



**Standards of Reference:** Refer to Section 9 of the Energy Auditor Scheme Handbook.

| ID     | Section                                                                                                                                                                                                                                                         |
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|        | <b>Exterior Evaluation</b>                                                                                                                                                                                                                                      |
| EXT-01 | <b>GATED ITEM</b><br>Candidate prepared combustible gas <b>AND</b> carbon monoxide (CO) measurement instruments per manufacturer's instructions.                                                                                                                |
| EXT-02 | Candidate determined building orientation <b>AND</b> discussed its impact on the building.                                                                                                                                                                      |
| EXT-03 | Candidate identified the materials for siding <b>AND</b> foundation <b>AND</b> roofing.                                                                                                                                                                         |
| EXT-04 | Candidate assessed <b>AND</b> discussed potential lead-based paint hazards.                                                                                                                                                                                     |
| EXT-05 | Candidate assessed possible components <b>OR</b> issues that could affect the structural integrity of the building.<br>If no issues are identified, candidate discussed components <b>OR</b> issues that could affect the structural integrity of the building. |
| EXT-06 | Candidate identified <b>one</b> exterior combustion appliance venting termination <b>OR one</b> mechanical penetration.                                                                                                                                         |

| ID     | Section                                                                                                                                                                                                                                                                                                  |
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|        | <b>Interior Evaluation</b>                                                                                                                                                                                                                                                                               |
| INT-01 | <b>GATED ITEM</b><br>Candidate tested indoor ambient carbon monoxide levels (CO) <b>AND</b> verbally stated the readings <b>AND</b> took appropriate action according to the current standard of reference.                                                                                              |
| INT-02 | Candidate tested indoor ambient air for combustible fuel gases on each floor <b>AND</b> verbally stated the readings <b>AND</b> took appropriate action according to the current standard of reference.                                                                                                  |
| INT-03 | Candidate determined the presence <b>AND</b> condition of smoke detectors <b>AND</b> carbon monoxide detectors.                                                                                                                                                                                          |
| INT-04 | Candidate identified <b>AND</b> assessed potential air leakage locations.                                                                                                                                                                                                                                |
| INT-05 | Candidate identified <b>OR</b> discussed presence <b>AND</b> placement of vapor retarders.                                                                                                                                                                                                               |
| INT-06 | Candidate assessed <b>AND</b> identified moisture issues.<br>If no issues are identified, candidate discussed potential moisture issues.                                                                                                                                                                 |
| INT-07 | Candidate assessed <b>AND</b> identified potential electrical hazards.<br>If no issues are identified, candidate discussed potential electrical hazards.                                                                                                                                                 |
| INT-08 | Candidate assessed <b>AND</b> identified evidence of pest/vermin infestations.<br>If no issues are identified, candidate discussed potential evidence of pest/vermin infestations.                                                                                                                       |
| INT-09 | Candidate assessed the building for evidence of structural damage <b>OR</b> water damage.<br>If no issues are identified, candidate discussed potential evidence of structural damage <b>OR</b> water damage.                                                                                            |
| INT-10 | Candidate verified that clothes dryer is properly vented to the exterior <b>AND</b> determined if venting materials are appropriate to the appliance type.<br>If venting is inaccessible, candidate discussed proper venting conditions <b>AND</b> venting materials appropriate for the appliance type. |
| INT-11 | Candidate assessed the building for conditions that would interfere with or prevent blower door testing.<br>If no issues are identified, candidate discussed conditions that would interfere with or prevent blower door testing.                                                                        |
| INT-12 | Candidate assessed the building for hidden or inaccessible spaces.<br>If none are identified, candidate discussed commonly found hidden or inaccessible spaces.                                                                                                                                          |

