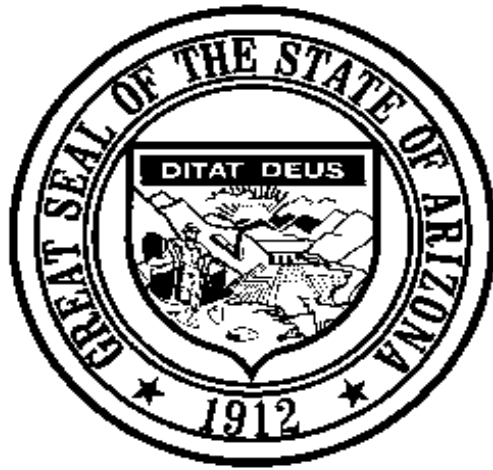


**STATE OF ARIZONA  
DEPARTMENT OF HOUSING  
MANUFACTURED HOUSING AND BUILDING DIVISION**

**INSTALLATION INSPECTION GUIDELINES**



November 2020 Edition

## STATUTORY REQUIREMENTS

- 41-4002. Office of manufactured housing; purpose - The purpose of the office of manufactured housing within the department is to maintain and enforce standards of quality and safety for manufactured homes, factory-built buildings, mobile homes and accessory structures and installation of manufactured and mobile homes, factory-built buildings and accessory structures. The affairs of the office of manufactured housing shall be conducted consistently with minimum standards of the United States department of Housing and Urban Development so as to be designated the "state inspector" for manufactured homes and related industries. The office shall implement all existing laws and regulations mandated by the federal government, its agencies and this state for such purposes.
- 41-4001. Definitions - "Installation" means:
  - (a) Connecting new or used mobile homes, manufactured homes or factory built buildings to on-site utility terminals or repairing these utility connections.
  - (b) Placing new or used mobile homes, manufactured homes, accessory structures or factory built buildings on foundation systems or repairing these foundation systems.
  - (c) Providing ground anchoring for new or used mobile homes or manufactured homes or repairing the ground anchoring.
- 41-4004. Powers and Duties of the Department
  - A. 4. Enter and inspect or investigate premises at reasonable times, after presentation of credentials by the director or personnel of the office or under contract with the office, where units regulated by this article are manufactured, sold or installed, to determine if any person has violated this chapter or the rules adopted pursuant to this chapter.

## GENERAL

The purpose of these guidelines is to establish a workable baseline of performance that will allow installations to be completed with a minimum of three inspections. This is one way of doing it, other ways may work also.

The installation inspection requirements are first and foremost established to protect the people who will use or reside in the buildings regulated by the department. When faced with the situations encountered daily in the field by inspectors, this priority must be kept in mind when determining a course of action.

Installation Inspection is:

- Verification that the installation complies with statute/rule (codes, standards, etc.)

Installation inspection is not:

- A project management service for dealers, installers, contractors, manufacturers or home owners.
- A quality control service for dealers, installers, contractors, manufacturers or home owners.

It is appropriate to provide education and a degree of assistance to the entities we deal with in the field, but we must be careful not to allow assistance to evolve into doing their job for them. Licensees, especially, are responsible for performing their tasks and scope of work in a manner that complies with the requirements and are responsible for knowing how to do this. .

Enforcement of codes and standards is meant to protect primarily the individuals who will use or reside in regulated buildings, but this is not all. Ensuring substantial compliance with codes and standards also protects the greater community from the actions of individuals that may not care if they themselves are protected, and may create a situation that could endanger their neighbors. An example: Improper installation of an awning could allow the wind to carry that awning through the air and dump it on a neighbors property or person.

Codes and standards lay out requirements that, when met, will ensure a minimum degree of safety. At first glance, codes and standards may appear to be a huge tangled body of, sometimes contradictory, requirements. Closer examination reveals a hierarchy of interconnected and usually consistent layers that can establish the primary requirements and the detail requirements necessary to create a safe situation. It is not always easy to connect all the dots, but the dots can be connected if you follow it through.

