

Virginia Department of Housing and Community Development

AHP Program Minimum Design, Construction, and Housing Rehabilitation Standards

"Rehabilitation" is defined as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values."

The purpose of these standards is to establish guidelines, define when DHCD will undertake a rehabilitation project, and what must be accomplished to qualify the project as a success as dictated by the Uniform Housing Code.

HUD regulations require that all houses receiving major rehabilitation work be brought up to a minimum standard. This document represents DHCD's efforts to meet HUD's requirements. The minimum Housing Rehabilitation Standards are derived from the standards based on the provisions of the Uniform Building Code (UBC), Uniform Housing Codes, and HUD Section 8 Minimum Housing Quality Standards.

For purposes of this document the following definitions are applicable:

Rehabilitation: A method to provide decent, safe and sanitary housing to low and moderate-income individuals, it is not a method to provide remodeling and/or renovation.

Standard Housing: A well-maintained residential structure constructed on a permanent, stable foundation exemplifying solid structural integrity reflecting weather tightness that insulates against the elements and that incorporates the basic mechanical systems of plumbing, electricity, heating, hot water, toilet facilities, and kitchen facilities as prescribed in the Uniform Building Code.

Sub-Standard Housing: A residential housing unit that lacks any of the following: A permanent solid foundation, exemplifies a lack of structural integrity and weather tightness; lacks minimal insulation, has deficiencies in the basic mechanical systems in that they do not meet current UBC, or evidences deferred maintenance to the degree that the structure becomes subject to increased decay.

The following standards are set forth only as minimum standards and should be reviewed by contractors, developers, homeowners and city/county officials as minimum requirements that provide guidance in undertaking rehabilitation projects. Consideration will be given to the requirements established by the Local Building Department and Fire Department, prior to beginning rehabilitation work.

Some of the standards may exceed minimum code requirements of the Uniform Housing Codes but they are being presented to meet minimum quality standards required by HUD.

I. Site Conditions must meet the following criteria:

Positive Drainage: All drainage on a site should drain away from the house and other accessory buildings, but not toward any adjoining houses or structures. Drainage should be toward the street, alley, or easement, and facilitated by elevation around structures or construction of swales.

Splash Blocks: All houses should be provided with splash blocks, aprons, or gutter extensions to carry water away from foundations. When concrete sidewalks and patios exist, splash blocks are not required.

Architectural Barriers: In recognition of the Americans with Disabilities Act, every effort should be taken to remove barriers to the handicapped or elderly. These will include installation of handrails on staircases with more than three tiers, ensuring that the height of each step does not exceed four to seven inches in height and nine inches in tread width. When pouring new sidewalks and stoops, ramping should be considered as an alternative to steps. Tripping situations caused by uplifting of sidewalks, tree roots, or other barriers should be removed.

Holes or Depressions: Holes or depressions of more than six inches in diameter should be filled to correct drainage problems and remove safety hazards.

Trees, Bushes and Grassed Areas: Trees that present a safety hazard because electrical wiring runs through them must be trimmed as directed by Dominion Power, or the local fuel and power company as prescribed. Trees that could damage the structural integrity of an adjoining building above or below the foundation should be removed. All unsightly and overgrown trees in the yard and in the right-of-way should be trimmed as prescribed by the local Department of Forestry, if applicable. Bushes and brush in a yard should be trimmed in the same manner, but any vegetation on the property line will require approval in writing by the adjoining property owners. While the installation of grass is not proposed to be a standard, the property owner is required to keep all ground vegetation below eight inches, excluding flowers and other similar plants. However, the maintenance of lawns is strongly encouraged.

Dilapidated and Accessory Buildings: Any structure that is in a state of disrepair or collapse must be repaired or demolished, and any collection of building materials. If there is a prevalence of abandoned ash pits that are not utilized as trash containers, they should be demolished and removed. They impose both a fire and safety hazard for children playing in neighborhood alleys and easements. All property owners must agree to clean up these site deficiencies.

