

City of Auburn

Housing Rehabilitation Standard

The Housing Rehabilitation Standard is a minimum performance standard for the Rehab Program. The standard is a guide for decision-making to produce uniformly safe, decent, durable and high-performing housing.

Purpose

The purpose of rehabilitation standards is to eliminate neighborhood blight through renovation and while providing families with safe, secure and affordable homes.

Primary considerations are as follows:

1. Health and Safety
2. Performance and durability
3. Life cycle cost
4. Affordable operating cost
5. Balanced initial cost

Applicability

This standard will be the basis for improvements under two programs: Residential Rehabilitation and Home Owner Rehabilitation. As of the date of the final inspection, repairs will last for a minimum of 5 years with proper maintenance.

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1. Health & Safety

A. Lead Based Paint (LBP)	
Repair Standard	Minimum Life 5 years
<p>For all houses constructed prior to 1978 - four (4) floors, two (2) window sills and two (2) window troughs (all randomly selected) plus a blank sample must be submitted to an EPA-accredited lead analytical laboratory and the dust samples must pass a dust wipe test for lead content as per the protocol in the HUD Guidelines. Lead-safe work practices must be followed, and only Renovate, Repair & Paint certified contractors used to perform the work.</p> <p>http://www.hud.gov/offices/lead/lbp/hudguidelines/</p>	
Replacement Standard	Minimum Life 20 years
<p>When stabilization of surfaces containing LBP is impractical, the most affordable solution for abatement of the component will be chosen. Walls containing LBP may be covered with drywall or gutted and replaced with drywall. Trim and other wood or metal components containing LBP may be removed and replaced with similar materials. Lead-safe work practices must be followed, and only certified abatement contractors used to perform the work.</p>	

B. Asbestos	
Repair Standard	Minimum Life 5 years
<p>Non-friable intact Asbestos materials that are not creating a hazard such as cementitious exterior wall shingles may be left intact and painted if appropriate. Asbestos-resilient floor tiles may be labeled as such and covered with underlayment and new resilient flooring.</p>	
Replacement Standard	Minimum Life 20 years
<p>Friable asbestos components such as boiler or pipe insulation, badly deteriorated cementitious shingles or deteriorated flooring will be removed and, if necessary, replaced with non-hazardous materials. Work will be done by a licensed abatement contractor.</p>	

C. Radon	
Repair Standard	Minimum Life 5 years
<p>At the customer's request and expense, a short-term radon test will be conducted. If the result is a reading of 4 pCi/L or higher, a second test will be required. When a second test is required, average the results. If the average is above 4 pCi/L, remediation will be required.</p>	
Replacement Standard	Minimum Life 20 years
<p>If, as a result of the testing above, there is a presence of Radon at or above the 4 pCi/L level, remediation will be undertaken per the EPA guidance in their Consumer's Guide to Radon Reduction. Http://www.epa.gov/radon/pubs/consguid.html</p>	

D. Mold	
Repair Standard	Minimum Life N/A
N/A	
Replacement Standard	Minimum Life 5 years
<p>Any presence of mold is unacceptable and must be addressed per the National Center for Healthy Housing protocol “Creating a Healthy Home.”</p> <p>http://www.nchh.org/Portals/0/Contents/FloodCleanupGuide_screen_.pdf</p> <p>All carpeting, drywall or other gypsum-based wall coverings or any other non-structural components with mold present will be removed and replaced. The National Center for Healthy Housing protocol “Creating a Healthy Home” will be followed for remediation of structural components.</p>	

E. Fire Safety - Egress	
Repair Standard	Minimum Life N/A
NA	
Replacement Standard	Minimum Life 5 years
<p>Egress windows are required in all new sleeping and living areas unless other secondary means of escape requirements are met. The minimum dimensions for egress window clear openings are 24” wide by 34 1/4” tall, with a clear opening of 5.7 square feet. No bedrooms should be created in attics or basements unless Life Safety Code egress requirements are met.</p>	

F. Fire and CO Alarms	
Repair Standard	Minimum Life N/A
N/A	
Replacement Standard	Minimum Life 5 years
<p>Existing fire and smoke, carbon monoxide and security systems that meet code will be repaired to operating condition. Directly wired smoke detectors are required in each bedroom and a combination smoke/CO detector is required in the living area. A smoke detector is required adjacent to heating appliances.</p>	

