

**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) NSP 1, 2 & 3		TBRA (Subpart M)	A, L, SS, O (Subpart K) Homebuyer and Special Needs*
Condition	<\$5,000	\$5,001 - \$25,000	Children 5 and under	
Strategy Level	1. Do no harm	3. Assess and control lead hazards	2. Identify and stabilize deteriorated paint	2. Identify and stabilize deteriorated paint
Disclosure & Pamphlet	Yes	Yes	Yes	Yes
Hazard Evaluation	Paint Testing of disturbed surfaces	Paint Testing and Risk Assessment	Visual Assessment /HQS	Visual Assessment/ Prepurchase Insp.
Notice	Yes	Yes	No	No
Lead Hazard Reduction	Repair paint disturbed during rehabilitation	Interim Controls	Paint Stabilization	Paint Stabilization
Worker Requirement	Supervised EPA construction workers	Trained or supervised workers	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
Ongoing Maintenance	No	No	Yes	Yes (if ongoing relationship)
EIBLL	No	(HOME funded rentals only)	Yes	No
Requirements	Testing Report Clearance Report	Work Write-up Risk Assessment Clearance 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.	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.



ENERGY STAR Qualified Homes, Version 3 (Rev. 03)

Thermal Enclosure System Rater Checklist

Home Address: _____	City: _____	State: _____		
Inspection Guidelines	Must Correct	Builder Verified ¹	Rater Verified	N/A
1. High-Performance Fenestration				
1.1 <i>Prescriptive Path</i> : Fenestration shall meet or exceed ENERGY STAR requirements ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 <i>Performance Path</i> : Fenestration shall meet or exceed 2009 IECC requirements ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Quality-Installed Insulation				
2.1 Ceiling, wall, floor, and slab insulation levels shall meet or exceed 2009 IECC levels ^{3,4,5}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 All ceiling, wall, floor, and slab insulation shall achieve RESNET-defined Grade I installation or, alternatively, Grade II for surfaces with insulated sheathing (see checklist item 4.4.1 for required insulation levels)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Fully-Aligned Air Barriers⁶				
At each insulated location noted below, a complete air barrier shall be provided that is fully aligned with the insulation as follows:				
<ul style="list-style-type: none"> • At interior surface of ceilings in all Climate Zones; also, at interior edge of attic eave in all Climate Zones using a wind baffle that extends to the full height of the insulation. Include a baffle in every bay or a tabbed baffle in each bay with a soffit vent that will also prevent wind washing of insulation in adjacent bays • At exterior surface of walls in all Climate Zones; and also at interior surface of walls for Climate Zones 4-8^{7, 8} • At interior surface of floors in all Climate Zones, including supports to ensure permanent contact and blocking at exposed edges^{9,10} 				
3.1 Walls				
3.1.1 Walls behind showers and tubs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.2 Walls behind fireplaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.3 Attic knee walls / Sloped attics ¹¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.4 Skylight shaft walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.5 Wall adjoining porch roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.6 Staircase walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.7 Double walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.8 Garage rim / band joist adjoining conditioned space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.9 All other exterior walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Floors				
3.2.1 Floor above garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2.2 Cantilevered floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2.3 Floor above unconditioned basement or vented crawlspace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Ceilings				
3.3.1 Dropped ceiling/soffit below unconditioned attic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.2 Sloped ceilings ¹¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.3 All other ceilings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Reduced Thermal Bridging				
4.1 For insulated ceilings with attic space above (i.e., non-cathedralized ceilings), uncompressed insulation extends to the inside face of the exterior wall below at the following levels: CZ 1 to 5: $\geq R-21$; CZ 6 to 8: $\geq R-30$ ¹²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 For slabs on grade in CZ 4 and higher, 100% of slab edge insulated to $\geq R-5$ at the depth specified by the 2009 IECC and aligned with thermal boundary of the walls ^{4,5}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Insulation beneath attic platforms (e.g., HVAC platforms, walkways) $\geq R-21$ in CZ 1 to 5; $\geq R-30$ in CZ 6 to 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Reduced thermal bridging at walls (rim / band joists are exempted) using one of the following options:				
4.4.1 Continuous rigid insulation, insulated siding, or combination of the two; $\geq R-3$ in Climate Zones 1 to 4, $\geq R-5$ in Climate Zones 5 to 8 ^{13,14} , OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.2 Structural Insulated Panels (SIPs), OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.3 Insulated Concrete Forms (ICFs), OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.4 Double-wall framing ¹⁵ , OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.5 Advanced framing, including all of the items below:				
4.4.5a All corners insulated $\geq R-6$ to edge ¹⁶ , AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.5b All headers above windows & doors insulated ¹⁷ , AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.5c Framing limited at all windows & doors ¹⁸ , AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.5d All interior / exterior wall intersections insulated to the same R-value as the rest of the exterior wall ¹⁹ , AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4.5e Minimum stud spacing of 16" o.c. for 2 x 4 framing in all Climate Zones and, in Climate Zones 5 through 8, 24" o.c. for 2 x 6 framing unless construction documents specify other spacing is structurally required ²⁰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



