

**COMMUNITY DEVELOPMENT
NEIGHBORHOOD HOUSING STANDARDS**

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CITY OF KNOXVILLE

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NEIGHBORHOOD HOUSING STANDARDS

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INTRODUCTION TO THE NEIGHBORHOOD HOUSING STANDARDS:

These guidelines, which shall be referred to as the Neighborhood Housing Standards, have been adopted by the Community Development Department of the City of Knoxville. As a condition for receiving monies from the United States Department of Housing and Urban Development (HUD), the City of Knoxville must make reference to a code or document that defines a ‘standard’ that housing rehabilitation cases shall be brought to; the Neighborhood Housing Standards has been that ‘standard’ for many years.

The intent of these Neighborhood Housing Standards is to provide a guideline for the rehabilitation of *existing* housing units under the various housing programs administered by the City of Knoxville that use HUD funds. In itself, it is not intended as a ‘code’, but rather, incorporates a minimum housing standard that can be used to:

- a.) meet (and many times exceed) the minimum standards dictated by the most currently adopted ICC Property Maintenance Code used by the Codes Enforcement Department in the inspection of housing units;
- b.) meet (and many times exceed) the minimum standards dictated by the HUD Section Eight Housing Quality Standards for living units;
- c.) serve as an outline for the Rehabilitation Specialist in preparing a work write-up for an existing unit that meets (and many times exceeds) the requirements of the codes and standards referenced above, and;
- d.) serve as a reference that can be used in resolving disputes with homeowners when their expectations exceed the intent of our programs.

CODES

The City of Knoxville has adopted by ordinance the ICC Residential Building Code as the ‘building code’ within the city. This code addresses existing buildings and states, in part, that “alterations repairs or rehabilitation work may be made to any existing structure, building...without requiring the building, structure....to comply with all the requirements of the technical codes, provided that the alteration, repair or rehabilitation work conforms to the requirements of the technical codes”. It is advantageous to both the homeowner (as a borrower) and the City of Knoxville (as a lender) that existing buildings not be required to meet all of the technical codes required for new construction but instead, meet the requirements as a safe, decent, and sanitary living unit as enforced by the City of Knoxville Codes Enforcement Department via the ICC Property Maintenance Code, and as required by HUD’s Section 8 Standards. Compliance with both of these standards shall be satisfied with the outline provided by these Neighborhood Housing Standards.

However, it shall be recognized that any *new construction* (i.e., replacement or infill housing), or any rehabilitation that causes a *change of occupancy classification* to an existing building, shall automatically trigger the requirement for building, electrical, plumbing, gas, and mechanical systems to be brought to the standards intended by the technical building codes recognized by the City of Knoxville for new construction.

Even in the cases where new construction or changes in classification occur (as referenced above), these Neighborhood Housing Standards shall be a guide for the rehabilitation specialist in determining minimal requirements, facilities, and fixtures that shall be furnished for each living unit. However, in cases where conformance with new building codes is required, any conflict between these Neighborhood Housing Standards and the currently adopted Building Code shall recognize the Building Code as taking precedence.

OBJECTIVES

- I. To assist homeowners, landlords, and tenants in obtaining a safe, decent, and healthy home environment. This home environment shall be comfortable, affordable, easily maintained, relatively energy efficient, and appropriately sized (as defined in the “General Design Criteria” of this document, as well as the currently adopted version of the ICC Property Maintenance code.

A house with unsafe and unhealthy conditions is defined by the ICC Property Maintenance Code as follows:

1. One which is so damaged, decayed, dilapidated, unsanitary, unsafe, or vermin-infested that it creates a serious hazard to the health or safety of the occupants or the public.
2. One that lacks illumination, ventilation, or sanitation facilities adequate to protect the health or safety of the occupants or the public.

Such dwellings are subject to condemnation by Codes Enforcement as unfit for human habitation. When a building is so posted, design criteria shall include all the requirements for release of this condemnation.

- II. To assure that the rehabilitation of such buildings and the correction of such defects are done in a manner that will:
 1. Provide structural integrity and adequate protection from further decay or deterioration.
 2. Have reasonable economy of maintenance.
 3. Be of good quality and workmanship.
 4. Provide cost effective energy efficiency.
 5. Eliminate identified lead-based paint hazards in pre-1978 housing.
 6. Provide accessibility features to occupants as needed.

- III. To provide for a more uniform application of departmental and program policies to all applicants.

SCOPE AND PRIORITIES:

The rehabilitation specialist evaluates and records the before rehab condition of the premises during the initial inspection. This information is compiled and used in completing an initial inspection report and draft specifications and preliminary cost estimate. This must then be evaluated along with information provided by the financial specialist regarding eligible financing and modified to provide a final set of specifications which can meet the needs of the individual family within their

financial restraints while complying with our program requirements.

To provide a set of guidelines for this process, the following set of priorities is provided:

- Safety
- Health and Sanitation
- Code Requirements
- Program requirements
- Economy
- Maintenance
- Accessibility

All Community Development Department rehabilitation programs are intended to eliminate code deficiencies and unsafe conditions while considering the occupant's needs and the owner's long term plans for the building. It is important to understand the distinction between this objective and programs that provide for remodeling of housing to improve appearance or convenience. **Ours are rehabilitation programs, not remodeling programs.** While each deficiency may have several solutions, it shall be assured that all code and incipient violations are remedied before any general property improvements are addressed.

The possible repairs and improvements have been divided into three categories:

Code Violations & Program Requirements: (Program Requirements)

Code Violations & Program Requirements are considered deficiencies in the structure that are violations of the ICC Property Maintenance Code as adopted by the City of Knoxville, or the fire codes or zoning ordinances of the City of Knoxville. This category shall also include the requirements of MPC Infill Housing Committee, Historic Preservation Standards, and Energy Star Home Certification for new construction. This category also includes measures that provide for the special needs of the occupant such as accessibility modifications, as well as the Lead Based Paint Rules found in 24 CFR 35. At project completion, all major systems, regardless of whether that system is in violation of the code, must have a remaining useful life of at least five years. Major systems include structural support, roofing, cladding and weatherproofing (e.g. windows, doors, siding, and gutters), plumbing, electrical, and HVAC.

Incipient Violations: (Preventative)

Incipient Violations are defects that will further deteriorate and lead to subsequent code violations within a **two-year** period if not corrected (other than major systems that fall under Program Requirements). These items are **recommended**, but may be left out of the contract to meet cost guidelines, or achieve affordability for the owners of the building. Incipient items may also include visitability features.

General Property Improvements: (GPI)

GPI are improvements that are not required by housing code, but would benefit the building by making it more livable, maintainable, safe, or secure. These include items that are customary for the area, not items which would be considered luxurious or excessive. Examples would be ceiling fans, fencing, utility or storage spaces (except as required on subsequent pages), additional outlets for electronics, and rearranging interior space to eliminate inefficient design. Garages, Washing Machines, Clothes Dryers, Spas, free standing microwaves and similar fixtures shall **not** be an eligible expense under rehabilitation.

The work specified must provide for the correction of all code violations. All incipient situations must be addressed before any general property improvements are funded. However, program guidelines do not require all incipient situations to be addressed if including them results in a project cost that is not affordable. Where the owner requests GPI's, they may be completed as part of the rehabilitation contract, but shall be funded by the owner when their cost exceeds the limitations of the loan program being utilized. The total amount of GPI's allowed in a project, regardless of funding source, is 10% of the code and incipient items. Items that are considered excessive for rehab programs are not eligible for funding and may not be included in rehab contracts. Also ineligible shall be any other item that is not a permanent, fixed part of the structure, such as a washer/dryer.

Rental Rehab Programs are intended to assist low/mod income families. General Property Improvements are allowed as above if the project will be monitored for affordable rents. Otherwise, they are not desirable or allowable if they increase rents to where they are unaffordable to low/mod tenants.

The chart in the appendix of this booklet illustrates the application of these categories to the limitations of our programs. Reference numbers correspond with designated sections of the work write-up and rehabilitation specifications and design standards.

PROGRAM AND CODE REQUIREMENTS

Many funding sources are used by the Community Development Department to finance rehabilitation and new construction and each has its own requirements that are to be considered in planning projects and writing specifications. In addition, restrictions placed on all construction and repair by the City of Knoxville and the State of Tennessee must be considered in design, along with the financial feasibility of particular designs.

Building Codes:

As implied in the Introduction, these guidelines are not intended to supersede the requirements of the Building Inspection Department of the City of Knoxville, but are expected to complement and clarify these requirements, assuring that the program is compatible with applicable codes. The rehabilitation specialist shall be familiar with the requirements of the building codes and to see that the project specifications do not conflict with these codes. We are required to correct all deficiencies with regard to the ICC Property Maintenance Code, and all new installations must comply with the currently adopted edition of the ICC Residential Building Code. All projects shall be completed by licensed contractors under permit issued by the City of Knoxville Building Inspections Department. A general contractor or a licensed home improvement contractor shall supervise each project under construction. Representatives of CD shall deal directly with these contractors; it shall be the contractor's responsibility to deal with their subcontractors and/or other workmen.

