

Step-by-step Guide for Planning Radon Testing in Oregon Multifamily Buildings

Below is a step-by-step guide for planning radon testing at a specific multifamily building site. It should be used with the other information in this document.

By preparing a “dry-run” on paper, owners and managers can identify timelines, costs (staff time and test kit costs) and unexpected barriers. Careful planning before testing begins will help ensure more accurate test results and lower costs.

1. **Prepare with proper planning.**

To plan radon testing, you must understand the testing process and what steps to take to make sure test results are precise, accurate and free of bias.

Review the test steps and find out if any residents have conducted their own radon tests. If so, collect and record their test results with as much information as possible.

Make sure all units and common areas on the building floor plan are individually labeled; create labels for them if they are not.

Become familiar with radon mitigation techniques that might be recommended.

2. **Communicate with residents and staff before testing.**

It is important to notify residents before testing and inform them about what they can expect during the testing process. Specifically, building owners and managers should plan to:

- Post sufficient notice of inspection for radon testing. Plan to give two weeks’ notice before testing begins.
- Provide the dates the detectors will be placed and retrieved.
- Relate the importance of maintaining the proper test conditions.
- Stress that testing is done to ensure resident safety and interfering with the testing devices could ruin the test results.
- Tell residents when the test results will be available and how they can see the results. Let residents know they can learn more about radon from the EPA’s “A Citizen’s Guide to Radon” document at <https://www.epa.gov/radon/citizens-guide-radon-guide-protecting-yourself-and-your-family-radon>

This kit contains:

- Building signage for testing, and
- Templates for employee and resident notices and emails.

3. **Identify units, common areas and buildings to be tested**

Place a radon testing device in each ground-contact unit or apartment, room used as office space or room associated with the building complex. A unit is “ground-contact” if it has floors or walls in contact with the ground. Also place detectors in any ground floor units over crawl spaces, utility tunnels or enclosed parking garages.

Place testing devices in 10 percent of units on any upper floors, with a minimum of one device on each upper floor. On floors three and higher, place the test devices in units that are not directly above a unit being tested.

Test in the lowest level of a unit, even if it is not currently used, if it could serve as a den, playroom, office, work area or additional bedroom in the future. Test all non-residential ground-contact rooms or areas, such as utility, storage or mechanical rooms. Also test any other areas that:

- Could be occupiable with little or no modification
- Are occupied more than four hours a day, or
- Have air communication with occupiable areas, such as stairwells and elevator shafts.

Unoccupied areas containing radon can allow radon to enter apartments on upper floors. **If in doubt**, test. Make sure all units in the building floor plan are individually labeled; create labels for them if they are not.

Determine the number of test kits for upper floors as described below (see 4b.)

4. **Determine the number of normally-operating test kits needed.**

- a. Count all ground-contact units, offices, laundry and recreational rooms and any other common areas.

Number of test kits for ground-contact units, rooms and offices:

For common areas, use one test kit for every 2000 square feet. So, a lobby that is 3200 square feet would require a minimum of two detectors.

Area#1 square footage: _____

Number of kits needed: _____

Area#2 square footage: _____

Number of kits needed: _____

Area#3 square footage: _____

Number of kits needed: _____

Total test kits for all ground-contact units, rooms and areas:

- b. Determine the number of test kits needed for upper floors.

Calculate 10 percent of the total number of units on each floor and round up. So, a second floor with 16 units would require 1.6, which would round up to 2 test kits on each upper floor. There is always a minimum of one test kit per floor.

Number of units on floor 2: _____

Number of kits needed: _____

Number of units on floor 3: _____

Number of kits needed: _____

Number of units on floor 4: _____

Number of kits needed: _____

Total test kits for all upper floor units:

5. Determine the number of quality control test kits needed.

- a. Determine the number of **duplicate** test kits needed.

Units/areas to be tested x 0.10 (10%) = _____

Note: Round up to the next whole number. Remember, you need a minimum of one duplicate kit per building.

- b. Determine the number of **blank** test kits needed.

Units/areas to be tested x 0.05 (5%) = _____

Note: Round up to the next whole number. Remember, you need a minimum of one blank kit per building.

- c. Determine the number of **spike** test kits needed.