Below is the basic hierarchy of codes and standards most commonly used in inspecting regulated buildings:

Applicable codes and standards

- Factory Built Buildings – Approved Building Plans, Approved Installation Plans (when applicable), current adopted body of ICC Codes and NAFPA/NEC, Equipment and Materials assembly and/or installation instructions.
- Manufactured Homes – 3280 Manufactured Home Construction and Safety Standards, 3285 Model Manufactured Home Installation Standards, 3286 Manufactured Home Installation Program, Home Manufacturer’s Installation Manual, Applicable Approved Plans (Attached Accessory Structures, Flood prone area or other special conditions, etc.), Equipment and Materials assembly and/or installation instructions.
- Mobile Homes - Home Manufacturer’s Installation Manual, 3285 Model Manufactured Home Installation Standards, Applicable Approved Plans (Attached Accessory Structures, Flood prone area or other special conditions, etc.), Current adopted body of ICC Codes and NAFPA/NEC, Equipment and Materials assembly and/or installation instructions.

## **INSPECTION**

What we deal with has been described as:

“The inherent messiness of the industrial world, where nothing is ever as neat as in academic models.”

Consistency of procedure and the application of codes and standards is key to the effective execution of our statutory responsibilities. We must start with a general model of what will work consistently when applied in the field. It is inherent in what we do that variations and inconsistency will be encountered regularly. This is unavoidable. However, we can still expect a high level of performance if we keep in mind and adhere as close as possible to an established process.

The fees paid for an installation permit include three inspections. Any subsequent inspections are subject to further inspection fees. This system was created in recognition of the fact that most manufactured home installations are completed with three or less inspections (in fact 74% at the time of writing). This also applies to the majority of factory built buildings. Most FBB installations are relatively simple lease units, however, there are also some very complex installations of primarily commercial buildings that will require more (sometimes many more) than three inspections to complete. These are dealt with as they come. Standardized procedures must be built around the most common scenario and provide guidance for the rarer more complex installations.

With that in mind, the following scenario has been created to establish a standard sequence of events that will substantially ensure that the most common type of installation will be completed in three inspections. The scenario is for a double wide Manufactured Home, above ground set, with attached accessory structure, maybe a carport or similar awning. This scenario will form a base from which installation of other building types may be extrapolated. It is not

necessary to create a specific outlined procedure for all the building types encountered. This scenario, when understood, will provide the guideline for all installations.

Model Installation Scenario:

### Before Inspection

Installation Site suitability

- Site access evaluated
- Soil suitability and Bearing Capacity - Verified or tested to identify footing size and anchor type
- Frost depth identified
- Water permeability and/or site drainage evaluated and addressed
- Penetrometer or engineer soil report obtained

Home construction is suitable for installation site

- Correct wind zone
- Correct thermal zone
- Correct roof load

Permits, Plans, and LAHJ approval obtained

- Zoning approval from Local Authority Having Jurisdiction (LAHJ)
- Fire separations and setbacks provided per LAHJ
- LAHJ ordinances or special requirements addressed
- Flood hazard provisions (when applicable)
- Home installation (when applicable) and accessory plans approved by ADOH
- Installation Permit obtained

Home and Component Manufacturer's installation instructions and any required ADOH approved plans available on site

Alternate Construction (AC) and/or Site Completion (SC) requirements (when applicable) addressed

Home site is prepared

- Pad constructed and compacted, situated per LAHJ zoning requirements
- Graded for drainage

Access to site available, all work exposed for inspection

**MAKE SURE THE JOB IS READY FOR INSPECTION BEFORE SCHEDULING INSPECTION**

### 1<sup>st</sup> Inspection

### Footings

- Footing size accurate for soil conditions
- Footing depth accurate for frost depth
- Footing locations according to manufacturer's instructions

### Foundation

- 6-mil vapor retarder installed under home (when applicable)
- Pier heights and location according to home manufacturer's installation instructions
- Column post support piers properly sized and located
- Perimeter piers placed per home manufacturer's installation instructions
- 12" minimum clearance under main frames, 18" minimum clearance under floor joist
- Anchor type appropriate for soil conditions
- Anchor location, and spacing, per manufacturer's instructions
- Stabilizer plates installed (when required)
- Anchor depth in soil per manufacturer's instructions
- Anchors installed per anchor manufacturer's instructions
- Longitudinal tie downs are installed (when required)
- Foundation drains are in place (when applicable)

### Structural Connections

- Shipping blocks and straps removed
- Gasket installed at marriage line
- Roof properly connected at marriage line
- Hinged roof and eaves secured and connected in place
- Endwalls properly connected at marriage line
- Floors properly connected at marriage line
- Floors, endwalls, and roofs are properly aligned

