



Lake County Consortium Property Rehabilitation Standards

HOME Investment Partnerships Program/CDBG/NSP1&3



Lake County Consortium

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1. ADMINISTRATION

A. Introduction

The Lake County, IL Property and Rehabilitation Standards (PRS) are designed to provide a standard framework for single-family housing (1-4 units) rehabilitation projects that are funded under the Lake County Consortium (Consortium) through the HOME Investment Partnerships Program, Community Development Block Grant Program (CDBG), and the Neighborhood Stabilization Program (Rounds 1 & 3). All funded entities and/or subrecipients receiving funds from the Consortium shall adopt and agree to abide by these standards.

Staff members of Consortium-funded entities shall therefore use this document to:

- Implement the Consortium’s priorities (see Lake County Consortium Consolidated Plan)
- Define the scope of work for each project
- Develop project work write-ups
- Assure required compliance with regulations
- Provide standards for quality, performance and durability

B. Applicable Codes, Regulations, Standards and Guidelines

These codes, regulations, standards and guidelines are hereby referenced as a part of the PRS:

- 1) The 2012 International Property Maintenance Code
- 2) State and local Building Codes, Zoning Codes and ordinances in force in each jurisdiction
- 3) The International Energy Conservation Code
- 4) The Uniform Physical Condition Standards (UPCS) of the Department of Housing and Urban Development
- 5) Manufacturers’ Standards and Installation Instructions
- 6) Residential Construction Performance Guidelines for Professional Builders and Remodelers
- 7) Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings
- 8) Regulation on Lead-Based Paint Hazards in Federally-Owned Housing and Housing Receiving Federal Assistance
- 9) The EPA Renovation, Repair and Painting Program Final Rule (RRP)
- 10) Residential Remodeling and Universal Design: Making Homes More Comfortable and Accessible
- 11) Uniform Federal Accessibility Standards (UFAS) and Illinois Accessibility Code (Note: Check applicability to single-family)
- 12) HUD Maintenance Guidebook #7 – Termite, Insect and Rodent Control
- 13) Uniform Federal Accessibility Standards or ANSI A117-1
- 14) The Materials and Methods Standards adopted by each subrecipient as per 24 CFR 92.251(b)(i)

15) Other standards as referenced in the text of the PRS

C. Categorization and Prioritization of Work

The Property and Rehabilitation Standards seek to set priorities for the scope of work to be completed in the rehabilitation of houses. The following definitions shall apply:

Shall: Means that the work related to this item must be done

Should: Means that, when economically feasible, work related to this item will be done

May: Means that, when economically feasible, work related to this item may, but will not necessarily, be done

Shall not: Designates items of work prohibited from being done

D. Minimum Property Standard

All rehabilitated properties shall, after rehabilitation, comply with the minimum requirements of the 2012 International Property Maintenance Code and the Uniform Physical Condition Standards (UPCS) of the Department of Housing and Urban Development. Provisions of the PRS shall supersede the Property Standard where more stringent, or protective, or in disallowance of work as ineligible. At no time shall a standard, specification or code be permitted that is less stringent than the minimum property standard hereby adopted. Repairs made as a part of the rehabilitation shall have a life expectancy of at least 5 years with a goal life expectancy of 15 years. Installations completed during the course of rehabilitation shall have a life expectancy of 15 or more years.

For rental housing, upon project completion, each of the following major systems must have a remaining useful life for a minimum of 15 years or the major systems must be rehabilitated or replaced as part of the rehabilitation work: structural support; roofing; cladding and weatherproofing (e.g., windows, doors, siding, gutters); plumbing; electrical; and heating, ventilation, and air conditioning.

E. Code Compliance

All work shall be done in compliance with the Building Codes, Zoning Codes and applicable ordinances in force in each jurisdiction.

Permits shall be obtained as required by the jurisdiction and permitted work shall be inspected and approved by the local jurisdiction or its designee. Documentation of permits, inspections and approvals shall be maintained in the Subrecipient's property case file for each project and submitted upon request to the Consortium.

F. Suitability for Rehabilitation

Substandard dwellings that cannot be brought into compliance with these Property and Rehabilitation Standards and applicable code requirements shall be deemed not suitable for rehabilitation and shall not be rehabilitated. If the after rehab value of the assisted property is determined to exceed 95% of the median purchase price for the area as published by HUD, the property shall be considered not suitable for rehabilitation for non-compliance with 92.254 of the HOME regulation.

G. Enforcement

Any subrecipient, beneficiary, developer or contractor funded under the any of the applicable programs is contractually obligated to comply with the provisions of the PRS and failure to comply shall be considered a violation of the written agreement, loan agreement or contract and may result in termination of funding and repayment of funds expended.

2. WORK REQUIRED, ALLOWED AND PROHIBITED

A. Substandard Conditions and Allowed Improvements

Each item of work conducted under the Consortium’s programs shall contribute to one or more of the following priorities, and items that do not contribute to one or more of the following priorities shall not be done. Conditions, the addressing of which contribute to achieving the following, shall be or should be considered to be substandard conditions, depending upon their seriousness and status of compliance with the applicable codes, standards and guidelines.

Priority 1 – Shall be addressed immediately.

- a. Life threatening deficiencies (Procedures yet to be defined – see code definition of “imminent danger”)

Priority 2 – Deficiencies shall be remediated by the rehabilitation.

