding the rehabilitation itself. When performing an initial inspection and developing a work write-up, the rehabilitation specialist must take the rehabilitation standards into consideration. To assist the rehabilitation specialist understand the scope of the standards, an inspection checklist is included in Appendix A. The inspection checklist is guidance and is not required.

Based on local program parameters regarding the amount of each grant or loan, some or all of the items reviewed during the initial inspection and included in the work write-up will be rehabilitated. In any event and regardless of the amount of HOME or HTF investment, there are certain items that must be repaired as a part of the rehabilitation project, while some items will be considered only if sufficient financial resources are available to the project.

The rehabilitation standards are intended for use in the inspection and evaluation of conditions of residential properties considered for rehabilitation, to determine whether rehabilitation is feasible for individual properties, and to serve as a minimum standard for improvement when rehabilitation will take place.

Section 2 presents specifications for the rehabilitation that will take place. These specifications are intended only as technical guidance and are not required. The rehabilitation specialist may use the specifications in developing a scope of work and reviewing and approving the work of contractors. The specifications are intended to provide basic methods and materials for the construction scope of work. If used, the specifications represent an accepted standard of workmanship or materials. These are the details most important to contractors and will ultimately ensure the rehabilitation is properly completed and will last for many years.

Throughout this document the words shall, must, and may are defined as follows:

Shall/Must: Indicates a mandatory requirement

Should: Indicates something that is recommended but not mandatory

May: Indicates something that is not mandatory but is permissible.

### A. Local Decisions

Before requesting HOME and/or HTF resources, a community or nonprofit must determine the purpose of its program. Some questions to ask in the early stages of program development are:

- Where are the units owned and occupied by low-income households located?
- Should resources be provided to any low-income homeowner, or should resources be targeted to a special population group?
- Should resources be targeted to a specific geographic area or neighborhood (a revitalization or redevelopment program)? OR
- Should resources target low-income households living in any geographic area within the jurisdiction of the agency?

- What level of rehabilitation assistance do low-income owner-occupants need?
- Should the program allow for reconstruction of units?
- What is the maximum amount of assistance any one household may receive?
- If the HOME or HTF assistance is not sufficient to rehabilitate the unit to a minimum standard, what other resources are available to ensure the unit is safe and sanitary upon completion of rehab?

Following the application process during which the client’s eligibility is determined, the client’s unit must be inspected to determine what conditions exist at the unit that may be eligible for rehabilitation. This initial inspection involves preparing a complete list of existing conditions that must be addressed by the rehabilitation work and may also include a list of those items the homeowner has requested be rehabilitated. This initial inspection must encompass the entire property, including all rooms of the house, the grounds, and all other accessory buildings, fences or structures. The homeowner should be present during this and each subsequent inspection to ensure all parties have reviewed and understand the inspection procedures and so that the inspector can obtain a clear understanding of any ongoing problems. If available, photo or videotape may aid the inspection process.

Following the initial inspection, a determination must be made as to which items will be rehabilitated. The state has four main categories of rehabilitation. Depending upon the amount of funding available to each unit and the conditions present in each unit, the rehabilitation that will take place will vary. The rehabilitation specialist must prioritize existing conditions based on these categories. Existing code violations and health and safety hazards must be corrected. Depending upon the extent of these deficiencies, the project budget may not be sufficient to cover all of the priority items. When this occurs, the project may not be feasible. The objective of ensuring all priority items are rehabilitated is to ensure that the unit provides a healthful environment for the occupants.

Once a preliminary scope of work is completed, a contractor can be selected. Ideally, the agency operating the rehabilitation program is not a party to the construction contract but assists the homeowner in the bidding process and the hiring of contractors. Contractors that participate in any rehabilitation program should meet the following eligibility criteria:

1. Licensed by the State of Arizona Registrar of Contractors to perform the type of work required.
2. Adequately insured and bonded for the full value of the project.
3. NOT be included in the “List of Parties Excluded from Procurement and Non-procurement Programs” (better known as the debarment list) maintained by the US Department of Housing and Urban Development.
4. Capable of commencing and completing the scope of work in a timely manner.

Before hiring a contractor, the agency should meet with the homeowner to review the list of work and to schedule a pre-bid conference. The purpose of the pre-bid conference is to allow interested contractors to review the work write-up, the physical conditions at the property, and learn about the requirements of participation in the program.

After the pre-bid conference, contractor proposals will be accepted. Based on contractor proposals, the scope of work may be revised to fit the project budget. These revisions must be done in accordance with the priority order of rehabilitation.

Once a contractor is selected, the agency and homeowner must meet with the contractor to discuss the construction schedule, method of payment, and the terms and conditions of the construction contract. The construction contract should contain, at a minimum, the following information:

1. Scope of work, including plans and specifications;
2. Time for performance of the work, including grounds for delay and changes to the contract;
3. Insurance policy limits, lien waivers, equal employment opportunity requirements;
4. Standards for workmanship, warranties, and defects after completion;
5. Method of compensation;
6. Permits, licenses, and surveys required for the work;
7. Conditions for terminating the contract.

When the work is substantially complete so that the owner can occupy the unit or can again utilize the rehabilitated item for its intended purpose, the contractor should notify the homeowner so that the homeowner can prepare a list of those items that need to be completed or corrected. Depending upon local program operations, this list may be generated with the assistance of the rehabilitation specialist.

When all of the work is completed, a final inspection takes place. If an item is found to be not in accordance with the rehabilitation standards or the contract, the contractor must complete or correct the item and request re-inspection.

The contractor should provide the homeowner with the following information:

1. Contractor name, address, phone number.
2. Copies of the construction contract and any plans or specifications prepared by the contractor for the project.
3. Copies of all building permits.
4. Copies of all required surveys.
5. Copies of all labor and material payment and performance liens and any records of expenses required by the contract.
6. Copies of all materials and equipment warranties applicable to the work.
7. Copies of all materials and equipment manufacturers' operation and maintenance information applicable to the work.
8. Copies of consumer product safety data and other information necessary to communicate the safety features of building systems and equipment.
9. Copies of additional project data and information as may be appropriate.

When the homeowner, contractor, and agency agree that the work has been completed, and all work has been accepted by the local building safety inspector, as required, the contractor may request final payment.

The contractor is responsible for guarantee of all work performed for a period of twelve months from the date of final completion. Any defects that appear within this period that result from defective or improper workmanship or materials must be corrected by the contractor at the contractor's expense. In the event any such defects appear, it is the homeowner's responsibility to notify both the contractor and the rehabilitation specialist in writing. The homeowner must also assume responsibility for ongoing maintenance of the work.

B.        Rehabilitation Priorities

A group of rehab specialists and housing professionals met to define those items that should be included as part of every work initial inspection report. As a result of these meetings, it was determined that rehabilitation items should be prioritized to allow for local flexibility in program design. It was determined that initial inspection reports must include those items that are included on the ① list. Items included on the ② list are also considered critical but not as critical as those items on the ① list. Other items were considered less critical and should always be inspected but may not be rehabilitated. The items on the ③ list should be reviewed, and where feasible corrected. These items must also be included whenever substantial rehabilitation (in excess of \$25,000) is taking place. Items from all lists must be included in the initial inspection report for all reconstruction projects and those where the cost of rehab exceeds 75% of the value of the property.

①        MUST Include in Initial Inspection and Report and MUST Repair or Replace

These items relate to the general health and safety of the occupants and potential violations of local code. These items must also be part of the work write-up on each unit to be rehabilitated (i.e. must be repaired or replaced prior to any other work).

- Hazardous Materials.
- Health and Safety Hazards.
- Stable and Weather-tight Roof.
- Electrical System. The unit must have a minimum 100-amp electrical service, with no unsafe conditions.
- Plumbing (including hot water). Must be in good working order and be safe and sanitary.
- Heating and Cooling System. Must be adequate and safe with a reasonable (3-year) useful life.
- Egress in accordance with local health and safety codes.

②        MUST include in Initial Inspection and Report and SHOULD Repair or Replace

The following items are first priority items that shall be included in every initial inspection report. These items shall also be included in the work write-up (funds permitting) and shall receive priority in work to be completed as part of the rehabilitation project. Repair or Replacement may take place based on the amount of available resources.

- Structural Soundness and Integrity (including rotted or deteriorating materials and those impacted by termites or other wood-boring insects).
- Siting of the structure and its relationship to water penetration that may impact structural integrity.
- Appropriate kitchen facilities including a sink and means of cooling and heating food to healthful standards.
- If the structure has an attached garage, appropriately-rated fire wall between garage and living areas.

- ③ MUST include in Initial Inspection Report and MAY Repair or Replace.

These items shall be included in every inspection report and may be included in the work write-up (funds permitting). These items generally result from deferred maintenance and are considered general improvements.

- Debris that may be a fire hazard.
- All existing exposed surfaces painted or sealed and not presenting a health or safety hazard.
- Repair and replacement of doors and windows not presenting a health or safety hazard.
- Cabinetry.
- Trip hazards.
- Finished flooring.

Each rehab specialist must determine, on a case-by-case basis, the priority of items not listed above. The rehab specialist shall take into consideration the following when determining the priority of items for inclusion in the work write-up:

1. The age and physical condition of the building occupants.
2. The goal of the rehab program (is the program revitalization program or a direct-benefit program?).
3. Funds available for rehabilitation of each unit.
4. Value of the unit after rehabilitation.

**IMPORTANT:** Once an item has been disturbed as a result of the rehabilitation it **MUST** be repaired or replaced in accordance with the standard. The placement of an item on the ② or ③ lists does not excuse the recipient from meeting the standard when an item is impacted by the rehabilitation.

