



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

Log No. 076
~~Proponent Revision 4~~
Rec'd 5/20/22
TAG Modification
5/26/22

1. State Building Code to be Amended:

- International Building Code
- ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized [energy code forms](#)

Section(s):
WSMC 403.4

Title:
Residential Ventilation

2. Proponent Name (Specific local government, organization or individual):

Proponent: **Eric Vander Mey, Rushing**
Title: **Principal**
Date: **4/8/2022 Revised on 5/20/2022**

3. Designated Contact Person:

Name: **Eric Vander Mey**
Title: **Principal**
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4. Proposed Code Amendment. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Code(s) **WSMC** Section(s) **403.4**

Enforceable code language must be used.

Amend section to read as follows:

See proposed changes below in red, underline with track changes.

INTERIOR ADJACENT ROOM. An enclosed room without exterior windows or openings to the outdoors located within a dwelling or sleeping unit that ~~does not have interior unobstructed openings required for an interior adjoining space.~~

INTERIOR ADJOINING SPACE. A room or space without openings to the outdoors that is naturally ventilated from another habitable space by unobstructed fixed openings sized in accordance with Section 402.3.

BALANCED WHOLE HOUSE VENTILATION. Any combination of concurrently operating residential dwelling or sleeping unit mechanical exhaust and mechanical supply whereby the total mechanical exhaust airflow rate is within 10 percent or 5 cfm, whichever is greater, of the total mechanical supply airflow rate. Intermittent dryer exhaust, intermittent range hood exhaust, and intermittent toilet room exhaust airflow rates above the residential dwelling or sleeping unit minimum ventilation rate are exempt from the balanced airflow calculation.

NOT BALANCED WHOLE HOUSE VENTILATION. A whole house ventilation system serving a dwelling or sleeping unit that is not considered balanced per the definition in this code for "balanced whole house ventilation system". Only other than Group R-2 dwelling and sleeping units are allowed in accordance with Section 403.4.4.1 to have not balanced whole house ventilation systems.

DISTRIBUTED WHOLE HOUSE VENTILATION. A whole house ventilation system shall be considered distributed when it supplies outdoor air directly (not transfer air) to each dwelling or sleeping unit habitable space, (living room, den, office, interior adjacent room, interior adjoining spaces or bedroom), and exhausts air from all kitchens and bathrooms directly outside.

NOT DISTRIBUTED WHOLE HOUSE VENTILATION. A whole house ventilation system shall be considered not distributed when either the supply system or the exhaust system is not distributed. Supply systems are not distributed when a habitable space is supplied with outdoor air to ventilate an interior adjacent room or an interior adjoining space. Exhaust systems are not distributed when all bathrooms and kitchens are not exhausted by the whole house ventilation system. If either the supply system or the exhaust system is not distributed, then the ventilation quality adjustment system coefficient adjustment is required in accordance with Section C403.4.3.

LOCAL EXHAUST. An exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a residential dwelling or sleeping unit.

RELIEF AIR. Exhausted return air from a system that provides ventilation for human usage.

WHOLE HOUSE VENTILATION SYSTEM. A mechanical ventilation system, including fans, controls, and ducts, which replaces, by direct means, air from the habitable rooms with outdoor air.

403.4 **Group R whole house mechanical ventilation system.** Each dwelling unit or sleeping unit shall be equipped with a whole house ventilation system that complies with Sections 403.4.1 through 403.4.6. Each dwelling unit or sleeping unit shall be equipped with local exhaust complying with Section 403.4.7. All occupied spaces, including public corridors, other than the Group R dwelling and sleeping unit, that support the Group R occupancy shall meet the ventilation requirements of Section 402 or the mechanical ventilation requirements of Sections 403.1 through 403.3.

403.4.1 System design. The whole house ventilation system shall consist of one or more supply fans, one or more exhaust fans, or an ERV/HRV with integral fans; and the associated ducts and controls. Local exhaust fans shall be permitted to serve as part of the whole house ventilation system when provided with the proper controls in accordance with Section 403.4.5. The systems shall be designed and installed to supply and exhaust the minimum outdoor airflow rates [per-in accordance with](#) Section 403.4.2 as corrected by the balanced and/or distributed whole house ventilation system coefficients in accordance with Section 403.4.3 where applicable.