- a. Meet all applicable code requirements for existing residential structures and the rehabilitation work conducted upon them.
- b. Control or eliminate lead hazards
- c. Treat incipient conditions which will result in deficiencies within 5 years.
- d. Install disaster mitigation improvements (yet to be defined- See Durability by Design, 8.2 Recommended Practices, HUD PD & R 2002))
- e. Protect health and safety of occupants and make the unit a “Healthy Home”
- f. Improve accessibility to permit use by a person with a disability

Priority 3 – Should be remediated and shall be remediated to the extent that project funding allows before addressing Priority 4 items.

- a. Enhance energy efficiency
- b. Protect and extend the life expectancy of the dwelling

Priority 4 – Discretionary housing improvements may include modest amenities and aesthetic features if funding is sufficient. Examples include, but are not limited to:

Improvements to the street presence (appearance) of the property, improving low (but adequate) water pressure, cracked window glass not posing a safety hazard, replacement of worn flooring, installation of all-weather driveway, repair of defective paint in post-1978 homes, replacement of worn countertops, replacement of non-functioning appliances, fencing for defensible space.

Discretionary housing improvements shall be in keeping with housing of a similar type in the community and must avoid luxury improvements. (See B below)

B. General Prohibited Work / Ineligible Items

Examples of prohibited work/ineligible items include, but are not limited to the installation of:

All materials, fixtures or equipment of a type or quality exceeding that customarily used on properties of the same general type as the property to be rehabilitated or reconstructed or built; reimbursement for an owner's labor; room additions (unless required to comply with occupancy limitations at IPMC Section 404); purchase, installation or repair of furnishings; demolition that does not improve the structure or remediate a deficiency or unsafe condition; free standing concrete block walls; interior wood paneling; bookcases; barbecue pits/outdoor fireplaces; bath houses; swimming pools; dumbwaiters; greenhouses; photo murals; kennels; ceiling fans; new installation or repair of TV antennas; tennis courts; valances, cornice boards, and drapes; saunas and hot tubs; flower boxes; and installation of greenhouse windows.

Abandonment, repair or replacement of the above mentioned items is permissible as only required to mitigate a life safety risk, if disturbed during rehabilitation, or if required, per code, or to comply with these Property and Rehabilitation Standards.

3. QUALITY

A. Material Quality

New material of appropriate quality, meeting the requirements of referenced codes, standards and guidelines or codes in force in the jurisdiction, and meeting the specifications of the nationally recognized authority for the type of material, shall be used. The funded entity shall specify the appropriate material in the work write-up and specifications and materials and methods standards. Used material shall not be installed unless specified in the work write-up and approved by the property owner and by the funded jurisdiction prior to installation. Equipment and materials shall comply with the work write-up, materials and methods specifications and the Manufacturer's Standards.

B. Work Quality Performance

Work quality shall conform to work write-ups and materials and methods specifications, which shall require compliance with Manufacturer's Standards and Installation Instructions. The level of quality for the product installations delivered shall meet or exceed the "Residential Construction Performance Guidelines for Professional Builders and Remodelers," Fourth edition or later.

4. LEAD-BASED PAINT HAZARD ELIMINATION

All residential properties subject to Title X and 24 CFR Part 35, HUD's "Regulation on Lead-Based Paint Hazards in Federally Owned Housing and Housing Receiving Federal Assistance", shall be rehabilitated in accordance with that regulation and the Illinois Lead Poisoning Prevention Code, 410 ILCS Part 845. All work on properties subject to the EPA Renovation, Repair and Painting Final Rule, 40 CFR 745, shall be rehabilitated in compliance with those rules. (See Section 16 below regarding accessory structures and outbuildings.)

A. Risk Assessment

For all properties subject to the lead regulations, in accordance with 24 CFR Part 35, a risk assessment and lead-based paint inspection shall be conducted, which shall identify lead-based paint and hazards on the entire site including, but not limited to, accessory structures and play areas. Any risk assessment shall be performed by an Illinois State Certified Risk Assessor in accordance with the requirements and guidelines found in Chapter 5 of the HUD Handbook – "Guidelines for the Evaluation and Reduction of Lead-Based Paint Hazards in Residential Housing".

B. Work Practices and Occupant Protection

A Work Practice and Occupant Protection Plan shall be produced for each subject property in accordance with 77 IAC 845.255. When occupants are present in a property, occupants shall be temporarily,

voluntarily relocated as required in the HUD regulation. With some exceptions, the occupants shall be temporarily relocated before and during lead hazard reduction activities to a suitable, decent, safe and similarly accessible dwelling that does not have lead hazards. Occupants shall be allowed to remain in place only if they will be protected during their continued occupancy in accordance with the Work Practice and Occupant Protection Plan, which shall include a project time schedule and floor plans describing required containment areas, and which shall be submitted by the contractor and shall be approved by the Risk Assessor and the Rehabilitation Specialist, and acknowledged by the property owner and occupants before any work begins.

C. Security

When occupants are relocated, measures appropriate to maintaining the security of the property may be incorporated into the project.

D. Clearance

Prior to re-occupancy, clearance examinations shall be performed by qualified personnel and final clearance shall be achieved as required by the HUD and Illinois regulations. (77 IAC 845.295)

5. HISTORIC PRESERVATION

The rehabilitation of dwellings subject to the Section 106 review process of 36 CFR Part 800 and located within a residential historical district, or listed on the National Register of historic places, or locally landmarked, shall comply with the findings and recommendations of any pertinent historic preservation public body recognized or established by the local municipal jurisdiction in which the Consortium-assisted property is located. Rehabilitation work shall be guided by the U.S. Department of the Interior's, "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings."

