

STATE BUILDING CODES DIVISION

"Tiny House" Overview

House Committee on Business and Labor
February 15, 2017

Recent state action

- Closed investigation
- Reminded manufacturers of licensing requirements
- Defined what is a traditional RV
- Eliminated state approval for park models/temporary structures
- Provided temporary/permanent structure guidance to local government

Traditional RV –

"Temporary, recreational, emergency or seasonal use"

- Registered by NHTSA
- No special highway permit
- Designed for daily set-up
- Built to ANSI - A1192 RV Code
- Walls and roof – aluminum, fiberglass, fiberglass composite, or rubber membrane
- No pitched roof or bay windows

Dwellings (Houses) –

"Includes permanent provisions for living, sleeping, eating, cooking, and sanitation"

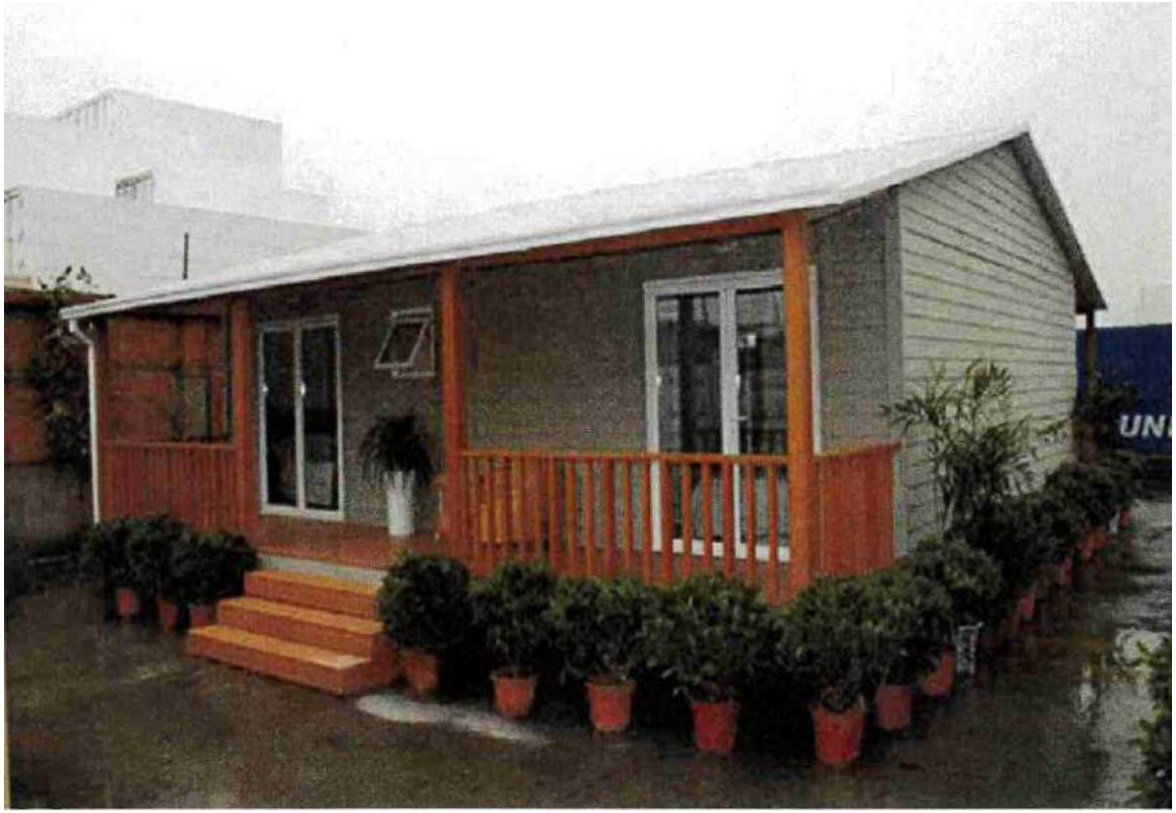
Temporary structures (Park model RV's, transitional housing, etc.) –