Tennessee Historical Commission (THC):

All projects shall be reviewed for their potential impact on the historically significant aspects of the community. All locations shall be evaluated for potential eligibility for inclusion on the National Register of Historic Places, or contributing to a historic district, or in a local historic overlay zone. When found to be a contributing building, the Historic Preservation Officer of the Metropolitan Planning Commission, pursuant to the programmatic agreement with the Tennessee Historic Commission (THC) shall review these projects before being put out to contractor bid. All requirements of the Secretary of Interior's Standards for Rehabilitation of Historic Properties shall be written into the specifications and all change orders affecting the appearance on eligible projects shall be reviewed by a THC representative for impact.

Infill Housing Design Review Committees:

All replacement home projects shall be submitted to the In-Fill Housing Design Review Committee for review, prior to the solicitation of bids. The committee will reference the Heart of Knoxville Design Guidelines as developed by the Knoxville-Knox County Metropolitan Planning Commission and make recommendations to ensure that the completed construction project is an asset to the community where the dwelling is to be built, and not a detriment.

Section 504 Accessibility

All projects must comply with Section 504 of the Rehabilitation Act of 1973 which states, in part, that "no otherwise qualified individual with a disability in the United States shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance...." When a project contains 15 or more units and the rehabilitation cost equals or exceeds 75 % of the replacement cost of the completed facility, or in the case of new construction, the project must comply with 24 CFR 8.22 requiring a minimum of 5% of the units or at least one unit shall be made accessible to persons with mobility disabilities and an additional 2% of the dwelling units or at least one unit, whichever is greater, shall be made accessible to persons with hearing or visual disabilities. Projects containing fewer than 15 units or projects with rehabilitation cost less than 75% of replacement cost must comply with 24CFR8.23(b) Under this section, alterations to dwelling units shall, to the maximum extent feasible, be made to be readily accessible to and usable by individuals with disabilities. The phrase *to the maximum extent feasible* shall not be interpreted as requiring that a recipient make a dwelling unit, common area, facility or element thereof accessible if doing so would impose undue financial and administrative burdens on the operation of the multifamily housing project.

PROGRAM AND CODE REQUIREMENTS (continued from previous page)

Energy Efficiency

The proposed work must comply with HUD's Cost Effective Energy Conservation Standards. Basically, this requires a cost/payback analysis to justify all exceptions to normal policy. Further, all new construction (i.e., replacement housing) shall meet the requirements of the current version of Energy Star.

Lead Based Paint Regulations:

All residential facilities (with few exceptions allowed per federal regulations) receiving federal HOME and/or CDBG monies for rehabilitation assistance shall be evaluated for the presence of lead-based paint, per 24 CFR 35 and the State of Tennessee Lead Program Rules.

GENERAL DESIGN CRITERIA

Each existing house shall be brought to a minimum standard of compliance with the current ICC Maintenance Code and with HUD Section 8 housing quality standards and shall contain at least the following minimum facilities. Existing designs that do not comply with the following section shall be considered to be an incipient violation and shall be corrected before General Property Improvements (GPI) are addressed. Exceptions may be granted in cases where correction of existing designs would be harmful to the structure, or be excessively expensive in relation to the rest of the project; the Construction Management Supervisor shall approve these exceptions prior to the commencement of rehabilitation. They may remain unchanged providing that the building inspector does not require correction of the existing situation.

Space Requirements:

As required by ICC Property Maintenance Code, each dwelling unit shall have a minimum square footage total habitable floor area based on the number of occupants. In most cases the table below may exceed the minimum code requirement.

Each unit shall provide the following minimum habitable spaces:

1. Living room and bedroom space
2. Kitchen, cooking and dining areas (not necessarily separate rooms)
3. Bathroom within the dwelling unit

The following tables indicate the minimum adequate room sizes and shall be used as a guide for subdividing existing space and for computing the minimum space for required additions.

<u>ROOM</u>	<u>1 BR</u>	<u>2 BR</u>	<u>3 BR</u>	<u>4 BR</u>	<u>LEAST DIMENSION</u>
LIVING ROOM	160 SF	160 SF	170 SF	180 SF	11'-0"
DINING ROOM	There is no requirement for a separate Dining Room Area				Not Applic.
BEDROOM (1ST)	120 SF	120 SF	120 SF	120 SF	9'-4"
BEDROOM Other	80 SF*	80 SF*	80 SF*	80 SF*	8'-0"
TOTAL BR AREA	120 SF	200 SF	280 SF	360 SF	8'-0"
OTHER HABITABLE ROOMS (Including Kitchens)	80 SF	80 SF	80 SF	80 SF	8'-0"

* See “Minimum Bedroom Size” section below. For existing units, 70 square feet for a bedroom serving one person shall be acceptable; for new construction, 80 square feet minimum shall be provided for any single occupant bedroom. The 8'-0” minimum dimension shall apply to both existing and new construction applications.

Privacy and Arrangement of interior spaces:

1. All habitable rooms within a dwelling unit shall be accessible without passing through a public hallway, an exterior space, or a bathroom.
2. The only exit from a unit, or the only access to a bedroom or bathroom, shall not be through another bedroom or bath.

Minimum bedroom size:

Each bedroom intended for use by a single occupant shall have at a least 70 SF of floor area. Each bedroom occupied by more than one occupant shall have a minimum of 50 SF of floor area for each occupant (i.e.; 100 SF for two occupants, 150 SF for three occupants, etc).

Minimum hallway width: Thirty-six inches (36") is the minimum required hallway width for hallways within dwelling units. We shall consider existing situations for non-required egress hallways to require modification when the width is less than 30". Such situations shall be considered as incipient violations and shall be corrected to code minimums where funding is available. When the specified work does not include modification of hallways between 30" and 36", they may be accepted and remain as a pre-existing, non-conforming condition with approval of the Building Inspector.

Minimum railing heights:

The minimum height of guardrails on single-family residences is 36". Railings are required whenever a porch is 30" or more above the finished grade and on steps with more than 4 risers.

Consult applicable codes for railings on multifamily units and handrail heights on stairs.

Ceiling heights:

The minimum clear ceiling height for existing rooms to be considered habitable space shall be 7'-0". In rooms with a sloping ceiling, the 7'-0" ceiling height shall be required in only one-half of the room area; however, no section of the room measuring less than five feet from the finished floor to the finished ceiling shall be included in the computation of the minimum room area. A habitable room is a space for living, sleeping, eating, or cooking and does not include bathrooms, closets, halls, or storage/utility spaces.

BATH FACILITIES:

Size and Number of Bathrooms:

One bathroom shall be considered adequate for each household with four or fewer family members. An additional bathroom is recommended, but not required, for every 3 additional family members. Additional bathrooms beyond the minimum required, will be considered a GPI cost. When additional baths exist in a house, they shall all be brought into code compliance. When funding limitations require, and the number of occupants allows, the rehab specialist may require that extra baths be disconnected and their fixtures removed, to further reduce construction costs.

Each full bath shall include a bathtub or shower, a toilet, and a lavatory arranged in a convenient and accessible manner in a room with a minimum of 30 square feet of floor area. When residents of a home are disabled or confined to a wheel chair, the bath may be rearranged or relocated to provide adequate access for those individuals. Such modifications shall be considered an incipient repair.

FACILITIES, SYSTEMS, AND EQUIPMENT:

Sanitation Equipment:

Each dwelling shall have the following fixtures located within the dwelling unit in good working order:

- Kitchen Sink
- Lavatory
- Tub or Shower
- Water Closet (Toilet)

Each of these fixtures shall be connected to an approved drainage system that empties into the city sewer (septic tank/drain field systems, where existing, shall be abandoned). The kitchen sink, lavatory, and tub/shower shall be connected to a potable water supply system with hot (120 degrees minimum) and cold water supplied.

Electrical System:

For electrical systems, the specifications that follow meet or exceed the minimum requirements currently contained within ICC Property Maintenance Code.

Each dwelling shall have a code compliant electrical system of at least 100-amp service entrance capacity. Each habitable room (other than Kitchens) shall have at least two separate and remote 110V outlets plus an overhead light fixture controlled by a switch at the room entrance door. Each laundry room must have at least one 110V receptacle plus an overhead light. A switched receptacle may be substituted for an overhead light fixture in habitable rooms.

Kitchen Electrical Requirements:

Each kitchen shall have at least three separate and remote receptacles, and a wall or ceiling lighting outlet controlled by a wall switch shall be provided. All receptacles located in the Kitchen shall be GFCI protected as required by code. In addition, refrigerators, ranges, freezers, microwaves, washers, and dryers (as applicable) shall have separate, dedicated circuits.