| ID     | Section                                                                                                                                                                                         |
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|        | <b>Interior Evaluation (continued)</b>                                                                                                                                                          |
| INT-13 | Candidate conducted combustion gas leak testing according to current version of ANSI/BPI-1200, testing a representative sample of the piping for 1-2 minutes <b>AND</b> on at least 3 fittings. |
| INT-14 | Candidate recommended leak detection solution to verify positive reading from detector.                                                                                                         |
| INT-15 | Candidate identified <b>OR</b> discussed possible deficiencies in the fuel supply lines.                                                                                                        |

| ID    | Section                                                                                                                                                                                                                             |
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|       | <b>Doors and Windows</b>                                                                                                                                                                                                            |
| DW-01 | Candidate assessed <b>one</b> exterior door, including type <b>AND</b> material.                                                                                                                                                    |
| DW-02 | Candidate assessed condition of <b>one</b> exterior door, including evaluation of hardware <b>AND</b> door sweep <b>AND</b> seals <b>AND</b> operation.                                                                             |
| DW-03 | Candidate accurately measured <b>one</b> window <b>OR one</b> door.                                                                                                                                                                 |
| DW-04 | Candidate assessed <b>one</b> exterior window type.                                                                                                                                                                                 |
| DW-05 | Candidate assessed <b>one</b> exterior window frame material.                                                                                                                                                                       |
| DW-06 | Candidate assessed <b>one</b> exterior window glazing type.                                                                                                                                                                         |
| DW-07 | Candidate assessed condition of <b>one</b> exterior window, including evaluation of hardware <b>AND</b> seals <b>AND</b> operation.                                                                                                 |
| DW-08 | Candidate assessed <b>one</b> type of existing interior shading <b>AND one</b> type of existing exterior shading.<br>If no shading exists, candidate discussed <b>one</b> type of interior <b>AND one</b> type of exterior shading. |
| DW-09 | Candidate identified <b>three</b> thermal characteristics of <b>one</b> exterior window <b>AND three</b> thermal characteristics of <b>one</b> exterior door.                                                                       |

| ID    | Section                                                                                                                                                                      |
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|       | <b>Walls</b>                                                                                                                                                                 |
| WA-01 | Candidate assessed wall type, including structure <b>AND</b> interior <b>AND</b> exterior finishes.                                                                          |
| WA-02 | Candidate assessed wall thickness <b>AND/OR</b> cavity depths.                                                                                                               |
| WA-03 | Candidate assessed presence <b>AND</b> type of wall insulation.<br>If wall insulation is not accessible, candidate described how to <b>safely</b> determine insulation type. |

| ID    | Section                                                                                                                     |
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|       | <b>Attic</b>                                                                                                                |
| AT-01 | Candidate assessed attic insulation type <b>AND</b> depth.                                                                  |
| AT-02 | Candidate assessed attic insulation condition <b>AND</b> coverage.                                                          |
| AT-03 | Candidate identified <b>AND</b> assessed location of existing thermal boundary <b>AND</b> alignment with pressure boundary. |

| ID    | Section                                                                                                            |
|-------|--------------------------------------------------------------------------------------------------------------------|
|       | <b>Mechanical Ventilation</b>                                                                                      |
| MV-01 | Candidate identified existing mechanical ventilation type(s) <b>AND</b> controls.                                  |
| MV-02 | Candidate verified that exhaust fans are properly vented to the exterior ( <b>OR</b> discussed if not accessible). |
| MV-03 | Candidate assessed the condition of the ventilation ductwork ( <b>OR</b> discussed if not accessible).             |
| MV-04 | Candidate accurately measured existing flow rate of <b>one</b> ventilation fan.                                    |

| ID    | Section                                                                                                                                            |
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|       | <b>Appliance and Baseload</b>                                                                                                                      |
| AB-01 | Candidate collected manufacturer's data plate information from <b>one</b> electric appliance.                                                      |
| AB-02 | Candidate assessed lighting and identified bulb type <b>AND</b> wattage <b>AND</b> fixture <b>AND</b> usage for <b>one</b> lamp/luminaire.         |
| AB-03 | Candidate correctly identified the amperage rating of the main electrical panel ( <b>OR</b> discussed if main electrical panel is not accessible). |
| AB-04 | Candidate identified <b>OR</b> discussed additional base-load appliances that use energy.                                                          |
| AB-05 | Candidate measured <b>OR</b> discussed how to measure the flow rate of a showerhead or faucet.                                                     |