ENERGY STAR Qualified Homes, Version 3 (Rev. 03)

Thermal Enclosure System Rater Checklist

Inspection Guidelines	Must Correct	Builder Verified ¹	Rater Verified	N/A
5. Air Sealing				
5.1 Penetrations to unconditioned space fully sealed with solid blocking or flashing as needed and gaps sealed with caulk or foam				
5.1.1 Duct / flue shaft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.2 Plumbing / piping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.3 Electrical wiring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.4 Bathroom and kitchen exhaust fans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.5 Recessed lighting fixtures adjacent to unconditioned space, ICAT labeled and fully gasketed. Also, if in insulated ceiling without attic above, exterior surface of fixture insulated to $\geq R-10$ in CZ 4 and higher to minimize condensation potential.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.6 Light tubes adjacent to unconditioned space include lens separating unconditioned and conditioned space and are fully gasketed ²¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 Cracks in the building envelope fully sealed				
5.2.1 All sill plates adjacent to conditioned space sealed to foundation or sub-floor with caulk. Foam gasket also placed beneath sill plate if resting atop concrete or masonry and adjacent to conditioned space.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.2 At top of walls adjoining unconditioned spaces, continuous top plates or sealed blocking using caulk, foam, or equivalent material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.3 Sheetrock sealed to top plate at all attic/wall interfaces using caulk, foam, or equivalent material. Either apply sealant directly between sheetrock and top plate or to the seam between the two from the attic above. Construction adhesive shall not be used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.4 Rough opening around windows & exterior doors sealed with caulk or foam ²²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.5 Marriage joints between modular home modules at all exterior boundary conditions fully sealed with gasket and foam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.6 All seams between Structural Insulated Panels (SIPs) foamed and/or taped per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.7 In multi-family buildings, the gap between the drywall shaft wall (i.e. common wall) and the structural framing between units fully sealed at all exterior boundary conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 Other Openings				
5.3.1 Doors adjacent to unconditioned space (e.g., attics, garages, basements) or ambient conditions gasketed or made substantially air-tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3.2 Attic access panels and drop-down stairs equipped with a durable $\geq R-10$ insulated cover that is gasketed (i.e., not caulked) to produce continuous air seal when occupant is not accessing the attic ²³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3.3 Whole-house fans equipped with a durable $\geq R-10$ insulated cover that is gasketed and either installed on the house side or mechanically operated ²³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rater Name: _____ Rater Pre-Drywall Inspection Date: _____ Rater Initials: _____				
Rater Name: _____ Rater Final Inspection Date: _____ Rater Initials: _____				
Builder Employee: _____ Builder Inspection Date: _____ Builder Initials: _____				

Notes:

- At the discretion of the Rater, the builder may verify up to eight items specified in this checklist. When exercised, the builder's responsibility will be formally acknowledged by the builder signing off on the checklist for the item(s) that they verified.
- For Prescriptive Path:* All windows, doors, and skylights shall meet or exceed ENERGY STAR Program Requirements for Residential Windows, Doors, and Skylights – Version 5.0 as outlined at www.energystar.gov/windows. *For Performance Path:* All windows, doors and skylights shall meet or exceed the component U-factor and SHGC requirements specified in the 2009 IECC – Table 402.1.1. If no NFRC rating is noted on the window or in product literature (e.g., for site-built fenestration), select the U-factor and SHGC value from tables 4 and 14, respectively, in 2005 ASHRAE Fundamentals, Chapter 31. Select the highest U-factor and SHGC value among the values listed for the known window characteristics (e.g., frame type, number of panes, glass color, and presence of low-e coating). Note that the U-factor requirement applies to all fenestration while the SHGC only applies to the glazed portion. The following exceptions apply:
 - An area-weighted average of fenestration products shall be permitted to satisfy the U-factor requirements;
 - An area-weighted average of fenestration products more than 50% glazed shall be permitted to satisfy the SHGC requirements;