Units/areas to be tested x 0.03 (3%) = _____

Note: Round up to the next whole number.

6. Determine total number of test kits needed to perform all required tasks.

_____ Number of normal test kits from section 4a.

_____ Number of normal test kits from section 4b.

_____ Number of duplicate test kits from section 5a.

_____ Number of blank test kits from section 5b.

_____ Number of spike test kits from section 5c.

Total number of test kits for building: _____.

7. Use a Test Kit Location Floor Plan to create a Test Kit Placement Log.

New Language for paragraph: “Use the Test Kit Location Floor Plan Log and Test Kit Placement Log when planning the placement of the test kits and when recording radon test results.”

Multifamily building radon testing teams can use the building’s emergency escape plan map to decide which units to place the different types of test kits in (detectors, blanks and duplicates). These documents guide the planning of a radon testing effort as well as the testing itself.

Important: Create a separate Test Kit Placement Log for each building at the multifamily building site.

Test Kit Placement Instructions

When planning the placement of the test kits and recording data when testing is taking place, it's recommended to use a system to record this information. We have provided examples of a Test Kit Placement Log, and Test Kit Location Floor Plan to be used at your convenience.

Directions: using your building's Test Kit Placement Log, indicate the units or rooms that will have detectors (D), blanks (B) and duplicate (Dup) test kits in the unit comment column.

Although the Test Kit Placement Log examples has rows reserved for the 10 percent of rooms at each building site where duplicates should be placed and for the 5 percent of rooms where blanks should be placed, these are for your team's convenience. The selection of rooms for duplicates and blanks should be random. Remember, there must be a minimum of one duplicate and one blank per building.

The remaining fields in the log will be filled out when testing begins.

Regarding the remaining fields:

- "Test kit serial #" is the unique identification number found on each test kit.
- "Start date and time" and "Stop date and time" refer to the actual moments when kits are placed and activated to begin measuring the radon in the room (and then stopped). This information helps the lab adjust its equipment for the most accurate analysis of the test kit.

If you have questions, please contact the Oregon Radon Awareness Program at 971-673-0440 or radon.program@dhsosha.state.or.us.