6. FLOOD PLAIN MANAGEMENT

The rehabilitation of flood-prone residential structures shall comply with applicable federal, state and local regulations and laws. The rehabilitation of dwellings located in a floodplain in jurisdictions participating in the Flood Protection Management System shall comply with the applicable Federal Emergency Management Agency regulations and the "Design Manual for Retrofitting Flood-Prone Residential Structures", or design standards determined by the local certified community.

7. ACCESSIBILITY AND UNIVERSAL DESIGN

A. Accommodation of Resident's Needs

Modifications to accommodate the needs of residents with respect to accessibility and safety shall be made to the extent feasible and as limited by the configuration and construction of the property. Fire sprinklers shall be installed in homes for wheelchair- bound populations when economically feasible.

B. Modifications

All architectural elements newly built, modified, replaced or installed in the course of rehabilitation should, to the extent feasible, be in conformance with the precepts of Universal Design, as described in the HUD publication, “Residential Remodeling and Universal Design: Making Homes More Comfortable and Accessible”. Modifications made to improve accessibility should meet or exceed the requirements set forth in the Uniform Federal Accessibility Standards or ANSI A117.1.

C. Levels

One of the following levels of accessibility may be met, dependent upon the clients’ physical needs and financial resources:

Visitability:

- 1) No-step entry
- 2) Adequate doorways
- 3) Usable bathroom

Usable Home: If requested by a physically disabled occupant, home shall meet this level of accessibility when funding is available:

- 1) Accessible route into and through the dwelling unit
- 2) Accessible switches, outlets and controls
- 3) Reinforced walls for grab bar installation
- 4) Usable kitchens
- 5) Ground floor bedroom

Full Accessibility:

- 1) Wheelchair turning space in kitchen, bath and hall areas
- 2) Doors – maximize space and lever hardware throughout
- 3) Kitchen – accessible to wheelchair bound
- 4) Bathroom fixtures per universal design standard
- 5) Accessible controls in all areas
- 6) Communication devices in bath and at front and rear door

8. PEST MANAGEMENT

All required extermination of pests and vermin should be carried out by a pest management professional using the precepts of integrated pest management as outlined in the publications, “Guidance in Integrated Pest Management” from the U.S. Department of Housing and Urban Development and the HUD “Maintenance Guidebook #7 – Termite, Insect and Rodent Control.” Extermination activities shall minimize the use of poisons and pollutant substances within the living environment.

9. FIRE PROTECTION AND SMOKE ALARMS

All fire protection systems and devices shall be maintained in operable condition.

A. Smoke Alarms

Smoke alarms shall be installed in accordance with the International Residential Code, Section R313 Smoke Alarms or the requirements of the code in force in the local jurisdiction where its requirements are more protective. Smoke alarms shall receive primary power from the building wiring and shall have battery backup. Multiple smoke alarms shall be interconnected, such that activation of any one alarm will activate all others. Smoke alarms shall, at a minimum, be installed in the following locations:

- 1) On each story including basement and cellar
- 2) Alarms are not required in unfinished attics and crawlspaces
- 3) Outside of each bedroom
- 4) In each bedroom

Exceptions: Battery operated smoke alarms may be installed, and existing smoke alarms are not required to be interconnected, in existing areas of buildings where repairs do not disturb interior finishes, unless wires may be run through an attic or other space without disturbing interior surfaces.

When a dwelling is occupied by any hearing impaired person, smoke alarms shall have an alarm system designed for hearing impaired persons in accordance with NFPA 72 (or Successor Standards)

B. Foam Plastic, Flame Spread and Smoke Density

Foam plastic materials, walls and ceiling finish materials and insulation materials that have a flame-spread classification greater than 200, or a smoke-developed index greater than 450, shall not be installed during construction, rehabilitation, or repair, as outlined in the International Residential Code, Section 315. Where these types of materials exist, they shall be covered with safe materials or removed and replaced. (Note: This section may not pertain to conditions commonly found)

10. ENERGY CONSERVATION

- a) Each assisted dwelling unit should be made more energy efficient.
- b) Energy evaluation shall be conducted either by a local program representative, using the Applicable Project Recommendations and the Home Energy Saver calculation of the HUD Energy Efficient Rehab Advisor available at www.rehabadvisor.pathnet.org, or by a qualified Energy Evaluator using an equivalent or more detailed analytic system.
- c) Energy conservation measures evaluated to have a payback period of 5 years or less shall be accomplished to the maximum extent feasible and as limited by available funding and the existing construction in accordance with the International Energy Conservation Code.
- d) Equipment, appliances, windows, doors and appurtenances replaced during rehabilitation shall be replaced with Energy Star qualified products.
- e) All heating and cooling systems shall undergo system-specific maintenance and all fuel burning heating systems shall undergo system-specific maintenance and combustion efficiency analysis.
- f) Heating and cooling equipment over 15 years old, or which cannot be repaired to a condition having a life expectancy of at least 5 years, shall be replaced. Replacement heating and/or cooling systems shall be properly sized as evidenced by completion of ACCA/ANSI Manual J® or an equivalent sizing calculation tool. Replacement gas-fired forced air furnaces shall be 90% or more efficient and shall be of two-pipe design drawing combustion air from the exterior.
- g) All air ducts shall be tightly sealed where accessible.
- h) Heating or cooling supply runs through unconditioned space shall be avoided and, when present, should be rerouted. When runs through unconditioned space are present, in a condition where they must remain in unconditioned space, they shall be insulated.
Installed lighting fixtures shall be of the compact fluorescent or similarly energy efficient type.
Bulbs replaced in existing fixtures should be of the compact fluorescent or LED type.