"Temporary structures are allowed for 180 days, may be extended and must meet general safety requirements as necessary to ensure public health, safety and general welfare"

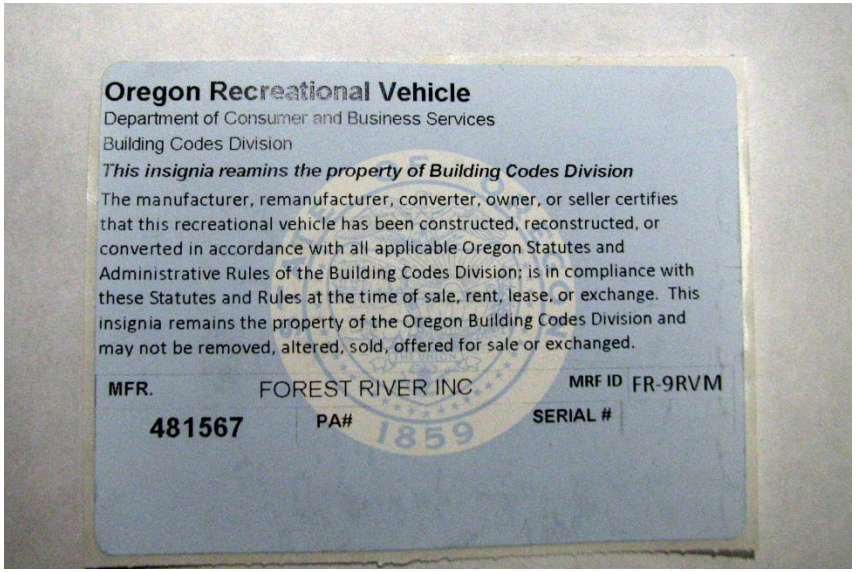
Licensing requirements (general)

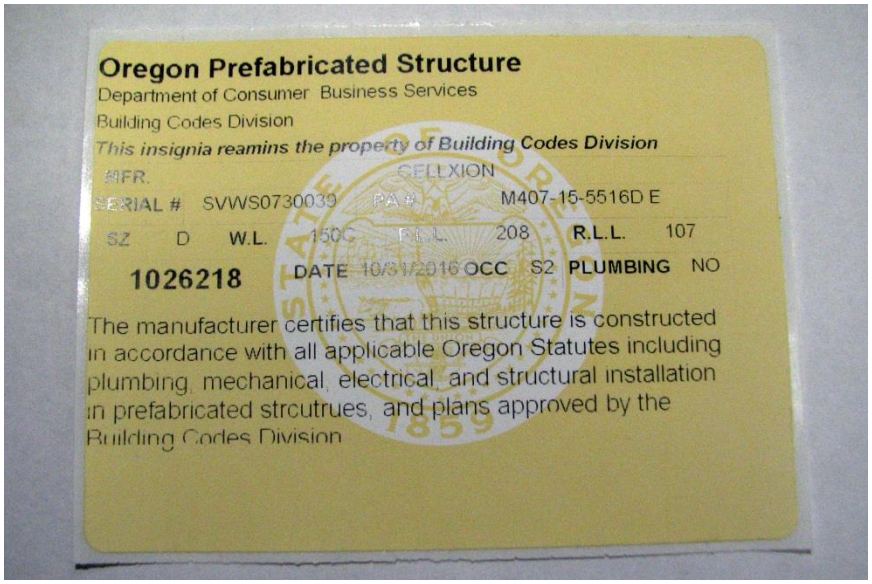
1. General or specialty contractor license (CCB)
   a) Insurance, bond, Workers Compensation insurance
   b) Dispute resolution/mediation for consumers
2. Journeyman electrician license (BCD)
3. Journeyman plumber license (BCD)
4. Local/state business license


Springdale




AS EVIDENCED BY THIS LABEL NO. KTH 667288
THE MANUFACTURER CERTIFIES TO THE BEST OF THE MANUFACTURER'S KNOWLEDGE AND BELIEF THAT THIS MANUFACTURED HOME HAS BEEN INSPECTED IN ACCORD-ANCE WITH THE REQUIREMENTS OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IS CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE. SEE DATA PLATE.


