Clark County & North Las Vegas

Neighborhood Stabilization Program (NSP) Homeownership Rehab Standards for One and Two Unit Structures

Effective June 8, 2010

MISSION AND HOUSING VALUES

Our mission is to make Clark County and North Las Vegas a better place to live by supporting community efforts to expand affordable homeownership through equal access to safe, healthy and affordable housing.

The values that flow from this mission are as follows:

- Safe and healthy homes
- Affordable operating costs
- Saleable homes
- Accessibility for persons with disabilities
- Performance and durability
- Sustainable construction

APPLICABLE LAWS AND REGULATIONS

We intend to renovate and resell homes in full compliance with the following statutory and regulatory requirements. The most current adopted law/regulation will override the standard if discrepancies exist.

- Building Code: The International Unit Residential Code 2009, locally amended
- Energy: The International Energy Code of 2009
- Zoning Code: The Local Zoning Code
- Water Sense: October 2009 Water Saving Measures
- Federal Housing Code: Housing Quality Standards
- Life Safety Code: Life Safety Code
- Title X Lead Hazard Reduction Regulation 1012, 1013 (pre-1978)
- ADA Accessibility Guidelines
- International Energy Conservation Code 2009 with local amendments
- Nevada OSHA

NSP projects shall seek guidance and strive to conform to the following codes when feasible and if financial resources are available for a specific project:

- Home Performance Specifications for Warm Climates
- Healthy Homes Guidelines
- Green Communities Standards
- Universal Design standards for handicapped accessibility on a case-by-case basis

Exceptions: On a case-by-case basis deviations from the minimum requirements of these standards will be permitted with approval of the appropriate local agency.

Clark County & North Las Vegas
NSP HOMEOWNERSHIP REHAB STANDARDS

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TITLE: I SITE IMPROVEMENTS: OUTBUILDINGS

REPAIR STANDARD: 75% or more salvageable
Minimum Life: 3 Years
Unsafe, illegal or unapproved structures, including outbuildings, additions and patio covers will be removed if it is not financially feasible (up to $5000) to complete repairs required to make them structurally sound, leak free and building and zoning code legal.

REPLACEMENT STANDARD: No outbuilding shall be provided.

TITLE: I SITE IMPROVEMENTS: PAVING AND WALKS

REPAIR STANDARD:
Minimum Life: 15 Years
Badly deteriorated, essential paving, such as front sidewalks, will be repaired to match. Non-essential, deteriorated paving, such as sidewalks that are unnecessary, will be removed and appropriately landscaped.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Essential walks and drives shall be replaced with concrete.

TITLE: I SITE IMPROVEMENTS: LANDSCAPING

REPAIR STANDARD:
Site shall be graded to allow water to run away from foundation. Trees that are too close to the structure or shall be removed. Irrigation shall be retrofitted to include drip emitters, a filter, a pressure regulator, rain sensor and timer.

REPLACEMENT STANDARD:
Xeriscape front yards. Each dwelling shall receive one shade tree with a mature height of at least 15'. Provide drip irrigation on an automatic timer.

TITLE: I SITE IMPROVEMENTS: FENCING/GATES

REPAIR STANDARD:
Minimum Life: 10 Years
Masonry fencing shall be repaired to code.

REPLACEMENT STANDARD:
Tier 3: When funding is sufficient, additional masonry or wrought iron fencing may be installed to create defensible space in conformance with neighborhood/homeownership association requirements.

TITLE: II EXTERIOR SURFACES: EXTERIOR CLADDING (STUCCO)

REPAIR STANDARD:
Minimum Life: 6 Years
Exterior finish and trim will be intact, weather proof and free of deterioration. Replacement of damaged sections may include up to 25% of surfaces. Exterior wood shall be spot primed and top coated.

REPLACEMENT STANDARD:
Minimum Life: 40 Years
If 25% or more needs repair, entire wall shall receive a 1-coat stucco over 2" insulation board.

TITLE: II EXTERIOR SURFACES: EXTERIOR PORCHES

REPAIR STANDARD:
Minimum Life: 10 Years
Unsafe or unsightly porches will be repaired to conform closely with porches in the neighborhood. Porch repairs will be structurally sound, with smooth and even decking surfaces.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Deteriorated porches and balconies shall be replaced with preservative treated structural lumber and tongue and groove pine or synthetic deck material. Replace with concrete when economically possible.

TITLE: II EXTERIOR SURFACES: EXTERIOR RAILINGS

REPAIR STANDARD: None

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Railings that do not meet the current code shall be removed and replaced with wrought iron or synthetic wood.

TITLE: II EXTERIOR SURFACES: EXTERIOR STEPS AND PATIOS

REPAIR STANDARD:
Minimum Life: 10 Years
Steps, stairs and decks shall, be structurally upgraded to IRC 2009 code; free from all significant deterioration.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Any replacement patio, deck or stoop shall be of a minimum functional size, design and construction.

TITLE: III FOUNDATIONS & STRUCTURE: FIREWALLS

REPAIR STANDARD:
Minimum Life: 15 Years
Party walls shall be maintained without cracks and plaster deterioration and upgraded with 5/8" type X gypsum, glued and screwed to structure.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
All party walls shall conform to the 2009 IRC new construction requirements for fire separation at both walls and roofs.