11. ENVIRONMENTAL QUALITY

The scope and conduct of rehabilitation of each dwelling unit shall take into consideration the improvement and maintenance of satisfactory and healthy air quality within the unit.

- a) Carbon monoxide alarms shall be installed in residential units where fossil fuels are combusted, and residential units with attached garages. Carbon monoxide alarms installed as per manufacturers' recommendations shall be present in such dwelling units within 15 feet of each room used for sleeping as per 430 ILCS 135. Carbon monoxide alarms should be present or installed on each floor of the dwelling, may be installed in each bedroom, or in accordance with local code where requirements are more protective. Alarms should receive primary power from the building wiring. When installed in combination with interconnected smoke alarms, they shall be hardwired and interconnected with the smoke alarms.

- b) In any planned work area where it is suspected that friable asbestos may exist or be disturbed, rehabilitation work shall not be conducted until a determination is made by properly licensed firms, and trained or accredited persons. Such work shall be conducted in a manner which complies with applicable asbestos laws and regulations. Remediation shall be accomplished as required by the assessment.
- c) Each assisted dwelling unit shall be tested for radon. Testing may be done by a licensed radon measurement professional or the property owner. When testing is performed by the property owner, instructions for testing using short-term testing devices shall be provided by the rehabilitation program. The property owner shall perform short-term measurement carried out in accordance with the instructions of the device manufacturer. The short-term test shall be carried out in accordance with IAC Title 32, Part 422, Section 422, Appendix B, Recommended Testing strategy for Measurements in Buildings Involved in Real Estate Transactions. If the test result is less than 4pCi/L, remediation is not required and the property owner shall be advised to re-test in two years. If the test result exceeds the recommended action level, currently 4pCi/L, remediation by a licensed radon mitigation specialist shall be performed to meet or exceed the requirements of the International Residential Code, Appendix F.
- d) Any presence of mold is unacceptable and shall be addressed per the National Center for Healthy Housing protocol “Creating a Healthy Home” at http://www.nchh.org/Portals/0/Contents/FloodCleanupGuide_screen_.pdf
- e) Water infiltration and dampness shall be eliminated. Elements of the building envelope and site drainage shall shed water and shall provide drainage to a suitable location. Sources of excess moisture and condensation within the building envelope shall be mitigated.
- f) Mechanical ventilation to remove excess moisture and indoor pollutants from the living spaces may be installed.
- g) Installations shall use paperless gypsum board or cement board at all potentially damp areas to prevent mold.
- h) Installed flooring shall be of a type with low or no off-gassing such as concrete, ceramic tile, Forest Stewardship Council (FSC) certified wood flooring, or bamboo with low urea formaldehyde content in its binders.
- i) Installation of carpeting should be minimized. Installed carpeting should be of a type with low VOC content and recyclable fiber and backing content.
- j) Onsite building materials shall be protected from rain and moisture to prevent mold growth.

12. WATER CONSERVATION

All plumbing fixtures, faucets and accessories replaced in the course of rehabilitation shall bear the EPA WaterSense® label. Where faucets, spray devices, shower heads and similar fittings remain in place, they

shall be retrofitted with a WaterSense® labeled aerator, laminar flow device or spray device. These requirements are subject to the availability of appropriate products as listed at http://www.epa.gov/watersense/product_search.html

13. STREET PRESENCE OF THE PROPERTY

Amenities of a non-luxury nature, enhancing the street presence of the property, may be installed. When installed, documentation that such amenities are comparable to unassisted homes in the market area, shall be a part of the Subrecipient's project file.

- a) The exterior of the property should present a positive street presence, contributing to the quality of the neighborhood. Work necessary to achieve a positive street presence should be accomplished. When repainting of the property is required, it should be painted in a non-monochromatic color scheme, as selected from a recommended palette of the paint manufacturer, consistent with the neighborhood character.
- b) Accessory structures and fixtures on the property should be an asset to the street presence of the property, or should be refurbished to a condition such that they shall be an asset or should be removed. (See 16 below)
- c) Existing landscaping elements should undergo maintenance, trimming, pruning, refurbishing, removal or replacement to a condition that makes them asset features of the property providing a positive street presence.
- d) Plantings to shade paved areas for environmental improvement should be considered.

14. ON-SITE SEWAGE SYSTEMS

All plumbing fixtures shall be connected to an approved sewage disposal system. All private sewage systems shall be tested to ensure that they are properly and adequately functioning. If problems exist, they shall be corrected in compliance with the Illinois Private Sewage Disposal Licensing Act and Code, and the Public Health Ordinance for Lake County. Each such system shall be individually assessed with respect to cost and its impact upon project feasibility.

15. PRIVATE WATER SYSTEMS

Private water systems shall be approved and shall be tested for contamination. Water samples shall be properly taken and tested for common contaminants by an approved testing laboratory. Unhealthful contamination and system defects shall be remediated. Each such system shall be individually assessed with respect to cost and its impact upon project feasibility.