## II. OVERVIEW

The purpose of these guidelines is to provide a means to upgrade and preserve housing units while maintaining reasonable standards for health and safety. Rehabilitation work must address each of the following:

- (i) Health and safety: The participating jurisdiction's standards must identify life-threatening deficiencies that must be addressed immediately if the housing is occupied.
- (ii) Major systems: Major systems are: structural support; roofing; cladding and weatherproofing (e.g., windows, doors, siding, gutters); plumbing; electrical; and heating, ventilation, and air conditioning. Each of the major systems must have a remaining useful life for a minimum of five (5) years or for such longer period specified by the participating jurisdiction, or the major systems must be rehabilitated or replaced as part of the rehabilitation work.
- (iii) Lead-based paint. Housing must meet the lead-based paint requirements at 24 CFR part 35.
- (iv) Accessibility. Housing must meet the accessibility requirements in 24 CFR part 8, which implements Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), and Titles II and III of the



Americans with Disabilities Act (42 U.S.C. 12131-12189) implemented at 28 CFR parts 35 and 36, as applicable. Rehabilitation may include improvements that are not required by regulation or statute that permit use by a person with disabilities.

- (v) Disaster mitigation. Housing must be improved to mitigate the impact of potential disasters (e.g., earthquake, hurricanes, flooding, and wildfires) in accordance with State and local codes, ordinances, and requirements.
  - (vi) State and local codes, ordinances, and zoning requirements. Housing must meet all applicable State and local codes, ordinances, and requirements or, in the absence of a State or local building code, the International Existing Building Code of the International Code Council.
  - (vii) Uniform physical condition standards. Upon completion, the HOME-assisted project and units will be decent, safe, sanitary, and in good repair as described in 24 CFR 5.703. HUD will establish the minimum deficiencies that must be corrected under the participating jurisdiction’s rehabilitation standards based on inspectable items and inspected areas from HUD-prescribed physical inspection procedures (Uniform Physical Conditions Standards) pursuant to 24 CFR 5.705.
  - (viii) Capital needs assessments. For multifamily rental housing projects of twenty-six (26) or more total units, the participating jurisdiction must determine all work that will be performed in the rehabilitation of the housing and the long-term physical needs of the project through a capital needs assessment of the project.
    - Construction documents and cost estimates. The participating jurisdiction must ensure that the work to be undertaken will meet the participating jurisdiction’s rehabilitation standards. The construction documents (i.e., written scope of work to be performed) must be in sufficient detail to establish the basis for a uniform inspection of the housing to determine compliance with the participating jurisdiction’s standards. The participating jurisdiction must review and approve a written cost estimate for rehabilitation after determining that costs are reasonable.
    - Frequency of inspections. The participating jurisdiction must conduct an initial property inspection to identify the deficiencies that must be addressed. The participating jurisdiction must conduct progress and final inspections to determine that work was done in accordance with work write-ups.
- A. These housing rehabilitation/construction standards are intended as a guide for housing assisted with State HOME or Housing Trust funds (HTF). All HOME or HTF assisted housing must, upon completion, be affordable, decent, safe, and sanitary. As such, assisted housing must meet or exceed these standards and all local codes, zoning and ordinances.
- B. The state recognizes that in some locations exceptions will be necessary if rehabilitation assistance is to be provided. In those cases where variations or exceptions are necessary, the recipient may adopt a formal standard that accounts for the variations that are specific to the geographic area being served. These variations must be submitted to and approved by the Housing and Infrastructure Development Division of the Arizona Department of Commerce (Commerce) prior to implementation of your program.

- C. With the exception of locally adopted variations, all habitable structures assisted with HOME or HTF must meet these standards. New construction shall comply in full with all applicable codes and regulations.
  
- D. The state further reserves the right to waive any standard if necessitated as a practical issue or if such standard is uncommon in a defined geographic area, and if such waiver does not create hazard to, or jeopardize safety of the occupant(s). The state reserves the right to insist on repair of any item which, in accordance with this standard:
  - 1. renders a property unsafe, not decent, or unsanitary;
  - 2. constitutes a major building system in danger of failure;
  - 3. fails to meet applicable codes.
  
- E. Structures with additions or modifications must comply with applicable building codes. Substandard workmanship, unsafe items, or hazardous situations are not acceptable. If repair of these items is not cost effective, the addition or modification may be demolished.
  
- F. All demolition, additions, alterations, modifications, repairs, or improvements to property(s) and/or structure(s) performed shall fully comply with current Uniform Administrative, Building, Plumbing, Mechanical and Fire Codes, National Electrical Code, Arizona Revised Statutes as applicable.
  
- G. The requirements outlined in this document do not preempt local or state codes or ordinances, nor do they alter or affect a contractor's obligation to comply with local or state law or requirements.
  
- H. All new work must conform to local codes.
  
- I. Any work performed shall not cause existing buildings to become unsafe.
  
- J. These standards provide that additions, alterations and repairs may be made without bringing the entire existing structure up to current or new code requirements provided that additions, alterations and repairs do not exceed seventy-five percent (75%) of the value of the existing building or structure.
  
- K. Existing buildings legally constructed in the past shall be considered acceptable today unless they do not conform to specific local retroactive requirements.

### III. LIFE EXPECTANCY OF SYSTEMS ①

Major systems in the property, or items necessary to make a property meet standards should be analyzed on the basis of 3-year life expectancy. Major systems and necessary items include: roofs, heating, cooling, plumbing, water heaters, and the electrical components of the property.

#### IV. HAZARDOUS MATERIALS ①

##### A. Asbestos

1. Materials containing asbestos (ACM) that are to be removed as a condition of contract shall be removed and disposed of in a proper and safe manner by a certified asbestos abatement contractor or in accordance with locally-approved disposal standards.
2. Asbestos containing material must be dealt with in the most practicable and safe manner possible.
3. Exposed floor mastic containing asbestos must be encapsulated or removed in those areas where carpet is being installed.
4. Unsound tile containing asbestos must be removed prior to installation of a new layer of resilient flooring.
5. No asbestos containing materials shall be used for repair, replacement or new installation.

##### B. Lead-Based Paint

1. Every unit constructed before 1978 which is or may become occupied by children under the age of seven must be tested for the presence of lead (exceeding Federal Standards) in paint.
2. Lead based paint must be abated in accordance with federal regulations.
3. All wood trim, doors, doorjamb, frames that have lead-based paint must be removed and replaced.
4. Lead paint on walls or ceilings that is peeling, flaking, or otherwise deteriorated or that will be disturbed as a result of rehabilitation shall be completely covered with, at a minimum, 1/4" drywall, taped, sanded, primed, and painted.

#### V. OTHER REQUIREMENTS

##### A. Energy Efficiency

Compliance with the new ADOH Weatherization Standards will require coordination between a BPI Certified Building Analyst or Energy Auditor (BPI Certified Professional) and the Rehabilitation Specialist. The Weatherization Professional will conduct both a pre-construction energy audit and a post construction compliance inspection on those weatherization standards items included in the rehabilitation scope of work. The energy audit utilizes pressure diagnostics, infrared cameras and other equipment to identify air leaks, duct leaks, insulation deficiencies, inefficient appliances, venting problems and other energy issues. Deficiencies identified in the energy audit, related to the specifications listed below, should be included in the rehabilitation Scope-of- Work and corrected during the rehabilitation whenever possible. Items identified in the energy audit not related to the specifications listed below may be corrected at the discretion of the Rehabilitation Specialist. Work must be done in accordance with the ADOH Owner Occupied Housing Rehabilitation Weatherization Standards. In most cases it would be preferable to have the BPI Certified Professional conduct the more complex weatherization work, such as air sealing the attic, though it can be done by any contractor knowledgeable of weatherization practices.

It is not necessary that all energy related subcontractors (HVAC, Insulation, etc) have BPI Certification but all trades must adhere to the ADOH Owner Occupied Housing Rehabilitation Weatherization Standards, as determined through a post construction final inspection conducted by the BPI Certified

Professional. The Rehabilitation Specialist must inform all subcontractors of the ADOH Owner Occupied Housing Rehabilitation Weatherization Standards in advance so that proper installation can occur. A list of Weatherization Professionals is provided at the following websites:

<http://www.azhomeperformance.com/index.html>

[http://www.bpi.org/tools\\_locator.aspx?associateTypeID=CTR&accreditedSearch=N](http://www.bpi.org/tools_locator.aspx?associateTypeID=CTR&accreditedSearch=N)

1. Weatherization work is a matter of doing a few things well and understanding the house as a system. Weatherization concentrates on the following items.
2. Getting the home air tight (air sealing)
3. Insulating the home right (focus on insulation performance not just R-value)
4. Dealing with sunlight (shade screens and reflective coatings)
5. Correctly installing efficient equipment (duct sealing, pressure balanced, air flow, sizing and charge)
6. Base loads (refrigerators, CFL)

The traditional Department of Energy (DOE) funded Weatherization programs limit the scope of work to less costly items that meet strict DOE Savings-to-Investment Ratios (SIRs). The Scope-of-Work for owner occupied housing rehabilitation (OOHR) is not bound by the same DOE requirements and includes much more than weatherization work. However, SHF recipients that wish to use DOE funding for the weatherization component of their OOHR projects must comply with DOE rules for the weatherization portion of the OOHR.

A home previously weatherized through another program such as the weatherization program funded the U.S. Department of Energy (DOE) is not exempt from ADOH Owner Occupied Housing Rehabilitation Weatherization Standards.

The result of previous weatherization work should be a sealed house and attic, sealed duct work, a functional balanced HVAC system and adequate insulation (both size and installation). New rehabilitation work will typically include items such as new HVAC, re-wiring, re-plumbing and new windows. This new work will disturb insulation, create new attic penetrations and generally undo much of the previous weatherization work. This will change the conditions upon which the previous post construction compliance inspection was based, rendering it invalid. New rehabilitation work will require, at a minimum, a new post-construction compliance inspection.

#### Rehabilitation Scope of Work Priorities and Mandates

To facilitate inclusion of weatherization standards into rehabilitation, ADOH has set a priority ranking for rehabilitation activities. The activities or rehabilitation items to be address thru OOHR projects are prioritized in order as follows:

1. Code Violations
2. Issues of Health and Safety
3. Weatherization Standards/ Energy Efficiency
4. Improvements of a Cosmetic Nature

Likewise, the weatherization specifications listed below have been prioritized. Budget and ADOH maximum investment per unit considerations may not allow for following the order of priority, however

rehabilitation specialists should attempt to address the highest priority weatherization standards whenever possible. In all cases, rehabilitation specialists should consult the BPI Certified Professional when finalizing the scope of work prior to bid to ensure that weatherization standard items included in the scope will not adversely affect the energy performance in the home.