TITLE: III FOUNDATIONS AND STRUCTURE: FOUNDATIONS

REPAIR STANDARD:
Minimum Life: 20 Years
Foundations shall be repaired to be sound, stable and water resistant.

REPLACEMENT STANDARD:
Foundation replacements above 25% are beyond the scope of the program.

TITLE: III FOUNDATIONS & STRUCTURE: STRUCTURAL WALLS

REPAIR STANDARD:
Minimum Life: 20 Years
All structural members shall be free from deterioration, rot and termite damage and be sized in conformance to IRC. Any member not in conformance with code shall be resupported as determined by a structural engineer.

REPLACEMENT STANDARD:
Minimum Life: 40 Years
Walls shall be 2" x 6", 24" on center with at least R-19 insulation and solid sheathing to match existing.

TITLE: IV WINDOWS AND DOORS: INTERIOR DOORS PLACEMENT

REPAIR STANDARD:
Minimum Life: 10 Years
All bedrooms, baths and closets shall have well operating doors and locksets in bedrooms and baths. Privacy lock sets on bath. All other doors shall have passage locks. Reuse existing doors when possible. All keyed locksets shall be removed.

REPLACEMENT STANDARD:
Minimum Life: 15 Years
Doors may be solid core or composite in paint grade jambs.

TITLE: IV WINDOWS AND DOORS: EXTERIOR DOORS

REPAIR STANDARD:
Minimum Life: 10 Years
Exterior doors shall be solid core, insulated to minimum R-8, weather stripped, operate smoothly, including a peep site, a dead bolt, and an entrance lock set.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
All replacement doors at the front of the property will be neighborhood sensitive, Energy Star (R-8), steel or fiberglass solid core doors with peep sight and deadbolt. Wrought iron screen doors at front entrances allowable. Garage/house doors shall be 20 minute fire rated with self closing hinges. Energy Star, solid core doors with peep sight, dead bolt, and entrance locksets shall be installed at entrances not visible from the front street. Garage doors shall be R-5, embossed metal with a lockable assembly.

TITLE: IV WINDOWS AND DOORS: WINDOW PLACEMENT

REPAIR STANDARD: Bedrooms, kitchens and baths (as applicable) shall have one operable window with a screen and meet egress requirements per code.

REPLACEMENT STANDARD: Removal of excess bathroom and kitchen windows. Side elevation fenestration shall be considered during energy reduction analysis.

TITLE: IV WINDOWS AND DOORS: WINDOWS & SLIDING GLASS DOORS

REPAIR STANDARD:
Minimum Life: 10 Years
All windows and sliding glass doors shall be double glazed, weather tight, include a locking device, and where required for egress, be fully functioning/operational. All windows shall be retrofitted with 80% heat block solar screens or NFRC approved reflective film.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Double glazed, double or single hung, PVC or fiberglass, one over one, a minimum R-value of 2.8 (U=.33), SHGC of 0.30 and DP of 50.

TITLE: V ROOFING: FLAT AND LOW SLOPE ROOFING

REPAIR STANDARD:
Minimum Life: 5 Years
Repair when cost is less than or equal to 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.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
The most cost effective roof, either 3 ply hot built-up, T.P.O., EPDM, or spray foam shall be installed with an Energy Star reflective coating.

TITLE: V ROOFING: PITCHED ROOFS

REPAIR STANDARD:
Minimum Life: 5 years with warranty
Repair when cost is less than or equal to 30% 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 removed.

REPLACEMENT STANDARD:
Moderate: Minimum Life: 30 Years
Fiberglass, asphalt, 3 tab, class A shingles weighing at least 235 and up to 270 lbs, architectural grade, 30 year fiberglass asphalt or architectural metal with a ventilated system designed for installation recommendations.

High: Minimum Life: Varies
Roofing may be clay tile or architectural metal.

TITLE: VI INSULATION AND VENTILATION: ATTIC VENTILATION

REPAIR STANDARD:
Minimum Life: 5 Year
Any pre-installed ventilation shall be maintained or if powered and not functioning, replaced.

REPLACEMENT STANDARD:
Minimum Life: 20 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.

TITLE: VI INSULATION AND VENTILATION: BATH VENTILATION

REPAIR STANDARD: None

REPLACEMENT STANDARD:
Minimum Life: 5 Years
Energy Star, exterior ducted, 70 CFM, max 20 sones with separate switch or humidistat in all full baths. Heat recovery ventilation is preferred.

TITLE: VI INSULATION AND VENTILATION: INFILTRATION

REPAIR STANDARD:
Minimum Life: 5 Years
All exterior doors and attic hatches shall be weather stripped. All visible cracks shall be caulked.

REPLACEMENT STANDARD:
Minimum Life: 10 Years
Blower door testing shall be used to reduce air infiltration as far as practicable. Air-to-air heat exchangers may be installed.

TITLE: VI INSULATION AND VENTILATION: INSULATION

REPAIR STANDARD: Not Applicable – Possible realignment if opened.

REPLACEMENT STANDARD:
Minimum Life: 15 Years
Attic insulation goal is R38, crawls spaces R19. Side walls will be insulated with blown cellulose to cavity capacity. Attic access panel must be insulated per 2009 Code.

