From time to time our offices receive inquiries by homeowners on how to upgrade their pre-HUD home to approach the HUD standards in the area of fire safety (as listed below). Local county/city jurisdictions or insurance company requirements usually generate these inquiries. Generally, these agencies will not accept a pre-HUD home that has its light and receptacle circuits wired in aluminum, or has not been built to the HUD fire safety requirements and egress window requirements of the federal “Manufactured Home Construction and Safety Standards, Part 3280.”

This checklist is designed to be generic in content and may not include all requirements for your particular installation. The manufacturer’s installation instructions must be adhered to and available to the inspector at the time of the inspection. Be sure you can answer “Yes” to all of the questions before calling for inspection. Failure of the inspection will require a re-inspection fee to be paid.

Please call your local L&I Factory Assembled Structures Inspector with any questions.

Reference

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAC 296-150M-0309</td>
<td>Alteration Permit purchased and insignia issued.</td>
</tr>
<tr>
<td>3280.801(e)</td>
<td>Aluminum wiring is NOT acceptable for use in 15 and 20 amp branch circuits. You may do any of the following to correct the use of aluminum wiring:</td>
</tr>
<tr>
<td></td>
<td>1.) rewire the 15 and 20 amp branch circuits in copper;</td>
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<tr>
<td></td>
<td>2.) install receptacle and switches that are approved for the use of either aluminum or copper (i.e. - they will be marked AL/CU); or</td>
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<tr>
<td></td>
<td>3.) install copper &quot;pig tail&quot; connections using wiring nuts approved for aluminum wires between the aluminum wire and the receptacle/switches/light fixtures/bath fans/range hoods. Note: if the wire from a light fixture/range hood/etc. is already copper it will only be necessary to replace the wire nut with a wire nut acceptable for aluminum wire.</td>
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<tr>
<td></td>
<td>4.) If the circuit breakers in the electrical panel for 15 and 20 amp circuits are not approved for aluminum wire the breakers either need to be replaced with those that are acceptable for aluminum wire or the need to be pigtailed with copper wire and wire nuts acceptable for aluminum wire.</td>
</tr>
<tr>
<td>3280.106 &amp; .404</td>
<td>Egress windows per the attached drawings are installed in each bedroom</td>
</tr>
<tr>
<td>3280.203(b)(3) &amp; (c)(1)</td>
<td>Walls, doors and ceilings in the water heater and furnace compartments are protected per the attached drawings</td>
</tr>
<tr>
<td>3280.203(b)(4); (c)(1) &amp; (c)(2)</td>
<td>Exposed surfaces adjacent to the cooking range/ cooktop and kitchen cabinets are protected per the attached drawing</td>
</tr>
<tr>
<td>3280.204</td>
<td>Permanent wired smoke and carbon monoxide alarm(s) shall be installed per the attached drawings. Alarms with listed 10 year battery may be used</td>
</tr>
</tbody>
</table>

Notes: Any other alterations to the home that have not previously inspected and approved by the Department will cause the approval of this inspection to be denied.
Furnace and Water Heater Compartments

Fire protection of furnace and water heater compartments in manufactured and mobile homes.

- Pipes, vents and other penetrations through the gypsum wallboard shall be tight fitted (not able to move freely) or gaps of 1” or less may be sealed with firestopping material of fireproof caulking or fireproof foam sealant.

- All walls and ceiling surrounding a furnace or water heater must have gypsum wallboard on them. Seams and corners are to be tight fitted or trimmed with gypsum wallboard.

- Gypsum wallboard installed on the back of the door or panel and on the exposed portions of the door frame. The doorstop shall also be made of gypsum wallboard.

- Return air grills must be of metal, and the opening through the door must be lined with gypsum wallboard on all exposed sides.

- No carpeting on the floor.

- Gypsum wallboard trim over all gaps. Gaps of ½” or less over framing may be taped and joint compound applied.

Note: gypsum wallboard must be a minimum of 5/16” thick.
Cooking Appliances
Fire protection of surfaces in the area of cooking appliances in manufactured and mobile homes.