16. ACCESSORY STRUCTURES AND OUTBUILDINGS

All accessory structures, including detached garages, fences and walls, shall be maintained structurally sound and in good repair as per IPMC 302.7.

All elements of the residential property including surrounding land, outbuildings, fences, play equipment available for use by residents, but not including land used for agricultural, commercial, industrial or other non-residential purposes, not including paint on pavement of parking lots, garages or roadways, shall be subject to lead-based paint hazard elimination requirements at #4 above.

17. REHABILITATION STANDARDS FOR MOST COMMONLY SPECIFIED WORK AND PROBLEMATIC ISSUES

A. Site Improvements

1. *Outbuildings / Removal*

Repair standard: 75% or more salvageable

Minimum life – 5 years

Unsafe, illegal or unapproved structures, including outbuildings, additions and patio covers will be removed if it is not financially feasible (up to \$4000) to complete repairs required to make them structurally sound, leaf-free and IPMC-compliant and zoning code legal.

Replacement standard – No outbuildings shall be provided, except for the replacement of an existing detached garage. Exceptions: On a case-by-case basis, deviations from the minimum requirements of these standards will be permitted with approval of the Consortium.

2. *Paving and Walks*

Repair standard:

Minimum life – 5 years

Deficient, essential paving, such as front sidewalks, will be repaired to match. Non-essential, deteriorated paving may be removed.

Replacement standard:

Minimum life – 15 years

Essential walks and drives shall be replaced with 4" thick, 4% air entrained, 3000 PSI concrete with metal reinforcement (as needed) or asphalt driveways: level surface by compacting a 4" gravel base over a uniformly graded and compacted subgrade, form, spread and roll 2" of bituminous base coat, and 1" topcoat to create a driveway 10' wide. Pitch water from building with a 1/8" per foot slope. Permeable paving is allowable provided it is first approved by the appropriate local agency.

3. *Landscaping and Drainage*

Repair standard:

Site shall be graded to direct water to run away from foundation. Trees that are too close to the structure may be trimmed or shall be removed. Trees which are a safety hazard must be removed.

Replacement standard:

Front yards may be landscaped with a \$500 maximum allowance in for-sale homes only and \$2000 for rental developments.

4. *Fencing/Gates*

Repair standard:

Minimum life – 5 years

Fencing shall be repaired to code and UPCS, if feasible, or removed.

Replacement standard:

When funding is sufficient for non-essential improvement, additional wood or wrought iron fencing may be installed to create defensible space in conformance with zoning and neighborhood/homeownership association requirements.

5. *Swimming Pools / Hot Tubs*

Repair standard:

Minimum life – N/A

Not permitted by federal financing. Pools may be filled.

Replacement standard: N/A

B. *Exterior Surfaces*

1. *Exterior Cladding*

Repair standard:

Minimum life – 5 years

Siding, trim, soffit and fascia will not be deficient as per Section 304 of the IPMC. All exterior wood components will have a minimum of one continuous coat of paint, and no exterior painted surface will have any deteriorated paint as per Section 304.2.

Replacement standard:

Minimum life – 15 years

Historically sensitive vinyl siding, with 45 year material warranty and/or aluminum trim.

2. Exterior Porches / Balconies

Repair standard:

Minimum life – 5 years

Unsafe or unsightly porches and balconies will be repaired to conform closely to porches in the neighborhood. Porch repairs will be structurally sound, with smooth and even decking surfaces.

Replacement standard:

Minimum life – 15 years

Deteriorated porches and balconies shall be replaced with preservative-treated structural lumber and tongue and groove pine, or 4-5" synthetic deck material. Replace with concrete if appropriate and economically possible.

3. Exterior Railings

Repair standard: None

Replacement standard:

Minimum life – 15 years

Railings that do not meet the current code shall be removed and replaced with wrought iron, pressure-treated wood sanded smooth or synthetic wood.

4. Exterior Steps and Patios

Repair standard:

Minimum life – 15 years

Steps, stairs and decks shall be structurally sound and compliant as per the IPMC and free from all significant deterioration.

Replacement standard:

Minimum life – 15 years

Any replacement patio, deck or stoop shall be of a minimum functional size, design and construction.

C. Foundations and Structure

1. *Fire-Resistance-Rated Assemblies*

Repair standard:

Minimum life – 5 years

Required fire-resistance-rated assemblies and openings shall be maintained functional without cracks and deterioration and upgraded as required with 5/8" type X gypsum glued and screwed, and a minimum of one coat of fire tape to structure.

Replacement standard:

Minimum life – 15 years

All party walls and assemblies requiring fire-resistance rating shall conform to the fire and building code requirements of the jurisdiction for fire separation.

2. *Foundations*

Repair standard:

Minimum life – 15 years

Foundations shall be repaired to be sound and water resistant, if financially feasible. All leaking cracks that have displacement of 1/8" and widths over 1/8" need to be epoxy injected and sealed.

Replacement standard:

Minimum life – 15 years

Foundation replacement shall only be permitted if the project is financially feasible.

3. *Structural Members*

Repair standard:

Minimum life – 15 years

All structural members shall be free from deterioration, rot and termite damage and be sized in conformance to the IPMC. Any member not in conformance with code shall be re-supported as to meet structural design code or as determined by a structural engineer.

Replacement standard:

Minimum life – 15 years

4. *Masonry Structure*

Repair standard:

Minimum life – 15 years

Masonry structure elements shall be sound, functional and in accordance with the IPMC.