TITLE: VI INSULATION AND VENTILATION: KITCHEN VENTILATION

REPAIR STANDARD: N/A

REPLACEMENT STANDARD:
Minimum Life: 5 Years
Energy Star, exterior ducted range hoods or exhaust fans shall be required with less than 20 sones, at least 120 CFM (when economically feasible) and capped with a functional back draft.

TITLE: VII INTERIOR SURFACES: INTERIOR RAILINGS

REPAIR STANDARD:
Minimum Life: 10 Years
Handrails will be present on one side of all interior steps or stairways with more than two risers and around platforms over 30" above floor level with adequate structural attachment.

REPLACEMENT STANDARD:
Minimum Life: 15 Years
Hand and guardrails shall be replaced with universal design standard material and construction.

TITLE: VII INTERIOR STANDARDS: INTERIOR WALLS AND CEILINGS

REPAIR STANDARD:
Minimum Life: 5 Years
Walls shall be stripped of wallpaper, holes, cracks and deteriorated surfaces. All visual surfaces shall be 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 1/2" gypsum with water resistant board in wet areas. 5/8" Type X over 24" on center studs installed per the American Gypsum Association. Kitchen tile backsplashes and ceramic tile wainscot in baths.

TITLE: VII INTERIOR STANDARDS: HAZMAT TESTING AND TREATMENT

All properties shall undergo visual "Risk Evaluations" and property age evaluation by rehab supervisors.

REPLACEMENT STANDARD: IN PLACE MANAGEMENT & ABATEMENT
Minimum Life: 20 Years
Pre 1978 Lead Only: After an inspection by a Nevada licensed EPA Certified Risk Assessor, all hazardous material shall be removed from all moving parts, floors and mouthable surfaces. Encapsulants and enclosures may be used.
Asbestos: Inspections required on all properties.

TITLE: VII INTERIOR STANDARDS: CLOSETS

REPAIR STANDARD:
Minimum Life: 1 Year
Existing closets will be maintained.

TITLE: VII INTERIOR STANDARDS: FLOORING

REPAIR STANDARD:
Minimum Life: 10 Years
Ceramic tile flooring may be repaired and wood floors sanded and refinished. Salvageable carpet may be cleaned.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Stone or tile 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 to be ceramic tile. Carpet is allowed in bedrooms.

TITLE: VII INTERIOR STANDARDS: APPLIANCES

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

REPLACEMENT STANDARD: Energy Star and Water Sense
- Dishwasher: Energy Star rated
- Washing Machine: Energy Star rated

• Dryer: Energy Star rated
• Water Softener: Per ANSI 44 with demand initiated regeneration
• Refrigerator: Energy Star rated
• Range – Gas, 4 burner
• Garbage disposal – 1/2 hp, with minimum three year warranty
• Microwave/Hood combination (if replacing)
• Built-in Oven (to match)

TITLE: VIII ELECTRIC: SPECIALIZED CIRCUITS

REPAIR STANDARD: Repair existing.

REPLACEMENT STANDARD:
Minimum Life: 15 Years
Kitchen receptacles within 6 feet of a sink, all bath receptacles and at least one exterior receptacle shall be protected by a GFCI. Arc fault receptacles shall be installed in all bedrooms.

TITLE: VIII ELECTRIC: KITCHEN ELECTRIC DISTRIBUTION

REPAIR STANDARD:
Minimum Life: 15 Years
Electric service may be supplied to trash compactors, microwave ovens, double ovens, range grills, and any appliance proposed for installation.

REPLACEMENT STANDARD:
Minimum Life: 15 Years
Permanently installed or proposed stoves, refrigerators, freezers, dishwashers and disposals, washer and dryers shall have separate circuits sized to N.E.C. Two separate 20 amp counter circuits are required with each kitchen area.

TITLE: VIII ELECTRIC: FIXTURES

REPAIR STANDARD: None

REPLACEMENT STANDARD:
Minimum Life: 20 Years
All halls, rooms necessary to cross to other rooms and stairways must be well lighted and controlled by a 3-way switch using concealed wiring. 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 electric openers with laser safety devices. Tier 3 bedrooms and living areas may receive Energy Star ceiling fans.

TITLE: VIII ELECTRIC: ALARMS

REPAIR STANDARD:

Minimum Life: 5 Year
Existing fire and smoke, CO shall be repaired to operating condition. Security system may be repaired as needed.

REPLACEMENT STANDARD:
Minimum Life: 15 Years
Directly wired, interconnected smoke detectors are required on each dwelling floor. CO detectors are required with all fuel burning furnaces. Security systems may be installed at 1st floor doors and windows.

TITLE: VIII ELECTRIC: INTERIOR ELECTRIC DISTRIBUTION

REPAIR STANDARD: None

REPLACEMENT STANDARD:

Minimum Life: 20 Years
All rooms shall be rewired to the latest version of the national Electric Code using affordable fixture allowances and Energy Star fixtures. Minimum of one 20-amp circuit per room.