www.healthoregon.org/radon

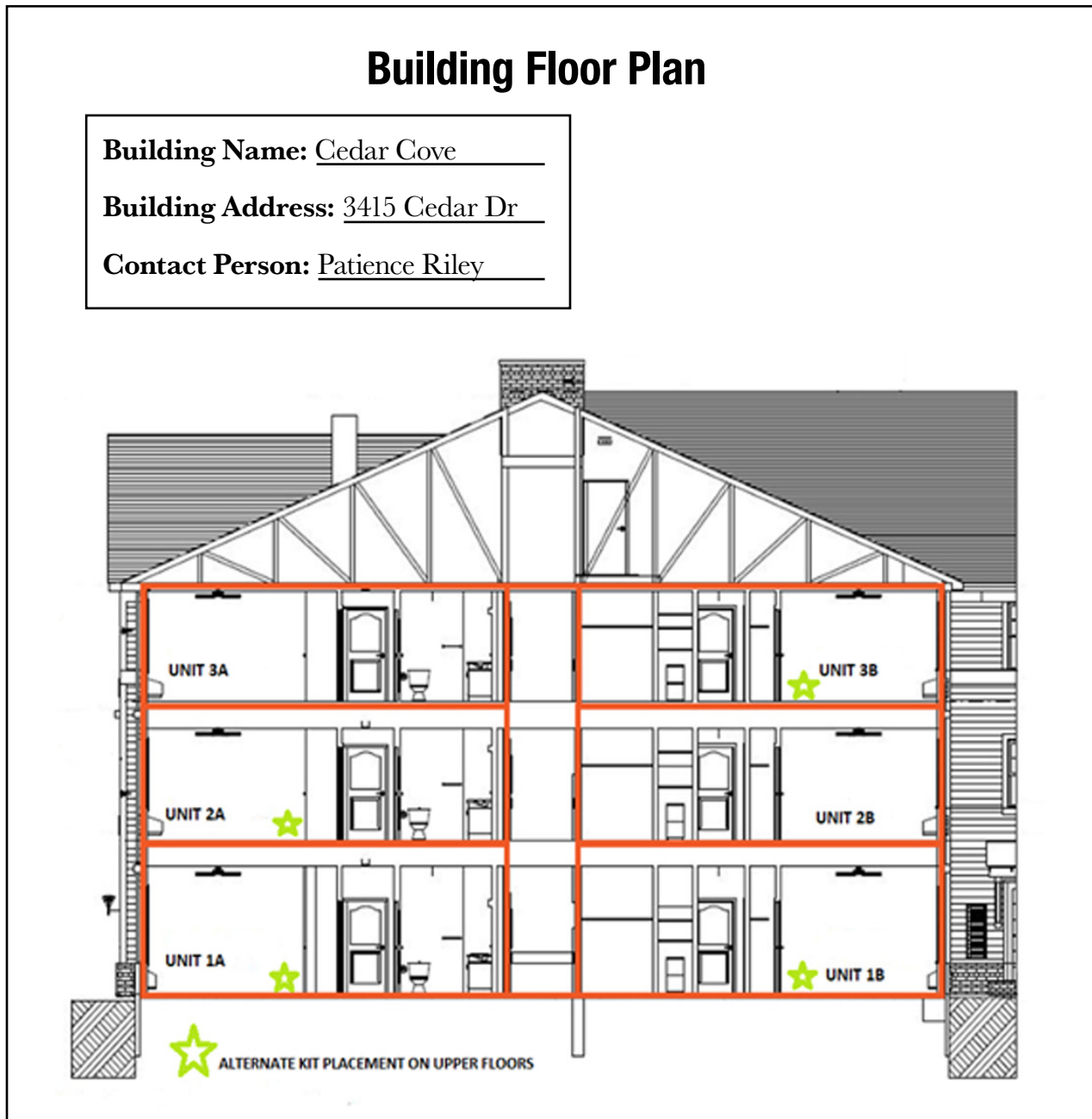
Test Kit Placement Log Example

Building name: Cedar Cove **Testing contractor:** AAA Radon Testing
Address: 3415 Cedar Dr **Contractor phone:** 503-222-5555
Portland, OR 97224 **Building contact:** Patience Riley
Contact email: _____ **Contact phone:** 503-888-2997

Test kit serial #	Floor – unit #	Room	Place -location	Start date and time	Placement Tech	Stop date and time	Pick-up Tech	Comments
12345	1-100	Living	S Wall	2/3/20 11:20 am	ML	2/7/20 1:56 pm	JR	
12346	1-100	Bed	Dresser	2/3/20 11:23 am	ML	2/7/20 2:06 pm	JR	D
12347	1-104	Living	S Wall	2/3/20 11:30 am	ML	2/7/20 2:10 pm	JR	
12348	1-106	Living	S Wall	2/3/20 11:32 am	ML	2/7/20 2:16 pm	JR	
12349	1-106	Living	S Wall	2/3/20 11:34 am	ML	2/7/20 2:24 pm	JR	
12350	1-108	Bed	N Stand	2/3/20 11:40 am	ML	2/7/20 2:30 pm	JR	B
12351	1-110	Living	W Wall	2/3/20 11:45 am	ML	2/7/20 2:35 pm	JR	
12352	1-112	Living	W Wall	2/3/20 11:52 am	ML	2/7/20 2:41 pm	JR	
12353	1-114	Living	W Wall	2/3/20 11:59 am	ML	2/7/20 2:45 pm	JR	Kit moved
12354	1-116	Living	W Wall	2/3/20 12:04 pm	ML	2/7/20 2:49 pm	JR	
12356	2-200	Living	S Wall	2/3/20 11:20 am	GJ	2/7/20 2:02 pm	GJ	window open

Technician: Matt Laughlin **Initials:** ML **License number:** G100225
Technician: George Jackson **Initials:** GJ **License number:** G107809_
Technician: Julio Ramirez **Initials:** JR **License number:** G122349

Test Kit Location Floor Plan Example



PUBLIC HEALTH DIVISION
Phone: 971-673-0440

You can get this document in other languages, large print, braille or a format you prefer. Contact Oregon Radon Awareness Program at 971-673-0440 or email radon.program@dhsosha.state.or.us. We accept all relay calls or you can dial 711.

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