Replacement standard:

Minimum life – 15 years

D. *Windows and Doors*

1. *Interior Doors*

Repair standard:

Minimum life – 5 years

All doors and hardware shall function as intended. Privacy locksets shall be present on bath and master bedroom doors. All other doors shall have passage locks (not including closets). Recycle doors when possible.

Replacement standard:

Minimum life – 15 years

Doors may be solid core, hollow core, or composite in paint grade jambs. Where all doors are not replaced, replacement doors should match existing doors. Replaced operating locksets shall be of the lever type.

2. *Exterior Doors*

Repair standard:

Minimum life – 5 years

Exterior doors shall be sound, weather stripped, and operate smoothly. They should have a deadbolt, an entrance lockset and window or security peep sight.

Replacement standard:

Minimum life – 15 years

All replacement doors at the front of the property will be neighborhood sensitive, Energy Star, steel or fiberglass doors with window or peep sight and deadbolt. Garage/house doors shall be fire-rated with self-closing hinges. Energy Star, doors with peep sight, deadbolt, and entrance locksets shall be installed at entrances not visible from the front street. Garage/house doors shall be R-5, embossed metal with a lockable assembly. Installed locksets shall be of the lever-operated type.

3. *Storm Doors*

Repair standard:

Minimum life – 5 years

Storm doors shall be weather-tight, operate smoothly, function as intended and have intact screen panels as designed.

Replacement standard:

Minimum life – 15 years

Swing shall be coordinated with the swing of the prime door.

4. *Windows and Sliding Glass Doors*

Repair standard:

Minimum life – 5 years

All windows and sliding glass doors shall be weather-tight, meet the requirements of the IPMC, and where required for egress, be fully functioning/operational.

Replacement standard:

Minimum life – 15 years

Double glazed, PVC, clad wood or fiberglass, a minimum R-value of 2.8 (U=.33), SHGC of 0.30 and DP of 45.

5. *Basement windows*

Repair standard:

Minimum life – 5 years

Windows must be weather-tight, operable for ventilation, in good working order and lockable.

Replacement standard:

Minimum life – 15 years

Basement windows may be replaced with glass block provided with operable and lockable center vents.

E. Roofing

1. *Flat and Low Slope Roofing*

Repair standard:

Minimum life – 5 years

Repair roofing when cost is less than 30% of total replacement cost. Built-up roofing, flashing and accessories shall be repaired wherever a 5-year leak-free warranty is available from a certified roofing company. Work to be conducted by an Illinois licensed roofing company.

Replacement standard:

Minimum life – 15 years

The most cost effective Energy Star certified roof of: 3-ply hot built-up, T.P.O. or EPDM. Flat ceiling homes can use standard 8 x 8 roof vents calculated per the BPI standard for free vent area/attic volume distributed through vented eaves and vented roof. Work to be conducted by an Illinois licensed roofing company.

2. *Pitched Roofs*

Repair standard:

Minimum life – 5 years with warranty

Repair when cost is less than, or equal to, 5% of total replacement cost. Missing and leaking shingles and flashing shall be repaired on otherwise functional roofs. Concrete, metal and tile roofs shall be repaired when at all possible. Antennae and communication disks shall be permanently removed if no longer used. Work to be conducted by an Illinois licensed roofing company.

Replacement standard:

Minimum life – 25 years

Fiberglass, asphalt, 3-tab, class A shingle weighing at least 220, and up to 270 lbs., 25 year warranty with ridge and soffit ventilation system. Vaulted and cathedral ceiling areas require continuous ridge venting that meets the BPI standard noted above for attic ventilation in flat-roofed buildings. Install drip edge on all edges. Work to be conducted by an Illinois licensed roofing company.

3. *Gutters and Downspouts*

Repair standard:

Minimum life – 5 years

Gutters and downspouts must be in good repair, functional, leak-free and configured to functionally direct water away from the structure.

Replacement standard:

Minimum life – 15 years

Gutters and downspouts will be installed to collect storm water from all lower roof edges and to direct water away from the structure without accumulation or ponding. Drainage tiles will be installed where functionally required.

F. Insulation and Ventilation

1. Attic Ventilation

Repair standard:

Minimum life – 5 years

Any pre-installed ventilation shall be maintained, or if powered and not functioning, replaced.

Replacement standard:

Minimum life – 15 years

Attics will be ventilated with a minimum of 1 square foot of free vent for each 300 square feet of roof area or be redesigned for integration with new insulation system. Solar powered roof vents may be used when possible. Attic access panels must be insulated with rigid insulation to meet the local climate minimum of R-38 and weather-stripped to ensure a tight seal.

2. Bath Ventilation

Repair standard: None

Replacement standard:

Minimum life – 15 years

Energy Star, exterior ducted, 70 CFM, max 20 sones and separate switch or humidistat in all full and three quarter baths. Replaced exhaust fans must have timers.

3. Infiltration

Repair standard:

Minimum life – 5 years

All exterior doors and attic hatches shall be weather-stripped. All visible cracks shall be caulked.

4. *Insulation*

Repair standard:

Not applicable where existing insulation meets an estimated R-value of R-17 or where not cost effective as per energy evaluation.

Replacement standard:

Minimum life – 15 years

Insulation will be installed when determined to be cost effective by energy evaluation. Attic insulation goal is R-38, crawl spaces R-19. New walls will be insulated to capacity with blown cellulose, fiberglass or closed cell foam to cavity capacity. Attic access panel must be insulated to R-9 with rigid foam.