TITLE: VIII ELECTRIC: SERVICE AND PANEL

REPLACEMENT STANDARD:
Minimum Life: 20 Years
200 amp service with a main disconnect panel containing at least 30 circuit breaker positions. Garages and outbuilding may be fed with up to 100 amp subpanels.

TITLE: IX PLUMBING SYSTEM: DRAIN, WASTE, VENT LINES

REPLACEMENT STANDARD:
Minimum Life: 20 Years
PVC replacement lines shall be installed in accordance with the most recently approved version of the mechanical code.

TITLE: IX PLUMBING SYSTEM: PLUMBING FIXTURES

REPAIR STANDARD: EPA Water sense
Minimum Life: 5 Years
All fixtures and faucets shall have all working components replaced. Faucet will be retrofitted with low flow aerators: kitchen faucets with a maximum flow rate of 2.2 gal/min; bath faucets with a maximum flow rate of 1.5 gal/min.

REPLACEMENT STANDARD: EPA Water Sense
Minimum Life: 20 Years
Single lever, low flow, 2.2 gal/min kitchen and 1.5 gal/min bath, metal faucets and 2.5 gal/min maximum shower diverters with lifetime drip-free warranty. White ceramic, high efficiency

"HET" toilets, double bowl stainless steel kitchen sinks, fiberglass tub surrounds and steel enameled 5' tubs.

TITLE: IX PLUMBING SYSTEM: PLUMBING MINIMUM EQUIPMENT

REPAIR STANDARD: None

REPLACEMENT STANDARD:
Minimum Life: 10 Years
Every dwelling shall have a double or single bowl kitchen sink, an Energy Star rated dishwasher, a 1/2 hp garbage disposal and a 3-piece bath.

TITLE: IX PLUMBING SYSTEM: FIRE SPRINKLERS

REPAIR STANDARD: Repair all.

REPLACEMENT STANDARD: None required. Recommended in homes for physically disabled persons and frail elderly.

TITLE: IX PLUMBING SYSTEM: WATER HEATERS

REPAIR STANDARD:
Minimum Life: 5 Years
Each dwelling unit shall have a gas, electric or solar water heater. The minimum capacity for units with two bedrooms or less shall be 30 gallons, larger units shall have a minimum capacity of 40 gallons. Water heaters shall have pressure relief valves with drip legs that extend to within one foot of the floor.

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.

TITLE: IX PLUMBING SYSTEM: WATER SUPPLY

REPAIR STANDARD:
Minimum Life:
All homes shall be tested to identify and rectify any leaks. All fixtures must be supplied with a 2 gallons per minute water flow and shut off valves must operate. Lead and galvanized pipe shall be replaced with PVC or PEX. All accessible hot water lines shall be insulated; maximum static pressure is 60 psi.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
All fixtures shall have brass shut off valves. One, freeze protected exterior hose bib is required.

TITLE: X HVAC: AIR CONDITIONING

REPAIR STANDARD:
Minimum Life: 5 Year
Existing central air conditioning shall be inspected, serviced and refurbished per diagnostic testing of unit and distribution system – per (BPI) technical standards for air conditioning and heat pump specialist as described in Chapter 6 of the Saturn Mechanical Systems Field Guide, 2006.

REPLACEMENT STANDARD:
Minimum Life: 12 Years
Units over 5 years old shall be replaced with Energy Star certified. Ground mounted units are encouraged when zoning code allows.

TITLE: X HVAC: CHIMNEY/FIREPLACE REPAIR

REPAIR STANDARD:
Minimum Life: 20 Years
Unsound chimneys shall be repaired or removed. When chimneys must be used for combustion ventilation, they shall be replaced.

REPLACEMENT STANDARD:
Minimum Life: 20 Years
Replacement furnace flues when required shall be metal double or triple walled as recommended by the equipment manufacturer.
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 or a new liner, the chimney will be eliminated and replaced with a high efficiency, power vented unit.

TITLE: X HVAC: DISTRIBUTION/VENTILATION SYSTEM

REPAIR STANDARD:
Minimum Life: 5 Year
Existing central air conditioning shall be inspected, serviced and refurbished per diagnostic testing of unit and distribution system – per (BPI) technical standards for air conditioning and heat pump specialist 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 and run in conditioned space within the building envelope. If not run inside envelope, see alternative by energy auditor. Air leakage and ventilation may be brought into conformance to Chapter 4 of HPSWC.

TITLE: X HVAC - HEATING PLANT

REPAIR STANDARD:
Minimum Life: 5 Years
Heating plants that are less than 5 years old and rated 80% efficiency or better shall be tested and tuned-up per BPI. Setback thermostats are recommended.

REPLACEMENT STANDARD:
Minimum Life: 20 years
Condensing gas furnaces rated over 90 AFUE and heat pumps over 14.5 SEER with 10 year warranty on parts and labor. Air to air heat exchangers are eligible for this program. HVAC system shall be sized to maintain 75°F measured 36" off the floor when the outside temperature is 112°F (the average yearly maximum), in all habitable and essential rooms. Clark County is in a zone 3 climate area. Interior design temperature used for heating and cooling load calculations per 2009 IECC. Dual heat pumps are allowed in larger, two story homes.

