

WEATHERIZATION ASSISTANCE PROGRAM

Remote Video Inspection Protocol & Policy

SCOPE

The following encompasses remote video inspection protocols and policy specific to the weatherization program administered by the Tennessee Housing Development Agency.

PURPOSE

To create a method of meeting the inspection requirements of the THDA Weatherization Assistance Program by reducing the some of the physical requirements in various inspection types at the site of weatherization. THDA also recognizes additional possibilities through use of remote video in the realm of training and technical assistance. The use of remote training and technical assistance is not currently covered in this document.

The remote inspection policy is not a substitute for the current methods of on-site inspections involved in weatherization. The purpose of the following protocols is to increase safety, add flexibility, and reduce burden in areas such as travel, scheduling, costs, and on-site workers.

REQUIREMENTS

The weatherization site must have adequate wireless connectivity. The smart phone or tablet used on-site and at the remote location must have a THDA approved live streaming video application installed and functioning at the time of the call. All necessary inspection tools and equipment will be available for use on-site by the subgrantee representative during the remote inspection.

The subgrantee representative may be a staff member or contracted weatherization inspector/ auditor affiliated with the unit scheduled for inspection.

ACRONYMS

THDA – Tennessee Housing Development Agency

WAP – Weatherization Assistance Program

QA – Quality Assurance

QCI – Quality Control Inspection

BPI – Building Performance Institute

QUALITY ASSURANCE INSPECTIONS / STATE MONITORING

THDA reserves the right to determine the selection of which, if any, monitored units will be conducted remotely. While the purpose of remote inspections stated above remains the same, the state recognizes instances where on-site quality assurance inspections are necessary based upon subgrantee performance criteria, incomplete desk review, and insufficient jobsite documentation rather than convenience.

QA INSPECTION PROCESS – Preparation

1. The subgrantee will be notified as in previous years to the upcoming monitoring appointment.
2. The subgrantee will submit to THDA the completed ‘QA Scheduling Template’ with selected, or pre-selected clients.
 - a. An added scheduling column will be labeled “REMOTE” by THDA if the inspection is agreed to be conducted virtually.
 - b. THDA will allow QA Inspections to occur simultaneously with Quality Control Inspections. This approach will be encouraged in local areas where indoor health and safety are of heightened concern or due to other determining factors. Reducing the amount of site visits shall aid in reducing potentially harmful on-site exposures.
3. All required documents and photos will be uploaded to WAPez as previously required. (Reference ‘TN QA Technical Document’ Upload)
 - a. Comprehensive desk review prior to field inspection will be conducted by THDA staff or its technical representative.
4. A BPI QCI certified subgrantee representative must be scheduled and on-site to conduct diagnostic testing and manage the device camera.
 - a. This role will serve as the on-site proxy to the QA state monitor as well as provide commentary relevant to the energy audit and quality control inspection.
5. A BPI QCI certified state monitor, or approved representative, will remotely guide the inspection process.
6. QA Monitor written confirmation of expectations will be sent to subgrantee prior to inspection.

QA INSPECTION PROCESS – On-site Inspection

DEVICE

1. THDA staff or representative (QA Inspector) and on-site QCI will confirm the video app is connected and operational.
2. Phone or tablet notifications will be disabled during the remainder of inspection.

COMMUNICATION

1. The QA Inspector will discuss the inspection process with the on-site QCI.
 - a. Accessibility, site conditions and navigation, site challenges, etc. will be discussed prior to the inspection beginning to obtain mutual expectations.
 - b. Available diagnostic equipment and inspection tools will be confirmed.
2. Remote communication between the QA inspector, QCI, and client may be conducted prior to or after the inspection.
3. Photos and notes will be captured by either the subgrantee representative at the direction of

QA inspector or by the QA inspector themselves. This depends on the type of agreed upon remote video application.

Photos:

- a. The site in general – exterior, interior
- b. Multiple photos of each installed measure
- c. Missed opportunities and/or unusual circumstances
- d. Missed health and safety hazards
- e. Best practices

POST QA INSPECTION PROCESS

The subsequent processes will remain consistent with previous monitoring procedures. On-site data is collected and evaluated. A report will be produced either by THDA's technical representatives or through THDA itself. The technical QA report will accompany the programmatic monitoring report as normal.

QUALITY CONTROL INSPECTIONS & RE – INSPECTIONS

Quality Control Inspections, as defined by the Department of Energy and THDA, cannot be conducted *completely* through remote video application. Building diagnostics are a crucial component to weatherization and these must be conducted on-site by a BPI certified Quality Control Inspector. However, a portion of the quality control inspection may leave open the possibility to remotely verify whether certain measures are installed to standard. This would most likely occur if diagnostics are not required to verify work standards and ample observations can be made remotely and clearly documented.

Whether remote or in-person, the client must sign the THDA QCI form acknowledging the work scope passes inspection and is to quality.

The weatherization contractor assigned to the unit scheduled for remote inspection will be the responsible on-site party working in cooperation with the QCI. Only those measures listed below are allowed for remote verification.

The QA Inspection On-Site Inspection procedures shall be followed during instances of remote inspection between the weatherization contractor and QCI.

Re-inspections are similar to Quality Control Inspections. Re-inspections require the QCI to return to a unit based on previously inspected measures that did not meet Tennessee weatherization standards or codes. There are instances where remote visual inspections will satisfy the re-inspection requirements and determine whether or not the re-inspection can be conducted remotely.

The list of approved measures are below:

Measure Installations Verified Remotely

- Safety Devices – smoke and carbon monoxide alarms
- Windows and Doors
- Roof repairs
- Belly repairs

- Gutters and drainage
- Sump pumps
- Plumbing repairs
- Electric repairs
- Duct insulation
- Lead safe practices
- Vapor barriers
- Attic insulation*
- Floor/belly insulation*
- Kneewall insulation*
- Attic and crawlspace accesses
- Electric HVAC systems and associated components
- Water heater installation and associated components
- Water heater pipe and tank insulation
- Water heater pressure/temperature relief valve
- Clothes dryer exhaust repair/replacement
- Refrigerator replacement
- *Measures not listed may be included with prior THDA approval.*

Measure Installations Verified by QCI On-Site

- Air and duct leakage measures
- *Wall insulation and any other insulation that requires verification using infrared or physical means.
- All dwelling units with combustion appliances
- Bathroom/kitchen exhaust duct repair or installation
- Exhaust fan installation

The Quality Control Inspector will ultimately determine if a measure meets technical standards, whether inspected in-person or remote. An inspector may find in-person verification is necessary if remote inspection proves insufficient or impractical.

SUMMARY

The remote video inspection will serve as a supplement to weatherization inspections and not a permanent substitute. All remote inspections will be held to the same THDA monitoring principles, work specifications, and expected standards of quality.

Subgrantees shall contact THDA prior to an inspection appointment should there be questions on remote procedures, documentation, feasibility, or any other scenario that may result in insufficient data collection.