ENERGY STAR Qualified Homes, Version 3 (Rev. 03) HVAC System Quality Installation Contractor Checklist¹

Home Address: _____ City: _____ State: _____				
System Description ² _____		Cooling system for temporary occupant load? ³ Yes <input type="checkbox"/> No <input type="checkbox"/>		
1. Whole-Building Mechanical Ventilation Design⁴		Cont./Tech. Verified⁵	Rater Verified	N/A
1.1 Ventilation system designed to meet ASHRAE 62.2-2010 requirements ⁶ .		<input type="checkbox"/>	<input type="checkbox"/>	-
1.2 Ventilation system does not utilize an intake duct to the return side of the HVAC system unless the system is designed to operate intermittently and automatically based on a timer and to restrict outdoor air intake when not in use (e.g., motorized damper).		<input type="checkbox"/>	<input type="checkbox"/>	-
1.3 Documentation is attached with ventilation system type, location, design rate, and frequency and duration of each ventilation cycle.		<input type="checkbox"/>	<input type="checkbox"/>	-
1.4 If present, continuously-operating vent. & exhaust fans designed to operate during all occupiable hours.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 If present, intermittently-operating whole-house ventilation system designed to automatically operate at least once per day and at least 10% of every 24 hours.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Heating & Cooling System Design^{4,7} - Parameters used in the design calculations shall reflect home to be built, specifically, outdoor design temperatures, home orientation, number of bedrooms, conditioned floor area, window area, predominant window performance and insulation levels, infiltration rate, mechanical ventilation rate, presence of MERV6 or better filter, and indoor temperature setpoints = 70°F for heating; 75°F for cooling				
2.1 Heat Loss / Gain Method: <input type="checkbox"/> Manual J v8 <input type="checkbox"/> ASHRAE 2009 <input type="checkbox"/> Other: _____		<input type="checkbox"/>	<input type="checkbox"/>	-
2.2 Duct Design Method: <input type="checkbox"/> Manual D <input type="checkbox"/> Other: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Equipment Selection Method: <input type="checkbox"/> Manual S <input type="checkbox"/> OEM Rec. <input type="checkbox"/> Other: _____		<input type="checkbox"/>	<input type="checkbox"/>	-
2.4 Outdoor Design Temperatures: ⁸ Location: _____ 1%: _____ °F 99%: _____ °F		<input type="checkbox"/>	<input type="checkbox"/>	-
2.5 Orientation of Rated Home (e.g., North, South): _____		<input type="checkbox"/>	<input type="checkbox"/>	-
2.6 Number of Occupants Served by System: ⁹ _____		<input type="checkbox"/>	<input type="checkbox"/>	-
2.7 Conditioned Floor Area in Rated Home: _____ Sq. Ft.		<input type="checkbox"/>	<input type="checkbox"/>	-
2.8 Window Area in Rated Home: _____ Sq. Ft.		<input type="checkbox"/>	<input type="checkbox"/>	-
2.9 Predominant Window SHGC in Rated Home: ¹⁰ _____		<input type="checkbox"/>	<input type="checkbox"/>	-
2.10 Infiltration Rate in Rated Home: ¹¹ Summer: _____ Winter: _____		<input type="checkbox"/>	<input type="checkbox"/>	-
2.11 Mechanical Ventilation Rate in Rated Home: _____ CFM		<input type="checkbox"/>	<input type="checkbox"/>	-
2.12 Design Latent Heat Gain: _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	-
2.13 Design Sensible Heat Gain: _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	-
2.14 Design Total Heat Gain: _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	-
2.15 Design Total Heat Loss: _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	-
2.16 Design Airflow: ¹² _____ CFM		<input type="checkbox"/>	<input type="checkbox"/>	-
2.17 Design Duct Static Pressure: ¹³ _____ Inches Water Column (IWC)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.18 Full Load Calculations Report Attached		<input type="checkbox"/>	<input type="checkbox"/>	-
3. Selected Cooling Equipment, If Cooling Equipment to be Installed				
3.1 Condenser Manufacturer & Model: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Condenser Serial #: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Evaporator / Fan Coil Manufacturer & Model: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4 Evaporator / Fan Coil Serial #: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.5 AHRI Reference #: ¹⁴ _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6 Listed Efficiency: _____ EER _____ SEER		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.7 Metering Device Type: <input type="checkbox"/> TXV <input type="checkbox"/> Fixed orifice <input type="checkbox"/> Other: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.8 Refrigerant Type: <input type="checkbox"/> R-410a <input type="checkbox"/> Other: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.9 Fan Speed Type: ¹⁵ <input type="checkbox"/> Fixed <input type="checkbox"/> Variable (ECM/ICM) <input type="checkbox"/> Other: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.10 Listed Sys. Latent Capacity at Design Cond. ¹⁶ : _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.11 Listed Sys. Sensible Capacity at Design Cond. ¹⁶ : _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.12 Listed Sys. Total Capacity at Design Cond. ¹⁶ : _____ BTUh		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.13 If Listed Sys. Latent Capacity (Value 3.10) ≤ Design Latent Heat Gain (Value 2.12), ENERGY STAR qualified dehumidifier installed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.14 Listed Total Cap. (Value 3.12) is 95-115% of Design Total Heat Gain (Value 2.14) or next nom. Size ^{17,18}		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.15 AHRI Certificate Attached ¹⁴		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Selected Heat Pump Equipment, If Heatpump to be Installed				
4.1 AHRI Listed Efficiency: _____ HSPF		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Performance at 17°F: Capacity _____ BTUh Efficiency: _____ COP		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Performance at 47°F: Capacity _____ BTUh Efficiency: _____ COP		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