5. *Kitchen Ventilation*

Repair standard: N/A

Replacement standard:

Minimum life – 15 years

Energy Star, exterior ducted range hoods or exhaust fans with less than 10 sones, at least 120 CFM and capped with a functional back draft.

G. *Interior Surfaces*

1. *Interior Railings*

Repair standard:

Minimum life – 5 years

Handrails and guardrails will conform to the IPMC and minimum building code requirements. At a minimum, handrails will be present on one side of all interior steps or stairways with more than two risers, and guardrails will be present around platforms over 30" above floor level with adequate structural attachment, in compliance with the local code.

Replacement standard:

Minimum life – 15 years

Hand and guardrails shall be replaced with universal design standard material and construction.

2. *Interior Walls and Ceilings*

Repair standard:

Minimum life – 5 years

Walls and ceilings to be repaired shall be stripped of wallpaper. Holes, cracks and deteriorated surfaces shall be patched and sanded as to create a smooth surface and recoated using premium, low VOC, vinyl acrylic paint.

Replacement standard:

Minimum life – 10 years

Walls shall be plumb, ceiling level with a smooth finish on at least ½” gypsum with water-resistant or paperless board in wet areas. 5/8” type X over 24” on center studs installed per the American Gypsum Association. Water-resistant wallboard must be used in kitchen tile backsplashes and in ceramic tile baths.

3. *Interior Wall Tile*

Repair standard:

Minimum life – N/A

Replace rather than repair.

Replacement standard:

Minimum life – 15 years

Replace with similar economically feasible material or waterproof sheet material as per manufacturers' instructions.

4. *Closets*

Repair standard:

Minimum life – 5 years

Existing closets will be maintained. If there is any part of a door (i.e., track for bi-fold, etc.) then it must be complete and working properly.

Replacement standard:

Minimum life – 15 years

If a closet is replaced, it must include a clothes rod and shelf. Closet doors are not required. Coat hooks and other hardware in lieu of a closet shall be supplied by the occupant.

5. *Flooring*

Repair standard:

Minimum life – 5-15 years

Flooring may be repaired, if deficient, and wood floors sanded and refinished. Salvageable carpet may be cleaned and must have a minimum remaining life of 5 years.

Replacement standard:

Minimum life – 15-20 years

Stone, tile, or vinyl flooring may be installed over reinforced cement underlayment in baths. Wood or laminate flooring may be installed in living and dining rooms and halls. Kitchen and utility may be installed as ceramic tile or vinyl flooring. FHA approved carpet over 6 lb. rebound underlayment is allowed in bedrooms when economically feasible. New carpeting shall have a minimum life of 10 years.

6. *Appliances*

Assessment of existing appliances shall be made to determine if replacement is necessary.

Replacement standard:

Energy Star and Water Sense. The following appliances are eligible to be installed only when funding allows:

- Dishwasher: Energy Star rated
- Washing machine: Energy Star rated (required)
- Dryer: 7 CF with sensor dry system
- Refrigerator: Energy Star rated (required)
- Range: Gas or electric, 4 burner
- Garbage disposal: ½ hp, with minimum 3 year warranty
- Microwave/Hood combination (if replacing current equipment)
- Built-in oven (to match existing) Energy Star rated

7. *Kitchen Cabinets and Countertop*

Repair standard:

Minimum life – 5 years

All cabinets and countertops will be sound and cleanable. Existing cabinets with hardwood doors and face frames may be repaired.

Replacement standard:

Minimum life – 15 years

New kitchen cabinets will meet the ANSI A208.1 and A208.2 standard for formaldehyde content of particleboard and MDF, or have exposed edges of particleboard and MDF sealed to prevent the out-gassing of formaldehyde. Cabinets will have hardwood doors and face frames. There will be a minimum of 10 lineal feet of post-formed countertop with corresponding base cabinets and wall cabinets. Corners in countertop designs are permitted if factory assembled. A drawer base (12" or 15") will be included in new cabinetry.

H. Electric

1. *Specialized Circuits GFCI and Arc Fault*

Repair standard:

Minimum life – 15 years

Retrofit devices as required for safety

Replacement standard:

Minimum life – 15 years

Install devices in accordance with local code. At a minimum, protect kitchen receptacles within 6 feet of a sink, all bath receptacles and any exterior receptacle with GFCI devices. Arc fault receptacles shall be installed to serve all bedrooms.

2. *Kitchen Electric Distribution*

Repair standard:

Minimum life – 15 years

Permanently installed stoves, refrigerators, freezers, dishwashers and disposals, washers and dryers shall have separate circuits sized to NEC. Two separate 20 amp counter circuits are required with each kitchen area.

Replacement standard:

Minimum life – 15 years

Electric service shall be supplied to trash compactors, microwave ovens, double ovens, range grills, and any appliance proposed for installation.

3. *Fixtures*

Repair standard: None

Replacement standard:

Minimum life – 15 years

All halls and rooms necessary to cross to other rooms, and stairways must be well lighted and controlled per NEC code. Attics must have utility fixtures. All fixtures shall be Energy Star. Replace all incandescent bulbs with fluorescent or LED bulbs. Exterior door lighting shall provide 100 lumens at ground level (motion detectors allowed). Garage doors shall be equipped with laser safety devices. All closet light fixtures must be fluorescent type rated for use in closets.