Bulk Trash: Bulk trash, including refrigerators, stoves, washers, dryers and other appliances; un-licensed automobiles and other vehicles; and improperly stored construction materials or firewood are bulk trash and should be removed or appropriately stacked as prescribed by the local Nuisance Ordinance, if applicable.

Sidewalks: All accesses to residential structures should have a three and a half foot of sidewalk that connects with other sidewalks or driveways to provide access to the house that can be maintained in snowy weather conditions. Sidewalks from rear door entrances to garages, garbage disposal areas, and around to the front are not required and need not be provided unless they are needed to control drainage conditions.

Storm Gutters and Driveways: Deteriorated gutters on streets that impede drainage or cause a safety hazard should be reinstalled. This also applies to driveway approaches. Deteriorated driveways should be replaced as a second priority item; meaning that if the cost of rehabilitation exceeds prescribed thresholds they may be left as is. The installation of driveways is encouraged but is not necessary if costs reach predetermined thresholds.

II. Foundations must meet the following criteria:

Stability: The foundation must be stable and not sinking, window openings must be level, and top of foundation at base of structure must be level. The foundation should also be constructed of solid concrete of at least six inches wide and 36-inches deep on a footing of 12-inches wide and six-inches deep for a one-story structure. On two story residential properties, the foundation must be eight-inches wide and 36-inches deep on a footing of 15-inches wide by seven inches deep. Reconstruction of foundations must adhere to the city/county's foundation design including the installation of rebar. Lack of stability beyond a reasonable level will preclude rehabilitation being undertaken.

Collapsed Sections: Collapsed sections of foundations must be reconstructed as prescribed by city/county code or a stamped engineer's blueprint. Consideration should be given to the degree to which the remaining foundation meets the minimum Uniform Building Code.

Cracks: Inspectors should evaluate foundations to identify cracks, particularly at window areas. All cracks must be filled with epoxy, cement, and rubbed with appropriate cement materials. All cracks with more than a 1/8 inch spread must be investigated by a licensed engineer and have an appropriate treatment applied, if economically feasible.

Inappropriate Construction: All foundations constructed of brick, unfilled cement block, cinder block, mixtures of rock and cement, railroad ties, and other treated wood are unacceptable and will disqualify a structure from receiving rehabilitation unless the construction occurs in less than 25% of the foundation and the foundation could be reconstructed economically.

Spalling Foundation: Spalling refers to the condition exemplified by crumbling gravel or rock, decaying concrete, collapse of foundations in sections that do not expose dirt on the outside, etc. When these conditions exist, foundations must be treated with epoxy and concrete mixtures that will correct major deficiencies. Spalling of foundation surfaces of not less than one inch in depth may be left untreated, but treatment is recommended when rehabilitation cost thresholds are not an issue.

Waterproofing: All foundations evidencing leakage from the outside will require waterproofing. Cracks will be sealed as proposed above. Leaking around foundation floors will be sealed by

utilizing an appropriate waterproofing compound. Leakage through foundation walls should be corrected by providing positive drainage, concrete aprons, or in severe cases by digging out the dirt around the foundation and weatherproofing with an approved water proof material. Removing dirt around foundations and water proofing with tar materials is not recommended for more than 30% of the foundation walls, due to cost considerations.

III. Structural Integrity must meet the following criteria:

Structural Integrity: This means that the exterior walls are weather tight and do not permit entry of water, snow, or wind into the interior. There cannot be any holes in the exterior walls, separation of siding materials, collapse of siding or deterioration of exterior siding materials. All exterior walls must be of standard construction with two-by-fours, 16 inches on center or 24 inches on new construction when appropriate. Insulation sheathing on the exterior, covered with approved exterior siding material, is to be installed when repairs are done.

Weather Tight Exterior Walls: In addition to the above siding considerations, there cannot be cavities between the exterior wall and windows, door entries, or openings at the rafters at the rim joist. All deficiencies must be corrected.

Additions: All additions to residential structures must be on a properly constructed foundation and must not evidence separation from the original structure. Many additions are constructed on concrete slabs that may cause separation. When these conditions exist, they may preclude rehabilitation from being undertaken.