### Weather Tight

- Roofing no holes or exposed fasteners
- Roof flashings and roof jacks in place
- Hinged roof and eaves have roofing applied
- Vents and flues correctly installed
- Roof cap and roofing material is applied at the marriage line

### Pre burial of utilities

- Correct fill material used
- Water pipe materials are approved types
- Water piping is supported at proper intervals
- Sewer piping is graded, and has clean outs when required
- Sewer pipe materials are approved types
- Sewer piping is supported at proper intervals

- Electrical conduit materials are approved types
- Electrical conductors are approved types
- Electrical conduit is supported at proper intervals
- Gas pipe materials are approved types
- Gas piping is supported at proper intervals
- Under ground utility and connections testing

#### Plumbing

- Water and drain connections have been properly made
- Water and drain crossover connections have been properly made
- Water and drain penetrations through floor have been sealed
- All required tests have been witnessed and successfully completed

#### Electrical

- Service equipment correctly located and accessible
- Service equipment neutral/ground jumper in place
- Service equipment grounding electrode(s) in place and properly connected
- Distribution Panel amperage appropriate for home
- Electrical connections at marriage line have been properly made
- Electrical connections at marriage line have proper polarity
- Electrical connections at marriage line have j-box covers re-attached
- Chassis and all metallic parts are properly bonded
- All required tests have been witnessed and successfully completed

#### Gas

- Pipe cross over connections have been properly made
- All required tests have been witnessed and successfully completed .

#### Accessory

- Complies with approved plan
- Correct materials and fastening
- Footings, anchoring, strapping correct per approved plan
- Electrical load calc provided for added equipment/devices (when applicable)

### 2<sup>nd</sup> Inspection

#### Foundation

- Wedges and straps

#### Utilities

- Backfill of utility trenches

#### HVAC

- Ducts properly attached, connected, and supported
- Ducts correct type and R value
- Equipment service receptacle correct location
- Equipment disconnect correct size and location
- Condensate drain installed and terminated correctly
- Electrical load calc provided for added equipment (when applicable)

Accessory installation

### 3<sup>rd</sup> Inspection

Exterior siding trimmed, flashed, and sealed

Windows and doors trimmed and sealed

Egress doors and windows open and close properly

Bottom board damage is repaired and sealed

- Drain and water line penetrations through floor have been sealed
- Plumbing and electrical access covers and insulation have been replaced

Water lines and P-traps are protected from freezing (when appropriate)

Operational checks and adjustments completed

## **ON SITE INSPECTION**

### PURPOSE and INTRODUCTION

The purpose of on site inspection is to physically verify that installation of regulated buildings is completed in compliance with Statutes, Rules, and adopted Codes and Standards.

The inspection process outlined:

- Users request an inspection through the OMH Scheduler
- Inspectors evaluate requests and accept/assign inspections into their daily schedule
- Inspectors visit sites and conduct inspections
- The inspection results are entered into an inspection report and emailed to the user and/or interested parties as listed on the permit
- Inspection reports are saved as part of the permit record documentation

### PROCESS

Inspector accepts/assigns inspection



1. Inspector logs into the Inspection Scheduler to view inspection requests and accepts/assigns to inspector's inspection list/schedule.
2. Inspector will verify and determine eligibility of the requested inspection. The Inspector may re-assign the requested inspection for a Remote Video Inspection (RVI) in lieu of a physical inspection if circumstances warrant.
3. Inspector will review each inspection request to verify that fee payment has been made when applicable. If no payment is indicated for an inspection that requires pre-payment, the Inspector will follow the procedure for non-payment and cancel the inspection. The inspection requestor will automatically be notified, by the Inspection Scheduler, that the request has been cancelled.

#### Confirm Inspection:

1. No later than the morning of the day of inspection, notify Permit Holder of intended arrival time at site. Give a minimum two-hour window. The window may be more specific if possible.
2. Inform Permit Holder if changes to arrival window are necessary due to unforeseen circumstances.

#### Arrive at site:

1. Meet site representative, introduce yourself, present credentials as necessary.
2. Briefly outline inspection procedure, communicate any specific requirements (witness tests, access to construction, etc.).