4. *Interior Electric Distribution*

Repair standard:

All unsafe electrical issues shall be resolved.

Replacement standard:

Minimum life – 15 years

All electrical deficiencies will be remediated in accordance with the electric code in force in the jurisdiction using affordable fixture allowances and Energy Star fixtures.

5. *Service and Panel*

Repair standard:

Minimum life – 15 years

Distribution panels shall have a main disconnect, at least 10 circuit breaker protected circuits, a 100 amp minimum capacity and be adequate to safely supply existing and proposed devices. Electrical panel shall be replaced if not adequate in capacity, or if unsafe for any reason to local codes.

Replacement standard:

Minimum life – 20 years

A load calculation shall be made and the electric service and panel shall be sized to serve the home and its occupancy uses with at least a 100 amp service with a 20 circuit panel provided for homes of up to 1800 SF. Homes larger than 1800 SF or all-electric, should be provided with at least a 200 amp service with a main disconnect panel containing at least 42 circuit breaker positions.

I. *Plumbing System*

1. *Drain, Waste, Vent Systems*

Repair standard:

Minimum life – 15 years

System shall be in safe, sanitary and functional condition free of obstructions, leaks and defects.

Replacement standard:

Minimum life – 15 years

Shall be replaced in accordance with local code, with a preference for replacement with PVC piping. Install anti-backflow devices where appropriate.

2. Plumbing Fixtures and Fittings

Repair standard:

Minimum life – 5 years

All fixtures and fittings shall be in safe, sanitary and functional condition. Anti-backflow devices shall be installed where appropriate.

Replacement standard:

Minimum life – 15 years

Single lever, low flow, 2.2 gal/min kitchen and 1.6 gal/min bath, metal faucets and 2.5 gal/min maximum shower diverters with lifetime drip-free warranty. White ceramic, 1.6 GPF toilets, double bowl stainless steel or porcelain kitchen sinks, fiberglass tubs and surrounds, and steel or porcelain enameled 5' tubs with tile surrounds. A dual flush toilet shall be permitted if it is demonstrably the equivalent of the above standard.

3. Water Heaters

Repair standard:

Minimum life – 5 years

Water heaters shall be code compliant, in working order, leak-free, in safe condition and capable of meeting expected demand.

Replacement standard:

Minimum life – 12 years

Energy Star, high efficiency, pilotless, Energy Star, gas fired or dual element electric (0.97) water heaters with at least R-7 insulation and a 12-year replacement warranty. 40 gallons electric for 1 and 2 bedroom units and 40 gallons gas or 52 gallons electric for 3 and 4 bedroom units. Efficiency shall be a 90% sealed combustion system (power vented) throughout.

4. Sump Pump

Repair standard:

Minimum life – 5 years

Sump pump drainage systems shall be safe and function as intended with an approved discharge which outflows away from the dwelling. Sump pits shall have covers.

Replacement standard:

Minimum life – 15 years

Sump pumps shall be installed only to mitigate existing moisture conditions.

5. *Water Supply*

Repair standard:

Minimum life – 5 years

All homes shall be tested to identify and eliminate all leaks. All fixtures must be supplied with 2 gallons per minute water flow and shut off valves. Lead pipe shall be replaced. All accessible copper hot water lines shall be insulated; maximum static pressure is 60 psi. Replacement of galvanized pipe with copper pipe is recommended, but not required.

Replacement standard:

Minimum life – 15 years

All fixtures shall have brass shutoff valves of ¼ turn and compliant type. One, freeze-protected exterior hose bib is required.

J. *HVAC1/23/2013*

1. *Chimney / Fireplace Repair*

Repair standard:

Minimum life – 15 years

Unsound chimneys shall be repaired or removed. When chimneys must be used for combustion ventilation, they shall be relined or replaced. When structurally unsound, they shall be replaced.

If the service life of the chimney is comparable to service life of heating plant, then no replacement is necessary. If the chimney needs replacing, where appropriate, the chimney will be eliminated and replaced with a high efficiency, power vented unit.

Replacement standard:

Minimum life – 15 years

Replacement furnace flues, when required, shall be metal, double or triple walled as recommended by the equipment manufacturer.

2. Distribution / Ventilation System

Repair standard:

Minimum life – 5 years

Central air conditioning shall be inspected, serviced and refurbished per diagnostic testing of unit and distribution system – per (Building Performance Institute) technical standards for air conditioning and heat pump specialists as described in Chapter 6 of the Saturn Mechanical Systems Field Guide, 2006.

Replacement standard:

Minimum life – 20 years

All ductwork shall be insulated to R-4, seams sealed with Mastic, and run in conditioned space within the building envelope. Ducts in unconditioned spaces are allowable provided that they meet the leakage minimum of ≤ 3 CFM and are insulated with an R-8 value material.

3. Central Equipment

Repair standard:

Minimum life – 5 years

Heating plants that are less than 5 years old, and rated 65 AFUE efficiency or better, shall be tested and tuned up as per Building Performance Institute standards. Energy Star setback thermostats shall be installed.

Replacement standard:

Minimum life – 15 years

Condensing gas furnaces rated over 86 AFUE and heat pumps over 13.5 SEER with 10 year warranty on parts and 5 years labor. Air to air heat exchangers are eligible for this program. HVAC system shall be sized to maintain interior design temperature used for heating and cooling load calculations per ASHRAE Manual J and sizing documentation shall be maintained in the case file.