Oregon Recreational Vehicle
Department of Consumer and Business Services
Building Codes Division
This insignia reamins the property of Building Codes Division
The manufacturer, remanufacturer, converter, owner, or seller certifies that this recreational vehicle has been constructed, reconstructed, or converted in accordance with all applicable Oregon Statutes and Administrative Rules of the Building Codes Division; is in compliance with these Statutes and Rules at the time of sale, rent, lease, or exchange. This insignia remains the property of the Oregon Building Codes Division and may not be removed, altered, sold, offered for sale or exchanged.
MFR. FOREST RIVER INC MRF ID FR-9RVM
481567 PA# SERIAL #


Oregon Prefabricated Structure
Department of Consumer Business Services
Building Codes Division
This insignia reamins the property of Building Codes Division
MFR. CELLXION
SERIAL # SVWS0730039 PA # M407-15-5516D E
SZ D W.L. 150C R.L.L. 208 R.L.L. 107
1026218 DATE 10/31/2016 OCC S2 PLUMBING NO
The manufacturer certifies that this structure is constructed in accordance with all applicable Oregon Statutes including plumbing, mechanical, electrical, and structural installation in prefabricated strcutrues, and plans approved by the Building Codes Division

Key Differences Between ANSI A119.5 (Park Model RV Code) and the Residential Building Code (ORSC):

Element	ORSC	ANSI 119.5
Publisher of Standard	International Code Council	Recreation Vehicle Industry Association (RVIA)
Definition	Dwelling: Any building that contains one or two dwelling units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that are occupied for living purposes. Dwelling Unit: A single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.	Park Model Recreational Vehicle: A single living unit that is primarily designed and completed on a single chassis, mounted on wheels, to provide temporary living quarters for recreational, camping, or seasonal use, is certified by the manufacturer as complying with all applicable requirements of ANSI A119.5 and: a. Has a gross trailer are not exceeding 400 square feet (37.15 square meters) in the setup mode or, b. If having a gross trailer area not exceeding 320 square feet (29.72 square meters) in the setup mode, has a width greater than 8.5 ft (2.59 meters) in the transport mode.
Independent Plan Review	Required	None
Independent Inspections	A number of structural, mechanical, electrical, and plumbing inspections throughout the construction process.	None

Fire Resistive Requirements	ORSC	ANSI 119.5
Interior Finish	R302.9 limits wall and ceiling finishes to a maximum flame spread index of 200 and a maximum smoke development of 450.	3-1.1 limits interior finishes to a maximum flame spread classification of 200, but the standard is silent on smoke development.
Exterior Wall Protection	R302.1 contains requirements for the fire-resistance ratings of exterior walls, openings, projections and penetrations based on minimum fire separation distances.	No Requirements
Insulation Flame Spread	R302.10 requires insulation materials to have a maximum flame spread index of 25 and maximum smoke development index of 450 (with some exceptions).	No Requirements
Fire blocking in Concealed Spaces	R302.11 has requirements for fireblocking at a number of locations in concealed spaces of combustible construction.	No requirements
Fire blocking Around Penetrations	R302.11 requires fire blocking at openings around vents, pipes, ducts, cables and wires at ceiling and floor levels with an approved material to resist the free passage of flame and products of combustion.	No requirements

Smoke Detectors:	ORSC	ANSI 119.5
Power Source	R314.4 – Requires smoke alarms to receive primary power from building wiring with battery backup.	3-3.1 – Allows smoke alarms with battery-only power source. There is an exception that allows for (but does not require) a park model to have a 120v smoke alarm with battery backup if it has lighting capable of being powered only by a 120 volt or 120/240 volt power supply.
Interconnection	R314.5 – Requires all smoke alarms to be interconnected.	No Requirements
Sleeping Rooms	R314.3 – Requires smoke alarm in each sleeping room and outside each separate sleeping area.	Section 3-3.1 & 3-3.3 – Only requires that there be at least one smoke alarm and prohibits it from being within the separate sleeping areas. If the park model has a loft, section 5-10.3 requires an additional smoke installed in a loft.