Siding Material: Asbestos siding is not an inappropriate siding material unless it has become broken and detached and is exposing the insulation fabric to the weather. When possible, asbestos siding should be repaired. Asphalt siding is considered to be an inappropriate material by the local Fire Department. It may be covered by a fire retardant siding material when rehabilitation is undertaken. Only older deteriorating asphalt material will be considered for such treatment. Interior paneling, untreated plywood, Sheetrock and other materials that do not hold up to the weather in the area are deemed inappropriate and must be removed.

Bearing Walls: Bearing walls in a structure should be identified and inspected for proper construction. When they are lacking in basements, new walls or support beams and jacks must be installed to maintain the integrity of the structure. No bearing walls may be removed when undertaking rehabilitation unless appropriate construction procedures are applied and required supports are installed to compensate for their removal.

Painting and Exterior Walls: While chipping, cracking and deteriorating paint is not a structural problem, the local city or county's rehabilitation effort require these conditions to be corrected. If the structure was built prior to 1978, in particularly when there are children residing in the house, the local city or county requires that a lead-base paint analysis be conducted. When lead-base paint is found to exist on exterior walls they must be resided with an appropriate siding material. (See HUD Lead-Based Paint regulation.)

Historic Considerations: All structures in historic districts or those with architectural features that exemplify unique architectural characteristics must be given special consideration. The State Historic Preservation Office shall be involved in making specific decisions affecting these projects.

IV. Roofs MUST MEET THE FOLLOWING CRITERIA:

Roofing Specifications: DHCD has developed a roofing specification which requires that when replacing any roof with more than two layers of shingles, all roofing materials must be replaced to the deck for inspection by the local city or county's Building Department prior to re-roofing. Re-roofing requires 30 lb. felt paper, and depending on the slope, T-locks, three tab, or roll roofing as prescribed by the City/County Code.

Trusses and Supports: On structures over 50 years of age, the truss and support system of roofs must be inspected to ensure adequate construction. When deficiencies are identified, appropriate supports and truss systems must be reconstructed.

Chimneys: All non-functioning chimneys must be removed and the cavity repaired with at least half inch weatherproof plywood. All exhaust vents must be located at least two feet above the roof; and all attic spaces must be vented through the roof or through other appropriate areas.

Slope Requirements: All roofs must have at least a four inch to one foot slope. Roof areas not having such a slope should be considered for reconstruction to meet minimum slope requirements. Reconstruction should occur whenever the reconstruction area is wider than nine feet on the stooped side and leaking cannot be prevented by installation of rolled roofing or rubberized roofing membrane.

Fascia and Soffit Board: All fascia and soffits around the perimeter of a roof should be inspected for deterioration and replaced, caulked, and painted when necessary. Houses exemplifying exposed rafters do not necessarily have to be reconstructed to cover with fascia and soffits. Fascia board, however, should be installed whenever gutters are needed.

V. Interior Walls must meet the following criteria:

Fire Barriers: Five-eighth inch Type X Sheetrock is required under joist in garages that have a living area above them and on walls in garages adjoining living quarters. Five-eighth inch Type X Sheetrock is also required when another structure is within five feet of the wall being reconstructed as part of the rehabilitation activity. No cardboard materials, paper materials, tar paper, or exterior insulation materials, such as fiber board, will be permitted in any walls. All interior walls should be ½ inch Sheetrock. Paneling materials must be placed over Sheetrock.

Damaged Interior Walls: Holes in Sheetrock must be repaired and precautions taken to prevent future damage by installation of door stops and other necessary measures. Water damaged Sheetrock must be removed and replaced. In bathrooms, water proof green rock, blue rock or other similar drywall material must be utilized. Interior walls with decayed Sheetrock must be repaired by installing new Sheetrock, taping cracks, texturing and repainting.

Interior Trim in Baseboard: All damaged door trim and baseboard must be removed and replaced.