Finally, ADOH has established a list of weatherization standards which are mandated if included in the scope of rehabilitation. The mandates are established as an “if” you repair/replace item A “then you must” meet the specified standard for item A. For example if you replace windows, then you must meet the minimum requirements for IECC 2009 codes per the climate zone the home is located in. Mandated standards follow the weatherization standards priorities.

Owner Occupied Rehabilitation Weatherization Specification Priorities

The specifications below constitute the ADOH Owner Occupied Housing Rehabilitation Weatherization Standards listed in order of priority.

1. Duct Leakage/ HVAC Static Pressure
  - a. All accessible joints, seams and connections in the duct system must be sealed using UL 181 approved duct mastic.
  - b. All Boot-Sheetrock gaps must be sealed.
  - c. All supply or return ducts on the roof that are exposed to direct sunlight must be painted with white elastomeric paint after they are sealed.
  - d. Static Pressure tests should be taken after all work is complete and the pressures must not exceed manufacturer’s specifications

A/C systems should all be verified to have proper charge and airflow by a licensed A/C technician.

2. Air / Thermal Barrier (properly installed insulation) and Room Pressure Balancing
  - a. The Thermal Barrier must be installed in complete contact with an effective air barrier, and to IECC 2009 installation standards and levels specific to the climate zone the home is in as defined by IECC Climate map. <http://energycode.pnl.gov/EnergyCodeReqs/?state=Arizona>.
  - b. No room in the home shall exceed +/- 3Pa of pressure. In the case where passive return or a live return system must be installed to correct these issues, the goal should be to accomplish as close to a 0.0Pa of pressure as possible.

3. Lighting
  - a. Light bulbs that are typically used for a minimum of 2 hours per day or more (limit 10) must be replaced with Energy Star Rated CFL or LED light bulbs with equivalent or better Lumen output.

4. Other
 

Other standards included below are not listed in priority order and can be addressed as budget or ADOH maximum investment per unit allows:

  - a. HVAC
    1. A Manual J must be completed and followed reflecting any of these listed measures that will be done to that home and the report submitted to the rehab specialist for any new Air Conditioning replacement.

- b. Duct Replacement
  - 1. In the case of a comprehensive duct System replacement in conjunction with an AC replacement, a Manual D report must be followed and a copy of that report given to the Rehab Specialist.

Owner Occupied Housing Rehabilitation Mandated Standards

As previously stated the following standards are mandated for the corresponding Scope of Work activities addressed through the rehabilitation. If you are replacing/repairing any of the following items then you must meet the corresponding standard for the item.

- 1. Windows
  - a. Any replacement windows must meet the minimum requirements for IECC 2009 codes per the climate zone the home is located in.
- 2. Roofing
  - a. Whenever a roof replacement is scoped that involves removing the existing decking, the new decking must have a factory installed radiant barrier surface. (Climate zones 2, 3, 4).
  - b. When replacing shingles, special consideration should be given to 'high reflectivity and high emissivity shingles' in Climate zone 2.
  - c. All powered attic ventilation fans must be removed (including solar powered).
- 3. Appliances
  - a. All appliances should be replaced with Energy Star approved appliances.
- 4. Hot Water System
  - a. When replacing an electric water heater in a garage with a home occupancy of no less than 4 people, a Hybrid Heat Pump water heater must be used. (Climate Zone 2 only)
  - b. Low flow faucet aerators and shower heads (1.5GPM shower head) must be installed in all faucets and showers.

CAZ Tests

If the home is occupied during the rehab process a CAZ test must be completed pre-construction and post construction. Post construction results shall not exceed BPI maximum CAZ depressurization limits.

Weatherization Standards Process

ADOH recommends that rehabilitation specialists follow the step by step process outlined below or a similar process to ensure compliance with ADOH Weatherization Standards.

- 1. Energy Audit
 

A whole home energy audit should be conducted prior to development of the scope of work and must be performed by a BPI Certified Building Analyst or Energy Auditor (BPI Certified Professional). Rehabilitation Specialists can request that the BPI Certified Professional include a priority ranking of energy items to be addressed in their report. This is not mandatory but can be useful when determining which weatherization standards can or should be addressed in the rehabilitation.
- 2. Scope of Work
 

Rehabilitation Specialist develops scope of work following the priorities established by ADOH:

- a. Code Violations
- b. Issues of Health and Safety
- c. Weatherization Standards/Energy Efficiency
- d. Improvements Cosmetic in Nature

Rehabilitation Specialist, considering budget and ADOH maximum investment per unit, should include as many weatherization standards in the scope as possible and consider addressing those items in order of priority.

3. Consultation with BPI Certified Professional  
 Before finalizing the scope of work for bidding purposes, the Rehabilitation Specialist should consult with the BPI Certified Professional by allowing their review of the scope of work. This will ensure that weatherization standards selected to be covered in the rehabilitation scope of work do not adversely affect the energy efficiency and performance of the home. A helpful tool to identify and write up specifications for scope of work in the bid package can be found at <https://sws.nrel.gov/>. This web based tool allows for a search of energy related items specific to climate zone.
4. Bid Process  
 After scope of work is finalized, rehabilitation specialists can go out to bid for construction. When reviewing submitted bids, be sure they verify that bidders have included the required weatherization specifications in their quote.
5. Construction  
 During construction, Rehabilitation Specialists should include the BPI Certified Professional in interim inspections where compliance with weatherization specifications will be reviewed.
6. Post Construction Compliance Inspection  
 At completion of the construction the BPI Certified Professional must inspect all scope of work items that were required to meet ADOH weatherization standards. These items must all pass inspection before the housing unit rehabilitation will be considered to be in compliance. Failing items should be addressed by the contractor or subcontractor responsible for proper installation. The BPI Certified Professional will reference the NREL Standardizes Work Specifications found at <https://sws.nrel.gov/> when determining Pass/Fail of installed weatherization measures.

Monitoring of Compliance with Weatherization Standards

ADOH staff will monitor for compliance with weatherization standards by reviewing the scope of work for all energy related work done on the housing unit and matching those with the post construction compliance inspections done by the BPI Certified Professional. All BPI post construction inspections must have an outcome of “Pass.”

**B. Housing Facilities ②**

Each unit must provide sufficient space and facilities for the storage, preparation and serving of food.

1. The bathroom must be located in a separate room with a privacy door that can be locked. The door shall be in good operating condition.
2. In units with more than one bedroom and only one bathroom, a bedroom cannot be used as the only means of ingress or egress to the bathroom.
3. Each unit must have at least one shower or tub with hot and cold running water.

4. The facilities must use an approved public or private waste disposal system.
5. Bedrooms must be a minimum of 81 square feet in floor area with no dimension less than 7 feet.
6. Each bedroom must have its own separate access to a common room or area. A bedroom cannot be used as the only means of ingress and egress for another bedroom.

## VI.     SITEWORK

### A. Pest Control

1. The building must be free of wood boring insects. If termite activity is detected, the entire building shall receive termite pesticide treatment. Where detectable, structural damage caused by wood boring insects must be repaired. Visible, excessive non-structural damage shall be repaired. Any conditions conducive to termite activity, such as wood-to-earth contact shall be corrected.
2. Each unit must be free of mice, roaches, rats, or other disease-carrying pests. If such pests are detected, extermination must be undertaken until the existing problem has been eliminated.

### B. Walls and Fences

1. Retaining walls must be in good condition.
2. Excessive cracking, bowing, leaning or heaving must be repaired.
3. Cracks and displacements of more than 1/4" must be repaired.
4. Walls which lean enough to make the center of the top course fall outside the middle 1/3 of the base must be replaced.
5. Retaining walls must have weep holes in sufficient number and size to relieve water trapped behind the wall.
6. Fences or masonry walls may be installed.
7. Existing fences should be in good repair.
8. Holes, broken pickets, torn chain-link fabric, missing top-rails, defective posts or supports, broken or missing masonry units, wobbly gate posts, gates which don't open and close properly, etc. shall be repaired.

### C. Siting of building(s) ②

1. The site must allow water to drain away from the foundation and for water to be channeled around the building in a manner capable of draining away heavy rains.

### D. Pedestrian Traffic

1. Walks, driveways, and concrete or asphalt paved pads or parking areas must be free of trip hazards.
2. Cracks more than 1/2" in width or any crack that causes a trip hazard must be repaired.
3. Walkways and areas subject to pedestrian traffic shall be finished in such a manner as to minimize slip hazards when wet.

### E. Accessory Buildings

1. Accessory storage sheds in need of minor repair may be repaired.
2. Storage sheds in poor condition may be removed or replaced.
3. Storage sheds may be installed if this is a feature in keeping with improvements of surrounding standard projects.



**F. Landscaping**

1. Installation of new irrigation and sprinkler systems is acceptable.
2. Dead trees or shrubs shall be removed.
3. Plants that are undermining any structure (i.e. walls, masonry fences, and slabs) or interfering with drainage shall be removed.
4. Plants blocking access to electrical panels, windows, doors, sidewalks, or walkways, or interfering with overhead electrical, telephone, or television cables shall be trimmed or removed.
5. Plants that are abrading the roof surface shall be trimmed.
6. Palm trees having build-up of dead palm fronds, may be trimmed or removed.
7. Plants, trees or shrubbery posing personal safety hazards must be trimmed or removed.
8. High water use landscaping may be removed or converted to drought tolerant landscaping if this is a feature in keeping with improvements of surrounding standard projects.

**VII. CONCRETE ②**

- A. Foundations and footings shall be sound.
- B. Cracks larger than 1/4" shall be repaired.
- C. Repairs at the direction of a structural engineer may be required.
- D. Slabs shall be free of excessive cracking, movement and trip hazards.
- E. Cracks or displacement of more than 1/4" in slabs shall be repaired.
- F. Cracks that have shifted more than 1/4" shall be beveled, filled and the adjoining structural elements examined for weakness or failure.