Stairways:	ORSC	ANSI 119.5
Width	R311.7.1 requires a clear width of 36 inches at points above the handrail and below the required headroom height.	5-10.4.1.1 requires a clear width of not less than 17 inches at or above the handrail.
Risers	R311.7.4.1 limits riser height to a maximum of 8 inches.	5-10.4.1.2 allows for a maximum riser height of 12 inches.
Tread	R311.7.4.2 requires a minimum tread depth of 9 inches (min 10 inches without a nosing).	5-10.4.1.2 requires a minimum tread depth of 7 inches.
Alternating Tread Devices	Not allowed as a means of egress component.	5-10.4.2.3 allows alternating tread devices for stairs.
Ladder in lieu of stairway	Not allowed as access to occupied spaces.	5-10.5.1 allows a ladder for loft access.

	ORSC	ANSI 119.5
Safety Glazing	R308 requires safety glazing in hazardous locations (e.g. in doors, next to stairways, wet locations, etc.).	Does not require windows with safety glazing; however, interior glazing (such as mirrors) are required to be tempered when they are 431 in^2 or larger in area. Shower and tub enclosures are required to be safety glazing.
Exiting	R310.1 requires a minimum of 5.7 ft^2 of opening area (5.0 ft^2 on grade floor) and a minimum opening width of 20 inches and minimum opening height of 24 inches.	3-2.4 requires a minimum opening such that a 24 inch wide by 17 inch tall ellipse (area = 2.23 ft^2) will fit in the opening.

Structural Design:	ORSC	ANSI 119.5
Exterior walls	Table R602.3(5) requires exterior bearing wall studs to be minimum 2” x 4” nominal; although, with the insulation requirements are typically 2” x 6”.	5-5.2.1 allows 2” x 3” nominal studs.
Floors **Min. Live Load** **Max. Deflection**	Table R301.2(1) & ORSC R301.7 40 lbs/sf (30 lbs/sf in bedrooms) L/360.	5-3 30 lbs/sf L/240.
Roof **Minimum Live Snow Load** **Max. Deflection**	Table R301.2(1) & ORSC R301.7 25 lbs/sf snow load with possible increase or decrease based on location L/180 rafter and L/240 for ceiling.	5-3 30 lbs/sf live load with no requirement to meet site specific snow load. L/180 - doesn’t differentiate between roof and ceiling members.
Foundation	R403.1 requires exterior walls to be supported by and anchored to a continuous footing/foundation or engineered system.	Section 5-8 requires each park model to be provided with attachment points to facilitate the installation of at least 6 ground anchors.

	ORSC	ANSI 119.5
Wind & Seismic Loads	R301.1 & R602 requires dwellings be designed to resist the site specific wind and seismic loads.	Does not contain requirements to design for wind and seismic loads.
Fastening of Structural Members	Table R602.3(1) contains the fastening requirements for structural members. In general staples are not allowed to attach structural members greater than 1 inch in thickness.	Table 5.1 allows staples for most connections. The table does specify wood screws for a few connections.

	ORSC	ANSI 119.5
Minimum Insulation Requirements	Table N1101.1(1)	2-7.1,5-4.3,5-6.5
Ducts	R-8	R-4
Floors	R-30	R-5
Ceiling	R-38	R-7
Windows, Doors, Skylights	Max. U-value for windows (0.35), doors (0.20), skylights (0.60).	No requirements
Exterior Wall Drainage Plane	R703.1.1 requires that the exterior wall envelope be installed in a manner that water that enters the assembly can drain to the exterior.	No drainage requirements