2. Site

A. Grading	
Repair Standard	Minimum Life 5 years
All grading adjacent to the building and for a distance of at least 10 feet away from the building will slope away from the structure at a pitch of at least 1 inch per foot. All bare earth will be reseeded or sod will be installed to cover.	
Replacement Standard	Minimum Life N/A
N/A	

B. Outbuildings	
Repair Standard	Minimum Life 5 years
Unsafe and blighted structures, including outbuildings, will be removed if it is not financially feasible to complete the repairs required to make them structurally sound, leak-free, with lead hazards stabilized. Detached garages should have operable and lockable doors and windows.	
Replacement Standard	Minimum Life N/A
No outbuilding replacement is permitted in this program.	

C. Fencing	
Repair Standard	Minimum Life 5 years
Fencing on property lines is preferred. If repairs are needed, replacing sections in kind is permissible if the budget permits.	
Replacement Standard	Minimum Life N/A
Complete replacement of deteriorated fencing will only be undertaken if the budget permits.	

D. Paving And Walks	
Repair Standard	Minimum Life 5 years
Essential paving with minor defects will be repaired to match. Tripping hazards greater than $\frac{3}{4}$ " must be addressed. Non-essential, highly deteriorated paving, such as sidewalks that are unnecessary, will be removed and appropriately landscaped.	
Replacement Standard	Minimum Life N/A
Un-repairable essential walks will be replaced with permeable paving when financially feasible. Wood-framed, handicapped-accessible ramps are an eligible expense.	

E. Trees and Shrubbery	
Repair Standard	Minimum Life 5 years
Trees that are dead, dying, or hazardous will be removed. Removal will include cutting close to the ground, grinding of the stump to 12 inches below the finished grade, installation of topsoil and re-seeding.	
Replacement Standard	Minimum Life N/A
No tree replacement is permitted in this program.	

3. Exterior Building Surfaces

A. Exterior Cladding	
Repair Standard	Minimum Life 5 years
Siding and trim will be intact and weatherproof. All exterior wood components will have a minimum of one continuous coat of paint, and no exterior painted surface will have any deteriorated paint. Buildings designated as historic will have existing wood siding repaired in kind. New exterior wood will blend with existing and will be spot-primed and top-coated in a lead-safe manner.	
Replacement Standard	Minimum Life N/A
Buildings not designated as historic may have siding replaced with vinyl siding to match the existing configuration. CertainTeed, Mastic, and Wolverine brands are approved. If replaced, soffit material will be vented/perforated vinyl. New wood components will be FSC certified. http://www.fsc.org/	

B. Exterior Porches	
Repair Standard	Minimum Life 5 years
Deteriorated concrete porches will be repaired when possible. Unsafe wood porch components will be repaired with readily available materials to conform closely to historically accurate porches in the neighborhood. Porch repairs will be structurally sound, with smooth and even decking surfaces. Deteriorated wood structural components will be replaced with preservative-treated wood.	
Replacement Standard	Minimum Life N/A
Porches on building designated as historic will be rebuilt to conform closely to historically accurate porches in the neighborhood. Decks on non-historic porches will be replaced with 5/4" preservative-treated decking. Replaced railings will meet code. Replaced wood structural components will be preservative-treated.	

C. Exterior Railings	
Repair Standard	Minimum Life 5 years
Existing handrails will be structurally sound. Guard rails are required on any accessible area with a walking surface over 30" above the adjacent ground level. Sound railings may be repaired if it is possible to maintain the existing style. On historic structures railing repairs will be historically sensitive.	
Replacement Standard	Minimum Life N/A
Handrails will be present on one side of all interior and exterior steps or stairways with more than two risers and around porches or platforms over 30" above the adjacent ground level, and will meet local codes. Handrails and guard rails will conform to the style of similar components in the neighborhood. On historic structures new railings will be historically sensitive.	

D. Exterior Steps and Decks	
Repair Standard	Minimum Life 5 years
Steps, stairways, and porch decks will be structurally sound, reasonably level, with smooth and even surfaces. Repairs will match existing materials,	
Replacement Standard	Minimum Life N/A
In non-historic structures wood decking may be replaced with 5/4" X 6" preservative-treated material and new steps will be constructed from nominal 2" preservative-treated wood. On historic structures new wood decking will be 3/4" clear T & G fir, primed on all 6 sides before installation.	