ENERGY STAR Qualified Homes, Version 3 (Rev. 03) HVAC System Quality Installation Contractor Checklist¹

	Cont./Tech. Verified ⁵	Rater Verified	N/A
5. Selected Furnace, if Furnace to be Installed			
5.1 Furnace Manufacturer & Model: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 Furnace Serial #: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 Listed Efficiency: _____ AFUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4 Listed Output Heating Capacity: _____ BTUh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.5 Listed Output Heat. Cap. (Value 5.4) is 100-140% of Design Total Heat Loss (Value 2.15) or next nom. Size ^{18,19}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Refrigerant Tests - Run system for 15 minutes before testing Note: If cold weather makes it impossible to verify proper refrigerant charge, system must include a TXV ²⁰			
6.1 Outdoor ambient temperature at condenser: _____ °F DB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Return-side air temperature inside duct near evaporator, during cooling mode: _____ °F WB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Liquid line pressure: _____ psig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Liquid line temperature: _____ °F DB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Suction line pressure: _____ psig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.6 Suction line temperature: _____ °F DB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Refrigerant Calculations			
For System with Thermal Expansion Valve (TXV):			
7.1 Condenser saturation temperature: _____ °F DB (Using Value 6.3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2 Subcooling value: _____ °F DB (Value 7.1 - Value 6.4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.3 OEM subcooling goal: _____ °F DB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.4 Subcooling deviation: _____ °F DB (Value 7.2 - Value 7.3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For System with Fixed Orifice:			
7.5 Evaporator saturation temperature: _____ °F DB (Using Value 6.5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.6 Superheat value: _____ °F DB (Value 6.6 - Value 7.5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.7 OEM superheat goal: _____ °F DB (Using superheat tables and Values 6.1 & 6.2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.8 Superheat deviation: _____ °F DB (Value 7.6 - Value 7.7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.9 Value 7.4 is ±3°F or Value 7.8 is ±5°F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.10 An OEM test procedure has been used in place of sub-cooling or super-heat process and documentation has been attached that defines this procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Electrical Measurements			
8.1 Evaporator/air handler fan: _____ amps _____ volts _____ watts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Condenser fan: _____ amps _____ volts _____ watts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3 Compressor: _____ amps _____ volts _____ watts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.4 Electrical measurements within OEM specified tolerance of nameplate value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Air Flow Tests			
9.1 Air volume at evaporator: _____ CFM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2 Test performed in which mode? <input type="checkbox"/> Heating <input type="checkbox"/> Cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.3 Return duct static pressure: _____ IWC Test Hole Location ²¹ : _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.4 Supply duct static pressure: _____ IWC Test Hole Location ²¹ : _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.5 Test hole locations are well-marked and accessible ²¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.6 Measurement method used: <input type="checkbox"/> Anemometer <input type="checkbox"/> Pressure matching ²² <input type="checkbox"/> Flow grid <input type="checkbox"/> Fan curve <input type="checkbox"/> Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.7 Airflow volume at evaporator (Value 9.1), at fan design speed and full operating load, +/- 15% of the airflow required per system design (Value 2.16) or within range recommended by OEM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Air Balance			
10.1 Individual room airflows within the greater of ±20% or 25 CFM of the design / application requirements for the supply and return ducts ²³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.2 Balancing report indicating quantity of supply and return terminals per room attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. System Controls			
11.1 Operating and safety controls meet OEM requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Drain pan			
12.1 Corrosion-resistant drain pan, properly sloped to drainage system, included ²⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technician Name ²⁵ _____ Equipment Installation Date: _____ Technician Signature ²⁵ _____ Company: _____ Designer Name ²⁵ _____ System Design Date: _____ Designer Signature ²⁵ _____ Company: _____			