	ORSC	ANSI 119.5
Electrical:	OESC	OESC Article 552 **552.4 General Requirements**. A park trailer as specified in 552.2 is intended for seasonal use. It is not intended as a permanent dwelling unit or for commercial uses such as banks, clinics, offices, or similar.
Ground-Fault Circuit-Interrupter	List of locations in OESC 210.8(A) for dwelling units	OESC 552.41(C) – Close to the same as a dwelling. Required for receptacles serving kitchen countertops; within 6 feet of any lavatory or sink; in toilet, shower, and/or tub areas. This section has a shorter list because many items for dwellings are not applicable.
Arc-Fault Circuit-Interrupter Protection	Required -210.12(A)	Not Required
Small Appliance Circuit	Requires a minimum of two 20 ampere circuits in kitchen, panty, breakfast and/or dining room. 210.11(C)(1)	Two Options: A. Two to five circuit option for 30 ampere rated panel – not required B. For more than 5 circuits – same requirement as a dwelling 552.46(B)(2) & 210.11(C)(1)

	ORSC	ANSI 119.5
Laundry Circuit	Minimum of one dedicated 20 ampere circuit required to supply a laundry receptacle outlet. 210.10(C)(2)	Not required, but if provided under option B, 552.46(3) information note 1 points to 210.10(C)(2) – same as dwelling.
Bathroom Branch Circuits	Minimum of one dedicated 20 ampere branch circuit to supply a bathroom receptacle outlet(s)	Not required
Outdoor Receptacle	Minimum of two - 210.52(E)(1)	Minimum of one – 552.41(E)
Panel Boards Location	240.24(D) – Prohibited in vicinity of easily ignitable material such as a clothes closet	552.48(B) does not prohibit installation in vicinity of easily ignitable material.
Panel Board Working Space **Min Height** **Min Depth** **Min Width**	110.26 6-1/2 feet 36 inches 30 inches	552.45 None 30 inches 24 inches

	ORSC	ANSI 119.5
Service Size	Minimum 100 amp – 220.82(A)	Maximum 50 amp – 552.43
Cords	Permanently connected cords not allowed to pass through walls and floors – 400.8(2)	Permanently connected cords may pass through walls and floors when protected (from damage) – 552.44
Tamperproof Receptacles	Required – 406.12	Not required by article 552
Grounding Electrode	Required - 250.50	Not required by article 552

Mechanical:	ORSC	ANSI 119.5
Gas piping test	G2418.4.1 – requires minimum 10 psi test for 15 minutes.	2-14.17.1 – requires minimum 3 psi test for at least 10 minutes.
Ventilation of Fuel-Burning Cooking Appliances.	M1504.4 & Table M1507.3 – Requires range hood with minimum of 150 cfm intermittent.	2-6.4.4 – Allows a gravity vent 1 $in.^2$ per 2000 BTU/hr.
Ducts	M1160.1.1.1 - Prohibits the use of building cavities for air ducts.	2-7.5 - Allows return air ducts to be constructed of minimum 1 inch nominal wood.
Bathroom Ventilation	R303.3 & M1507 Requires bathrooms without bathing or showering with either 1.5 sf of clear opening for natural ventilation or minimum 50 cfm bathroom fan. With bathing and showering mechanical ventilation must be provided with minimum 80 cfm for intermittent or 20 cfm continuous bathroom fan.	5-3.6.2 requires minimum of 1 sf of openable area or with mechanical ventilation capable of change the air at least once every 12 minutes.

	ORSC	ANSI 119.5
Plumbing	OSPC	
Tub Anti-Scalding Provision	414.5 requires that the maximum hot water temperature for a bathtub or whirlpool be limited to a maximum of 120 degrees by a device that is in accordance with ASSE 1070 or SCA B125.3.	No Requirements
Shower Anti-Scalding	419.0 requires shower and tub-showers to have valves limiting the hot water temperature to a maximum of 120 degrees.	No Requirements
Plastic Pipe Clearance to Flues	Must install in compliance with installation standards of the material used.	4-4.3 allows plastic piping to be installed within 2 inches of a double-walled flue and within 6 inches of an open flame or single-walled flue. This may violate the installation instructions of some materials; PEX for example requires a minimum clearance of 12 inches.