E. Exterior House Numbers and Mailboxes	
Repair & Replacement Standard	Minimum Life 5 years
All houses will have 4" house numbers clearly displayed near the front door, and a standard size mailbox, preferably wall-hung at the entrance.	

4. Foundations & Structure

A. Firewalls	
Repair Standard	Minimum Life 5 years
Party walls that have cracks and plaster deterioration will be covered with 5/8" type X gypsum, glued and screwed to structure.	
Replacement Standard	Minimum Life N/A
When frame walls and floors adjoining other dwellings are gutted, new wall finish installations will conform to local requirements for fire ratings.	

B. Foundations	
Repair Standard	Minimum Life 15 years
Foundations will be repaired to be sound, reasonably level, and free from movement.	
Replacement Standard	Minimum Life N/A
Foundation replacement is not permitted by this program.	

C. Structural Walls	
Repair Standard	Minimum Life 15 years
Structural framing and masonry will be free from visible deterioration, rot, or serious termite damage, and be adequately sized for current loads. Prior to rehab, all sagging floor joists or rafters will be visually inspected, and significant structural damage and its cause will be corrected.	
Replacement Standard	Minimum Life N/A
New structural walls will be minimum 2" x 4", 16" OC. All exterior walls that are part of the building envelope (the air barrier and thermal barrier separating the conditioned space from the non-conditioned space) will be insulated with a minimum R-13 insulation and sheathed to code.	

D. Unfinished Space	
Repair Standard	Minimum Life N/A
N/A	
Replacement Standard	Minimum Life 60 years
Finishing of unfinished space is acceptable only when, for livability reasons of the owner, it is necessary to add bedroom space to achieve a ratio of 2 persons per bedroom. Stamped plans must be submitted to the City Building Official for review and approval prior to bidding. All building code standards for windows and doors, insulation and ventilation, and electrical apply.	

5. Windows and Doors

A. Interior Doors	
Repair Standard	Minimum Life 5 years
Baths and occupied bedrooms will have operating doors and lock sets.	
Replacement Standard	Minimum Life N/A
Hollow-core, pressed-wood product consistent with the style of existing doors including a brass-plated bedroom lock set.	

B. Exterior Doors	
Repair Standard	Minimum Life 5 years
Exterior doors will be solid, weather-stripped and will operate smoothly. They will include a dead bolt, and an entrance lock set.	
Replacement Standard	Minimum Life N/A
Replacement doors at the front of the property for historically significant buildings will be historically sensitive. Steel, six-panel doors may be installed at entrances not visible from the front street and on the front of the property for buildings that are not historically significant. All new doors will be weather-stripped to be air tight.	

C. Windows	
Repair Standard	Minimum Life 5 years
All windows will operate, remain in an open position when placed there, lock when closed and the open section will be covered with a screen.	
Replacement Standard	Minimum Life 15 years
Windows that are not repairable may be replaced and will meet the ENERGY STAR standard for this geographic region. http://www.energystar.gov/index.cfm?c=windows_doors.pr_anat_window Windows on key façades of historically sensitive properties will be wood of the style original to the building. New windows on other properties may be vinyl and double-glazed.	

D. Basement Windows	
Repair Standard	Minimum Life 5 years
A minimum of 2 basement windows on opposite sides of the building must be operable for ventilation, in good working order, and lockable. A Acrylic Panel (ACP) would be an acceptable alternative, installed per Maine State Weatherization Standards (Section 7210 pages 65-66).	
Replacement Standard	Minimum Life N/A
Basement windows may be replaced with vinyl that are operable and lockable.	

6. Roofing

A. Flat and Low-Slope Roofing	
Repair Standard	Minimum Life 5 years
Built-up roofing will be leak-free and will be replaced if the minimum life is questionable.	
Replacement Standard	Minimum Life N/A
The most cost-effective roof – either 2-ply polyglass 2-layered system or EPDM – will be installed.	