| ID    | Section                                                                                                                                                                                     |
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|       | <b>Heating, Cooling and DHW Equipment</b>                                                                                                                                                   |
| HC-01 | Candidate identified heating/cooling system type(s) <b>AND</b> fuel type.                                                                                                                   |
| HC-02 | Candidate collected manufacturer's data plate information from <b>one</b> of the following: heating <b>OR</b> ventilation <b>OR</b> air conditioning, <b>OR</b> water-heating.              |
| HC-03 | Candidate identified location <b>AND</b> type <b>AND</b> appliance(s) served by <b>one</b> thermostat.                                                                                      |
| HC-04 | Candidate identified <b>three</b> safety features related to <b>one</b> HVAC appliance.                                                                                                     |
| HC-05 | Candidate identified existing heating/cooling system health and safety concerns.<br>If none are present, candidate discussed potential heating/cooling system health and safety concerns.   |
| HC-06 | Candidate assessed general condition of combustion appliances <b>AND</b> assessed the condition <b>AND</b> configuration <b>AND</b> material <b>AND</b> pitch of the venting.               |
| HC-07 | Candidate evaluated the distribution system integrity.                                                                                                                                      |
| HC-08 | Candidate assessed opportunities for distribution system insulation.                                                                                                                        |
| HC-09 | Candidate identified water heating appliance type <b>AND</b> fuel type.                                                                                                                     |
| HC-10 | Candidate identified existing water-heating appliance health and safety concerns.<br>If none are present, candidate discussed potential water-heating appliance health and safety concerns. |
| HC-11 | Candidate identified <b>two</b> safety features related to water-heating appliance.                                                                                                         |

| ID    | Section                                                                                                                                                                                                                                                                      |
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|       | <b>Combustion Appliance Zone (CAZ) Testing</b>                                                                                                                                                                                                                               |
| CZ-01 | Candidate identified combustion appliance zone (CAZ).                                                                                                                                                                                                                        |
| CZ-02 | Candidate properly set up home for CAZ testing.                                                                                                                                                                                                                              |
| CZ-03 | Candidate correctly set up manometer <b>AND</b> tubing.                                                                                                                                                                                                                      |
| CZ-04 | Candidate correctly measured initial pressure (baseline) differential in the CAZ with reference to outside.                                                                                                                                                                  |
| CZ-05 | Candidate turned on all exhaust appliances <b>AND</b> recorded <b>OR</b> verbally stated the reading on the manometer.                                                                                                                                                       |
| CZ-06 | Candidate checked the impact of the HVAC air handler in the CAZ <b>AND</b> recorded <b>OR</b> verbally stated the reading on the manometer.<br>If the air handler cannot run independently, candidate must discuss potential impact of air handler operation within the CAZ. |
| CZ-07 | Candidate configured <b>ALL</b> interior doors, including CAZ door (using sensory, smoke, or manometer), to create greatest CAZ depressurization <b>AND</b> recorded <b>OR</b> verbally stated the reading on the manometer.                                                 |
| CZ-08 | Candidate identified conditions causing greatest CAZ depressurization.                                                                                                                                                                                                       |
| CZ-09 | Candidate checked for spillage in <b>one</b> appliance under greatest CAZ depressurization <b>AND</b> stated time limits for spillage testing based on current version of ANSI/BPI-1200.                                                                                     |
| CZ-10 | Candidate determined if the appliance passes the spillage test.                                                                                                                                                                                                              |
| CZ-11 | Candidate made appropriate recommendations for the CAZ according to current version of ANSI/BPI-1200.                                                                                                                                                                        |