Paint: A lead-based paint analysis must be conducted on houses constructed prior to 1978 that evidence chipping, flaking, cracking and otherwise deteriorating paint. If testing reveals the existence of lead-based paint surfaces, they must be removed or covered as prescribed by HUD Lead-Based Paint regulations.

Ceilings: All cracked or deteriorating ceilings require an inspection to determine the cause that generated the problem. Every effort should be made to correct the problem before the ceiling is repaired. Cracks must be filled and retextured, and the ceiling completely repainted when treated. When ceiling material does not evidence fire retardation or solid construction, it should be replaced with ½ inch Sheetrock and treated.

Tile and Waterproof Areas: When there is decaying ceramic or plastic tile in bath or shower areas, the deteriorated area must be removed. Water proof Sheetrock must be installed, and old or new tile reinstalled, grouted, and caulked. Backslashes in kitchens and above other sinks may also be required depending on the condition and layout of sinks and other plumbing.

Minimum Interior Height Condition: All interior living areas are required to be at least seven and one-half (7 ½) feet in height. All interior door openings must be six feet, eight inches (6'8"). Rehabilitation will not be undertaken in rooms that do not provide at least seven (7) feet of head clearance.

VI. Kitchen Facilities must meet the following criteria:

Minimum Cabinet Requirements: All kitchens must have sufficient base cabinets to house a kitchen sink and provide at least 36 inches of usable counter-top area. At minimum, three feet of upper cabinets must be available to store dishes. These minimum requirements should be expanded to optimize kitchen storage areas, but within reasonable limits controlled by costs. When a cabinet's level of wear makes it unsanitary or nonfunctional, it should be replaced. All replacement cabinets must be of minimum quality grade and approved by the project manager, prior to ordering.

Counter Tops: All counter tops showing evidence of wear, water damage, uplifting of surface material, etc. must be replaced. Replacement counter tops may include prefabricated laminated counter tops when walls are sufficiently square. When walls are not square and constructed of plaster materials, counter tops must be built in place, using 5/8 inch plywood with formica laminated on the plywood and on the front lip. Backsplash must be of the same laminated material or ceramic tile as prescribed by the homeowner and the City or County.

Faucets: All kitchen plumbing must be inspected to ensure that faucets and drain pipes work properly. When new counter tops require sink removal, new sinks and faucets must be provided if they show wear. All new sinks must be vented as prescribed by the Uniform Plumbing Code

(UPC). New sinks must be 20 gauge (not the cheapest sinks available). New faucets must be Delta stainless steel. P-traps and other drains under the sink shall be metal and not plastic.

Stoves, Refrigerators and Fans: Stoves, either gas or electrical, should be inspected. Installation of fans sometimes requires installation of a cabinet for attachment of the fan.

Flooring: Worn flooring with uplifted tiles, missing tiles, and uplifted cracked areas, etc., require that new flooring be installed. The use of indoor, outdoor, or other carpeting is discouraged due to sanitation considerations. These conditions can be addressed by installing vinyl floor covering when the owner agrees to the treatment.

Lighting and Electrical: GFI outlet receptacles will be required on all counter tops within six feet of sink areas. Minimum lighting in kitchens will consist of one lighting fixture in the kitchen cooking area and one lighting fixture in an adjoining eating/dining area, if the lighting is inadequate. The use of fluorescent lighting is an acceptable alternative.

VII. Baths must meet the following criteria:

Minimum Requirements: The minimum standard in a residential structure is as follows: One functional toilet, lavatory, towel rack, ring or hook, and either a shower or a bathtub. Any additional baths in a house, at minimum, must contain toilet stools, towel rack, ring or hook and a lavatory.

Sinks: All faucets must have hot and cold water knobs and must be in good functioning condition. The sink must have a proper drain with P-trap and be vented to the outside as prescribed by the Uniform Plumbing Code. A shut-off valve at the water line connection is required when replacements are made. Replacement of sinks will involve use of pre-finished medium grade vanities, one piece cultured marble sink tops and Delta or better faucets.