ENERGY STAR Qualified Homes, Version 3 (Rev. 03) HVAC System Quality Installation Rater Checklist¹

Home Address: _____		City: _____		State: _____	
Inspection Guidelines			Must Correct	Rater Verified	N/A
1. Review of HVAC System Quality Installation Contractor Checklist²					
1.1 HVAC System Quality Installation Contractor checklist completed in its entirety and collected for records, along with documentation on ventilation system (1.3), full load calculations (2.18), AHRI certificate (3.15), and balancing report (10.2).			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Review the following parameters related to system cooling design, selection, and installation from the HVAC Contractor checklist (Contractor checklist item # indicated in parenthesis):					
1.2.1 Outdoor design temperatures (2.4) are equal to the 1% and 99% ACCA Manual J design temperatures for contractor-designated design location ³			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.2 Home orientation (2.5) matches orientation of rated home			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.3 Number of Occupants (2.6) equals number of occupants in rated home ⁴			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.4 Conditioned floor area (2.7) is within $\pm 10\%$ of conditioned floor area of rated home			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.5 Window area (2.8) is within $\pm 10\%$ of calculated window area of rated home			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.6 Predominant window SHGC (2.9) is within 0.1 of predominant value in rated home ⁵			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.7 Listed latent cooling capacity (3.10) exceeds design latent heat gain (2.12)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.8 Listed sensible cooling capacity (3.11) exceeds design sensible heat gain (2.13)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.9 Listed total cooling capacity (3.12) is 95-115% (or 95-125% for Heat Pumps in Climate Zones 4-8) of design total heat gain (2.14), or next nominal size ⁶			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.10 HVAC manufacturer and model numbers on installed equipment, contractor checklist (3.1, 3.3, 5.1), and AHRI certificate or OEM catalog data all match ⁷			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.11 Using reported liquid line (6.3) or suction line (6.5) pressure, corresponding temp. (as determined using pressure/temperature chart for refrigerant type) matches reported condenser (7.1) or evaporator (7.5) saturation temperature (+/- 3 degrees) ⁸			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2.12 Calculated subcooling (7.1 minus 6.4) or superheat (6.6 minus 7.5) value equals reported target subcooling (7.3) or superheat (7.7) temperature ⁸			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Rater-verified supply & return duct static pressure <110% of contractor values (9.3, 9.4)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Duct Quality Installation - Applies to All Heating, Cooling, Ventilation, Exhaust, and Pressure Balancing Ducts					
2.1 Connections and routing of ductwork completed without kinks or sharp bends. ⁹			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 No excessive coiled or looped flexible ductwork. ¹⁰			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Flexible ducts in unconditioned space not installed in cavities smaller than outer duct diameter; in conditioned space not installed in cavities smaller than inner duct diameter			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Flexible ducts supported at intervals as recommended by mfr. but at a distance ≤ 5 ft.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Building cavities not used as supply or return ducts unless they meet items 3.2, 3.3, 4.1, and 4.2 of this checklist.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6 HVAC ducts, cavities used as ducts, and combustion inlets and outlets may pass perpendicularly through exterior walls but shall not be run within exterior walls unless at least R-6 continuous insulation is provided on exterior side of the cavity, along with an interior and exterior air barrier where required by the Thermal Enclosure System Rater Checklist.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 Quantity & location of supply and return duct terminals match contractor balancing report.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8 Bedrooms pressure-balanced using any combination of transfer grills, jump ducts, dedicated return ducts, and/or undercut doors to either: a) provide 1 sq. in. of free area opening per 1 CFM of supply air, as reported on the contractor-provided balancing report; or b) achieve a Rater-measured pressure differential ≤ 3 Pa (0.012 in. w.c.) with respect to the main body of the house when bedroom doors are closed and the air handler is operating. ¹¹			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Duct Insulation - Applies to All Heating, Cooling, Supply Ventilation, and Pressure Balancing Ducts¹²					
3.1 All connections to trunk ducts in unconditioned space are insulated.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 <i>Prescriptive Path:</i> Supply ducts in unconditioned attic have insulation \geq R-8. <i>Performance Path:</i> Supply ducts in unconditioned attic have insulation \geq R-6.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 All other supply ducts and all return ducts in unconditioned space have insulation \geq R-6.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Duct Leakage - Applies to All Heating, Cooling, and Balanced Ventilation Ducts					
4.1 Total Rater-measured duct leakage ≤ 6 CFM25 per 100 sq. ft. of conditioned floor area ^{13,14}			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Rater-measured duct leakage to outdoors ≤ 4 CFM25 per 100 sq. ft. of conditioned floor area. ^{13, 14, 15}			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Duct boots sealed to floor, wall, or ceiling using caulk, foam, mastic tape, or mastic paste.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