| ID    | Section                                                                                                                                                                                                                                                   |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>Combustion Safety and Efficiency Testing, Oven and Stovetop Testing</b>                                                                                                                                                                                |
| CS-01 | <b>GATED ITEM</b><br>Candidate tested indoor air levels for carbon monoxide throughout combustion safety and efficiency testing <b>AND</b> took appropriate action according to current standard of reference.<br>Candidate verbally stated the readings. |
| CS-02 | Candidate accurately measured CO in the flue gases of <b>one</b> natural draft vented appliance at the time interval specified in current version of ANSI/BPI-1200.                                                                                       |
| CS-03 | Candidate applied correct action level based on test results for CO in the flue of the appliance, referencing current version of ANSI/BPI-1200.                                                                                                           |
| CS-04 | Candidate accurately measured <b>AND</b> evaluated Steady State Efficiency of heating system.                                                                                                                                                             |
| CS-05 | Candidate accurately measured temperature rise in heating system <b>AND</b> compared result to manufacturer's specified range.                                                                                                                            |
| CS-06 | Candidate checked for items, excessive debris inside oven.                                                                                                                                                                                                |
| CS-07 | Candidate used appropriate sampling location for the oven test <b>AND</b> obtained accurate CO measurement at the time interval specified in current version of ANSI/BPI-1200.                                                                            |
| CS-08 | Candidate applied correct action levels in current version of ANSI/BPI-1200 based on test results for CO in oven.                                                                                                                                         |
| CS-09 | Candidate visually inspected stovetop burners for flame quality.                                                                                                                                                                                          |

| ID    | Section                                                                                                                                                                                                                                                 |
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|       | <b>Blower Door Testing</b>                                                                                                                                                                                                                              |
| BD-01 | <b>GATED ITEM</b><br>Candidate ensured that combustion appliances cannot fire during blower door testing.                                                                                                                                               |
| BD-02 | Candidate verified solid fuel appliances are in the appropriate condition to allow for blower door testing to be performed.<br>If solid fuel combustion appliances are not present, candidate discussed appropriate conditions for blower door testing. |
| BD-03 | Candidate correctly set up the blower door frame/shroud/fan.                                                                                                                                                                                            |
| BD-04 | Candidate correctly set up house in accordance with one of the approved methods listed in current version of ANSI/BPI-1200.                                                                                                                             |
| BD-05 | Candidate correctly set up the manometer <b>AND</b> tubing.                                                                                                                                                                                             |
| BD-06 | Candidate correctly measured baseline pressure differential.                                                                                                                                                                                            |
| BD-07 | Candidate conducted test to obtain an accurate CFM50 reading.                                                                                                                                                                                           |
| BD-08 | Candidate correctly interpreted the blower door reading <b>AND</b> discussed recommendations.                                                                                                                                                           |
| BD-09 | Candidate correctly performed single point zonal pressure differential of <b>one</b> zone <b>AND</b> interpreted results.                                                                                                                               |
| BD-10 | Candidate correctly performed pressure pan test on <b>one</b> duct register <b>AND</b> interpreted results.                                                                                                                                             |
| BD-11 | Candidate determined <b>two</b> points of infiltration/exfiltration with blower door running.                                                                                                                                                           |

| ID    | Section                                                                                                             |
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|       | <b>Duct Pressurization Testing</b>                                                                                  |
| DP-01 | Candidate demonstrated how to connect duct tester fan to distribution system <b>correctly</b> (do not turn on fan). |
| DP-02 | Candidate correctly set up manometer <b>AND</b> tubing <b>AND</b> probe for duct testing.                           |
| DP-03 | Candidate demonstrated how to temporarily seal <b>one</b> duct register.                                            |
| DP-04 | Candidate discussed procedure for conducting full duct pressurization test.                                         |
| DP-05 | Candidate discussed applicable standard(s) for interpreting duct tester diagnostic results.                         |
| DP-06 | Candidate discussed how to prioritize repairs.                                                                      |