B. Pitched Roofs	
Repair Standard	Minimum Life 5 years
Missing and leaking shingles and flashing will be repaired on otherwise functional roofs. Slate, metal and tile roofs will be repaired when possible. Antennae will be removed.	
Replacement Standard	Minimum Life N/A
No more than 2 layers of roofing are permitted. Fiberglass, asphalt architectural shingles with a prorated 30-year warranty with a continuous ridge vent will be installed over 15-lb. felt with new drip edge on all edges. Six feet of ice and water shield will be installed on eaves and valleys.	

C. Gutters and Downspouts	
Repair Standard	Minimum Life 5 years
Gutters and downspouts must be in good repair, leak free and collect storm water from all lower roof edges. Concrete or vinyl splash blocks will be installed to move water away from the foundation. The system must move all storm water away from the building and prevent water from entering the structure. In addition to positive drainage away from the building, outlets will be a minimum of 3 feet away from the foundation whenever there is a history of water problems.	
Replacement Standard	Minimum Life N/A
Gutters and downspouts will be installed and collect storm water from all lower roof edges. Concrete splash blocks will be installed to move water away from the foundation. The system must move all storm water away from the building and prevent water from entering the structure. In addition to positive drainage away from the building, outlets will be a minimum of 3 feet away from the foundation whenever there is a history of water problems.	

7. Insulation and Ventilation

A. Infiltration	
Repair Standard	Minimum Life 5 years
All homes or units will have an energy assessment conducted by the Rehab Coordinator, and any existing air sealing will be repaired.	
Replacement Standard	Minimum Life N/A
All homes or units will be air sealed to meet the minimum Energy Code.	

B. Bath Ventilation	
Repair Standard	Minimum Life 5 years
All homes shall meet the most recent ASHRAE 62.2 standard by using one bathroom fan continuously operating at a verified CFM rate sufficient to meet the ASHRAE standard and creating ≤ 0.3 Sones of fan noise. The fan will also have a minimum of 80 CFM and will be directly wired to the bathroom light fixture.	
Replacement Standard	Minimum Life N/A
As stated in the Repair Standard	

C. Insulation	
Repair Standard	Minimum Life N/A
NA	
Replacement Standard	Minimum Life 20 years
<p>The envelopes of all units will have a continuous air barrier and a continuous thermal barrier that is in contact with the air barrier. Attic insulation shall be a minimum of R38 with soffit baffles installed when there are soffit vents to maintain ventilation at the eaves. All exterior walls opened in the course of renovations shall be insulated with un-faced fiberglass batts or damp spray cellulose to R13 for 2x4 framing and R19 for 2x6 framing. Whenever financially feasible, 1-inch, foil-faced polyisocyanurate foam board will be added under new siding. Rim joists will be insulated to R19 with either 2-inch polystyrene rigid foam board or dense pack cellulose (using the bag method). Crawl space walls shall be insulated with 1-inch, foil-faced polyisocyanurate foam board and a 6-mil plastic vapor barrier will be installed continuously over the ground to the sill plate with all seams sealed.</p> <p>http://www.energystar.gov/ia/partners/bldrs_lenders_raters/downloads/Thermal_Bypass_Inspection_Checklist.pdf</p>	

D. Kitchen Ventilation	
Repair Standard	Minimum Life N/A
N/A	
Replacement Standard	Minimum Life 5 years
When the relative humidity levels in a home exceeds 65%, a kitchen mechanical ventilation will be required. The system must operate at a maximum of 20 Sones and producing a minimum of 150 CFM after accounting for ducting losses. All ductwork will be heavy gauge galvanized metal, air tight with mastic-sealed seams (no duct tape). It is preferred that mechanical ventilation exit at side walls and not at the soffit to minimize the potential for ice damming.	

E. Roof Ventilation	
Repair Standard	Minimum Life 5 years
1 square foot of free venting must be supplied for every SF of area directly under the roof if there is no soffit venting. 1 square foot of free venting must be supplied for every 300 SF of area directly under the roof if 20% of the venting is soffit vent and if the living space ceiling directly below the roof has a rating of one perm or less. (1 perm is achievable with a coating of ICI Dulux Ultra Hide Vapor Barrier paint 1060-1200 per manufacturer's instructions)	
Replacement Standard	Minimum Life 20 years
The venting requirement is the same as with the Repair Standard above with a strong preference for a combination of ridge vents, soffit vents and the one perm-rated ceiling required for the 1 to 300 ratio.	