TITLE: XI SPECIAL CONSTRUCTION ACCESSIBILITY

REPAIR STANDARD: NONE

REPLACEMENT STANDARD:
Low: ADA with Healthy Homes Fall Protection

TITLE: XI SPECIAL CONSTRUCTION
HEALTHY HOMES OPTIONS

1) Health & Safety

Fall Prevention/Accessibility
- No slip tub
- No slip floor on ceramic in bath and kitchen
- 2 Grab bars in bathtubs
- Shower rod fastened to studs

Theft/Assault Prevention

- Enhanced door locks
- Door 1" bolts and 3" screws

Poisoning Prevention & Survival
- Locking medicine cabinet

Avoiding Temperature Extremes
- Setback thermometer in house
- Reduce HWH setting to 120° F
- Antiscald tub faucets
- Antiscald lav faucets

Fire Prevention
- 10 lb ABC fire extinguisher in kitchen/garage
- Fire & smoke detectors per code
- Steel range hood duct vented directly to exterior if feasible
- Exterior fire alarm enunciator – accessible only
- Trim bushes back from house
- Wood or ceramic versus carpet – accessible only
- Arc fault circuit breakers
- Security system with fire monitoring – accessible only

Drowning Prevention
- Bath grab bars

Avoiding Electric Shock
- GFCI outlets in bath/exterior/garage
- Ground to NEC 2004
- Arc fault receptacles in bedrooms
- tamper-proof outlets upon replacement

2) Contaminant Exposure

Exterior Poisoning Prevention
- Caulk all openings "water-tight"

Minimizing Chemical Exposure
- Seal potential sources
- Tag sources of exposure
- Low VOC paints on interior
- Ceramic tile floors in baths

Lead Hazard Reduction
See Summary of Lead-Based Paint Requirements

Asbestos Exposure Reduction
- Don't saw, sand or drill A.C.M.
- In-place management
- Encapsulate friable asbestos coatings on pipes and ducts
- Remove all asbestos materials when feasible

Mold Prevention/Treatment
- Fix water leaks
- Saturate w/ Borax salt solution
- No unvented gas appliances
- Exterior-vented clothes dryer
- Perimeter drainage
- Excellent bath ventilation
- Size AC using Manual J

Avoiding Combustion By-Products
- CO monitors in homes with fuel burning appliances
- All range hoods vented directly to exterior
- Code legal make-up air
- Weatherstrip attached garage door

3) Forces of Nature

Pest Elimination, Bites & Stings
- Close off natural paths
- Caulk everything over 1/64" inside

Mold Prevention/Treatment
- Clean off mold
- Dry substrate
- Fix water leaks
- Saturate w/ Borax salt solution
- No unvented gas appliances
- Exterior-vented clothes dryer
- Timer on bath vent fan
- Vapor barrier in crawlspace and under slab
- Perimeter drainage
- Excellent bath ventilation
- Size AC using Manual J
- Towel drying racks

Avoiding Combustion By-Products
- CO monitors at fuel burning appliances
- All range hoods vented directly to exterior
- Code legal make-up air
- Weatherstrip attached garage door
- Separate gas/HWH furnace room

Minimizing Radon Exposure
- Provide make-up air to furnace

3) Forces of Nature

Pest Elimination, Bites & Stings
- Close off natural paths
- No spraying or fogging pesticides
- Caulk everything over 1/64" inside

TITLE: XI SPECIAL CONSTRUCTION SUSTAINABILITY OPTIONS

See Green Communities Checklist attached (optional)

TITLE: XI SPECIAL CONSTRUCTION
LEAD SAFE REGULATIONS

REPAIR STANDARD / REPLACEMENT STANDARD: Conformance to 1012-1013 Lead Regulation for all pre-1978 homes.

See Summary of Lead-Based Paint Requirements

PRE 1978 HOUSING ONLY
SUMMARY OF LEAD-BASED PAINT REQUIREMENTS

Activity (Regulation Subpart)	**Rehabilitation** (Subpart J)			**TBRA** (Subpart M)	**A,L,SS,O** (Subpart K) **Homebuyer and Special Needs***
Condition	**<$5,000**	**$5,001 - $25,000**	**>$25,000**	**Children 5 and under**	
Strategy Level	1. Do no harm	3. Assess and control lead hazards	4. Assess and abate lead hazards	2. Identify and stabilize deteriorated paint	2. Identify and stabilize deteriorated paint
Disclosure & Pamphlet	Yes	Yes	Yes	Yes	Yes
Hazard Evaluation	Paint Testing of disturbed surfaces	Paint Testing and Risk Assessment	Paint Testing and Risk Assessment	Visual Assessment /HQS	Visual Assessment/ Prepurchase Insp.
Notice	Yes	Yes	Yes	No	No
Lead Hazard Reduction	Repair paint disturbed during rehabilitation	Interim Controls	Abatement	Paint Stabilization	Paint Stabilization
Worker Requirement	Construction workers	Trained **or** supervised workers	Abatement workers **and** abatement supervisor	Supervised **or** trained workers	Supervised **or** trained workers
Work Practices	Safe work practices Worksite clearance Notice	Safe work practices Worksite clearance Notice	Safe work practices Worksite clearance Notice	Safe work practices Worksite clearance Notice	Safe work practices Worksite clearance Notice
Ongoing Maintenance	No	No	No (HOME funded rentals only)	Yes	Yes (if ongoing relationship)
EIBLL Requirements	No	No	No	Yes	No
Documentation	Testing Report Clearance Report	Work Write-up Risk Assessment Clearance Report	Work Write-up Risk Assessment Abatement Report	HQS Clearance Report Maintenance	HQS Clearance Report Maintenance
Options	Presume lead-based paint Use safe work practices on all surfaces to be disturbed	Presume lead-based hazards and paint. Standard Treatments on soil, dust, paint, friction, impact and mouthable.	Presume lead-based hazards. Abate all applicable surfaces, soil, dust.	Test deteriorated paint. Use safe work practices only on lead-based paint.	Test deteriorated paint. Use safe work practices only on lead-based paint surfaces.