Bathroom Electrical Requirements:

Each bathroom shall have at least one GFCI protected receptacle and one overhead or wall mounted light fixture controlled by a switch located adjacent to the entrance door. Switch and receptacle locations shall be at least three feet from the tub or shower. All bathroom receptacles shall be GFCI protected.

All bathrooms without an operable exterior window shall be equipped with an approved mechanical ventilating system, properly vented to the outdoors.

Kitchen Facilities and Appliances

Code compliant appliances for cooking and food preparation, as well as refrigerated storage shall be

required. These appliances may be provided by the occupant, but must be maintained in a clean, sanitary condition and be in good working order.

Food heating appliances shall consist of a cook surface and an oven, either electric or gas. Connections for a gas range shall consist of an inspected and approved gas connection and one 110V electrical outlet. Connections for an electric range shall consist of one 220V outlet for a freestanding range or separate electric service to each built-in unit as required by the appliance manufacturer and the City's adopted Electrical Code.

Refrigerated food storage and cooling shall consist of an electric refrigerator of minimum 14 cubic foot capacity capable of cooling and storing food at 40 degrees Fahrenheit, plus a compartment for freezing and maintaining food at 15 degrees Fahrenheit.

Kitchen Storage Space:

For one to four occupants, the required amount of cabinets to be provided shall be:

1. Wall cabinets or pantry shelving:
 - 8 lineal feet (face dimension) of overhead cabinets, including:
 - 12 square feet of shelving
 - 10 inch shelf depth
2. Base Cabinets and Counter Top
 - 8 lineal feet (face dimension) of base cabinets, including:
 - 5 square feet of drawer area
 - 40 cubic feet of storage in base cabinets (including drawers)
 - 16 square feet of counter top (including sink area)

The required storage and counter area shall be increased by ten percent (10%) for each additional bedroom in a dwelling unit beyond two bedrooms.

When replacing existing cabinets, the new cabinet layout should provide equal usable counter top and storage spaces as the previously existing permanent layout.

Garbage Facilities

Each rental dwelling unit shall have a temporary garbage storage facility, located outside the building, convenient to the kitchen exit, and accessible for trash collection. Metal or plastic trashcans with lids are acceptable providing they have a capacity of 60 gallons minimum for each dwelling unit.

Fire Code and Smoke Detectors:

Each unit shall comply with all applicable requirements of the ICC Property Maintenance Code.

Each residential unit shall have smoke detectors installed as follows: One smoke detector must be installed inside of each bedroom door. One smoke detector must be installed directly outside each separate sleeping area in the vicinity of bedrooms. All basements, cellars, crawl spaces, and attics

that contain mechanical equipment, shall also be equipped with a smoke detector. 110V permanently installed detectors are required for both rental and owner occupied units; all detectors shall be interconnected with battery backup. In all units with gas appliances, a Carbon Monoxide detector shall be installed. (Wi-Fi interconnected smoke detectors may be allowed by the Building Inspector in certain cases. When allowed, these units will satisfy the requirements of these standards).

There shall be one 5# 2A bc fire extinguisher installed in each rental unit. This fire extinguisher shall be located in the kitchen area, away from the range and accessible from the doorway.

Bath Accessories:

The following fixtures shall be considered an Incipient cost for all baths in rental units and owner occupied units.

<u>Fixture</u>	<u>Location</u>
Towel bars:	one 18" minimum
*Soap Dish:	one in bathtub or shower
Toilet Paper Holder:	next to water closet
Medicine cabinet:	above lavatory

*soap dishes built into fixtures may substitute for wall mounted accessories

Bath walls and floors shall be easily maintained and impervious to water (no wood or carpeted flooring materials). All joints between floors, walls, and fixtures shall be maintained water tight and free of mold or cracks.

Laundry Facilities:

Space for laundry facilities (washer and dryer) with appropriate utility connections is preferred, and shall be installed where space permits. Where provided, it shall be in a location accessible for each unit, either within the dwelling unit or in the basement or separate utility room.

Utility and Storage Facilities

A small outdoor storage shelter may be provided as a General Property Improvement if installed on a permanent foundation. Existing damaged storage shelters shall be repaired or removed as a Code cost.

Fencing

Existing damaged fencing shall be repaired or removed as a Code cost. New fencing may be provided as a GPI cost.

Closets and Interior Storage

Each bedroom shall have provided, a clothes closet, located within the bedroom or within a reasonable distance of the bedroom door, but not within a bathroom or kitchen. Each closet shall have a minimum shelf and rod length of 2 linear feet per room occupant with 3 linear feet being the minimum size.

When redesigning interior space or when adding on space, in addition to bedroom closet space, general storage space of 100 cubic feet should be provided, either within the unit or as lockable space accessible by the occupant. Unused habitable rooms may fulfill this requirement. Dry storage in basement or storage within an attic that is accessible by stairs and on a raised wood floor area may substitute for this requirement.

LIGHT AND VENTILATION

Habitable Spaces:

Each habitable room shall have at least one window facing directly outside with a minimum size equal to 8% of the room's floor area.

At least 45% of the required window must be openable except when the unit is equipped with a central heat and air-conditioning system. EXCEPTION: As per the ICC Property Maintenance Code, two adjacent rooms may be considered as one, when one half of the area of the common wall is open and unobstructed and provides an opening of not less than 1/8th of the floor area of the interior room or 25 sq. ft., whichever is greater.

In addition, all bedrooms shall have at least one window that meets the egress requirements of the ICC Property Maintenance Code, Section [F] 702.4. Where the bedroom has a door opening directly to the exterior of the building, egress sizing of windows may be relaxed. Bathrooms must meet the ventilation requirements of habitable rooms except that a mechanical ventilating system discharging to the exterior of the building may be substituted as allowed by code.

All public corridors must have natural ventilation or mechanical ventilation units except where exit doors open directly to the exterior.

Habitation of basement areas:

No basement or cellar space shall be converted to habitable space unless, in its existing condition, the walls and floors are clearly impervious to leakage and insulated for dampness, and the required minimum window area is provided and can be located within code and entirely above grade. Existing basement areas may remain as-is when within code, but any time that a contract calls for

foundation repair and the house has a portion of the basement with standing headroom, it shall be stated in the work write-up that it is not intended to create habitable or dry storage space in this area, so that there is no question regarding a water or moisture warranty from the contractor. Such circumstances also require a statement as to the responsibility for damage to the finishes in these areas resulting from work specified for adjacent habitable areas.

Utility Spaces

In laundry, utility, and non-habitable rooms containing heat-producing appliances, exhaust air shall be vented to the exterior of the building and this air shall not be re-circulated within habitable rooms, or attic/basement/crawl space areas.

Gas dryers, water heaters, and furnaces shall be provided combustion air and return air as required by the Mechanical Code and recommended by the manufacturer.

Ventilation of Structural Spaces

All building spaces such as attics and crawl spaces must be provided with natural ventilation by the installation of appropriate vents sized to prevent the accumulation of excess moisture or condensation. Changes in design, such as the installation of additional insulation may require additional ventilation so as to bring the spaces within the recommendations below (all areas are net open vent area in square feet):

- a.) Crawl Spaces: Where wood floor systems are used, ventilation openings shall have a net square foot area of not less than one square foot per 150 square feet of crawl space; where operable vents are used, an approved vapor barrier shall be installed over the entire ground surface when less than 5' of clearance exists. Crawl spaces exceeding 5' in height do not require vapor barrier installation.
- b.) Attics: For gabled or hipped roofs, ventilation shall be provided to furnish cross ventilation of each separate attic space with weather-protected vents. The ratio of total net free ventilating area of the ceiling shall be not less than one square foot per 150 square feet of ceiling (1/150). That ratio may be reduced to 1/300 provided that at least fifty-percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated (at least 3 feet above eave or cornice vents) with the balance of the required ventilation provided by eave or cornice vents.

In addition, all attic and crawl spaces shall have access doors as required for the purpose of maintenance and inspection. All vents must be screened to prevent the entrance of birds, insects, and rodents. The addition of screen fabric to existing vents may reduce the net open area and must be accounted for in computing the needed ventilation.

The installation of additional insulation shall require additional ventilation and vapor barriers to prevent damage to building components by condensation or moisture. The insulation of enclosed structural spaces and in crawl spaces with less than 14 inches clearance between the ground and the bottom of floor joists is not recommended.

INSULATION

All accessible structural spaces around habitable space shall be insulated to the following R-factors:

Attic: R-38
Floors: R-19
Walls (2x4): R-13

All heating ducts, including return air ducts, which are exposed to unheated air spaces shall be insulated to R-4.