**VIII. MASONRY ②**

- A. Exterior and load-bearing masonry walls shall be in good condition.
- B. Cracks passing through masonry units, cracks of more than 1/4" in width, cracks caused by lateral displacement of more than 1/4", or half moon cracks should be examined for structural weakness. Repairs may be required to be undertaken at the direction of a structural engineer.
- C. Masonry fireplaces shall be in good repair if used as a primary heat source.
- D. Hoods, walls, chimneys, caps, hearths, firebrick and all other structural portions of fireplace and chimney shall be sound and free of excessive missing mortar, missing bricks or loose masonry.

**IX. METALS**

- A. Grilles or louvers that cover ventilated openings provided for attic or sub-floor ventilation shall be removed and replaced if they are damaged and/or ineffective in protecting against entrance of rain and/or rodents or pests.
- B. Damaged or weathered metal siding shall be repaired or replaced, as appropriate, to ensure structural integrity and weather-tightness.

**X. CARPENTRY ②**

- A. Bearing walls and structures with obvious deficiencies shall be repaired as is appropriate.
- B. Exposed framing and wood construction shall be examined for structural soundness and good workmanship. Defects shall be corrected.

**XI. ENERGY CONSERVATION AND WEATHERIZATION**

- A. Insulation and Weather-stripping
  - 1. Where practical, properties without insulation in the ceiling, or where the insulation in the ceiling has an R-value less than 11 shall have ceiling insulation added.
  - 2. Weather-stripping at doors and windows shall be in good repair.
  - 3. Window gaskets and seals shall be in good repair.
  - 4. Open joints at windows, doors or other areas shall be caulked and sealed.
  - 5. Exterior doors shall have a properly working threshold and shoe or sweep to seal against infiltration.
  - 6. Windows shall be weatherproofed and stripped to prevent infiltration.
  - 7. Gaskets, glazing compound, caulking, weather-stripping or other weather sealants shall be in good condition.

**XII. ROOFING ①**

- A. General
  - 1. Roof framing shall be capable of supporting the roof and any equipment on it without sagging. Roofs with sags, swales, ridges, or uneven pitch shall be inspected and have deficiencies corrected.
  - 2. All roofs shall be free of leaks.
  - 3. Existing roofs must have an estimated life expectancy of at least 3 (three) years after repairs in order to be considered repairable.
  - 4. Roofs with less than a 3 (three) year life expectancy shall be replaced.
  - 5. Repairs shall be done only when the cost for repairs is estimated to be less than the cost of a new roof.
  - 6. New roof installations shall have all previous roofing and underlay removed and substrate thoroughly inspected and repaired prior to installation of new system. If the roof system is structurally sound, additional shingles may be installed over existing shingles if not more than one layer is currently installed.
  - 7. Every roof must be installed in accordance with manufacturer's specifications.
  - 8. Roofs shall have a positive slope that provides good drainage. Minor ponding is acceptable if pooling of water less is than 1/2" in depth, less than 1/3 the span of the roof or capable of drying in less than 48 hours after the last addition of water.
  - 9. Roofs draining onto others in such a way that excessive wear results shall have protection provided or the drainage rerouted.
  - 10. Roof drains must be low enough to prevent excessive ponding and made of materials that are impervious to water. Drains shall be constructed in such a way that they do not drain down the wall of the structure.

B. Flashing

1. Roof penetrations must be properly flashed and sealed.
2. Cracks forming around the seals of roof penetrations shall be resealed.
3. Seals made solely with mortar, plastic roof cement, or other materials that crack or shrink are not acceptable.
4. Roof flashing must be properly installed, in good condition, and must serve the purpose for which it was intended. Flashing that is loose, improperly sealed, heavily corroded, or damaged shall be repaired or replaced.
5. All new roofs must have a properly installed metal edge.

C. Built-up Roofs

1. Built-up roofs shall have an elastomeric aluminized or gravel coating. Where a gravel roof is being replaced, a three-ply built-up system with elastomeric coating or other suitable, approved system shall be provided.
2. Roof coatings shall be in good condition and consist of compatible materials.
3. Excessive peeling, bubbling, chipping, sloughing or mechanical damage shall be repaired.
4. Gravel roofs shall have gravel present in sufficient quantity and in proper distribution.
5. Roofing membranes shall consist of at least 3 layers. Cap-sheet exposures of more than 18" on roofs without a mineral coating (felt roofs) shall not be acceptable unless a core sample can be shown to have at least 3 layers. The roofing materials must be well adhered to the decking, and each course shall be solid mopped at the laps. Cold process adhesive is not acceptable for roofs with a slope of less than 2 1/2:12
6. The roof shall be free of fissures, cracks, lifting seams, excessive bubbles (more than 5% of the roof area) or excessive alligating in coatings or asphalt flood coats.

D. Rolled Roofs

1. Cold-application rolled roofing must have a slope of 2:12 or greater.
2. Rolled roofing that is applied without hot tar shall be fastened according to manufacturer's specifications.
3. New installations and repairs shall have fasteners spaced no more than 3" along the seams and laps.
4. Loose mineral surfacing, bare spots, wear, excessive wrinkles, loose seams, loose laps, etc. are indications of age and shall be cause for repair or replacement.

E. Foam Roofs

1. Foam roofs must have a slope of 2:12 or greater, and have a nominal 1" thickness. Nominal 1" means at least 1" thick with occasional 7/8" measurements acceptable. Ponding of 1/4" or more, or ponding covering more than 5 square feet is not acceptable.
2. Foam roofs must have an elastomeric coating in near perfect condition. Any detectable break in the coating surface must be repaired. Coatings thought to be more than 1 year old shall be recoated.
3. Foam roofs must be well adhered to the substrate. Any detectable break in the bond shall be cause for repair. Roofs with poor bonding in areas larger than 3 square feet shall be replaced. Humps, bubbles, ripples and voids are signs of improper application and may be cause for replacement.
4. In cases where a foam roof must be replaced, a different acceptable roofing system shall be installed unless a determination is made that the insulating qualities of a foam roof outweigh the associated maintenance costs.

F. Shingle Roofs

1. All newly-installed shingle roofs shall have a slope of no less than 3:12.
2. Existing shingle roofs with slopes between 2:12 and 3:12 must be carefully examined for leaks or other signs of failure.
3. Shingles shall be installed with proper exposure. Roofs with more than 1/4" of the untabbed portion of the shingles exposed, or not installed in compliance with manufacturer's specifications shall not be acceptable.
4. Roofs with excessive bird's mouths, lumps, breaks, or tears shall be repaired or replaced.
5. Fasteners shall be properly installed. Each shingle shall be fastened according to manufacturer's specifications. Staples cannot be used to lap from one shingle to another, as a substitute for stapling both ends individually. In those cases where it is determined that the roof is improperly fastened, the roof shall be replaced or repaired, as appropriate.
6. Existing shingle roof surfaces shall have substantially all of the original mineral surface and be well adhered both at the tabs and in the grooves. Loose mineral surface, sparsely covered surfaces, curling, cupping, breakage, or brittleness are cause for replacement or repair.

G. Wood Shake

1. The use of wooden roofing materials in roof replacement or new construction is prohibited.
2. Existing wood shake roofs must have a slope at least 3:12.
3. Wood shake roofs must be in good condition or shall be replaced.
4. Underlayment and interlayment must be present and in good condition.
5. Splitting, breaking, rotting or loose shakes, or worn, sloughing, or cracked underlayments and interlayments should be weighed in decisions about repair and reroofing. If such conditions are prevalent, the roof shall be replaced with another type of material.

H. Tile Roofs

1. Tile roofs that fail shall be replaced with another tile roof only when it is determined the feature is in keeping with improvements of surrounding standard projects.
2. Tile roofs in need of replacement shall be replaced with a suitable and more economical material when replacement with another tile roof is not in keeping with improvements of surrounding standard projects.
3. Repairs shall be done only when the cost of repairs is less than the cost of a new shingle roof and the planned repairs are expected to make the roof last at least another 5 (five) years.
4. Tile roofs shall have a minimum slope of 3:12 and be installed over solid decking.
5. Spaced slats are not acceptable unless installed over solid decking.
6. Tiles shall be in good condition.
7. Tiles shall be securely fastened in place unless specified otherwise by the manufacturer. Slipping, loose, or missing tiles shall be replaced. Tiles cracked all the way through, tiles with a badly weathered surface, or tiles with chips or breaks larger than 2" in diameter shall be replaced. Roofing tiles shall have a head lap of not less than 3" unless the tiles are keyed to lock together with less head lap.
8. Leaking ceramic or concrete tile roofs must be inspected to insure they have an underlayment. The underlayment shall be a minimum of 30-lb. felt and in good condition. Worn, flaking, sloughing, tearing or cracking of underlayment shall be cause for roof replacement or repair.

I. Metal Roofs

1. Metal roofs shall be of 26 gauge (Galvalume) or 29 gauge (galvanized).

2. Local codes must verify minimum required gauge.
3. Metal roofs must have a slope of 3:12 or greater.
4. Metal roofs must be properly aligned over uniform substructure to avoid panel distortion.
5. A moisture barrier shall be installed under new panels.
6. New installations must be made with galvanized nails with neoprene washers.
7. All rib lap joints must be sealed their entire length with a bead of caulking.

J. Gutters

1. Where appropriate, new roofs shall be equipped with gutter and downspout assemblies.
2. Newly installed gutter shall be equipped with the appropriate hangers and be designed to support the weight and conditions of the local area.
3. All existing and new gutters should be equipped with downspouts, bottom elbows, extensions, splash/diverter blocks, and other measures necessary to carry the water away from the dwelling.

### XIII. EXTERIOR FINISHES/SURFACES

- A. Damaged or weathered siding shall be repaired or replaced, as appropriate, to ensure structural integrity.
- B. Excessive or prevalent broken stucco or stucco with cracks in excess of 3/16" shall be repaired.
- C. Unstabilized adobe must be completely protected from weather by a layer of suitable material in keeping with neighboring structures.

### XIV. DOORS AND WINDOWS

A. General

1. Every bedroom shall have at least one window that can be opened and closed and securely locked. If bedroom is equipped with door openable to exterior of house, window may be of an unopenable type.
2. All bathrooms shall have a privacy door.
3. All habitable rooms shall have at least one window.
4. Openable windows shall be in sound and proper operating condition.
5. Windows installed in new room additions or in rooms whose function or description has been altered shall meet current code requirements for required light, ventilation, security, and egress.

