

Weatherization Specifications Project

List of Definitions

Agency: Community, Trade and Economic Development Housing Improvement Program

Air sealing: Sealing of the building envelope with materials that stop or prevent air leakage into or through a dwelling unit.

Ambient CO level: The level of CO measured within the dwelling unit, but not within the exhaust flue.

Auditor: the person that identifies health, safety, durability and energy conservation issues, problems and/or opportunities in buildings.

Background CO level: The naturally occurring level of CO measured outside of the dwelling unit.

Baffling: materials used to maintain ventilation openings and minimum clearance requirements.

Base-load costs: those energy costs associated with a building's operation excluding costs associated for heating/cooling.

Btu: British Thermal Unit. The quantity of heat required to raise one pound of water one degree Fahrenheit.

Building air flow standard: The calculation used to determine the target level of airflow in a dwelling unit that should be achieved by mechanical or natural ventilation at the completion of weatherization, measured in CFM50 (i.e., CFM measured at 50 Pascals pressure difference).

Building shell: a building's exterior envelope, consisting of the walls, floor and roof of a building.

By passes: Holes, openings and chase-ways typically found around chimneys, plumbing and electrical penetrations in attics and crawlspaces that allow conditioned air to escape or unconditioned air to enter a dwelling unit.

Ceiling loading: The amount of weight in pounds per square foot a ceiling is designed to support.

Client file: the file that contains documents specific to the work on an individual dwelling unit.

Combustion appliance: Any liquid, gas or solid-fuel burning appliance, including water heaters, wood stoves, ranges, ovens or stove tops, furnaces, boilers, space heaters, fireplaces, fireplace inserts and gas logs.

Combustion appliance zone: (CAZ) The physical area in which the combustion appliance is located; usually contained by a door or an access closure.

Combustion safety diagnostic testing: use of a digital and calibrated manometer to read pressure differentials and CO levels under a variety of natural and created conditions to assist in diagnosing airflow and draft dynamics in a combustion appliance.

Computerized Audit Tool: energy use analysis software that is approved by the Department of Energy for use in determining cost-effective conservation measures

Conditioned basement: an intentionally heated or cooled basement

Contractor: the weatherization agency and their subcontractors

Damming: materials used to prevent insulation from spilling or spreading to areas that may cause moisture, combustion or ventilation problems.

Data logger: A device that measures energy consumption over a given time period, typically in Kilowatt/hours, and often used to determine the energy consumption of refrigerator and freezer units.

De minimus level: the damaged or deteriorated (chipped, peeling, flaking, worn, etc) area of a given painted surface or component that, when exceeded, triggers the use of lead-safe work practices.

Diagnostic testing: use of a digital and calibrated manometer to read pressure differentials under a variety of natural and created conditions to assist in diagnosing airflow and ventilation dynamics in a dwelling unit.

Direct-vented combustion appliance: An ANSI Category I appliance. An appliance that operates with a non-positive vent static pressure and with a vent gas temperature that avoids excessive condensate production in the vent. Combustion air is supplied from outdoors directly to combustion chamber.

Dominant duct leakage testing: A test done with the air handler running that indicates which is the leakier side of the furnace distribution system (the supply side or the return side).

EnergyStar: a Department of Energy designation for products and materials that meet certain established energy efficiency requirements.

EPA: The Environmental Protection Agency; the federal agency that oversees environmental protection.

Exterior wall plate: The bottom framing member of a wall system that lies flat on the exterior perimeter of the foundation and to which wall studs are fastened.

Flame-spread rating: The flame spread index and smoke development index obtained by ASTM E-84 test method for surface burning characteristics of building materials.

Hardwired detector (or fixture): A detector (or fixture) that is directly and permanently wired into a dwelling unit's electrical system.

Heat rise: The number of degrees of temperature increase that air is heated as it is blown over a heat exchanger. Heat rise equals supply temperature minus return temperature.

Heating Degree Days: each degree that the average daily temperature is below the base temperature (usually 65 degree F) constitutes one heating degree day.

IC-rated fixture: A fixture that is rated and labeled for coverage with insulation.

Installed Measure Cost: The actual cost that will be incurred to completely install a given conservation measure. Formulas for calculating the installed measure costs are found in Section 2.6.3.

Installer: the person installing a weatherization measure

Knee wall: A short vertical wall in a story and a half dwelling unit.

Knob and tube wiring: A wiring method used primarily from 1900 to 1930, characterized by the use of two parallel wires supported on insulated glass knobs and tubes.

Lead based paint: Paint that contains 1.0 milligrams per square centimeter or 5000 micrograms per gram or 0.5 percent lead by weight.

Low-cost, No-cost: Relatively inexpensive conservation devices that can be easily installed by the weatherization client, i.e., compact fluorescent bulbs, low-flow shower heads and aerators and door weather-stripping.

Matrix of Insulation measures: a State-approved table that establishes levels of insulation that may added to and/or installed in buildings.

Matrix of non-insulation measures: a State-approved table that establishes non-insulation energy conservation measures

Mechanical air changes: The number of air changes per hour occurring in a dwelling unit as a result of air movement that is assisted with mechanically operated fans.

Multi-family dwelling unit: a unit with more than four dwelling units in a common building

Natural air changes: The number of air changes per hour occurring in a dwelling unit as a result of natural air movement (i.e., without any assistance from mechanical fans).

OSHA: The Occupational Safety and Health Administration; the federal agency that oversees workplace health and safety.

Power-vented combustion appliance: An ANSI Category IV appliance. An appliance that operates with a positive vent static pressure and with a vent gas temperature that may cause excessive condensate production in the vent.

Pressure boundary: an air barrier; usually the primary air barrier, most effective when aligned with a thermal boundary

Pressure pan testing: The process of testing air leakage in duct systems using a device to block a duct register while measuring the static pressure behind the device during a blower door test.

Priority Air Sealing: air sealing that addresses the major and obvious holes in the pressure boundary, typically visible holes in the walls and ceilings of the building envelope.

Program file: the file that contains documents required for the administration of a weatherization program.

Savings to Investment ratio (SIR): the measurement of how many times an energy retrofit pays for itself during an established lifetime.

Sealed combustion appliance: An appliance that draws all combustion air from outdoors and has a sealed exhaust system.

Spillage: The temporary flow of combustion gasses from a dilution device.

Steady-state operating condition: The typical operating condition of a heating appliance after it has gone through its initial start up period.

Thermal boundary: that plane of a building envelope where insulation is installed to minimize heat flow, most effective when aligned with a pressure boundary

TREAT: Targeted Residential Energy Analysis Tools. A computerized tool that is used during an energy audit that assists in determining cost-effectiveness of anticipated conservation measures for a dwelling unit.

Unconditioned basement: a basement that is intentionally not heated or cooled

Unintentionally conditioned basement: a basement that is heated or cooled unintentionally; typically getting residual heat or cooling from a conditioned space or from conditioning equipment located in the basement

UV resistant: Materials that are resistant to degradation caused by ultra-violet light rays.

Vapor retarder: A material that retards the passage of water vapor.

Vent draft pressure: The pressure in a vent with reference to either the outside or within combustion appliance zone, measured in Pascals.

Weatherization audit: the process of identifying energy conservation opportunities in building

WISHA: The Washington Industrial Safety and health Administration; the State of Washington agency that oversees workplace health and safety.

Worst-case depressurization test: A systematic setup of the dwelling unit in a configuration most likely to cause a combustion appliance to back-draft or spill exhaust gasses into the dwelling unit.

Zonal pressure testing: The use of pressure measurements to compare relative tightness or hole size of different surfaces and zones of a dwelling unit.