8. Interior Standards

A. Interior Walls and Ceilings	
Repair Standard	Minimum Life 5 years
Holes, cracks and deteriorated and un-keyed plaster will be repaired to match the surrounding surfaces. All visual surfaces will be stabilized to minimize lead paint hazards using premium vinyl acrylic paint.	
Replacement Standard	Minimum Life N/A
When necessary plaster will be replace by ½" gypsum board. Fire-rated assemblies will be specified on a project-by-project basis as required by local codes.	

B. Flooring	
Repair Standard	Minimum Life 5 years
Bathroom, kitchen and other water-susceptible floor areas will be covered with water-resistant flooring that is free from tears or tripping hazards. Damaged wood floor will be repaired. When existing deteriorated carpet is installed over hardwood floors, the hardwood will be refinished whenever possible.	
Replacement Standard	Minimum Life N/A
Baths will receive resilient sheet goods over plywood underlayment, and kitchens will receive resilient sheet goods or tile over plywood underlayment. Whenever possible rooms other than kitchens and baths with existing wood flooring will be maintained as wood floors and refinished when appropriate. Rooms other than kitchens or baths without usable wood floors may be finished with carpet and associated products.	

C. Bedroom Closets	
Repair Standard	Minimum Life 5 years
Existing closets with a minimum depth of 2 feet will be maintained in good repair and have a shelf and clothes rod. Install new if there are no bedroom closets.	
Replacement Standard	Minimum Life N/A
New closets may be created if there is a significant lack of storage space and the budget permits. New closets will have a depth of 2 feet and include a shelf and clothes rod.	

D. Kitchen Cabinets and Countertop	
Repair Standard	Minimum Life 5 years
Kitchens will have a minimum of 4 feet of countertop with base and wall cabinets. Existing cabinets with hardwood doors and face frames may be repaired if in good condition. All cabinets will be sound and cleanable.	
Replacement Standard	Minimum Life N/A
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. The replacement will be 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.	

9. Electric

A. Ground Fault Interrupter Circuits	
Repair Standard	Minimum Life 5 years
Non-functioning GFCIs will be replaced. Kitchen counter, bath and laundry receptacles within 6' of a water source will be replaced with a GFCI-protected receptacle or protected by a GFCI device.	
Replacement Standard	Minimum Life N/A
Kitchen counter, bath and laundry receptacles within 6' of a water source will be replaced with a GFCI-protected receptacle or protected by a GFCI device.	

B. Passage Lighting	
Repair Standard	Minimum Life 5 years
All lights and switches in hallways, stairs and other passages will be operable and safe.	
Replacement Standard	Minimum Life N/A
All halls, stairs and rooms necessary to cross to other rooms and stairways must be well lit and controlled by a 3-way switch using concealed wiring. Attics, basements and crawl spaces must have utility fixtures. All new light fixtures will be ENERGY STAR labeled.	

C. Kitchen Electric Distribution	
Repair Standard	Minimum Life 5 years
Existing receptacles, fixtures and switches will be safe and grounded.	
Replacement Standard	Minimum Life N/A
Permanently installed or proposed stoves, refrigerators, freezers, dishwashers and disposals, washers and dryers will have separate circuits sized to N.E.C. Two separate 20-amp counter circuits are required with each kitchen area.	

D. Interior Electric Distribution	
Repair Standard	Minimum Life 5 years
Exposed knob and tube will be replaced. Every room will have a minimum of two duplex receptacles, placed on separate walls and one light fixture or receptacle switched at each room entrance. Where the source wiring circuit is accessible (e.g., first floor above basements, in gutted rooms, etc.), receptacles will be grounded. All switch, receptacle, and junction boxes will have appropriate cover plates. Wiring will be free from hazard, and all circuits will be properly protected at the panel. Floor receptacles will be removed and a metal cover plate installed. Exposed conduit is allowed, when necessary. Bedrooms receptacles will be protected by an Arc Fault breaker. There must be one electrical receptacle at the service panel. Basements will have a minimum of 3 keyless bare bulb fixtures switched at the top of the stairs.	
Replacement Standard	Minimum Life N/A
When a room's wall finishes are removed, it will be rewired to the latest version of the National Electric Code.	