Ventilation: All bathrooms must have an operational window or a functional electric vent fan.

Doors: All bathroom doors must be at least 28-inches wide by 6 feet 8 inches in height, and have locking doorknobs from the inside of the bathroom or have other ways of locking the door (standard bathroom door knobs).

Tub Enclosures: All bath or shower facilities must have waterproof enclosures. These enclosures can include ceramic tile, plastic tile, or fiberglass molded enclosures. They may not include brick, linoleum, floor tile, or other permeable materials. On baths that do not have showers, an 18-inch high waterproof skirting must be provided utilizing any of the above acceptable materials.

Flooring: All bathroom flooring must be inspected at the base of the toilets to ensure that leaking is not occurring. When leaking has occurred and sub floor has rotted, the sub floor must be removed and replaced by half-an-inch plywood. Whenever a toilet is removed for any purpose, new toilet wax-ring gaskets must be installed. Any flooring material that permits water to seep

into the sub floor is unacceptable. Carpeting in bathrooms is generally not be considered an appropriate floor material.

Medicine Cabinets and Mirrors: Because children should be prevented from easy access to medicine, cabinets are required in most bathrooms. Mirrors must also be provided when they are not present.

Lighting: All bathrooms must have at least one light that can be switched from the inside. Lights switched from the outside generally do not need to be moved, unless rewiring to be conducted in the house. All receptacles must be GFI type in bathroom areas.

VIII. Bedrooms MUST MEET THE FOLLOWING CRITERIA:

Minimum Bedroom Sizes: The minimum size for a bedroom will be 7 feet by 10 feet, but larger sizes should be encouraged. When new construction is involved, minimum size will be 11 1/2 feet by 9 feet.

Closets: All bedrooms must have access to closets for storage of clothing. On existing housing, closets in adjoining hall areas are acceptable.

Windows: All bedrooms must have an egress window in addition to the door. Egress windows must be no more than 44 inches from the floor and permit at least 5.7 square feet of egress area. Windows must be operable and have locking mechanisms. If there are living accommodations in a basement, an egress window is required.

Doors: All bedrooms must have a functional door that closes, which, preferably can be locked from the inside. The width must be at least 28 inches, but bedroom doors are commonly 30 inches wide or larger. When new construction is undertaken, a 32 inch door should be considered. The door cannot have punctures or holes. The door may be of hollow core material.

Lighting: All bedrooms must have one switchable light fixture, preferably in the interior of the bedroom next to the entrance.

Outlets: Outlets are required to permit coverage of the entire room by an appliance with a six-foot cord. Use of extension cords is discouraged and additional outlets should be provided whenever possible to avoid their use.

IX. General Electrical must meet the following criteria:

Service: All residential properties should have adequate electrical service to a mast above 10 feet from the ground. Each house must have a 110 and 220 voltage service and an electrical breaker box accessible from the interior of the house. The electrical switch boxes on the exterior must be capable of being locked.

Knob and Tube Wiring: Knob and tube wiring in attics is not acceptable when insulation covers the wires. This type of wiring needs to expel heat through the insulation and is considered

to be a potential fire hazard when covered by insulation. Knob and tube wiring in attic must be replaced with romex whenever insulation is to be undertaken. Knob and tube wiring in walls where insulation is not to be accomplished may be left intact.

Ground Faults: Ground fault electrical outlets must be provided within six feet from any sink or lavatory. Also, they should be provided to provide coverage for all outdoor outlets and garages.

Safety Considerations: All electrical connections must be in enclosed metal or plastic electrical boxes. No hanging wires are permitted. All light fixtures should be inspected to ensure that they are solidly hung and that the electrical connections have not been loosened. All electrical fixtures that evidence wear must be replaced with new fixtures. All electrical outlets and switches must have tight cover plates. Any switches or outlets which are non-functional must be inspected by a licensed electrician and all electrical problems corrected. Light switches to basement areas, particularly when there is an open staircase, must be double switched at the top and bottom of the stairs. Living quarters are preferred to be electrically switched at entrances. Exterior lighting at the front and back doors must be provided. These lights must be weather proof and switched from the interior at the entrance.