ENERGY STAR Qualified Homes, Version 3 (Rev. 03) HVAC System Quality Installation Rater Checklist¹

Inspection Guidelines			Must Correct	Rater Verified	N/A
5. Whole-Building Delivered Ventilation					
5.1 Rater-measured ventilation rate is within 100-120% of HVAC contractor design value (2.11). ¹⁶			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Controls					
6.1 Air flow is produced when central HVAC fan is energized (set thermostat to "fan").			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Cool air flow is produced when the cooling cycle is energized (set thermostat to "cool"). ¹⁷			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Heated air flow is produced when the heating cycle is energized (set thermostat to "heat"). ¹⁷			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Continuously-operating ventilation & exhaust fans include readily accessible override controls.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Ventilation controls labeled, unless function is obvious (e.g., bathroom exhaust fan).			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Ventilation Air Inlets & Ventilation Source					
7.1 All ventilation air inlets located ≥ 10 ft. of stretched-string distance from known contamination sources such as stack, vent, exhaust hood, or vehicle exhaust. Exception: ventilation air inlets in the wall ≥ 3 ft. from dryer exhausts and contamination sources exiting through the roof. ¹⁸			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2 Ventilation air inlets ≥ 2 ft. above grade or roof deck in Climate Zones 1-3 or ≥ 4 ft. above grade or roof deck in Climate Zones 4-8 and not obstructed by snow, plantings, condensing units or other material at time of inspection.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.3 Ventilation air inlets provided with rodent / insect screen with ≤ 0.5 inch mesh. ¹⁹			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.4 Ventilation air comes directly from outdoors and not from adjacent dwelling units, garages, crawlspaces, or attics.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Local Mechanical Exhaust					
In each kitchen and bathroom, system installed that exhausts directly to the outdoors and meets one of the following Rater-measured airflow standards: ^{16, 20, 21}					
Location	Continuous Rate	Intermittent Rate ²²			
8.1 Kitchen	≥ 5 ACH, based on kitchen volume ²³	≥ 100 CFM ²⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Bathroom	≥ 20 CFM	≥ 50 CFM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3 If fans share common exhaust duct, back-draft dampers installed.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.4 Common exhaust duct not shared by fans in separate dwellings. ²⁵			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.5 Clothes dryers vented directly to outdoors, except for ventless dryers equipped with a condensate drain.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Ventilation & Exhaust Fan Ratings (Exemptions for HVAC and Remote-Mounted Fans) ²⁶					
9.1 Intermittent supply & exhaust fans rated at ≤ 3 sones by mfr., unless rated flow ≥ 400 CFM			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2 Continuous supply & exhaust fans rated at ≤ 1 sone by manufacturer.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.3 Bathroom fans used as part of a whole-house mechanical ventilation system shall be ENERGY STAR qualified; unless rated flow rate ≥ 500 CFM.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Combustion Appliances					
10.1 Furnaces, boilers, and water heaters located within the home's pressure boundary are mechanically drafted or direct-vented to outdoors. As an exception, atmospherically vented equipment is allowed in Climate Zone 1-3. For atmospherically vented furnaces, boilers, and water heaters, the Rater has conducted BPI's or RESNET's combustion safety test procedure and determined that the CO test results are less than 25 ppm and the combustion appliance zone depressurization limit is not exceeded. ^{27, 28, 29}			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.2 For fireplaces that are not mechanically drafted or direct-vented to outdoors, total net rated exhaust flow of the two largest exhaust fans (excluding summer cooling fans) is ≤ 15 CFM per 100 sq. ft. of occupiable space when at full capacity or the Rater has verified that the pressure differential is ≤ 5 Pa using BPI's or RESNET's combustion safety test procedure. ^{20, 28, 29, 30, 31}			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.3 If unvented combustion appliances other than cooking ranges are located inside the home's pressure boundary, the Rater has conducted RESNET's or BPI's combustion safety test procedure and determined that the ambient CO test results are less than 35 ppm. ³²					
11. Filtration					
11.1 At least one MERV 6 or higher filter installed in each ducted mechanical system. ³³			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.2 All return air and mechanically supplied outdoor air pass through filter prior to conditioning.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.3 Filter located and installed so as to facilitate access and regular service by the owner. ³⁴			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.4 Filter access panel includes gasket or comparable sealing mechanism and fits snugly against the exposed edge of filter when closed to prevent bypass. ³⁵			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rater Name: _____			Date Checklist Inspected: _____		
Rater Signature: _____			Rater Company Name: _____		



