

General Specifications for Weatherization Contractor Tasks

Specifications Applicable to ALL Tasks

- All work is to comply with state and local building codes.
- Contractor is to make an effort for minimal disturbance to occupants.
- Contractor shall clean up all debris and disturbances at no additional cost to the agency or occupants.
- The contractor shall supply all materials, labor, and equipment necessary to complete the work and make it whole.
- All services are to be provided in a polite and workmanlike manner.
- Any additional work deemed necessary by the contractor must be approved by the agency through the use of a signed change order.
- The agency is to be notified immediately of any circumstances that exist where work cannot be performed due to issues such as potential safety problems or potential for damage to the home.

CFL Replacement

- All CFL's must be Energy Star® rated.
- Light circuit is not to be controlled by a dimmer.
- Ensure that the socket is functional and that no hazardous conditions exist.
- The contractor must physically install all bulbs in sockets and test that they function properly.
- Ensure that all installed light bulbs provide adequate light for safety.
- All packaging and old bulbs are to be removed from the premises and disposed of properly.
- Contractor must install CFLs of comparable or higher luminescence

Installing Hard Wired Lighting Fixtures

- All state and local electrical codes must be followed.
- New fixture must be Energy Star® rated and designed to accept CFL's.
- Fixture is to be low cost and acceptable to the home.
- Contractor is to leave behind the bulb replacement instructions provided with the new fixture.
- Existing wiring must be able to support the new fixture without damage to the home.
- Contractor is to follow all instructions provided with the lighting fixture.
- All packaging and debris are to be removed, leaving only instructions that were provided that may be of use to the household.

Hot Water Tank Insulation

- Ensure that the existing tank is not leaking or in need of replacement.
- When at all possible, insulation is to completely surround the tank.
- Installation of insulation must not void the warranty on the tank.
(in most cases, warranty is only voided if the blanket is installed improperly)
- Contractor should follow correct installation procedures.
- Blanket must be "R-6 minimum" or greater.

- Tank wrap must be installed with blanket straps of polypropylene or baling wire. At least 3 straps towards the top, middle, and bottom.
- Electric hotwater heaters must have an insulated top as well as a wrap.
- Gas water heaters are to have no top due to draft diverter. Additionally, wrap should be cut around gas valve to ensure proper combustion air.

Hot Water Pipe Insulation

- Ensure that no pipe leaks exist.
- All insulation should be the appropriate size for the pipe leaving no exposed pipe. (pipe outside diameter must match the insulations inside diameter)
- All corners are to be mitered and taped.
- The first 3' of hot water pipe as well as 3' of intake must be insulated, or insulated as specified by agency.
- Insulation thickness should be at least the same as the diameter of the pipe.
- Combustible insulation must not be installed within 9" of the flue.
- Insulation should be fastened every foot or two to ensure it is secure to the pipe.

Showerhead Replacement

- New showerhead must have a flow rate of 1.7-2.5 gal/min.
- Only install a new showerhead if installation will not cause damage to existing plumbing.
- Plumbing tape should be applied at the joint.

Aerator Replacement

- Aerator must be installed without causing damage to existing plumbing.

Air Sealing Methodology

- Contractors who wish to provide air sealing services must perform blower door assisted air sealing to help identify major sources of infiltration.
- A projected goal for infiltration activities along with a task list will be established by the Agency using a blower door and pressure diagnostic techniques. Projected costs for achieving that goal will be provided based on the hourly rates found in the pricing section of this package.
- Contractors may air seal for up to one additional hour without approval if further leaks are discovered. Any more than the additional hour must be approved by the agency.
- The contractor will provide the agency with a list of tasks completed as well as their initial and final blower door numbers. (variances in equipment may occur between contractor and agency blower door readings)

General Insulation

- Ensure that no structural deficiencies exist that would impede the effectiveness of the insulation.
- Ensure that the structure is sound enough to support the weight of insulation and installer(s).
- All insulation and other materials installed must comply with the manufacturers standards and meet the minimum requirements for thermal resistance, fire safety, and quality.
- All measures performed are to be of a permanent nature.
- An infrared camera may be used to scan subcontracted insulation work. If significant voids are found in the building, the subcontractor will be notified and expected to correct it, within two weeks, free of charge.