The surfaces of the exposed walls adjacent to and within 6” of a range or cooktop appliance must be composed of gypsum wallboard. Kitchen cabinets constructed of combustible material that are located above a range or cooktop must be a minimum of 24 inches above the cooking surface. The cabinets must be protected on the bottom and on exposed sides within 6 inches of either side of the appliance, by covering the surface with gypsum wallboard and installing a metal hood above the cooking appliance.

- Gypsum wallboard on top of the hood.
- Minimum 3/8” enclosed air space between the cabinet and the gypsum wallboard on top of the hood.
- No windows within 12” of the edge of a burner or element of the cooking appliance.
- Receptacles located within 6” of the edge of the appliance must have an extension ring on the box to bring it out flush with the wall face.
- Gypsum wallboard is required on all exposed and/or vertical surfaces within 6” of the edge of the appliance.
- The range hood must be at least as wide as the appliance and have a lower front edge or “eyebrow” which extends at least 3” past the face of the cabinet above.
- All exposed surfaces such as walls, cabinet bottoms and sides within a horizontal distance of 6” of the edge of the cooking appliance must be protected by gypsum wallboard. This material may be painted or overlaid with metal, ceramic tile etc.
- Minimum 3/8” gap between the cabinet and the gypsum wallboard on top of the hood.
- 3” minimum eyebrow required at range hoods.
- Open wall or pass through in wall behind appliance.

Gypsum wallboard material is required on all exposed and/or vertical surfaces within 6” of the edge of the appliance.
Emergency Egress Windows.
Minimum requirements for emergency egress windows in Manufactured and Mobile Homes.

Every bedroom or other room designed expressly for sleeping purposes must have a window that meets the minimum requirements for emergency egress. Rooms that have a door, with a minimum clear opening of 28” wide by 72” high, which opens directly to the outside do not need to have an emergency egress window. A label on the window with wording that it meets AAMA Standard 1704 indicates that the windows meet the “Voluntary Standard for Egress Window Systems in Manufactured Housing”. This label is not required as long as the window meets the minimum dimensional requirements shown below. Egress windows and devices must be installed in a manner, which allows for proper operation. Caution: a window may meet the minimum width and height requirements and still not meet the minimum opening area requirement. *Note: a sill height of up to 44” maybe used when the window area is increased to a net clear openable area to 5.7 square feet per IRC R 310.1.*

When you multiply the clear width of the opening portion of the window by the clear height of the opening portion of the window there must be at least 720 square inches (5.0 s.f.) of opening.
Example #1: 20”w x 36”h = 720 Sq.In.
Example #2: 30”w x 24”h = 720 Sq.In.

The net clear height of the opening half of the window must be at least 24 inches.

The net clear width of the opening half of the window must be at least 20 inches.

The bottom of the opening in the window must be no more than 36” above the floor.

Floor line.

Locks, latches, operating handles, tabs, and any other window, screen or storm window devices which need to be operated in order to permit exiting shall not be located in excess of 54 inches from the finished floor.
Smoke & CO Alarms
Installation and location of smoke and CO alarms in manufactured and mobile homes.

Smoke alarms and carbon monoxide (CO) alarms are required at each hallway or area giving access to a bedroom or group of bedrooms. Smoke alarms are required in all homes. CO alarms are recommended in all homes, but are only required in homes with fuel burning appliances, an attached garage or when the home is over a basement. Combination smoke/CO alarms may be used.

When a furnace is located in the hall giving access to the bedrooms the alarm is to be located between the living area and the return air grill of the furnace. Smoke alarms must be installed on a wall, as shown below, even if the manufacturer’s instructions allow the smoke alarm to be installed on the ceiling. Smoke alarms must be permanently wired and installed on a J-box with splices terminating inside the box. The alarm may not be switched and if more than one smoke alarm is installed then each one is to be wired on a different branch circuit.

Alarms in manufactured/mobile homes do not need to be wired together to sound simultaneously. Note: Alarms must bear the following labels:
- Smoke alarm – UL217 or ANSI/UL 268
- CO alarm – ANSI/UL 2034
- Combo Smoke/CO – UL 217 and ANSI/UL 2034

In areas with flat or sloped ceilings the top of the alarm must be located between 4 and 12 inches below the point where the sidewall and ceiling of the home intersect.