ENERGY STAR Qualified Homes, Version 3 (Rev. 03) Water Management System Builder Checklist^{1,2,3}

Home Address: _____ City: _____ State: _____

Inspection Guidelines	Must Correct	Builder Verified	Rater Verified	N/A
1. Water-Managed Site and Foundation				
1.1 Patio slabs, porch slabs, walks, and driveways sloped ≥ 0.25 in. per ft. away from home to edge of surface or 10 ft., whichever is less. ⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Final grade is, or is scheduled by builder to be, sloped ≥ 0.5 in. per ft. away from home for ≥ 10 ft. and back-fill tamped to prevent settling ⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Capillary break beneath all slabs (e.g., slab on grade, basement slab) except crawlspace slabs using either: ⁵				
1.3.1 4 in. bed of ≥ 0.5 in. clean aggregate covered with ≥ 6 mil polyethylene sheeting lapped 6-12 in. or ≥ 1 " extruded polystyrene insulation with taped joints, in direct contact with concrete slab above, OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2 4 in. uniform layer of sand overlaid with geotextile drainage matting and covered with sheeting or ≥ 1 " extruded polystyrene insulation with taped joints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Capillary break for all crawlspace floors using either: ⁵				
1.4.1 Concrete slab over ≥ 6 mil polyethylene sheeting, lapped 6-12 in., OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4.2 ≥ 6 mil polyethylene sheeting, lapped 6-12 in. and either a) lapped up each wall or pier far enough to be fastened with furring strips or equivalent, or b) secured in the ground at the perimeter using stakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Exterior surface of below-grade walls finished as follows: <ul style="list-style-type: none"> For poured concrete, concrete masonry, and insulated concrete forms, finish with damp-proofing coating For wood framed walls, finish with polyethylene and adhesive or other equivalent waterproofing 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Class 1 vapor retarders not installed on the interior side of air permeable insulation in exterior below-grade walls ⁶	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Sump pump covers mechanically attached with full gasket seal or equivalent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Drain tile surrounded with clean gravel and fabric filter ⁷	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Water-Managed Wall Assembly				
2.1 Flashing at bottom of exterior walls with weep holes included for masonry veneer and weep screed for stucco cladding systems, or equivalent drainage system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Fully sealed continuous drainage plane behind exterior cladding that laps over flashing in Section 2.1. Additional bond-break drainage plane layer provided behind all stucco and non-structural masonry cladding wall assemblies ⁸	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Window and door openings fully flashed ⁹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Water-Managed Roof Assembly				
3.1 Step and kick-out flashing at all roof-wall intersections, extending ≥ 4 " on wall surface above roof deck and integrated with drainage plane above ¹⁰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 For homes that don't have a slab-on-grade foundation and do have expansive or collapsible soils, gutters & downspouts provided that empty to lateral piping that deposits water on sloping final grade ≥ 5 ft. from foundation or to underground catchment system ≥ 10 ft. from foundation. ¹¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Self-sealing bituminous membrane or equivalent at all valleys & roof deck penetrations ¹²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4 In 2009 IECC Climate Zones 5 and higher, self-sealing bituminous membrane or equivalent over sheathing at eaves from the edge of the roof line to > 2 ft. up roof deck from the interior plane of the exterior wall. ¹²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Water-Managed Building Materials				
4.1 Wall-to-wall carpet <u>not</u> installed within 2.5 feet of toilets, tubs, and showers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Cement board or equivalent moisture-resistant backing material installed on all walls behind tub and shower enclosures composed of tile or panel assemblies with caulked joints. Paper-faced backerboard shall not be used ¹³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 In Warm-Humid climates, Class 1 vapor retarders not installed on the interior side of air permeable insulation in above-grade walls, except at shower and tub walls ⁶	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Building materials with visible signs of water damage or mold <u>not</u> installed ¹⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Interior walls <u>not</u> enclosed (e.g., with drywall) if either the framing members or insulation products have high moisture content ¹⁵	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Builder Employee: _____				
Builder Signature: _____ Date: _____				
<i>Builder has completed Builder checklist in its entirety, except for items that are checked in the Rater Verified column (if any)</i> ²				
Rater Signature: _____ Date: _____				