All water supply lines that are exposed to unheated air and all within partially open wall cavities and all within exterior walls shall be insulated to R-2 when accessible during construction.

Existing exterior frame walls in homes shall not have insulation applied to them unless the existing wall coverings on at least one side are to be removed to the framing members during the normal course of the rehabilitation work. Removing of wall coverings, installing insulation, and re-applying wall covering where not needed in the normal course of the rehab work shall be a General Property Improvement item, as the expense of this cannot be appropriately justified.

HEATING

Each unit shall have a code approved permanent heating system that will maintain a relatively uniform temperature within all habitable rooms and baths of 68 degrees Fahrenheit. Portable electric and kerosene heaters are not considered adequate. Unvented open-flame or fuel burning heaters shall not be permitted. All existing mechanical units to remain must have a life expectancy of 5 years.

Energy Efficiency

The proposed work must comply with HUD's Cost Effective Energy Conservation Standards. Basically, this requires a cost/payback analysis to justify all exceptions to normal policy. Further, all new construction (i.e., replacement housing) shall meet the requirements of the current version of Energy Star Homes.

Standard procedures for determining appropriate heating repairs:

In reference to previous editions of these Neighborhood Housing Standards, there was considerable debate as to what type of system could replace which existing systems, and under which circumstances such a replacement was cost-effective. The City of Knoxville Community Development Department program has evolved policy to the stage that this has become somewhat a moot point, especially as the inclusion of air conditioning within a living unit is now considered an *incipient violation*. Thus, the following policy shall apply to heating systems:

- a.) If the existing primary heating system is a wood or coal burning system, or if the structure is heated via portable heating (kerosene/electric/gas/solid fuel), the system shall be replaced with a central heating and air conditioning system. The property owner shall have the final choice between gas and electric units, assuming gas service is available at the property. The Rehab Specialist shall determine which type of unit will work best for the structure, split unit or package unit.
- b.) If the existing primary heating system is a central gas or electric system that has duct work supplied to all living areas, *and if that unit is of an age and in such condition that it can reasonably be expected to remain serviceable for the next 5 years*, the unit shall not be replaced as a code or incipient violation. According to ASHRAE, the life expectancy of a Heat Pump is 15 years and that of a Gas Furnace is 18 years. Components to add air conditioning capability to the existing heating system (adding condensate lines and condenser equipment) may be added to an existing system as an incipient expense.
- c.) If an existing heating system is incompatible with the addition of air conditioning capabilities, the entire system may then be replaced as an incipient expense.

MAINTENANCE STANDARDS

Existing Building Conditions

The components of existing buildings shall be maintained in good condition and shall be free from and protected against decay and deterioration. All structural components shall be capable of supporting all loads to which they are subject and shall not be sagging or leaning excessively.

All structural systems and components of the building shall be maintained in a sound and serviceable condition, and shall be reasonably expected to remain so for the useful life of the building. Work specified by our programs may attempt to restore sagging floors and roofs and bulging or out-of-alignment walls and foundations to as near to the original contours as practical. However, we cannot always level floors and walls since the stresses that caused these defects were applied progressively over a long period of time. The jacking and bending needed to correct these situations frequently creates new, more concentrated stress which often does more damage than good to the building, revealing itself in cracked plaster and rubbing doors or even the separation of structural members such as walls and floors.

All deteriorated structural members shall be replaced. Full replacement of systems is not always necessary and may not be financially or technically feasible; therefore, bracing, removal or redesigning of portions of the building may be necessary to effectively repair the system. Rehabilitation shall include improvements to the existing design (where feasible), stabilization of existing conditions to prevent further deterioration, and adequate repairs so as to minimize the chance of reoccurrence of a problem.

Foundations:

1. Must be capable of supporting building loads with no signs of stress, such as cracks and bowing.
2. Mortar must be sound and not eroded.
3. Must be rodent and termite proof.

Skirting must be installed appropriately on a base of sound design, and shall be of material intended by the manufacturer for this purpose.

Chimneys:

1. Shall be structurally sound with tight mortar, not leaning.
2. Shall be flashed or sealed properly at the roof and walls.
3. All holes in the chimney in the attic or structural space shall be sealed.
4. Unused chimneys shall be removed in conjunction with reroofing if their cost of repair exceeds the cost of removal. (Unless forbidden by Tennessee Historical Commission program requirements)
5. We do not repair chimney liners or rebuild fireplaces except where required by the Tennessee Historic Commission, or where roof repairs necessitate chimney repair.

Exterior Walls:

Every exterior wall shall be free of holes, breaks, loose or rotting boards or timbers, and any other conditions that might admit rain or dampness to the interior portions of the walls or to the occupied spaces of the building. All siding material shall be kept in good repair.

Roofs:

All roofs shall be maintained in a water repellent condition. Work performed under Community Development Department programs shall not allow for applying new shingles over existing shingles. Existing roofs shall be reasonably expected to remain serviceable for the next five years.

WINDOWS AND DOORS:

Windows:

All windows shall be maintained in the following condition as required:

- Weathertight,
- Glazing compound / seals secure and free of loose or deteriorated areas,
- Glass shall be intact and free of cracks,
- If operable (includes appropriate counterbalance system and locks),
- Screens required on all openable windows,
- Safety glass must be maintained where required by code.

When two or more windows are located in one room and some of them cannot be returned to a workable condition, the following exception may be applied with approval of the Rehab Supervisor: All but one may be sealed in a fixed position or removed in lieu of repair providing the following conditions are met:

1. The remaining window will provide the required ventilation and egress minimums.
2. All hardware must be removed from the sealed windows so as to identify them as sealed units.
3. The storm window must provide for removal of sashes from the outside for cleaning.

Required Window Sizes:

Window sizes must satisfy the light and ventilation requirements of the Property Maintenance Code.

Bedroom window sizes:

Each bedroom shall have an outside window or door operable from the inside without the use of tools, keys, or special effort. In Bedrooms where no door direct to the exterior exists, the Dept. standard is to provide at least one egress window in each Bedroom, providing a clear opening of not less than twenty inches in width, 24 inches in height, and 5.7 square feet in area. The bottom of the opening shall not be more than 44 inches above the floor.

In cases where the above referenced Bedroom egress window conditions do not exist, the owner may have the option of leaving the existing window configuration as long as it meets the requirements of the Property Maintenance Code. If the owner chooses to alter the window configuration to meet the above referenced Dept. standard Bedroom window sizes, the cost of such alteration shall be considered an Incipient expense.

Window Hardware:

All operable windows shall have the following hardware in good condition and installed as intended by the manufacturer:

- Sash lock that shall secure the window in a closed position, but may be operated from the inside without special tools or devices.
- A counter balance or latching mechanism that will secure the window in an open or partially open position.

All windows shall be kept in good repair, free of peeling paint and weathertight. When the cost of repair exceeds 75% of the cost of replacement of a window system, replacement is in order. Windows are extremely visible and have significant impact on the architectural character of a building, especially historically significant ones, and should be replaced with ones which are of similar size and appearance if at all possible. The Tennessee Historical Commission must approve all window modifications and replacements on contributing projects.

Doors:

Existing exterior doors that are to be replaced may remain existing sizes, providing the jamb is to remain in place. When re-framing or replacement of jamb or relocation of the door opening is required, the following minimum door sizes shall be required:

1. Bedroom: 2'-6" X 6'-8"
2. Baths: 2'-0" X 6'-8 (2'-4" preferred)
3. Closets: 2'-0" X 6'-8"
4. Linen Closets: no minimum
5. Exterior Doors: 2'-8" X 6'-8"

Doorways may be widened as a code cost item if needed for accessibility purposes.

All exterior egress doors shall open without a key from the inside (including security doors).

Safety glazing shall be installed where required by code.

All rental units shall receive solid core or steel exterior units on dwelling unit entrance doors to comply with Section 8 Rental Standards.

Door Hardware:

All doors shall have installed in good working order: a working door knob assembly, a minimum of two hinges (three hinge minimum on exterior doors), a solid jamb assembly with door stops, and shall be in good repair, free of cracks and warping. Doors shall not drag on floor coverings and shall not stick or rub. In addition, exterior doors (defined as any door between heated and non-heated spaces) shall have weather-stripping, a weather-stripped threshold, a passage or keyed door knob assembly, and a deadbolt lock. Security peep sites are allowed if requested by the owner and may be counted as an incipient cost.

Storm and Screen Doors:

Screen doors and storm doors are not required by the Housing Code, particularly with the treatment of air conditioning (and heating) as a code violation. Existing storm doors may be repaired if the repair is minor, but if replacement is required it will be considered a General Property Improvement unless there is a clear need for protection of the prime door, in which case it would be considered a Code cost.

Security Doors:

Security doors are not required by the Housing Code. Existing security doors may be repaired if the repair is minor, but if replacement is required or if the owner requests a new security door for safety, it will be considered an incipient cost.