B. Doors

1. Doors, frames, jambs and casings shall be in good condition and free of excessive scratches, gouges, chipping, peeling or other unsightly damage or wear, and in good working order.
2. Gaps shall be sufficient to prevent rubbing and no larger than 1/4".
3. Doors with holes too large to be repaired, delaminating skins, broken stiles or rails shall be replaced.
4. Exterior doors shall be protected from sunlight with a proper coating of varnish, paint or other suitable weather protection.
5. Entry doors to storage or auxiliary structures may be hollow-core.

C. Windows

1. Glass shall be free of open holes or movable cracks.

2. New glazing installed in locations defined as hazardous by the Uniform Building Code System 5406 (d) or by the Arizona Revised Statutes, shall be safety glass.
3. Windows openable to the outside should have a screen that is in good condition.
4. Where practical, new screen installation may include solar sunscreens.

D. Hardware

1. Door latches and locks shall operate freely.
2. Hinges shall have no free play.
3. The latch-set shall be in good working order.
4. Those doors with locksets shall be capable of being locked.
5. Newly installed exterior doors to a unit must have a dead bolt.
6. Locksets requiring repair or replacement shall be replaced with a dead bolt.
7. All openable windows must have a secure and working lock.

E. Security Doors and Screens

1. Existing security doors shall be in good working condition.
2. Security doors not in good working condition shall be repaired or removed.
3. Latches and locks must work properly and conform to applicable codes.
4. Damaged screening may be replaced or removed.
5. Security bars shall not impede the full and proper operation of any window.
6. Security bars on windows located in sleeping rooms must be provided with latches and dimensioned so that current code egress requirements are met.
7. Security bars not meeting these requirements shall be modified to fully comply or else removed.

## XV. FINISHES

A. General

1. All surfaces, particularly those that can be damaged by water or direct sunlight, shall have a protective finish.
2. Paneling, wallpaper, mirror tiles, corkboards, etc. in good condition and not posing any form of hazard shall remain in place. Such wall coverings shall be replaced only at the sole cost of the owner.
3. Tub surrounds or shower walls shall be sound, made of waterproof materials and sealed against water penetration at all joints.
4. Loose tiles, broken or missing grout, missing tiles, loose wall panels, delaminating surfaces, and joints without caulking or grout are not acceptable.

B. Paint

1. Exterior paint shall be free of excessive peeling, checking, cracking, flaking, blistering or other defects.
2. All new wood shall be primed prior to painting.
3. Interior paint shall be in sound condition.
4. Paint that is damaged, difficult to clean, peeling, cracking, etc. shall be properly prepared and recoated.

C. Walls and Ceilings

1. Walls and ceilings shall be in sound condition and free of hazardous defects.

2. Cracks in plaster or gypsum wall board surfaces 1/8" or wider shall be repaired.
3. Loose drywall, broken plaster, loose paneling, etc. shall be repaired.

## **XVI. FLOORING**

### **A. General**

1. Floor framing shall be capable of supporting existing dead load and anticipated live loads as defined by the UBC as appropriate for type of structure and class of occupancy. Swales, sags, and ridges that do not present a trip hazard or otherwise jeopardize the health and safety of the occupant(s) shall be repaired.
2. Flooring shall be in good, sanitary condition and free of any hazardous conditions.
3. Flooring in kitchens, bathrooms and laundry areas shall be impervious to water.

### **B. Resilient Flooring**

1. Resilient flooring with excessive gouges, breakage, bubbling, lifting, or shrinking shall be repaired or replaced.

### **C. Wood Flooring**

1. Wood floors shall be in sound condition and free of excessive damage from wood-boring insects.
2. Wood flooring with excessive gouges, breakage, lifting, curling, buckling, or shrinking shall be repaired or replaced with resilient flooring or carpet.

### **D. Carpet**

1. Carpet that is improperly attached, badly worn, torn, or soiled shall be replaced if the cost of repair is greater than the cost of replacement
2. Existing carpet shall be in clean and sanitary condition.
3. Carpet may be replaced with resilient flooring, where appropriate.

### **E. Ceramic Flooring**

1. Ceramic tile shall be repaired, when possible to match the existing tile.
2. Ceramic tile requiring replacement shall be replaced with resilient flooring or carpet unless ceramic tile is a feature in keeping with improvements of surrounding standard projects.

## **XVII. SPECIALTIES**

### **A. Bath Accessories**

1. Each bathroom must be provided with a towel rod, shower rod and toilet paper holder.
2. Existing shower doors shall be sanitary and in proper operating condition.
3. Shower doors not constructed of tempered glass, or those with open holes or cracks shall be removed and replaced with shower rod.
4. Shower and tub enclosures shall be in sanitary condition and properly sealed.

### **B. Closets**

1. Each bedroom equipped with a closet must be equipped with a rod and shelf.

### **C. Fireplaces**

1. Existing fireplaces can be repaired.

2. Replacement fireplaces shall only be added at the sole expense of the owner.
3. Fireplace flues shall be free of debris, restrictions, holes, or excessive soot deposits. Flue liners, where present, shall be in good condition. Missing or broken liners shall be replaced.
4. Chimneys shall be in good repair and high enough to induce a draft that shall keep smoke from being allowed into the dwelling. Fireplaces shall have freely operable dampers, except where gas logs are permanently installed. Gas log installations shall have dampers permanently affixed in the open position.
5. The hearth shall comply with current code.

## XVIII. EQUIPMENT

### A. Cooking Units ②

1. The unit must have a means of properly heating food.
2. Newly-installed gas stoves must have an approved automatic lighter for all the burners.
3. Existing gas stoves shall be free of leaks, clogged burner ports, missing parts or any defect that makes cleaning or repair of the stove difficult, or that makes part of the stove inoperable or unsafe.
4. Electric stoves shall have a power supply capable of providing power for all those heating elements the stove is capable of using at one time. Elements should be capable of producing red heat except in those cases where design prohibits this, as in the case of ceramic elements.
5. Electric stoves shall be connected to an approved electrical outlet.

### B. Refrigerators ②

1. The unit must have a refrigerator or means of cooling or preserving food.
2. Existing refrigerator must be in proper working order.

### C. Miscellaneous Appliances

1. Garbage disposals and dishwashers may be replaced or provided if these features are in keeping with improvements or surrounding standard projects.
2. Dryers shall be vented to the outside using an approved pipe, sleeve, and vent cap.

## XIX. FINISH CARPENTRY

### A. Cabinetry

1. All cabinets and vanities shall be in good condition and appropriately secured.
2. Cabinets, drawers, and doors shall be free of broken or dysfunctional hardware, holes, peeling, chipping, sloughing, or any other damage rendering them difficult to clean or otherwise unsanitary.

### B. Countertops

1. Counters shall have a surface that can be easily cleaned and impervious to repeated cleaning.
2. Counters shall be free of holes, gouges, burns, peeling, cracking or any condition making them absorbent.



**XX. PLUMBING ①**

**A. General**

1. New or replacement piping shall be of approved materials.
2. Piping shall be properly installed and supported.
3. No plastic piping shall be exposed to sunlight unless it is approved by listing for such installation.
4. Each property equipped with facilities for a clothes washer shall have both hot and cold water supplied and drain shall be connected to an approved waste system.
5. Faucets, drains, valves, piping and supply lines shall be leak-free, functionally adequate and in proper operating condition.
6. Plumbing repairs requiring installation of new fixtures shall be done with water conserving devices including low flow faucets, low flow showerheads and low flow toilets, where appropriate.
7. Replacement or repair of unlisted plumbing or mechanical appliances is not acceptable.

**B. Domestic Water Supply**

1. Each unit shall have a water supply, connected to a potable water source.
2. Repair or replacement of the water supply system must be demonstrably safe, sanitary, reliable and able to serve the needs of the occupants.
3. No unit shall have lead water-supply piping. The use of lead solder shall not be allowed for repairs or replacements.
4. Multi residential building must be provided with backflow prevention devices on the water service, according to applicable code. All exterior hose bibs shall be provided with approved anti-siphon devices.

**C. Drain, Waste, Vent**

1. Gray water systems are not acceptable unless inspected and approved by the local building authority.
2. Waste lines shall be made of approved materials.
3. The waste disposal system shall be connected to an approved public or private disposal system capable of handling the occupant load of the unit(s).
4. The system shall be free of leaks, damaged, or corroded pipe. Waste lines shall be free of blockage or gurgling.
5. Existing waste systems must be properly vented. Vents considered to be inadequate or unsafe shall be replaced or repaired. Plumbing vents within 10' of a cooler must be at least 1' taller than the cooler.
6. A determination shall be made regarding the need for additional clean-outs for the waste disposal system.
7. Waste disposal systems shall be free of health hazards or unsafe conditions.
8. The waste lines shall provide a functional plumbing vent, a trap and leak free connections to the waste disposal system.

**D. Gas**

1. All repair and replacement of gas installations shall be with proper materials and in accordance with local codes.
2. The main gas shut-off shall be in good operating condition and free of leaks.

3. Flexible gas supply connections shall not exceed 3' in length.
4. Flexible gas supply connections shall be appropriately caulked and vented.

E. Fixtures

1. Individual sinks, toilets, clothes washers, and other plumbing devices shall have individual water-supply shut-offs.
2. All kitchens shall have a sink and faucet, in proper operating condition with a sink trap and hot and cold running water.
3. Every bathroom shall be in good operating condition with water supply.
4. Faucets shall be free of leaks and drips.
5. Sinks shall be free of excessive cracking, chipping or other damage that makes cleaning difficult or hazardous.
6. The plumbing shall be free of leaks in supply lines and sewer connections.
7. Supply lines and waste lines shall be in good condition.
8. Each bathroom shall have a toilet in proper operating condition and connected to an approved public or private sewer system.
9. Toilets must be in proper operating condition and free of cracks in the bowl, tank or tank lid.
10. Each toilet shall have a washable seat, and be free of leaks in either the water supply or the sewer connections.
11. Wall-mounted toilets shall be properly installed and secured.