BIDDER QUALIFICATIONS

BIDDER QUALIFICATIONS

Firm Name: _____
(Company Name)

(Address) (City, State, Zip Code)

(Phone Number) (Fax Number) (E-mail)

Date: _____

Construction Capabilities: (Check all that apply)

- | | | |
|--|---------------------------------------|--------------------------------------|
| <input type="checkbox"/> General Contracting | <input type="checkbox"/> Electrical | <input type="checkbox"/> Plumbing |
| <input type="checkbox"/> HVAC | <input type="checkbox"/> Demolition | <input type="checkbox"/> Earthmoving |
| <input type="checkbox"/> Asbestos Abatement | <input type="checkbox"/> Other: _____ | |

For Corporations Only:

Federal ID Number: _____

Name of State(s) in which incorporated: _____

Date(s) of incorporation: _____

If not incorporated in Arkansas:

1. Attach Certificate of Authority to do Business in Arkansas
2. Certificate Number: _____ Date: _____

(President's Name) (Vice-President's Name)

(Secretary's Name) (Treasurer's Name)

For Partnerships Only: Date of Organization: _____ Type of Partnership:

- General Limited Association

Names and Addresses of all partners: (use additional sheet if necessary)

1. _____
(Name) (Address) (City, State, Zip Code)

2. _____
(Name) (Address) (City, State, Zip Code)

General Information:

Federal ID Number: _____ or SSN: _____

City Business License #: _____ Number of Permanent Employees: _____

Number of years in business: _____

Geographical limits of operation: _____

If you have done business under a different name, please give name and location: _____

Has firm ever failed to complete a project or defaulted on a contract? If so, state where and why:

Date: Dated this _____ day of _____, 20____.

Signatures:

- Individual
- Partnership
- Joint Venture
- Corporation

Business Name: _____

Address: _____

Telephone: _____ Fax Number: _____

Federal ID Number: _____ Social Security Number: _____

Incorporated under the laws of the State of: _____

(If a corporation organized in a state other than Arkansas, attach certificate of Authority to do business in the State of Arkansas)

(Bidder's Signature)

(Corporate Secretary's Signature and Seal)

(Typed or Printed Name of Signor)

(Seal)

(Partner/Joint Venture Signature)

(Typed or Printed Name of Signor)

NOTICE: The City of Little Rock selects its board and commission members through a process that utilizes an executive session. Under Arkansas law, this fact deems a volunteer an employee for a limited purpose. The City cannot contract with an employee, and cannot contract with a corporation with an employee in an executive or managerial position who also serves as a volunteer on a City board or commission unless it first passes an ordinance to approve the contract. Is any person involved with this Bid an employee of the City, or a volunteer board or commission member who also holds an executive or managerial position with the Bidder? If the answer is "yes," please identify the person(s) and the nature of the relationship. THIS DOES NOT MEAN that the Bidder is disqualified; but, the apparent successful Bidder will not be selected if the Board of Directors fails to pass an ordinance to authorize the contract, regardless of the amount.

CERTIFICATION OF BIDDER REGARDING EEO

**CERTIFICATION OF BIDDER REGARDING EQUAL
EMPLOYMENT OPPORTUNITY INSTRUCTIONS**

This certification is required pursuant to Executive Order 11246 (30 F. R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause, and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

NAME AND ADDRESS OF BIDDER (Include ZIP Code):

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
 YES NO
2. Compliance reports were required to be filed in connection with such contract or subcontract.
 YES NO
3. Bidder has filed all compliance reports due under applicable instructions.
 YES NO
4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?
 YES NO

NAME AND TITLE OF SIGNER (Please type):

SIGNATURE

DATE