Sidewall Insulation

- The high density technique of sidewall insulation with cellulose is to be used on all jobs where the integrity of the interior wall can withstand the pressure of installation. This technique uses 3 ½ to 4 lbs of cellulose/ft³.
- Inspect the interior walls for holes where insulation might blow into the building. Check the location of electrical fixtures, outlets, hot air ducts and plumbing in exterior walls. Balloon frame band joists must be sealed prior to insulating.
- After the appropriate siding is removed to access the wall cavity, drill a 2 1/8" - 2 ½" hole at an angle in the direction the tube has to go. If the hole is in the middle of the cavity, angle the bit up and down.
- All holes should be probed to find all blockers up and down. If one is found, then additional holes will be needed in that cavity. Also, check each cavity side to side. Make sure to probe 100% of the house surface.
- After the cavity is filled, a small piece of fiberglass in each hole may be used in place of wooden plugs, to prevent wicking of moisture.
- If there is balloon construction, sometimes you may gain access to the 2nd floor cavity from the attic. Again, make sure you probe the cavity for blockers.
- Voids and bypasses will defeat the effectiveness of the "high density" technique of sidewall insulation. If there is an area that cannot easily be probed, then it needs to be opened up and examined. Once the bypass has been located, a solution needs to be determined.
- Installation of insulation in walls shall be from the exterior of the structure unless otherwise authorized by the agency and the owner of the building.
- Exterior siding shall be removed as necessary for proper installation of insulation. Wooden siding is to be reinstalled with hot-dipped galvanized nails. All siding damaged in removal shall be replaced in kind with new siding, primed and sealed where applicable.
- Under no circumstances will exterior siding be drilled and plugged without prior written approval of AGENCY and BUILDING OWNER.
- All exterior wall cavities shall be completely filled with insulation. Sufficient insulation shall be blown into the wall cavities to overcome any settling.

Attic Insulation

- Insulation pricing is based off of settled depth (assume 15% settling).
- Stairway accesses to attics must receive wall insulation and stair tread high density cellulose to ensure a complete thermal boundary. The access door must receive weather-stripping and a door sweep and must be secured against air leakage. The door must be insulated to a minimum of R-14
- In the case of an attic hatch, the hatch must be insulated to a minimum of R-14.
- In situations where attic areas have no access, an opening must be provided in an accessible yet inconspicuous location, such as a closet, whenever possible. Openings must be properly trimmed and finished with a 5/8" or greater thickness material such as plywood, which is primed on the heated side and insulated to a minimum of R-14 on the non-heated side.
- In the event that the contractor and household agree to permanently seal the opening, such as when the opening is patched with drywall, the contractor must ensure that the non-heated side of the covering is insulated to a minimum or R-14. The cover must be spackled and primed on the heated side.
- When the attic access is to be sealed, the contractor will provide the agency with notice and the option to inspect the work prior to sealing the hatch. A photograph of the completed work shall be provided if the agency is not able to inspect.
- Insulation shall not be installed closer than three inches from chimney flues, gaps in chimney flues must be properly air sealed.
- Electrical boxes are to be covered and flagged prior to insulating.
- No insulation shall be installed above a recessed light fixture so as to trap heat or prevent free air circulation. However, insulation may be installed over Type IC fixtures. All non-IC fixtures shall be boxed w/drywall.
- When a floored attic exists, the contractor must remove and replace flooring in a manner that provides minimum damage, and which provides access to all areas. Broken boards must be replaced with a like product and fastened appropriately. If a drill and plug method is used, plugs must be flush with existing surfaces.