Service to Accessory Buildings: Electrical service to garages and large storage buildings must be inspected. If they are found to be inappropriate or lacking, service may be provided, but only at minimal levels and the service should be ground faulted. Protection must be provided.

X. General Plumbing must meet the following criteria:

With regard to plumbing, it may be the policy of the City or County, when doing federally funded housing rehabilitation, to require the following minimum plumbing:

Type of Pipe: All repairs undertaken must be accomplished with standard copper pipe and with soldered fittings. Plastic and galvanized pipe that needs to be replaced may be repaired with similar materials. Whenever galvanized or lead pipe is found and is in significant disrepair, copper pipes will be used.

Venting: The Uniform Plumbing Code requires that all drains be vented. All drains that are changed as a result of replacing fixtures must be vented in accordance with the Uniform Plumbing Code. All drains must be provided with appropriate P-traps and vented in accordance with the Uniform Plumbing Code.

Faucets: All replacement faucets must be metal with chrome plating or stainless steel material. All faucets must be washerless. Consideration should be given to elderly or handicapped individuals requiring handicap faucet knobs to facilitate use of toilet and kitchen facilities.

Floor Drains: All basement facilities must have a functional floor drain.

Functional Sewer Lines: Each residential property must have its own functional sewer line. All houses with problems with sewage backup must be investigated and repairs made to the sewer line.

Shut-off Valves: All fixtures which are removed and replaced require the installation of shut-off valves.

Water Meter Readout: A water meter readout on the outside of the house must be provided whenever possible.

Gas Meters: All gas meters located on the inside of the house must be moved to the outside of the house.

Vent Stacks: All vent stacks must be at least one foot above the roof and appropriately sealed to prevent infiltration of water.

Water Heaters: In areas of high-water pressure, water heaters must have expansion tanks.

XI. Weather Tightness must meet the following criteria:

Primary Windows: Primary windows are not to be replaced unless they are rotted and are permitting the infiltration of air, snow or rain. Rotted sills and trim may be replaced or covered to eliminate decay or to cover lead-based paint. All primary windows should have locking devices for security.

Storm Windows: Double glazed storm windows on all exterior window openings are required. Storm windows may be aluminum, painted metal or vinyl whichever is most economical.

DOOR: When door jambs are still in good condition or the doors are of unusual sizes, solid core wood, prefinished or unfinished doors will be provided. All exterior doors should be provided with locking hardware and deadbolt security locks. All new and existing doors must be weather-stripped and a weather tight threshold installed when necessary. Use of hollow core veneer and panel doors are substandard and not acceptable..

Wall Insulation: When the framing is exposed, fiber glass rolled insulation must be installed. When siding is in bad condition or when there is evidence of lead-based paint, ½ inch insulating Styrofoam may be installed under new siding material.

Roof Insulation: All ceilings under attics or roofs must be insulated to at least an R-30. Blown-in insulation will be utilized to accomplish the work in the most economic fashion. If any other treatment is proposed by the owner, the owner will be responsible for the difference in the materials.

Exterior Siding Materials: Asbestos siding will be acceptable and will not be replaced unless over 25 percent of the exterior surface evidences broken or fallen siding. Asphalt siding is generally considered as a fire hazard by the local city or county Fire Department and old siding of this type should be considered for removal and be replaced. In some cases, the siding may be left as an insulating material. All holes in the walls must be repaired and cracks filled with caulking to prevent infiltration of the weather.

Exterior Siding Repairs: Exterior paneling materials such as unpainted plywood, Sheetrock, tar paper, cardboard, or metal patches are unacceptable siding materials.

Rim Joist and Crawl Space Materials: When basements are unfinished, an effort will be made to caulk the rim joist around the house and insulate the rim joist areas. Insulation under floor joists in crawl spaces may be considered but should be reserved for areas of new construction unless such areas are easily accessible on and then only in areas that are unheated.