F. Valves

1. Water supplies shall have individual shut-offs, where practical.
2. Loose or broken handles and levers shall be repaired or replaced.
3. Flexible gas supply connections shall be provided with an approved gas cock.

G. Water Heaters

1. Every unit shall be supplied with a sufficient amount of hot water to serve the occupant load of the property at peak demand times.
2. Water heaters shall be properly vented.
3. If the water heater unit is located outside, the unit must be properly protected from the weather.
4. Each water heater shall have a properly installed, approved temperature/ pressure relief valve with a 3/4" drain line installed to comply with current code.
5. The water heater shall have a rigid and properly supported door or platform under it.
6. Flexible gas supplied shall not exceed 3' and all plumbing fittings must be free of leaks.
7. Solar water heating devices shall be considered on a case by case basis.
8. Water heaters lacking individual shut-offs shall only have shut-offs installed when they are repaired or replaced.

**XXI. HVAC ①**

A. General

1. Air conditioning units shall be capable of cooling each cooled room to a temperature 30 degrees below ambient outside temperature at a level 5' above the floor.

2. Where practical, cooling should be provided from evaporative coolers. If refrigeration units are a feature in keeping with improvements of surrounding standard projects or are the only source of cooling, refrigeration units shall be serviced.
3. Filters shall be secure, clean, and large enough to pass sufficient recirculating air to make the unit operate properly.
4. Heat pumps used as cooling devices shall perform to the same standards as refrigeration and heating units described herein.
5. Heating and air conditioning units and evaporative coolers shall be free of corrosion and water damage.
6. Equipment housings and access panels must be intact and properly secured/installed. No exposed electrical connections, belts, pulleys, or blowers shall be allowed.

#### B. Heating

1. Every furnace shall, at a minimum, be cleaned, serviced, and certified to be safe, operable and adequate.
2. Each forced air unit shall have a filter. Filters shall be clean, secure, and capable of passing enough air to allow the unit to heat properly. If electronic filters are a feature in keeping with improvements of surrounding standard projects or are required for health reasons of the occupant, electronic filters may be repaired or installed. Existing electric filters, which are working properly, shall be replaced unless the filter has at least a 3-year life expectancy.
3. Each unit shall be provided with a means to control the unit's heating and cooling. Each heat source shall have a properly operating thermostat.
4. Air handlers shall be quiet, well balanced and clean.
5. The heat exchanger shall be in good condition. Excessive corrosion, soot, chemical deposits, cracks, back-draft or burners or other evidence of heat exchanger failure may be cause for replacing the unit.
6. All heating elements shall all be connected to a power source and functioning properly.
7. Where practical, wall furnaces, which are the main source of heat for the unit, shall be replaced with central heating equipment.
8. A room heater may be used, provided it is used as supplement to central heating, such as in a room addition. Room heaters shall be listed appliances, installed properly and sufficiently sized enough to heat the room in which they are installed.
9. Unvented gas heaters, except those designed to be unvented, are not acceptable and shall be replaced with a listed appliance.
10. Solar heating systems shall be considered on a case by case basis.

#### C. Ventilation

1. Ventilation for each bathroom shall comply with local codes.
2. Ventilation devices not in good operating condition shall be repaired or replaced.
3. Exhaust hoods or fans and filters must be in sanitary condition.

#### D. Air Conditioning

1. Refrigeration units shall be serviced and certified in good working condition by a licensed mechanical contractor qualified as an air conditioning technician.
2. Refrigeration units under the drip line of roofs, or under rain gutters or canales shall be moved or protected from excessive run-off on the unit.
3. Condensate drain lines shall be properly drained to avoid damage to the property. Roof units shall drain away from the roof in a manner that shall not damage the roof or structure.

4. Heat exchange fins shall be in good condition. The compressor shall be free of excessive debris. The unit shall be free of excess debris, vegetation or any obstruction that prevents the free circulation of air around the unit.

E. Evaporative Coolers

1. Evaporative coolers used as the only cooling source shall be capable of changing the air in a unit at a rate of once every two minutes. Existing coolers, in repairable condition but not capable of meeting this requirement, shall be replaced.
2. When substantially rehabilitating a unit, the cooler shall be free of leaks and have a life expectancy of 3 years or more. Heavily corroded cabinets are not acceptable.
3. Each cooler cabinet shall have all pad-frames and a means of fastening pads in each frame securely enough to prevent sagging.
4. Each cooler shall be level and have a water distribution system capable of delivering enough water to each pad to create run-off along the bottom of the entire pad. Plugged distribution lines, or occluded water troughs shall be cleaned. The water distribution system shall be free of leaks, including the attachments at the pump.
5. All coolers shall have a permanent water line with its own separate shut-off and a self regulating valve for maintaining the amount of water needed.
6. The pump shall be capable of providing a reserve of water in each of the water distribution troughs when the troughs are clean and functioning properly.
7. Fan belts, bearings, squirrel cage or blower shall be in good operating condition.
8. Blower shall be balanced and capable of quiet operation.

F. Combustion Air

1. Gas furnaces and water heaters shall have sufficient combustion air. In no case shall a proper volume of combustion air be dependent on a door, a window, or any other opening which is prepared for easy closing.
2. Newly installed or repaired gas furnaces and water heaters dependent on infiltration for combustion air, shall have available at least 50 cubic feet of room volume per 1000 btu/hour of aggregate input rating.
3. Furnaces or water heaters enclosed in spaces too small to provide combustion air by infiltration shall be provided with air in accordance with the current code.
4. Furnace enclosures shall be enclosed in a manner that prevents any intermingling of combustion air with the recirculating air. Furnace enclosure doors, which open inside the building, shall be free of gaps.
5. The furnace shall be properly caulked to its floor or platform.
6. Each furnace enclosure shall be free of damaged or incomplete walls, floor, or ceiling, which in any way allow communication of air from the enclosure to the home.

## XXII. ELECTRICAL ①

A. General

1. Care should be taken when aluminum wiring is encountered.
2. Electrical connections shall be made in a proper and safe manner. Permanently wired electric water heaters shall be supplied by properly sized conductors installed within metallic flex conduit where exposed. Exposed electrical cable serving the furnace shall be protected with

flexible conduit and properly made connections. Termination of electrical supply conductors and conduit shall be by means of approved fittings.

3. Exposed cables or wires shall be replaced or protected to meet code.
4. Wiring shall be free of damaged insulation or damaged conductors. Fraying, cracking, charring, or brittle insulation on a cable shall be cause for replacement.
5. Those portions of any system not exhibiting good workmanship shall be properly terminated and/or replaced in compliance with current code.
6. All electrical circuiting shall be of proper design and suitable for intended use, with overcurrent protection suitable for conductor ampacity.

**B. Service Entry and Equipment**

1. The size of the electrical service shall be adequate for the needs of the property after rehab completion and at a minimum meet National Electrical Code. If an electrical service is inadequate in ampacity to meet the electrical demand, either the service shall be upgraded to meet the new demands, or the electrical demand shall be reduced, if practical.
2. Each electrical service shall have a properly made ground that is either protected or rigidly affixed, in accordance with the National Electrical Code.
3. Means of disconnects must be provided for fixed electrical space heating units. Provisions for disconnect shall be in accordance with National Electrical Code.
4. Each electrical panel shall be, at a minimum, adequately sized for the service. All services and distribution centers shall be safe, and free of excessive corrosion, debris, holes, uncapped knockouts, etc. Exterior panelboards enclosures shall be of UL listed, rain-tight design. The panel shall be soundly and properly attached to the wall. Damaged, outdated, unsafe or otherwise unsatisfactory panels shall be replaced with panels that comply with the current code.
5. Each electrical panel shall have a main disconnect.
6. All circuiting shall have overload protection in compliance with current code.

**C. Branch Circuiting**

1. An adequate number of circuits to provide safe, functional distribution are required. Additions of circuits to property shall comply with current code.
2. Those properties having knob and tube wiring shall be rewired to comply with current code with the guidelines of the U.S. Consumer Product Home Safety Commission. If replacement is more cost effective than repair, then the home shall be rewired.

**D. Evaporative Coolers**

1. Evaporative coolers shall have an approved means of fused disconnect. Proper fusing shall be provided for pump and blower motors.
2. Cooler motors shall be of adequate size as determined by required number of air changes and shall function properly at all the speed settings for which it is designed.
3. A variable pitch sheave shall be installed and properly adjusted to limit current drawn by motor to within nameplate specifications.
4. Motors with excessive corrosion shall be replaced.

**XXIII. DEVICES**

**A. General Lighting and Outlets**

1. Bathroom shall have a light and one convenience outlet.

2. Each bedroom shall have at least 2 working duplex outlets, properly installed and safe for use.
  3. Light fixtures shall have correct and proper fitting covers or diffusers.
  4. Where practical, sufficient exterior lighting shall be provided.
  5. The kitchen shall have at least two 110-volt duplex outlets.
  6. Appliances requiring a 220-volt shall be connected to a 220-volt outlet.
- B. Ground Fault Circuit Interruption
1. At a minimum, ground fault circuit interrupters shall be installed in all bathrooms. When updating of electrical devices is required. GFCI's shall be installed where required in kitchens, bathrooms, garages/carports, and exterior outlets.
  2. Receptacles located at counter top level within 6 feet of the kitchen sink shall have ground fault interrupter protection.
  3. Each habitable structure with sleeping quarters shall have a smoke alarm system installed in accordance with local code.
- C. Low Voltage and Miscellaneous Systems
1. Existing television cable and antenna cable must be in good condition. Damaged cable may be repaired or removed.
  2. Existing security systems must be in good condition and operable for the intended use. Nonfunctional systems may be removed or replaced if this is determined to be a feature in keeping with improvements of surrounding standard projects.