Kneewalls

- Whenever possible, the kneewall areas should be insulated with the thermal barrier close to the heated area.
- Kneewalls need to be insulated and the floors dense packed with cellulose. The kneewall door must also be insulated to the same R-value as the adjacent walls.
- Insulation in kneewalls needs to be continuous and supported.

Rim Joists

- Rim joists may be insulated by the following methods:
 1. Tightly fitting faced fiberglass or rock wool batts with a minimum of R-19. Contractor must air seal the rim joist and sill plate area as needed with caulk or foam.
 2. Installation of 2" foam board insulation sealed around the edge with spray foam.
 3. Spray foam insulation to a thickness of 2" or more.
- The first options is to be completed according to the price schedule, if option 2 or 3 is chosen:
 - Contractor may propose a price per linear foot to the agency.
 - In situations where the basement is used as a living space, or where local codes require, proper code-compliant fire protection must be installed.
 - As stated in the general specifications, the contractor must achieve prior approval from the agency.

Crawlspaces

- The potential for freezing of pipes must not be created by insulating a crawlspace.
- Only insulate if measure is consistent with an appropriate thermal boundary for the home.
- Address any air leakage with appropriate air sealing.
- Floor insulation should be installed in a manner such that it is in contact with the subfloor with kraft or foil applied toward the heated space with insulation at a minimum of R-19.
- Dirt floor crawlspaces require a continuous air/moisture barrier. This may consist of plastic sheets of a minimum 4 ml overlapped at least one foot, sealed at the overlap using appropriate adhesive. The barrier must extend 10"-16" up the foundation wall, attached appropriately.
- Exhaust fans that terminate in the crawlspace are to be re-routed to the exterior of the building with rigid duct work.

Attic Ventilation

- All openings must be sealed in a weather tight manner and must not greatly detract from the aesthetics of the structure.
- Vent opening should be cut to allow for maximum airflow through the vent.

Programmable Thermostats

- All thermostats must be Energy Star®.
- In a home that utilizes a central air conditioning unit, thermostat must have the capability to adjust cooling temperatures.
- Must have a battery backup, large easy to read display, a minimum of 5/2-day program schedule, and be easy and intuitive to use.
- Thermostat should include a 1-year warranty.
- Thermostat must be compatible with the heating system, voltage should be appropriate, and the unit should be installed per manufacturers instructions.
- Installation includes training of appropriate household member.
- All instructions are to be left behind for household use.

CO and Smoke Detectors

- Household is to be instructed in the use of both smoke and CO detectors, and instructions should be left behind.
- All smoke and CO detectors must conform to local codes and be installed per manufacturers instructions.
- CO detectors are to be corded with battery backup.

Window Replacement

- Windows are to be low-E, Energy Star Rated, half or full screen, vinyl replacement windows.
- Contractor must install per manufacturer's instructions and cover the manufacturer's warranty. Contractor also warrants all parts and labor for 1 yr.
- Weights must be removed from weight pockets, insulate the cavity with expanding foam, ensuring complete coverage.
- Any structural framing in need of change or replacement is to be addressed by a signed change order.
- Gaps in the rough opening should be filled with non-expanding foam.
- Insulation should be installed in head expander.
- Install caulk to stop prior to installation.
- Special attention should be paid to window adjustments.
- Install interior jamb extensions and trim as needed to match existing household.
- Windows outside of the listed ranges shall be addressed on an as needed basis by the contractor and agency.

Door Replacement

- Replacement doors are to be steel insulated unless otherwise specified by the agency. Garage doors are to be fire rated.
- Contractor must install per manufacturer's instructions and cover the manufacturer's warranty. Contractor also warrants all parts and labor for 1 yr.
- Any structural framing in need of change or replacement is to be addressed by a signed change order.
- Pre-hung door jamb should match existing wall thickness.
- Gaps in the rough opening should be filled with non-expanding foam.
- Install caulk to stop prior to installation.
- Install trim as needed to match existing household.
- Quality lock set is to be installed and the key(s) provided to the resident.
- A price will be agreed on between the contractor and agency for custom ordered doors on an as needed basis.