	ORSC	ANSI 119.5
Storage Type Water Closet	Not allowed. Except for composting toilet in accordance with OAR 918-770-0080, OPSC 304.0 requires plumbing fixtures to connect to the drainage system of the building.	4-5.2.1 allows storage type water closet
Shower Compartment	OPSC 411.6 requires a minimum of 1024 in^2 and capable of encompassing a 30 inch circle.	No minimum size
Water Supply to Clothes Washer and Dishwasher	Vacuum Breaker Not required	4-6.7.4 Vacuum Breaker Required – Note park model requirement more stringent
Waterless Mechanical Traps	Not allowed	Allowed by 4-7.6.1

Temporary Structures – Local Building Official Considerations

Temporary Structures – ORSC Section 107

R107.1	Authorizes the building official to issue a permit for temporary structures.
R107.2	Temporary structures and uses shall conform to the structural strength, fire safety, means of egress, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.
R107.4	Authorizes the building official to terminate permit for temporary structure.

Temporary Structures – Considerations

Local Community	Do local ordinances prohibit or allow temporary structures?
Urgency/ Need	• Are temporary structures needed to house people who have been displaced by a disaster? • Are they needed to shelter homeless population from extreme weather?
Location	Floodplain; geological hazard ; distance to other structures;
Use	Will it be use continuously or on an intermittent basis?

As Necessary – Considerations

to ensure the public health, safety and general welfare.

R301	Structural members are adequate for the required design load.
R314&315	The structure has the required smoke and carbon monoxide alarms
R306	If bathroom facilities are not provided in the structure then bathroom facilities are provided elsewhere on the site.
R303.8	Depending on location, time of year, duration of occupancy, provisions for heating are provided.

As Necessary – Considerations

to Ensure the Public health, safety and general welfare.

R310	Sleeping rooms have an emergency escape and rescue opening.
R311	Egress door and path.
R311	Habitable areas on a second floor or loft are provided with a stairway.
R308	Glazing in hazardous locations meets the requirements of R308.

As Necessary – Considerations

to Ensure the Public health, safety and general welfare.

R303.1	Adequate ventilation is provided.
G2408.1	Fuel burning appliances installed according to listing and installation instructions.
M1503.4 **G2406** **G2407** **G2408**	Fuel burning appliances, including gas stoves/ovens ,in compliance with location, clearance to combustibles, combustion air and venting requirements.

Appendix A:

Overview of Pictures

#1 Accessory Dwelling

- Full permit
- Plan review
- License contractor
- Local inspection

#2 Traditional Recreational Vehicle

#3 Park Model RV

- Built to RV code?
- No license contractor
- No local inspection

4 Tiny house

- Built to RV code
- No license contractor
- No local inspection

#5 Park Model RV

- Built to RV code?
- No license contractor
- No local inspection

#6 Tiny house

- Built to RV code?
- No license contractor
- No local inspection

#7 Pre-Fab

- Full permit
- Plan review
- License contractor
- State and local inspection

#8 Accessory dwelling structure

- License contractor
- Electrical/plumbing permits
- Inspected by local government

Appendix B:

ANSI A1192 – Traditional RV Definition

A Vehicle-type unit that is primarily designed as temporary living quarters for recreational, camping, or seasonal use; has its own motive power or is mounted on or towed by another vehicle; is regulated by the National Highway Traffic Safety Administration as a vehicle or vehicle equipment; does not require a special highway us permit for operation on the highways; and can be easily transported and set-up on a daily basis by an individual.

ANSI A1195 – Park Model RV

A single living unit that is primarily designed and completed on a single chassis, mounted on wheels, to provide temporary living quarters for recreational, camping, or seasonal use, is certified by the manufacturer as complying with all applicable requirements of ANSI A119.5; and :

a) Have a gross trailer area not exceeding 400 square feet in the set-up mode or;
b) If having a gross trailer area note exceeding 320 square feet in the set-up mode, has a width greater than 8.5 feet in the transport mode.