* Special Needs Housing may be subject to the requirements of Subpart J,M or K depending on the nature of the activity undertaken. Most special needs housing involves acquisition, leasing, support services and operations, therefore, it has been placed in this column.

Green Communities Criteria Checklist

green communities™

Developer Name:

Project Name:

Address (Street/City/State):

Yes	No	?			Maximum Points
			Integrated Design		
			1.1	**Green Development Plan** Submit Green Development Plan outlining the integrated design approach used for this development that demonstrates involvement of the entire development team.	Mandatory
Yes	No	?	**Site, Location and Neighborhood Fabric**		
			2.1a LH	**Smart Site Location: Proximity to Existing Development** Provide site map demonstrating that the development is located on a site with access to existing roads, water, sewers and other infrastructure within or contiguous (having at least 25 percent of the perimeter bordering) to existing development.	Mandatory *except infill site or rehabs*
			2.1b LH	**Smart Site Location: Protecting Environmental Resources - New Construction** Do not locate new development within 100 feet of wetlands, critical slope areas, land identified as habitat for a threatened or endangered species; or on land previously used as public park land, land identified as prime farmland, or with elevation at or below the 100-year floodplain.	Mandatory *except infill site or rehabs*
			2.1c LH	**Smart Site Location: Proximity to Services - New Construction** Locate projects within a ¼ mile of at least two, or ½ mile of at least four community and retail facilities.	Mandatory *except infill site or rehabs*
			2.2	**Compact Development: New Construction** Achieve densities for new construction of at least six units per acre for detached/semi-detached houses; 10 for town homes; 15 for apartments.	Mandatory *except rehabs*
			2.3	**Walkable Neighborhoods: Sidewalks and Pathways** Connect project to the pedestrian grid. Include sidewalks or other all-weather pathways within a multifamily property or single-family subdivision linking residential development to public spaces, open spaces and adjacent development.	Mandatory
			2.4a LH	**Smart Site Location: Passive Solar Heating/Cooling** Orient building to make the greatest use of passive solar heating and cooling.	4
			2.4b	**Smart Site Location: Grayfield, Brownfield or Adaptive Reuse Site** Locate the project on a grayfield, brownfield or adaptive reuse site.	10
			2.5 LH	**Compact Development** Increase average minimum densities to meet or exceed: seven units per acre for detached/semi-detached; 12 units for town homes; and 20 units for apartments.	5
			2.6	**Walkable Neighborhoods: Connections to Surrounding Neighborhood** Provide a site plan demonstrating at least three separate connections from the development to sidewalks or all-weather pathways in surrounding neighborhoods.	5
			2.7 LH	**Transportation Choices** Locate project within ¼ mile radius of adequate public transit service, or ½ mile radius from an adequate fixed rail or ferry station.	12
Yes	No	?	**Site Improvements**		
			3.1	**Environmental Remediation** Conduct a Phase I Environmental Site Assessment and provide a plan for abatement if necessary.	Mandatory
			3.2 LH	**Erosion and Sedimentation Control** Implement EPA's Best Management Practices for erosion and sedimentation control during construction referring to the EPA document, Storm Water Management for Construction Activities.	Mandatory
			3.3 LH	**Landscaping** Provide a tree or plant list certified by the Architect or Landscape Architect, that the selection of new trees and plants are appropriate to the site's soils and microclimate and do not include invasive species. Locate plants to provide shading in the summer and allow for heat gain in the winter.	Mandatory *if providing landscaping*