PAINTING AND CEILING & WALL FINISHES:

Code requires that all exterior wood surfaces be protected from the weather by painting or other protective covering. We further require that all interior surfaces be so protected and that such coverings be maintained in a cleanable condition and be free from paint which is loose, chalking, cracked, chipped, peeling, or scaling. Walls and ceilings shall be maintained in a condition that is free from defective plaster and wallpaper. Also, refer to the Lead Based Paint Section below in regard to the presence and treatment of affected surfaces.

Lead Paint Abatement:

All residential facilities (with few exceptions allowed per federal regulations) receiving federal HOME and/or CDBG monies for rehabilitation assistance shall be evaluated for the presence of lead-based paint. A very basic guideline of these requirements follows; however, the complete applicability of this federal law can be found at 24 CFR 35.

Federal regulations require the elimination of lead based paint hazards and require us to take the following steps toward abatement.

1. The use of lead based paint is prohibited.
2. Occupants and property owners are required to be notified of the hazards of lead based paint.
3. Inspection is required of all buildings constructed prior to 1978. Painted surfaces that will be disturbed or replaced shall be tested for lead paint and treated if found to contain lead, or the surfaces may be treated without testing (with assumption of lead-based paint being present). Defective paint conditions must be corrected on all interior and exterior surfaces, as well as surrounding soil conditions.
4. The risk assessor must certify that inspections and tests are in compliance with the requirements and records must be kept indefinitely. A copy of the findings of the inspections, as well as recommended treatments, shall be furnished to the

property owner (and tenants, if a rental unit).

5. Tenants/homeowners shall be protected from the hazards of the abatement procedures. Generally, this will take place in the form of temporary relocation while rehabilitation work is performed.
6. On historically contributing properties, treatment must be performed consistent with the Secretary of the Interior's standards.
7. Disposal of paint must comply with Federal, State, and local requirements.

SIDING:

Code requires that exterior siding shall be maintained in such a condition as to be free from holes, breaks or deterioration. It must be intended by the manufacturer for use as exterior siding, and must be installed in accordance with the manufacturer's recommendations. It must be kept in such a condition that it will prevent the entrance of water or moisture into the interior wall surfaces and to within the structure of the wall.

In cases where it has deteriorated to a point where it cannot be restored to a sound condition, it shall be replaced or covered over with an appropriate substitute. Often a building will have more than one style of siding on its exterior; when incompatible styles of siding exists in a random pattern the removal and installation of a single, easily maintainable style may be considered the correction of an incipient code violation.

In cases where a building is considered to be contributing by the Tennessee Historical Commission, the replacement or repair of siding must comply with the Secretary of the Interior's standards.

FLOORS:

All interior floors shall be maintained in a clean and sanitary condition. The finished surface must be free of defects such as tears or uneven or weak sections. Bathrooms, laundry rooms, and kitchens shall have a hard surfaced, water resistant flooring that can be mopped and cleaned. The perimeter of all vinyl flooring shall be caulked to prevent water from penetrating the wear surface. All penetrations of the floors shall be caulked. Carpeted floors shall be laid over a surface that is even and is free from cracks or holes which might allow the entrance of insects or rodents, or which may cause tripping.

Carpet that is free of defects but visibly worn / soiled and at the end of its useful life, it may be replaced. Replacement of such carpet is to be considered an incipient cost. Existing laminate flooring in good repair may remain in place. New installations of laminate flooring are strictly prohibited.

REPLACEMENT HOUSE (RECONSTRUCTION) POLICY:

In the early 1990's, the federal government instituted a policy that allowed for funding of the

demolition and reconstruction of owner-occupied housing when it can be demonstrated that the reconstruction is the most economically feasible solution (that is, the cost of rehabilitation repairs exceeded the reasonable cost of building a new structure). In accordance with this policy, the City of Knoxville Community Development Department has instituted guidelines that shall be considered in determining the feasibility of rehabilitation, as well as the appropriateness and extent of reconstruction, if justified.

It shall be a matter of departmental policy that reconstruction of housing shall be limited to owner-occupied housing programs. The Rental Rehabilitation program offered by the Community Development Department does not offer a reconstruction option.

The replacement house provided shall not be required to be of equal size or design as the home it is replacing. Often, the replacement house is smaller in gross square footage or number of rooms provided. The City of Knoxville has standard designs for two, three and four bedroom homes that have been designed for function and affordability, and are generally used for the construction of replacement housing. One bedroom designs are prohibited. The City of Knoxville shall not provide 'custom' design services for program participants. If an applicant wishes to submit a comparably priced house beyond the standard designs provided by the City, that client shall be responsible for acquiring and compensating a private design professional, and furnishing finished plans (including floor plan, foundation plan, wall section and elevations) to the Community Development Department for review and approval. Final approval of 'custom' designs shall be determined solely by the Community Development Department, who shall reserve the right to decline financing assistance on any plan. If the applicant acquires additional funds from private resources, 'custom' designs that exceed the program requirements shall be reviewed on a case-by-case basis.

The Community Development Department periodically does a historical research on the pricing of replacement housing, both from national estimating resources and actual bids received on other comparably priced projects. Currently, the following overall guidelines apply to the size and construction of replacement housing in relation to program affordability:

- a.) the maximum size of a two bedroom house shall be limited to 950 gross square feet of living area;
- b.) the maximum size of a three bedroom house shall be limited to 1,100 gross square feet of living area;
- c.) the maximum size of a four bedroom house shall be limited to 1,300 gross square feet of living area;
- d.) replacement housing to be constructed in a historically sensitive area (as determined by the Tennessee Historical Commission or local overlays) shall be analyzed for cost vs. size on a case-by-case basis, and;
- e.) two bedroom homes shall be provided with one full bathroom, three bedroom homes shall be provided with up to 1-1/2 bathrooms, and four bedroom homes shall be provided with up to 2 full bathrooms depending on occupancy need and affordability.

General Property Improvements in Reconstruction

In general, the 'standard' plans have taken the provisions of the Neighborhood Housing Standards

into account when they were designed. Especially in cases where houses need to be ‘customized’ to meet a need (lot size, setbacks, etc), but also applicable to ‘standard plans’, the following items shall be considered GPI’s:

- a.) Square footage in excess of the guidelines given for housing units above, unless it is clearly demonstrated that the house design cannot meet minimum criteria within those square footages; as previously mentioned, all custom designs shall be reviewed by the Construction Management Supervisor prior to turning in an estimate to the financial analyst,
- b.) More bathroom than the maximums listed above.
- c.) More bedrooms than necessary to meet the code requirements for the family size (subject to review for multiple, unmarried adults occupying a structure, and any physician documented medical needs of the occupants);
- d.) Cabinetry in excess of the amounts given in the Neighborhood Housing Standards **or** the current ‘standard plans’ (whichever is more),
- e.) Excessive porch or decks beyond the limits currently employed within our standard plans (or their deviations; i.e., a full front porch ‘standard’ version).
- f.) In general, any non-code item fitting the description of a GPI as defined in the Neighborhood Housing Standards.

Of course, in the event of private financing, the scope of GPI’s beyond the normal 5% is allowable up to a total of 10% from all funding sources.

If General Property Improvement items can be identified in the design phase, it is certainly preferable to include these items within the bid package distributed at walk-through.

Accessibility / Visitability

‘Visitability’ is a term adopted by HUD to describe making an otherwise standard house accessible presently (or in the future) to a physically challenged individual. This would include larger (3’-0” wide) doors on all rooms, turning radii in bathrooms, exterior ramps (where practical and allowable by terrain), grab bars, and similar items to allow a physically disabled person to access and ‘visit’ the house, or allow a physically disabled person to occupy the house in the future.

All new construction shall be made visitable as defined by the Easy Living Homes program. Any project deemed to be not held to this visitability standard, must be approved by the Housing Manager.

Generally, in a household that has no current code-related need for the physically disabled features mentioned above, the desire to make the house meet these ‘visitability/accessibility’ features shall be the decision of the homeowner, and these features would be an incipient cost.

SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a2.0 Extermination and Pest Control	<p>Exterminate for termites, powder post beetles, rodents, or similar pests where evidence is apparent.</p> <p>Installation of screen fabric or other rodent proofing devices to prevent rodents from entering building.</p>	<p>Exterminate for termites, powder post beetles, rodents, or similar pests where evidence is not apparent.</p> <p>Installation of wire or enclosing overhangs to prevent roosting of pigeons or other damaging birds.</p> <p>One time renewal of annual contract for a house with an existing pest control contract.</p>	
a5.0 – a10.0 CONTOURING AND DRAINAGE	<p>All modification of yard or pavement contours that is intended to prevent ground water from draining through a foundation, into (or ponding around) the building, or causing erosion under or around a foundation, footing or slab on grade.</p> <p>All grading modifications that are intended to prevent a change in ground water flow onto neighboring properties, whether existing, or as a result of building construction, additions or changes.</p> <p>Changing the contours of a yard to prevent seepage of water into a crawl space or basement where no structural damage or threat is present.</p>	-	<p>Changes in contour to provide a level, accessible space for recreation.</p> <p>Changing the contour of a yard or terracing of a steep bank to make it more easily maintained.</p> <p>Completing an already started construction (i.e., retaining wall) or landscaping project which is not required for program compliance.</p>

SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a11.0 – 12.1 REMOVAL OF TREES OR SHRUBS AND BRUSH	<p>Removal of trees or limbs that are growing next to or through a foundation or pavement, causing excessive heaving or cracking.</p> <p>Removal of tree limbs which drag on (or are within six feet of) a roof or siding, causing damage to shingles, siding or fascia.</p> <p>Removal of diseased, dead, or girdled limbs or trees that are structurally unsound and which pose an immediate danger to the structure and/or persons.</p>	<p>Removal of live limbs or the topping of trees to reduce the danger of limbs falling on a structure or power line.</p> <p>Removal of trees or brush from a portion of a lot at the request of codes enforcement or owner.</p> <p>Removal of brush that encourages the breeding of vermin or impedes air circulation contributing to moisture accumulation in the structure.</p> <p>Removal of trees or limbs that contribute to significant accumulation of leaves in gutter or roof valleys.</p>	<p>Removal of trees for aesthetic reasons.</p> <p>Removal of limbs that do not pose a threat to the structure (common tree trimming).</p>
a13.0 GRASS	<p>Reseeding of ground disturbed by construction work; i.e., excavation for plumbing lines, re-contouring, or excavation of foundations.</p>	<p>Preparation and seeding of grass where it is necessary to prevent further erosion.</p>	<p>Re-seeding of lawn with a more desirable or disease-resistant variety.</p> <p>Any sod placements.</p>
a14.0 – 16.0 SIDEWALKS AND STEPS	<p>Repair of a broken or bowed exterior sidewalk or steps to eliminate a dangerous situation.</p> <p>Replacement or installation of a sidewalk necessary to travel from the street or driveway to the nearest door of a building.</p> <p>Replacement of a broken, collapsed, or weak steps, or where riser heights exceed those allowed by code.</p>	<p>Replacement of a broken sidewalk that has no loose or moving pieces.</p> <p>Replacement of a set of steps or sidewalk to eliminate a set of steps with uneven riser or tread (unless dictated by the Building Inspector).</p> <p>Replacement of the primary sidewalk to a required exit because it is too narrow (24" or less).</p>	<p>Installation of new sidewalks/steps for aesthetic reasons or convenience.</p>
SPECIFICATION	PROGRAM	PREVENTATIVE	GENERAL PROPERTY

REFERENCE NUMBER/NAME	REQUIREMENT (CODE)	(INCIPIENT)	IMPROVEMENT (GPI)
a14.0 – 16.0 SIDEWALKS AND STEPS (CONTINUED)	Installation of a wider than standard sidewalk and/or construction of a ramp at homes where a wheelchair is in use by a current occupant.	Repair of a broken, bowed, or uneven sidewalk that does not present an imminent danger.	
a17.0 – a17.1 DRIVEWAYS	Installation of a driveway or parking surfaces where required by code for off-street parking (note: this is a city ordinance and applicable city-wide).	Replacement of a driveway that is breaking up or holding storm water, or heaved due to root growth or erosion. Use of materials above what is required by City ordinance.	
a18.0 – 23.0 DEMOLITION	Demolition necessary to access building components to complete required work. Demolition of dilapidated portions of a building that are not required to provide the minimum habitable space for the existing permanent building occupants, and where the cost of rehabbing that portion of the building exceeds feasibility guidelines. Demolition of condemnable accessory structures on the same property. Demolition of primary structures where replacement housing is to take place.	Demolition of walls, wall and ceiling coverings, etc. to restore a substandard attic or basement to utility use.	Demolition intended to produce a major design change or change in use. Removal of plaster and lath where not needed to obtain a smooth wall or ceiling finish. Removal of wall or ceiling coverings solely to install cavity insulation.
SPECIFICATION REFERENCE	PROGRAM REQUIREMENT	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)

NUMBER/NAME	(CODE)		
a24.0 ROOM ADDITIONS (Includes new space allocation, revised floor plan, or reuse of interior spaces)	To provide sufficient sleeping or living space for existing permanent occupants of a dwelling unit as required by Property Maintenance Code To provide accessible bathroom for permanent occupant of building requiring such facilities.	To provide an accessible bathroom for 'visitability' purposes, as defined in these Neighborhood Housing Standards. To provide room for expected new family members where their occupancy is certain (i.e., pregnant mother residing in a one bedroom home).	Family rooms, dens, studies, and other rooms not required by code for the occupancy of the building.
a25.0 – 26.0 FOUNDATIONS	Replacement of bowed, leaning, cracked or missing portions of building foundation. Additional sections of foundation to fill in between piers where additional support beyond the piers is necessary. Repair or closing of openings in a foundation.	To replace weak portions of a foundation which are not bowed or sagging. Additional sections of foundation to fill in between piers supporting a building in cases where existing piers are providing adequate support.	For GPI room additions.
a27.0 CONCRETE PORCH	To replace a deteriorated concrete porch. Installation of a deck (3'x3' slab) to provide a code required landing outside an entrance door.	To replace a deteriorated wooden porch which needs replacement where the owner is not capable of continued maintenance. Replacement of a wood porch where the design requires too frequent maintenance or replacement, such as a porch too close to the ground. This may be done where it does not conflict with Historic concerns.	To replace a sound porch. To enlarge an existing porch.
SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)

a28.0 RETAINING WALLS	<p>To support an endangered foundation.</p> <p>Where failure has already occurred and where that failure threatens a structure or safety.</p> <p>To replace a broken existing wall that supports a portion of the yard in cases where failure will risk structure, adjacent property or public safety.</p>		Constructing walls primarily for landscaping purposes (i.e., terracing of banks not threatening the structure).
a31.0 CONCRETE APRON	To prevent storm water intrusion which will seriously damage building systems.	To reduce erosion along drip eaves in lieu of gutters.	
a31.3 CONCRETE SLAB	<p>To provide a floor for a room where proximity to the ground has caused constant maintenance and/or too frequent replacement of flooring (and is now in need of repair/replacement).</p> <p>As a base for mechanical equipment.</p>	As an entry stoop.	<p>To provide additional storage in the basement or crawl space.</p> <p>To add or increase the size of a porch beyond what is required by code.</p> <p>As a patio.</p>
a37.0 – 41.1 CHIMNEYS AND FIREPLACES	<p>Removal of existing chimneys or blocking of existing fireplaces to prevent their use where unsafe, or to prevent heat loss.</p> <p>Repair of chimneys above the roof (both used and unused chimneys).</p>	<p>To repair mortar erosion in the early stages of deterioration.</p> <p>Repair or removal of a chimney that is deteriorated to the point that it will soon be a health hazard or danger.</p>	<p>Adding chimneys for fireplaces.</p> <p>Chimney cleaning services for an operable fireplace.</p>
SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a37.0 – 41.0	Repair of chimneys	Repair or replacement of	

CHIMNEYS AND FIREPLACES (continued)	<p>below the roof where they present an immediate health or fire hazard.</p> <p>Repair as required by the Tennessee Historical Commission (THC).</p>	<p>fireplaces and mantels to produce a completed project: attaching loose parts, etc. These repairs are to be limited to minor repairs, not installation or rebuilding of fireplaces. Fireplaces are inefficient heat sources and we do not deal with their repair for reuse. Sealing of chimneys and fireboxes is the preferred alternative.</p>	
a42.0 –53.0, 54.0-62.0 STAIRS AND RAILINGS	<p>Wheelchair ramps where occupancy is intended for the disabled.</p> <p>To provide stairs or rails for code compliance.</p> <p>Replacement of stairs to bring risers and tread width and/or depth to uniform height.</p>	<p>To provide railings to assist individuals with mobility difficulty where they are not technically disabled, or in cases where future disabilities are a predictable result of a diagnosed disease.</p> <p>Use of vinyl or metal railing materials in lieu of wood.</p>	<p>Decorative railings where not necessary to correct a code violation.</p>
a63.0 – 72.0 ROOFING	<p>To remedy an active leak condition.</p> <p>To complete a partially completed roof project.</p> <p>To replace roofs where the life expectancy is less than 5 years.</p>	<p>To replace or repair worn roofing or roofing which has more than a 5 year life expectancy, but less than 10 years.</p> <p>To remove roofing in good condition when installed over three or more layers of previous roofing.</p>	<p>To change style, color, and/or material.</p> <p>To remove roofing in good condition which has been installed over less than three layers of previous roofing materials.</p>
SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a73.0 AWNINGS	To provide protection	To protect an exposed	For shade or aesthetic

	for a landing or exterior stair from snow or ice accumulation when that landing or stair is the primary entrance (and/or required egress). This applies to both rental and owner occupied units.	wooden door. To replace existing dilapidated awnings.	reasons.
a74 – 78.1 ATTIC VENTILATION	To bring ventilation into code requirements of the residential building code.		Changing style of vents for aesthetic reasons.
a79.0 – 82.0 GUTTERING	Gutters shall be required on all residential structures unless other design considerations adequately protect the structure. PVC extension piping to prevent endangering foundation and/or to prevent directing water onto neighboring property.	Installation of gutter leaf guards.	Changing of gutters for aesthetic reasons.

SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a83.0 – 90.0 SIDING AND SOFFIT	<p>To replace existing deteriorated siding and/or soffit.</p> <p>Installing vinyl siding where replacement cost for wood plus paint exceeds 80% of vinyl siding.</p>	<p>To protect the house where no overhang exists.</p> <p>The cost of siding replacement plus paint exceeds 50% of the cost of installation of siding and/or soffit.</p> <p>Asphalt siding is deteriorated over more than 10% of the surface and appropriate replacement material is no longer available (antiquated siding installations).</p> <p>Where solid appearing siding has been exposed too long or shows inability to hold paint.</p> <p>Where existing siding is so mixed in style or color as to be unsightly, or is installed in ways not intended by the manufacturer.</p> <p>Where it is recommended by the Rehab Specialist (and approved by the Construction Manager) because owner has a physical inability to maintain siding.</p>	<p>The installation of siding and/or soffit not covered as code or incipient.</p> <p>To reduce maintenance of siding as a convenience to the property owner.</p>

SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a91.0 – 133.0 CARPENTRY	<p>To replace deteriorated wood components.</p> <p>To correct structural damage and/or code deficient situations.</p> <p>To correct poor design or function of wood assemblies.</p> <p>To replace missing portions of a building.</p> <p>To meet compliance with Tennessee Historic Commission guidelines.</p> <p>To add building components or facilities as required under specific program guidelines.</p>	<p>To correct situations where untreated wood has been used in locations conducive to decay (cases where decay is minimal or not yet present).</p>	<p>Decorative carpentry.</p>
a135.0 – 147.0 FLOORS AND FLOOR COVERINGS	<p>To provide structural safety.</p> <p>To provide vinyl or other water resistant floor covering in all Kitchens, Bathrooms and Laundries.</p> <p>To replace severely worn or torn floor coverings.</p> <p>When required for the repair of sub-floor or structural repairs below or when required when</p>	<p>Carpet and pad when a floor is solid but too rough for paint or vinyl and this is the lower cost option.</p> <p>To replace worn, but not torn, floor coverings.</p> <p>Professional carpet cleaning.</p> <p>Refinishing of hardwood floors with a worn finish.</p>	<p>Replacement for aesthetic reasons.</p> <p>The additional cost of flooring materials above that required (increase in quality above materials allowed by General Specifications).</p> <p>Refinishing of hardwood floors without a worn finish.</p>

	<p>rearranging the floor plan or fixture locations.</p> <p>Replacement of unworn carpet with documented medical condition or mobility issues.</p>		
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SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
<p>a148.0 – 157.0 WALLS AND CEILINGS</p> <p>(Replacement)</p>	<p>Enclosure of Lead Based Paint where required by HUD regulations.</p> <p>To eliminate cracked, falling, moldy, or water softened surfaces.</p> <p>To complete unfinished sections of walls and/or ceilings in spaces required to meet the intent of these standards.</p> <p>To provide a level and solid surface for the application of tub tile.</p> <p>At applications where a fire resistance rating is required by code.</p>	<p>To eliminate worn paneling that is beyond reasonable repair, and cannot be matched.</p> <p>To eliminate wallpaper that is loose or soiled and cannot be cleaned.</p> <p>To eliminate paneling that is known to produce toxic fumes when burned or which does not comply with current fire and building codes.</p> <p>When the existing surface is so fragile that the repair processes will likely cause weakening or deterioration of adjacent surfaces (i.e., when the condition of plaster can not be reasonably determined and where there are indicators of stress in other areas).</p>	<p>To replace acceptable and/or repairable surfaces.</p> <p>To complete unfinished sections of walls and/or ceilings in spaces not required to meet the intent of these standards. (i.e., extra bathrooms, etc.)</p>
<p>a158.0 – 178.1 WINDOWS</p>	<p>To correct broken or deteriorated conditions, i.e., when windows do not open, or glass is broken.</p> <p>To obtain energy efficient window glazing. i.e. single pane windows.</p> <p>To provide weather protection for existing</p>	<p>To reduce maintenance.</p> <p>Replace when repair parts are not available.</p> <p>To correct existing non-complying code deficiencies such as inadequate light, ventilation, or egress (in non-bedroom applications).</p>	<p>For appearance, or increased interior lighting beyond the minimum code requirements.</p>

	<p>wood windows such as with the addition of exterior storms.</p> <p>Removal of security bars when required by the Building Inspector.</p>	<p>Removal or replacement of security bars covering egress windows with new units that meet the current code requirements.</p>	
SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a179.0 – 202.0 DOORS	<p>To correct broken or deteriorated conditions.</p> <p>To obtain energy efficiency.</p> <p>To provide safety, such as required egress, or in replacing a hollow core exterior door with a solid core door.</p> <p>To obtain access for required mechanical equipment or appliances.</p> <p>When/where required by codes.</p> <p>To provide security from forcible entry.</p> <p>Removal of double keyed deadbolts from exterior egress doors.</p>	<p>Installation of storm or security doors.</p> <p>Repair of Storm or Security Doors.</p>	
a203.0 – 207.0 CABINETS	<p>Replacement of cabinets beyond reasonable repair. When replacing cabinets, the guidelines listed in the “Kitchen Storage Space” section on page 11 of these Neighborhood Housing Standards shall be adhered to.</p> <p>Repair cabinets that are in a deteriorated condition.</p>	<p>Relocating existing or new kitchen facilities as part of floor plan modifications.</p> <p>Replacing existing cabinets that are in a deteriorated condition.</p>	<p>Installation of additional cabinet space beyond the limits set in the ‘code’ column at left (and listed in the “Kitchen Storage Space” section on page 11 of these Neighborhood Housing Standards).</p> <p>Replacement of otherwise serviceable and repairable cabinets.</p> <p>Replacement of cabinets to ‘update’ or ‘modernize’ a kitchen</p>

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SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a208.0 – 215.0 INTERIOR PAINTING AND WALLPAPER AND EXTERIOR PAINTING	<p>Abatement of all lead based paint surfaces on rehabilitation cases exceeding \$25,000.</p> <p>Interim Control of all lead based paint surfaces on rehabilitation cases less than \$25,000.</p> <p>Removal and replacement of all loose or peeling paint (lead or non-lead).</p> <p>Painting of all exposed wood and other permeable surfaces except pressure treated or naturally decay resistant wood surfaces.</p>	<p>Repainting of surfaces that are dirty or where painted more than five years ago.</p> <p>Covering unsightly colors or graffiti.</p>	
a216.0 – 220.0 INSULATION	<p>Installation of additional insulation to attics to provide a minimum R-38.</p> <p>Installation in accessible floor spaces to provide a minimum R-19.</p> <p>Installation of insulation in new walls, and all walls from which the interior and/or exterior covering is removed during construction. Walls shall be insulated to a minimum of R-14 <u>13</u></p>	<p>Removal of wall covering and installation of additional insulation in areas where it is necessary to provide additional insulation around plumbing.</p> <p>Installation to a greater R-factor than required when special circumstances warrant (such as a house presently heated with electric heat, or where heat costs are a hardship to the owner). In these cases, cost of insulation should be balanced with the cost of installing a new heating system for the most economical package available to the owner.</p>	Removal of wall covering for the purpose of installing insulation and/or vapor barrier to existing walls.

SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a221.0 – 227.0 HEATING AND AIR CONDITIONING	<p>Installation or repair of HVAC System capable of maintaining an interior temperature in all habitable rooms of at least 68 degrees Fahrenheit. When determining eligibility for replacement, the guidelines in the ‘Heating’ section (pages 15-16) of these Neighborhood Housing Standards shall be used.</p> <p>Installation of additional ductwork to provide heat to unheated required habitable space from an existing central furnace.</p> <p>Installation of permanent heat to replace portable or unvented or coal/wood burning heat systems.</p> <p>Installation of insulation to existing central furnace ductwork to provide more heating efficiency.</p>	Installation of through-the-wall blowers to assist with the even distribution of heat to all habitable rooms.	
SPECIFICATION	PROGRAM	PREVENTATIVE	GENERAL PROPERTY

REFERENCE NUMBER/NAME	REQUIREMENT (CODE)	(INCIPIENT)	IMPROVEMENT (GPI)
a229.0 – 250.0 ELECTRICAL	<p>Removal of all non-code compliant wiring and devices.</p> <p>Installation of GFI receptacles above Kitchen counters and in baths, and on exterior of house per code.</p> <p>Installation of bathroom vents where no window exists in bathroom.</p> <p>Replacement of all substandard devices (i.e., panel box, mast, lighting, etc.)</p> <p>Installation of smoke detectors as required.</p> <p>Installation of additional circuits for ranges, refrigerators/freezers, microwaves, washers and dryers.</p>	<p>Door bell and phone wiring.</p> <p>Installation of additional wiring to bring receptacles to current code requirements.</p> <p>Retaining minimal service to garages and other structurally adequate out buildings.</p>	<p>Pre-wiring for future appliances.</p> <p>Rewiring of an existing light fixture where the cost exceeds replacement with a minimal compliant fixture.</p> <p>Installation of more than two ceiling fans.</p> <p>Installation of microwave/vent combo units.</p> <p>Providing electrical service to garages and other structurally adequate out buildings where no current service exists.</p>
SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)

<p>a251.0 – 287.0 PLUMBING</p>	<p>Replacement of all leaking or defective plumbing, including fixtures beyond reasonable repair.</p> <p>Installation of minimum bathroom and kitchen facilities where none exist.</p> <p>Replacement of dilapidated bath vanities.</p> <p>Installing missing parts to code, i.e., water heater overflow pipes, pans, back flow preventers, etc.)</p> <p>Replacement or installation of water heaters capable of producing 120 degree heated water.</p> <p>Adding cut-offs to supply lines.</p> <p>Facilities as needed for disabled occupant.</p> <p>Minor repair of defective plumbing fixtures.</p>	<p>Relocating bath and kitchen fixtures in conjunction with floor plan changes.</p> <p>Replacement of drains that are not compliant to current codes and which are not being addressed in scope of work, such as “S” traps.</p> <p>To provide shower where only a tub exists.</p> <p>Installation of bath vanities instead of the required wall-hung lavatories where linen storage is limited, or where a vanity existed before.</p> <p>Moving hose bib from yard to more protected location in foundation.</p> <p>Installation of sump pumps in basements or crawl spaces.</p> <p>Replacement of galvanized water supply lines and cast iron DWV lines that are currently operational.</p>	<p>Installation of dishwashers, ice makers, garbage disposals, second baths, or bidets.</p> <p>Installation of more than one hose bib or relocating an existing hose bib unless new location requires less pipe, or is other wise at lower cost (EXCEPTION: where more than one exists, replacement in or near existing locations is eligible under the incipient category).</p>
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SPECIFICATION REFERENCE NUMBER/NAME	PROGRAM REQUIREMENT (CODE)	PREVENTATIVE (INCIPIENT)	GENERAL PROPERTY IMPROVEMENT (GPI)
a288.0 – 299.0 SPECIALTIES	<p>Installation of a moisture resistant wall covering around a bathtub with shower unit. This includes re-grouting of tile, re-caulking, etc.</p> <p>Installation of necessary appliances (ramps, grab bars, etc.) for disabled individuals.</p> <p>Installation of a minimal medicine cabinet with mirror above all vanities.</p> <p>Installation of a metal clothes dryer vents to the exterior of the building to code.</p> <p>Installation of fire extinguishers in rental units.</p> <p>Installation of house and apartment numbers.</p> <p>Installation of shower curtain rod.</p> <p>Repair or replacement (if necessary) of a range and refrigerator in the kitchen.</p>	<p>Bath accessory kits (code in rental units).</p> <p>Repair or re-grouting of existing wall tile beyond the tub area.</p> <p>Replacement of operable range/refrigerators for the purpose of energy efficiency.</p>	<p>To make rooms more convenient.</p> <p>General Remodeling.</p>

OTHER OPTIONS:

The following remedies may occasionally be necessary in extreme cases where limited resources jeopardize a complete rehabilitation of the structure, where the condition of the structure before rehab clearly indicates that the occupant is unlikely to adequately maintain the property following rehabilitation, or where there is general disagreement with the course of the rehabilitation process:

1.) CLEAN UP OF PREMISES PRIOR TO PROCEEDING WITH REHABILITATION:

The Rehabilitation Specialist, upon arriving at a property for initial inspection, shall not proceed with an inspection of conditions in unsanitary, unsafe, or constrained areas. Such conditions can only lead to incomplete evaluations; guesswork that can either add cost to the project, or result in vital work not being included within the write-up. In cases where adequate inspections cannot be made because of clutter, unsanitary conditions, hazards, or inaccessibility of spaces, the situation shall be corrected by the property owner prior to proceeding with the rehabilitation process. The Rehabilitation Specialist shall clearly explain the conditions to be corrected prior to re-inspection, and a note placed in the file explaining the circumstances. It is then the responsibility of the property owner to correct the situation, and notify the Rehabilitation Specialist that the property is ready for re-inspection.

2.) CLEAN UP AND MAINTENANCE OF PROPERTY DURING THE APPLICATION PROCESS:

All tenants are responsible for maintaining their dwelling unit in a clean sanitary condition along with the shared or common areas. This includes the keeping of all plumbing fixtures in a clean and functioning condition. They must dispose of their garbage and keep the area free of rubbish.

It is also unlawful for the owner or occupant of a building to utilize the premises for open storage of abandoned cars, refrigerators, glass building materials, rubbish, or similar items. They are also responsible for keeping the premises free of overgrowth, dead trees, etc.

Every tenant of a single family house has the responsibility for the control of insect, pests, and rodents. This is the owner's responsibility in buildings of two or more dwelling units.

Cleanup is not only a responsibility of the property owner, but it can make a significant difference in the cost of rehabilitation. In situations where clutter, filth, or even excess personal property prevents access by bidding contractors, bid prices are usually inflated to protect the contractors from the risk of the unknown, frequently at a substantial cost. If a contractor expects to be required to work around a cluttered or unsanitary conditions, or if he must clean up and haul off debris before he can start a job, the cost may well be several thousand dollars. Homeowners shall be encouraged to understand this, and encouraged to clean and maintain their property prior to soliciting bids. In extreme cases, this may require intervention by Codes Enforcement or by a social service agency, especially with the elderly or when owners do not have the means to accomplish this on their own. **Unless exceptions are made due to a hardship situation, and depending on the extent of the problem, this can be a reason for disqualifying an applicant.**

3.) REMOVAL OF UNUSED STRUCTURES, ROOMS AND/OR APPLIANCES:

Since the restraints of funding cannot be ignored, it may occasionally be necessary to reduce the costs of a project by not treating all of the structure, or even by removal of a portion of the structure, when the cost of correcting code deficiencies exceeds removal.

- a.) All dilapidated and unused or unnecessary portions of a house or accessory building on the property which are not being maintained and for which there is insufficient funding to repair shall be removed.
- b.) Where the interior space of a house is larger than needed by the family residing within, a section of the house may be considered as unused, non-inhabitable space and not rehabilitated, providing it is in compliance with minimum code requirements. In such cases, all dangerous or unsanitary conditions, all fire hazards, all conditions which encourage vermin and insect infestation, and all accumulation of junk shall be corrected. Where a portion of the house is going to remain, but not be habitable space, the intentions of rehabilitation shall be clearly noted on the page one notes of the work write up.

4.) PARTICIPATION IN REHABILITATION PROGRAMS IS VOLUNTARY:

As a property owner, participation within the housing programs sponsored by the Community Development Department is voluntary. There may be instances where the property owner disagrees with the recommendations of the Department, either on the inclusion or exclusion of individual work items, or the overall course to be taken in the case (i.e., reconstruction vs. rehabilitation).

In such a case, the property owner shall be made aware that program guidelines dictate that:

- a.) Housing that is constructed or rehabilitated with housing funds must meet all applicable local codes, rehabilitation standards, ordinances, and zoning ordinances at the time of project completion. Desired items cannot be chosen, while others are left out; the program requires a complete 'package'.
- b.) The most financially feasible solution to the family's housing needs shall be pursued, not only to increase affordability to the family, but to ensure that program resources assist the maximum number of families possible.

At any time in the process, up to the actual start of construction, the property owner may refuse assistance within the program without any financial liability. However, the decisions of the Department in terms of financial feasibility and the correction of code violations and/or housing deficiencies shall be final.

If the homeowner so chooses, they may proceed with rehabilitation and finance any portions of the work that may fall outside the parameters of the programs (i.e., a third bedroom in a new house where family size dictates two bedrooms, or in the case of General Property Improvements beyond the funding allowed by our programs).