E. Service and Panel	
Repair Standard	Minimum Life 10 years
Distribution panels will 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. If a working central air conditioning system is present, the minimum service will be 150 amp.	
Replacement Standard	Minimum Life N/A
100-amp service with a main disconnect panel containing at least 10 circuit breaker positions.	

10. Plumbing System

A. Drain, Waste, Vent Lines	
Repair Standard	Minimum Life 5 years
Waste and vent lines must function without losing the trap seal.	
Replacement Standard	Minimum Life N/A
When walls are removed exposing vent and waste lines those lines will be reworked to the current mechanical code.	

B. Plumbing Fixtures	
Repair Standard	Minimum Life 5 years
All fixtures and faucets will have working, drip-free components. Toilets with greater than a 1.6 GPF rating will be replaced with a maximum 1.3 GPF model.	
Replacement Standard	Minimum Life N/A
Single lever, metal faucets and shower diverters with 15-year, drip-free warranty and maximum 2.0 GPM flow. White ceramic low-flow toilets (1.3 Gal), double bowl stainless steel sinks, and fiberglass tubs with surrounds.	

C. Plumbing Minimum Equipment	
Repair Standard	Minimum Life 5 years
Every dwelling unit will have a minimum of one single bowl sink with hot and cold running water in the kitchen and at least one bathroom containing a vanity with a sink, and a shower/tub unit, both with hot and cold running water, and a toilet and will be repaired to conform to local code.	
Replacement Standard	Minimum Life N/A
Same as above.	

D. Water Heaters	
Repair Standard	Minimum Life 5 years
Each housing unit will have a working water heater with a minimum capacity of 40 gallons. Water heaters may be repaired if it is clear that a repair will make it operable.	
Replacement Standard	Minimum Life 10 years
Replacement units will have a minimum 40-gallon water heater with a 10-year warranty installed to the mechanical code.	

E. Water Supply	
Repair Standard	Minimum Life 5 years
The main shut off valve must be operable and completely stop the flow of water to the house. All fixtures must be leak-free and deliver sufficient cold water and, where applicable, hot water.	
Replacement Standard	Minimum Life 10 years
The main shut off valve must be operable and completely stop the flow of water to the house, and should be replaced if it does not. Lead and galvanized pipe that is part of the water service or the distribution system will be replaced with copper. All fixtures will have brass shut off valves.	

11. HVAC

A. Chimney Repair	
Repair Standard	Minimum Life 5 years
Unused chimneys will be removed to below the roof line wherever roofing is replaced. Unsound chimneys will be repaired or removed. When chimneys must be used for combustion ventilation, they will be relined.	
Replacement Standard	Minimum Life N/A
The creation of new flues is not recommended in this program. The use of high efficiency closed combustion appliances is recommended to avoid the need for new flues. Replacement furnace flues, when required, will be metal as recommended by the furnace manufacturer.	

B. Distribution System	
Repair Standard	Minimum Life 5 years
Duct work and radiator piping will be well supported, insulated in unconditioned space and adequate to maintain 68°F measured 36" off the floor when the outside temperature is the average yearly minimum, in all habitable and essential rooms. Duct work will be insulated to R-7, where necessary, and sealed at all seams with mastic (not tape) and pressure tested to eliminate leakage.	
Replacement Standard	Minimum Life 25 years
All duct work will be insulated to R-7, sealed at all seams with mastic (not tape), pressure tested to eliminate leakage and run in concealed space.	

C. Heating System	
Repair Standard	Minimum Life 5 years
Existing heating systems will be in good condition and will have a minimum efficiency rating of 75% AFUE, and will operate in a safe manner. Systems and returns will be leak free.	
Replacement Standard	Minimum Life 25 years
Gas-fired heating plants will be rated at $\geq 90\%$ AFUE or better. Oil-fired furnaces will be rated at $> 83\%$ AFUE or better. Oil-fired boilers will be rated at $> 84\%$ AFUE or better. 7-day programmable thermostats are required. When electric resistance heating systems are replaced, soffits for ductwork and/or new distribution pipes for hot water heating systems will be provided. Up to 4 lineal feet of resistance electric heating strips per 1000 square feet of floor area may be retained or installed in areas that are not cost effective to heat via ductwork or hot water distribution systems.	