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			3.4 LH	**Surface Water Management** Capture, retain, infiltrate and/or harvest the first ½ inch of rainfall that falls in a 24-hour period.	5
			3.5	**Storm Drain Labels** Label all storm drains or storm inlets to clearly indicate where the drain or inlet leads.	2
Yes	No	?	**Water Conservation**		
			4.1a LH	**Water-Conserving Appliances and Fixtures: New Construction** Install water-conserving fixtures with the following minimum specifications: toilets – 1.3 GPF; showerheads – 2.0 GPM; kitchen faucets – 2.0 GPM; bathroom faucets – 2.0 GPM	Mandatory
			4.1b LH	**Water-Conserving Appliances and Fixtures: Moderate Rehabilitation** Install water-conserving fixtures with the following minimum specifications *for toilets and shower heads* and follow requirements for other fixtures wherever and whenever they are replaced: toilets – 1.3 GPF; showerheads – 2.0 GPF; kitchen faucets – 2.0 GPM; bathroom faucets – 2.0 GPM.	Mandatory
			4.1c LH	**Water-Conserving Appliances and Fixtures** Install water-conserving fixtures with the following minimum specifications: toilets – 1.1 GPF; showerheads – 1.75 GPM; kitchen faucets – 2.0 GPM; bathroom faucets – 1.5 GPM	5
			4.2 LH	**Efficient Irrigation** If irrigation is necessary, use recycled gray water, roof water, collected site run-off, water from a municipal recycled water system, or a highly efficient irrigation system including all the following: system designed by EPA Water Sense professional; plant beds with a drip irrigation system; separately zoned turf and bedding types; a watering zone timer/controller; moisture sensor controller.	Mandatory *if irrigation is necessary*
Yes	No	?	**Energy Efficiency**		
			5.1a LH	**Efficient Energy Use: New Construction** Meet Energy Star standards (single family and low rise residential); exceed ASHRAE 90.1-2004 by 15 percent; California-exceed Title 24 by 15 percent; Oregon, Washington, Idaho and Montana--meet Northwest Energy Star	Mandatory
			5.1b	**Efficient Energy Use: Moderate & Substantial Rehabilitation** Perform an energy analysis of existing building condition, estimate costs of improvements, implement measures that will improve building energy performance by 15 percent from pre-renovation figures.	Mandatory
			5.2 LH	**Energy Star Appliances** If providing appliances, install Energy Star clothes washers, dishwashers and refrigerators.	Mandatory *if providing appliances*
			5.3a LH	**Efficient Lighting: Interior** Install the Energy Star Advanced Lighting Package in all interior units and use Energy Star or high-efficiency commercial grade fixtures in all common areas and outdoors.	Mandatory
			5.3b LH	**Efficient Lighting: Exterior** Install daylight sensors or timers on all outdoor lighting, including front and rear porch lights in single family homes.	Mandatory
			5.4	**Electricity Meter** Install individual or sub-metered electric meters.	Mandatory *(see full criteria for exceptions)*
			5.5 LH	**Additional Reductions in Energy Use** Exceed the relevant Energy Star HERS score for low-rise residential buildings or exceed other standards by increased percentages.	Optional *(see full criteria)*
			5.6a LH	**Renewable Energy** Install PV panels, wind turbines or other renewable energy source to provide at least 10 percent of the project's estimated electricity demand.	15
			5.6b	**Photovoltaic (PV) Ready** Site, design, engineer and wire the development to accommodate installation of PV in the future.	2
Yes	No	?	**Materials Beneficial to the Environment**		
			6.1 LH	**Construction Waste Management** Develop and implement a construction waste management plan to reduce the amount of material sent to the landfill by at least 25 percent.	5
			6.2 LH	**Recycled Content Material** Use materials with recycled content; provide calculation for recycled content percentage based on cost or value of recycled content in relation to total materials for project. Minimum recycled material must be 5 percent.	14

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		6.3 LH	**Certified, Salvaged and Engineered Wood** Commit to using at least 25 percent (by cost) wood products and materials that are salvaged wood, engineered framing materials or certified in accordance with the Forest Stewardship Council.	5
		6.4a LH	**Water-Permeable Walkways** Use water-permeable materials in 50 percent or more of walkways.	5
		6.4b LH	**Water-Permeable Parking Areas** Use water-permeable materials in 50 percent or more of paved parking areas.	5
		6.5a LH	**Reduce Heat-Island Effect: Roofing** Use Energy Star-compliant and high-emissive roofing or install a "green" (vegetated) roof for at least 50 percent of the roof area; or a combination of high-albedo and vegetated roof covering 75 percent of the roof area.	5
		6.5b LH	**Reduce Heat-Island Effect: Paving** Use light-colored, high-albedo materials and/or an open-grid pavement with a minimum Solar Reflective Index of 0.6 over at least 30 percent of the site's hardscaped area.	5
		6.5c LH	**Reduce Heat-Island Effect: Plantings** Locate trees or other plantings to provide shading for at least 50 percent of sidewalks, patios and driveways within 50 feet of a home.	5
Yes	No	?	**Healthy Living Environment**	
			7.1 LH	**Low / No Volatile Organic Compounds (VOC) Paints and Primers** Specify that all interior paints and primers must comply with current Green Seal standards for low VOC limits.	Mandatory
			7.2 LH	**Low / No VOC Adhesives and Sealants** Specify that all adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. Caulks and sealants must comply with Regulation 8, Rule 51 of the Bay Area Air Quality Management District.	Mandatory
			7.3	**Urea Formaldehyde-free Composite Wood** Use particleboard and MDF that is certified compliant with the ANSI A208.1 and A208.2. If using nonrated composite wood, all exposed edges and sides must be sealed with low-VOC sealants.	Mandatory
			7.4 LH	**Green Label Certified Floor Coverings** Do not install carpets in below grade living spaces, entryways, laundry rooms, bathrooms, kitchens or utility rooms. If using carpet, use the Carpet and Rug Institute's Green Label certified carpet, pad and carpet adhesives.	Mandatory *if providing floor coverings*
			7.5a LH	**Exhaust Fans – Bathroom** Install Energy Star-labeled bathroom fans that exhaust to the outdoors and are connected to a light switch and are equipped with a humidistat sensor or timer, *or* operate continuously.	Mandatory
			7.5b LH	**Exhaust Fans – Kitchen: New Construction & Substantial Rehabilitation** Install power vented fans or range hoods that exhaust to the exterior.	Mandatory
			7.5c	**Exhaust Fans – Kitchen: Moderate Rehabilitation** Install power vented fans or range hoods that exhaust to the exterior.	5
			7.6a LH	**Ventilation: New Construction & Substantial Rehabilitation** Install a ventilation system for the dwelling unit, providing adequate fresh air per ASHRAE 62.1-2007 for residential buildings above 3 stories or ASHRAE 62.2 for single family and low-rise multifamily dwellings.	Mandatory
			7.6b	**Ventilation: Moderate Rehabilitation** Install a ventilation system for the dwelling unit, providing adequate fresh air per ASHRAE 62.1-2007 for residential buildings above 3 stories or ASHRAE 62.2 for single family and low-rise multifamily dwellings.	10
			7.7 LH	**HVAC Sizing** Size heating and cooling equipment in accordance with the Air Conditioning Contractors of America Manual, Parts J and S, ASHRAE handbooks, or equivalent software.	Mandatory
			7.8	**Water Heaters: Mold Prevention** Use tankless hot water heaters or install conventional hot water heaters in rooms with drains or catch pans with drains piped to the exterior of the dwelling and with non-water sensitive floor coverings.	Mandatory