**XXIV. APPENDIX A – Inspection Checklist**

**HOME/IITF Housing Rehabilitation Standards**

Appendix A

**PROPERTY INSPECTION CHECKLIST**

Property Location: \_\_\_\_\_

Client Name: \_\_\_\_\_

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
<b>LIFE EXPECTANCY OF SYSTEMS</b>				
Major systems in the property, including: roofs, heating, cooling, plumbing, water heaters & electrical components have minimum 3 year life expectancy.				
<b>GENERAL HOUSING FACILITIES</b>				
Sufficient space & facilities for the storage, preparation & serving of food.				
Bathroom located in a separate room with privacy door that can be locked. Door in good operating condition.				
If more than 1 bedroom & only 1 bathroom, a bedroom is not only means of ingress or egress to the bathroom.				
At least 1 shower or tub with hot & cold running water.				
Uses an approved public or private waste disposal system.				
Bedrooms a minimum of 81 square feet in floor area with no dimension less than 7 feet.				
Each bedroom has separate access from a common room or area. No bedroom used as the only means of ingress & egress for another bedroom.				
<b>SITWORK</b>				
<b>Pest Control</b>				
Building is free of wood-boring insects.				
No conditions conducive to termite activity, such as wood-to-earth contact.				
Unit is free of mice, roaches, rats or other disease-carrying pests.				
<b>Walls &amp; Fences</b>				
Retaining walls in good condition.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Cracks & displacements of no more than 1/4".				
Walls lean not more than to make the center of the top course fall outside middle 1/3 of the base.				
Retaining walls have weep holes in sufficient number & size to relieve water trapped behind the wall.				
Existing fences in good repair.				
No holes, broken pickets, torn chain link fabric, missing top rails, defective posts or supports, broken or missing masonry units, wobbly gate posts, inoperable gates.				
<b>Siting of building(s)</b>				
Site allows water to drain away from the foundation & water to be channeled around the building in a manner capable of draining away heavy rains.				
<b>Pedestrian Traffic</b>				
Walks, driveways & concrete or asphalt paved pads or parking areas free of trip & slip hazards.				
No crack more than 1/2" in width & no crack that causes a trip hazard.				
<b>Accessory Buildings</b>				
Storage sheds in sound condition.				
<b>Landscaping</b>				
No dead trees or shrubs.				
Plants do not undermine any structure (i.e. walls, masonry fences, slabs) or interfere with drainage.				
Plants do not abrade roof surface.				
Plants do not block access to electrical panels, windows, doors, sidewalks or walkways or interfere with overhead electrical, telephone or television cables.				
Plants do not pose personal safety hazard.				
<b>CONCRETE</b>				
Foundations & footings are sound.				



Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
No cracks or displacement larger than 1/4".				
Slabs are free of excessive cracking, movement & trip hazards.				
<b>MASONRY</b>				
Exterior & load-bearing masonry walls are in good condition.				
Cracks passing through masonry units. Examine cracks of more than 1/4" in width, cracks caused by lateral displacement of more than 1/4" or half moon cracks for structural weakness.				
Masonry fireplaces are in good repair.				
Hoods, walls, chimneys, caps, hearths, fire brick & all other structural portions of fireplace & chimney are sound & free of excessive missing mortar, missing bricks or loose masonry.				
<b>METALS</b>				
Grilles or louvers that cover ventilated openings provided for attic or sub-floor ventilation are in sound condition & protect against entrance of rain and/or rodents or pests.				
Metal siding is sound & weather tight.				
<b>CARPENTRY</b>				
Bearing walls & structures are structurally sound & without obvious deficiencies.				
Exposed framing & wood construction are structurally sound.				
<b>ROOFING</b>				
<b>General</b>				
Existing roofs have an estimated life expectancy of at least 3 years.				
Roof framing is capable of supporting the roof & any equipment on it without sagging. No sags, swales, ridges or uneven pitch.				
Roof is free of leaks.				
Roofs have positive slope that provides good drainage.				
Roofs drain onto others in such a way that excessive wear does not result.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Roof drains are low enough to prevent excessive ponding & made of materials that are impervious to water.				
<b>Flashing</b>				
Roof penetrations are properly flashed & sealed.				
Roof flashing is properly installed, in good condition & serves the purpose for which it was intended. Flashing is not cracked, loose, improperly sealed, heavily corroded or damaged.				
<b>Built-up Roof</b>				
Built-up roofs have an elastomeric aluminized or gravel coating.				
Roof coatings are in good condition & consist of compatible materials.				
No excessive peeling, bubbling, chipping, sloughing or mechanical damage.				
Gravel roof has gravel present in sufficient quantity & in proper distribution.				
The roof is free of fissures, cracks, lifting seams, excessive bubbles (more than 5% of the roof area) or excessive alligatoring in coatings or asphalt flood coats.				
<b>Rolled Roofs</b>				
Cold-application rolled roofing has a slope of 2:12 or greater.				
No loose mineral surfacing, bare spots, wear, excessive wrinkles, loose seams, loose laps, etc.				
<b>Foam Roof</b>				
Roof has a slope of 2:12 or greater & a nominal 1" thickness.				
Foam roof has an elastomeric coating in near perfect condition. No detectable break in the coating surface.				
No ponding of 1/4" or more or ponding covering more than 5 square feet.				
Foam roof is well adhered to the substrate. No detectable break in the bond. No poor bonding areas larger than 3 square feet.				
No extensive bumps, bubbles, ripples or voids.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
<b>Shingle Roof</b>				
Roof has slope of 3:12 or greater. Examine roofs with slopes between 2:12 & 3:12 for leaks or other signs of failure.				
Not more than 1/4" of the untabbed portion of the shingles are exposed.				
No excessive bird's mouths, lumps, breaks or tears.				
Fasteners are properly installed.				
Existing shingle roof surface has substantially all of the original mineral surface & is adhered both at the tabs & in the grooves. Minimal loose mineral surface, sparsely covered surfaces, curling, cupping, breakage or brittleness.				
<b>Wood Shake</b>				
Roof has a slope of at least 3:12.				
Roof is in good condition.				
Underlayment & interlayment are present & in good condition.				
No excessive splitting, breaking, rotting or loose shakes or worn, sloughing or cracked underlayments & interlayments.				
<b>Tile Roofs</b>				
Roof has a minimum slope of 3:12 & is installed over solid decking.				
Tiles are in good condition.				
No tiles cracked all the way through, tiles with badly weathered surface or tiles with chips or breaks larger than 2" in diameter.				
If evidence of leaking, inspect for underlayment. The underlayment is a minimum of 30 lb. felt & in good condition. No worn, flaking, sloughing, tearing or cracking of underlayment.				
<b>Metal Roofs</b>				
Verify minimum required gauge.				
Roof has a slope of 3:12 or greater.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Roof is properly aligned over uniform substructure.				
All rib lap joints are sealed their entire length with a bead of caulking.				
<b>EXTERIOR FINISHES/SURFACES</b>				
No damaged or weathered siding.				
No excessive or prevalent broken stucco or stucco with cracks in excess of 3/16".				
Unstabilized adobe is completely protected from weather by a layer of suitable material in keeping with neighboring structures.				
<b>DOORS &amp; WINDOWS</b>				
<b>General</b>				
Every bedroom has at least 1 window that can be opened & closed & securely locked or has door openable to exterior of house.				
All bathrooms have a privacy door.				
All habitable rooms have at least 1 openable window.				
Openable windows are in sound & proper operating condition.				
Windows installed in room additions or in rooms whose function or description has been altered meet current code requirements for required light, ventilation, security & egress.				
<b>Doors</b>				
Doors, frames, jambs & casings are in good condition & working order & are free of excessive scratches, gouges, chipping, peeling or other damage or wear.				
Gaps are sufficient to prevent rubbing & no larger than 1/4".				
No holes too large to be repaired, delaminating skins, broken stiles or rails.				
Exterior doors are protected from sunlight with a proper coating of varnish, paint or other suitable weather protection.				
<b>Windows</b>				
Class is free of open holes or movable cracks.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
<b>Hardware</b>				
Door latches & locks & in good working order & operate freely.				
Those doors with lock-sets are capable of being locked.				
All openable windows have a secure & working lock.				
<b>Security Doors &amp; Bars</b>				
Existing security doors are in good working condition.				
Latches & locks work properly & conform to applicable codes.				
Security bars do not impede the full & proper operation of any window.				
Security bars on windows located in sleeping rooms are provided with latches & dimensioned so that current code egress requirements are met.				
<b>FINISHES</b>				
<b>General</b>				
All surfaces that can be damaged by water or direct sunlight have a protective finish.				
Paneling, wallpaper, mirror tiles, corkboards, etc. are in good condition & not posing any form of hazard.				
Tub surrounds or shower walls are sound, made of waterproof materials & sealed against water penetration at all joints.				
No loose tiles, broken or missing grout, missing tiles, loose wall panels, delaminating surfaces & joints without caulking or grout.				
<b>Paint</b>				
Exterior paint is free of excessive peeling, checking, cracking, flaking, blistering or other defects that may lead to failure.				
Interior paint is in sound condition.				
<b>Walls &amp; Ceilings</b>				
Walls & ceilings are in sound condition & free of hazardous defects.				
No cracks in plaster or gypsum wall board surfaces 1/8" or wider.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
No loose drywall, broken plaster, loose paneling, etc.				
<b>FLOORING</b>				
<b>General</b>				
Floor framing is capable of supporting existing dead load & anticipated live loads as defined by the UBC.				
Flooring is in good, sanitary condition & free of any hazardous conditions.				
Flooring in kitchens, bathrooms & laundry areas is impervious to water.				
<b>Resilient Flooring</b>				
Resilient flooring is free of excessive gouges, breakage, bubbling, lifting or shrinking.				
<b>Wood Flooring</b>				
Wood floors are in sound condition & free of excessive damage from wood-boring insects.				
Wood flooring does not have excessive gouges, breakage, lifting, curling, buckling or shrinking.				
<b>Carpet</b>				
Carpet is properly attached & not badly worn, torn or soiled.				
<b>Ceramic Flooring</b>				
Ceramic tile is in sound condition.				
<b>SPECIALTIES</b>				
<b>Bath Accessories</b>				
Each bath provided with towel rod, shower rod & toilet paper holder.				
Existing shower doors are in proper operating condition.				
Shower doors constructed of tempered glass or have no open holes or cracks.				
Shower & tub enclosures are in sanitary condition & properly sealed.				
<b>Closets</b>				
Each bedroom that contains a closet is equipped with a rod & shelf.				
<b>Fireplaces</b>				
Fireplace flues are free of debris, restrictions, holes or excessive soot deposits. Flue liners, where present, are in good condition.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Chimneys are in good repair & high enough to induce a draft & keep smoke from being allowed into the dwelling. Freely operable dampers, except where gas logs are permanently installed. Gas log installations have dampers permanently affixed in the open position.				
The hearth complies with current code.				
<b>EQUIPMENT</b>				
<b>Cooking Units</b>				
Unit has a means of properly heating food.				
Existing gas stoves are free of leaks, clogged burner ports, missing parts or any defect that makes cleaning or repair of the stove difficult or that makes part of the stove inoperable or unsafe.				
Electric stoves have a power supply capable of providing power for all those heating elements the stove is capable of using at one time. Elements are capable of producing red heat except in those cases where design prohibits this.				
Electric stoves are connected to an approved electrical outlet.				
<b>Refrigerators</b>				
Unit has a refrigerator or means of cooling or preserving food.				
Existing refrigerator is in proper working order.				
<b>Dryers</b>				
Existing dryer is properly vented to outside using approved pipe, sleeve & vent cap.				
<b>FINISH CARPENTRY</b>				
<b>Cabinetry</b>				
All cabinets & vanities are in good condition & appropriately secured.				
Cabinets, drawers & doors are free of broken or dysfunctional hardware, holes, peeling, chipping, sloughing or any other damage rendering them difficult to clean or otherwise unsanitary.				
<b>Countertops</b>				
Counters have a surface that can be easily cleaned & is impervious to repeated cleaning.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Counters are free of holes, gouges, burns, peeling, cracking or any condition making them absorbent.				
<b>PLUMBING</b>				
<b>General</b>				
Piping is properly installed & supported.				
No plastic piping is exposed to sunlight unless it is approved by listing for such installation.				
If equipped with facilities for a clothes washer, both hot & cold water is supplied & drain is connected to an approved waste system.				
Faucets, drains, valves, piping & supply lines are leak-free, functionally adequate & in proper operating condition.				
<b>Domestic Water Supply</b>				
Water supply, connected to a potable water source.				
No lead water-supply piping.				
<b>Drain, Waste, Vent</b>				
Gray water system approved by the local building authority.				
Waste lines are made of approved materials.				
Waste disposal system is connected to an approved public or private disposal system capable of handling the occupant load of the unit(s).				
The system is free of leaks, damaged or corroded pipe. Waste lines are free of blockage or gurgling.				
Existing waste systems are properly vented. Plumbing vents within 10' of a cooler are at least 1' taller than the cooler.				
Waste disposal systems are free of health hazards or unsafe conditions.				
Waste lines provide a functional plumbing vent, a trap & leak free connections to the waste disposal system.				
<b>Gas</b>				
Main gas shut-off is in good operating condition & free of leaks.				



Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Flexible gas supply connections do not exceed 3' in length.				
Flexible gas supply connections are appropriately caulked & vented.				
<b>Fixtures</b>				
Individual sinks, toilets, clothes washers, & other plumbing devices have individual water-supply shut-offs.				
Kitchen has a sink & faucet, in proper operating condition with a sink trap & hot & cold running water.				
Every bathroom in good operating condition with water supply.				
Faucets are free of leaks & drips.				
Sinks are free of excessive cracking, chipping or other damage that would make cleaning difficult or hazardous.				
The plumbing is free of leaks in supply lines & sewer connections.				
Supply lines & waste lines are in good condition.				
Each bathroom has a toilet in proper operating condition & connected to an approved public or private sewer system.				
Toilets are in proper operating condition & free of cracks in the bowl, tank or tank lid.				
Each toilet has a washable seat.				
Wall-mounted toilets are properly installed & secured.				
<b>Valves</b>				
Water supplies have individual shut-offs, where practical.				
No loose or broken handles or levers.				
Flexible gas supply connections are provided with an approved gas cock.				
<b>Water Heaters</b>				
Water heater supplies sufficient amount of hot water to serve occupant load of property at peak demand times.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Water heater is properly vented.				
If the water heater is located outside, it is properly protected from the weather.				
Water heater has a properly installed, approved temperature/ pressure relief valve with a 3/4" drain line installed to comply with current code.				
Water heater has a rigid & properly supported door or platform under it.				
Flexible gas supplies do not exceed 3' & all plumbing fittings are free of leaks.				
<b>HVAC</b>				
<b>General</b>				
Air conditioning units are capable of cooling each room to a temperature 30 degrees below ambient outside temperature at 5 feet above floor.				
Filters are secure, clean, & large enough to pass sufficient recirculating air to make the unit operate properly.				
Equipment housings & access panels are intact & properly secured & installed. No exposed electrical connections, belts, pulleys or blowers.				
<b>Heating</b>				
Furnace is safe, operable & adequate.				
Forced air unit has a filter.				
Unit is provided with a means to control the unit's heating & cooling. Each heat source has a properly operating thermostat.				
Air handlers are quiet, well balanced & clean.				
The heat exchanger is in good condition. No excessive corrosion, soot, chemical deposits, cracks, back-draft or burners or other evidence of heat exchanger failure.				
All heating elements are connected to a power source & functioning properly.				
Room heaters are listed appliances, installed properly & sufficiently sized to heat the room in which they are installed.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
No unvented gas heaters, except those designed to be unvented.				
<b>Ventilation</b>				
Ventilation for each bathroom complies with local codes.				
Ventilation devices are in good operating condition.				
Exhaust hoods, fans & filters in sanitary condition.				
<b>Air Conditioning</b>				
Refrigeration units are in good working condition.				
Refrigeration units under the drip line of roofs or under rain gutters are protected from excessive run-off on the unit.				
Condensate drain lines are properly drained to avoid damage to the property. Roof units drain away from the roof in a manner that does not damage the roof or structure.				
Heat exchange fins are in good condition. The compressor is free of excessive debris. The unit is free of excess debris, vegetation or any obstruction that prevents the free circulation of air around the unit.				
<b>Evaporative Coolers</b>				
Evaporative coolers used as the only cooling source are capable of changing the air in a unit at a rate of once every 2 minutes				
Cabinet not heavily corroded.				
Each cooler cabinet has all pad-frames & a means of fastening pads in each frame securely enough to prevent sagging.				
Each cooler is level & has a water distribution system capable of delivering enough water to each pad to create run-off along the bottom of the entire pad. The water distribution system is free of leaks, including the attachments at the pump.				
Each cooler has a permanent water line with its own separate shut-off & a self regulating valve for maintaining the amount of water needed.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
The pump is capable of providing a reserve of water in each of the water distribution troughs when the troughs are clean & functioning properly.				
Fan belts, bearings, squirrel cage or blower are in good operating condition.				
Blower is balanced & capable of quiet operation.				
<b>Combustion Air</b>				
Gas furnaces & water heaters have sufficient combustion air. Proper volume of combustion air is not dependent on a door, a window or any other opening which is prepared for easy closing.				
Furnaces or water heaters are not enclosed in spaces too small to provide combustion air by infiltration.				
Furnace enclosures are enclosed in a manner that prevents any intermingling of combustion air with the recirculating air. Furnace enclosure doors, which open inside the building, are free of gaps.				
The furnace is properly caulked to its floor or platform.				
Each furnace enclosure is free of damaged or incomplete walls, floor or ceiling that in any way allow communication of air from the enclosure to the home.				
<b>ELECTRICAL</b>				
<b>General</b>				
A separate electric service & meter is provided.				
Electrical connections are made in a proper & safe manner.				
Permanently wired electric water heaters are supplied by properly sized conductors installed within metallic flex conduit where exposed.				
Exposed electrical cable serving the furnace is protected with flexible conduit & properly made connections.				
Termination of electrical supply conductors & conduit is by means of approved fittings.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Exposed cables or wires meet code.				
Wiring is free of damaged insulation or damaged conductors. No fraying, cracking, charring or brittle insulation.				
All electrical circuiting is of proper design & suitable for intended use, with overcurrent protection suitable for conductor ampacity.				
<b>Service Entry &amp; Equipment</b>				
The size of the electrical service is adequate for the needs of the property.				
Each electrical service has a properly-made ground, which is either protected or rigidly affixed in accordance with the National Electrical Code.				
Means of disconnect are provided for fixed electrical space heating units.				
Each electrical panel is, at a minimum, adequately sized for the service. All services & distribution centers are safe & free of excessive corrosion, debris, holes, uncapped knockouts, etc. Exterior panelboard enclosures are of UL listed, rain-tight design. The panel is soundly & properly attached to the wall.				
Each electrical panel has a main disconnect.				
All circuiting has overload protection in compliance with current code.				
<b>Branch Circuiting</b>				
Adequate number of circuits to provide safe, functional distribution.				
Property does not have knob & tube wiring.				
<b>Evaporative Coolers</b>				
Evaporative coolers have an approved means of fused disconnect. Proper fusing is provided for pump & blower motors.				
Cooler motors are of adequate size as determined by required number of air changes & function properly at all the speed settings for which they are designed.				

Appendix A – Inspection Checklist (continued)

HOME/HTF Housing Rehabilitation Standards

Appendix A

PROPERTY INSPECTION CHECKLIST

INSPECTION ITEM	PASS	FAIL	N/A	COMMENTS
Motor does not evidence excessive corrosion.				
<b>DEVICES</b>				
<b>General Lighting &amp; Outlets</b>				
Each bathroom has a light & 1 convenience outlet.				
Each bedroom has at least 2 working duplex outlets, properly installed & safe for use.				
Light fixtures have correct & proper fitting covers or diffusers.				
The kitchen has at least 2 110-volt duplex outlets.				
Appliances requiring a 220-volt are connected to a 220 volt outlet.				
<b>Ground Fault Circuit Interruption</b>				
GFCI's are installed where required in kitchens, bathrooms, garages/carports, & exterior outlets.				
Receptacles located at counter top level within 6 feet of the kitchen sink have ground fault interrupter protection.				
Each structure with sleeping quarters shall have a smoke alarm system installed in accordance with local code.				
<b>Low Voltage &amp; Miscellaneous Systems</b>				
Existing television cable & antenna cable are in good condition.				

Inspected By \_\_\_\_\_

Date \_\_\_\_\_