#### Start Inspection:

1. Check permit file on laptop. Look for any special circumstances or requirements relevant to the current inspection.
2. Open report on tablet. Prefill Inspection Report. (See INSPECTION REPORT ON TABLET for procedure)
4. Verify Construction Documents:
  - Permit
  - Confirm zoning: setbacks, Zoning Plan, Address etc.
  - Plans: Accessory, Flood, Foundation
  - HUD Home Manufacturer notified of changes to home
  - Soil reports: Penetrometer, Engineered, Pit set drainage
  - Manufacturer's Instructions: Home Installation Manual, Equipment Installation Manuals, Manufactured Skirting/Awning Installation Instructions
  - Marriage Line connection photos
  - Data Plate
  - Labels/Insignia: HUD Label(s), Modular Certification Insignia, Installer/Contractor Certification Insignia
  - Utility Test Form
5. Check Utility Test status.

Inspection:

1. Visually inspect all aspects of installation construction.
  - Focus on those items specified in inspection request.
  - Check previously approved items for continued compliance.
  - Alert site representative to potential non-compliance.
2. Require site representative to expose construction/provide access for inspection.
3. Alert site representative to any non-compliance discovered. Explain non-compliance as necessary.
4. Apply Green Tag to approved utility connections. Inform utility provider of approval.
5. Re-inspect any non-compliance that was corrected during time of inspection.

Complete Report:

1. Complete Installation Report on tablet (Comet).
2. Complete Excel close out form on laptop.
3. Send utility clearances to utility providers via email. Save utility clearance in Permit file.
4. Delete pre pay email (laptop).
5. Note inspection as complete in OMH Scheduler (tablet).
6. Complete timesheet (laptop).

## **REMOTE VIDEO INSPECTION (RVI)**

### PURPOSE and INTRODUCTION

The purpose of the Remote Video Inspection is to provide an alternative to on-site inspection. It may be used for any inspection deemed appropriate by the inspector.

The inspection process outlined:

- The inspector assigns the requested inspection for a Remote Video Inspection (RVI) in lieu of a physical inspection if circumstances warrant.
- The inspector initiates a RVI call to the user.
- The inspector directs the user to send video images of the work that needs to be inspected.
- The inspection results are entered into an inspection report and emailed to the user and/or interested parties as listed on the permit.
- RVI may be saved as part of the permit record documentation.

RVI will count the same as a site inspection, fees apply accordingly. Scheduling of same day re-inspections is based on availability of time slots in the OMH Scheduler, and the RVI inspector's discretion. All RVI will be scheduled.

### PROCESS

Technical requirements:

- 4G smart phone or equivalent, 3G connectivity may not provide the speed and clarity needed to complete the inspection.
- Skype capability.

#### Requesting an inspection:

- User requests an inspection through the inspection scheduler via the ADOH website in the usual manner.
- The user selects the inspection subject from the inspection drop down menu.
- The user finalizes the process and may request an RVI.

#### User Preparation:

- Make sure equipment is fully charged.
- Turn off phone notifications that may interrupt inspection call, failure to do so may delay inspection.
- Use ear buds or microphone to improve communication.
- Ensure that the necessary tools based on type of inspection are readily available. For example, tape measure, level, GFCI tester, step ladder, etc.
- Make sure power tools and equipment are not running so that the call audio is clear.
- Applicable approved plans in good condition on site.
- Be ready to accept video call at scheduled time.

#### Inspector procedure:

- ADOH Inspector logs into the Inspection Scheduler to view inspections requests for RVI and assigns to the RVI inspection list.
- Inspector will verify and determine eligibility of the requested inspection. The Inspector may re-assign the requested inspection for a physical inspection in lieu of a RVI if circumstances warrant.
- Inspector will review each inspection request to verify that fee payment has been made when applicable. If no payment is indicated for an inspection that requires pre-payment, the Inspector will follow the procedure for non-payment and cancel the inspection. The inspection requestor will automatically be notified, by the Inspection Scheduler, that the request has been cancelled.
- Inspector will contact user by email to verify date and approximate time of RVI.

#### Inspection:

- Begin inspection at street view looking at structure.
- Document HUD Labels and/or insignia, HUD Data Plate, Approved Plans when applicable.
- Follow the directions of the inspector.
- Make note of any correction items.

#### Record Keeping/Tracking/Reporting

- RVI may be recorded and saved to the permit folder.
- Daily log of completed RVI.