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			7.9a	**Materials in Wet Areas: Surfaces** In wet areas, use materials that have smooth, durable, cleanable surfaces. Do not use mold-propagating materials such as vinyl wallpaper and unsealed grout.	Mandatory
			7.9b	**Materials in Wet Areas: Tub and Shower Enclosures** Use fiberglass or similar enclosure or, if using any form of grouted material, use backing materials such as cement board, fiber cement board or equivalent (i.e., not paper-faced).	Mandatory
			7.10a	**Basements and Concrete Slabs: Vapor Barrier** Provide vapor barrier under all slabs. For concrete floors either in basements or on-grade slab install a capillary break of 4 four inches of gravel over soil. Cover all gravel with 6 millimeter polyethylene sheeting moisture barrier with joints lapped one foot or more. On interior below grade walls, avoid using separate vapor barrier or below grade vertical insulation.	Mandatory
			7.10b LH	**Basements and Concrete Slabs – Radon: New Construction & Substantial Rehabilitation** In EPA Zone 1 and 2 areas, install passive radon-resistant features below the slab along with a vertical vent pipe with junction box available, if an active system should prove necessary. For substantial rehab, introduce radon-reduction measures if elevated levels of radon are detected.	Mandatory
			7.11	**Water Drainage** Provide drainage of water to the lowest level of concrete away from windows, walls and foundations.	Mandatory
			7.12 LH	**Garage Isolation** Provide a continuous air barrier between the conditioned (living) space and any unconditioned garage space. In single-family houses with attached garages, install a CO alarm inside the house on the wall that is attached to the garage and outside the sleeping area, and do not install air handling equipment in the garage.	Mandatory
			7.13 LH	**Clothes Dryer Exhaust** Clothes dryers must be exhausted directly to the outdoors.	Mandatory
			7.14 LH	**Integrated Pest Management** Seal all wall, floor and joint penetrations with low VOC caulking. Provide rodent-proof and corrosion proof screens (e.g., copper or stainless steel mesh) for large openings.	Mandatory
			7.15	**Lead-Safe Work Practices: Moderate & Substantial Rehabilitation** For properties built before 1978, use lead-safe work practices during renovation, remodeling, painting and demolition.	Mandatory
			7.16	**Healthy Flooring Materials: Alternative Sources** Use non-vinyl, non-carpet floor coverings in all rooms.	5
			7.17	**Smoke-free Building** Enforce a "no smoking" policy in all common and individual living areas in all buildings. See full criteria for "common area" definition.	2
			7.18 LH	**Combustion Equipment (includes space & water-heating equipment)** Specify power vented or combustion sealed equipment. Install one hard-wired CO detector for each sleeping area, minimum one per floor.	Mandatory
Yes	No	?	**Operations and Maintenance**		
			8.1 LH	**Building Maintenance Manual** Provide a manual that includes the following: a routine maintenance plan; instructions for all appliances, HVAC operation, water-system turnoffs, lighting equipment, paving materials and landscaping, pest control and other systems that are part of each occupancy unit; an occupancy turnover plan that describes the process of educating the tenant about proper use and maintenance of all building systems.	Mandatory
			8.2 LH	**Occupant's Manual** Provide a guide for homeowners and renters that explains the intent, benefits, use and maintenance of green building features, along with the location of transit stops and other neighborhood conveniences, and encourages additional green activities such as recycling, gardening and use of healthy cleaning materials, alternate measures for pest control, and purchase of green power.	Mandatory
			8.3 LH	**Homeowner and New Resident Orientation** Provide a walk-through and orientation to the homeowner or new resident using the Occupant Manual from 8-2 above that reviews the building's green features, operations and maintenance along with neighborhood conveniences.	Mandatory

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