403.4.2 Whole house mechanical ventilation rates. The sleeping unit whole house mechanical ventilation minimum outdoor airflow rate shall be determined in accordance with the breathing zone ventilation rates minimum outdoor airflow rate shall be determined in accordance with the breathing zone ventilation rates requirements of Section 403.3.1.1.1.2 using Equation 4-2. The dwelling unit whole house mechanical ventilation minimum outdoor airflow rate shall be determined in accordance with Equation 4-10 or Table 403.4.2.

$$Q_r = 0.01 * A_{\text{floor}} + 7.5 * (N_{\text{br}} + 1) \quad \text{(Equation 4-10)}$$

where:

- Q_r = Ventilation airflow rate, cubic feet per minute (cfm) but not less than 30 cfm for each dwelling unit.
- A_{floor} = Conditioned floor area, square feet (ft²)
- N_{br} = Number of bedrooms, not less than one.

**TABLE 403.4.2
WHOLE HOUSE MECHANICAL VENTILATION AIRFLOW RATE
(CONTINUOUSLY OPERATING SYSTEM)**

Floor area (ft ²)	Bedrooms ¹				
	1	2	3	4	≥5
<500	30	30	35	45	50
500 – 1000	30	35	40	50	55
1001 - 1500	30	40	45	55	60
1501 – 2000	35	45	50	60	65
2001 – 2500	40	50	55	65	70
2501 – 3000	45	55	60	70	75
3001 – 3500	50	60	65	75	80
3501 – 4000	55	65	70	80	85
4001 – 4500	60	70	75	85	90
4501 – 5000	65	75	80	90	95

1. Minimum airflow (Q_r) is set at not less than 30 cfm for each dwelling unit.

403.4.3 Ventilation quality adjustment. The minimum whole house ventilation rate from Section 403.4.2 shall be adjusted by the system coefficient in Table 403.4.3 based on the system type not meeting the definition of a *balanced whole house ventilation system* and/or not meeting the definition of a *distributed whole house ventilation system*.

$$Q_v = Q_r * C_{\text{system}} \quad \text{(Equation 4-11)}$$

where:

- Q_v = Quality-adjusted ventilation airflow rate in cubic feet per minute (cfm)
- Q_r = Ventilation airflow rate, cubic feet per minute (cfm) from Equation 4-10 or Table 403.4.1
- C_{system} = System coefficient from Table 403.4.3

Table 403.4.3 SYSTEM COEFFICIENT (C_{system})^{a, b}

System Type	Distributed	Not Distributed
Balanced	1.0	1.25
Not Balanced	1.25	1.5

- a. [Systems shall be either balanced or not balanced. See definitions of balanced and not balanced whole house ventilation systems for further details.](#)
- b. [Systems shall be either distributed or not distributed. See definitions of distributed and not distributed whole house ventilation systems for further details.](#)

403.4.4 Whole house ventilation residential occupancies. Residential dwelling and sleeping unit whole house ventilation systems shall meet the requirements of Sections 403.4.4.1 or 403.4.4.2 depending on the occupancy of the residential unit.

403.4.4.1 Whole house ventilation in Group R-2 occupancies. Residential dwelling and sleeping units in Group R-2 occupancies system shall include supply and exhaust fans and be a *balanced whole house ventilation* system in accordance with Section 403.4.6.3. The system shall include a heat or energy recovery ventilator with a sensible heat recovery effectiveness as prescribed in Section C403.3.6 of the *Washington State Energy Code*. The whole house ventilation system shall operate continuously at the minimum ventilation rate determined in accordance with Section 403.4. The whole house supply fan shall provide ducted outdoor ventilation air to each habitable space within the residential unit.

Exceptions:

1. *Interior adjoining spaces that are ventilated from another habitable space are not required to have outdoor air ducted directly to the adjoining space. These systems are considered not distributed whole house ventilation systems and shall use the “not distributed” quality adjustment system coefficient in accordance with Section 403.4.3.*
2. *Interior adjacent rooms that are ventilated from another habitable space are not required to have outdoor air ducted directly to the interior adjacent room. These systems are considered not distributed whole house ventilation systems and shall use the “not distributed” quality adjustment system coefficient in accordance with Section 403.4.3. The interior adjacent room shall be provided with a transfer fan with a minimum airflow rate of 30 cfm or with relief air inlet with a minimum airflow of 20 cfm that is connected to the exhaust/relief air inlet of an ERV/HRV whole house ventilation system. Transfer fans that ventilate interior adjacent rooms shall meet the same rating in accordance with Section 403.3.6 and shall have whole house ventilation controls in accordance with Section 403.4.5.*

403.4.4.2 Whole house ventilation for other than Group R-2 occupancies. Residential dwelling and sleeping units in other than Group R-2 occupancies, including I-1 condition 2 occupancies, shall have a whole house mechanical ventilation system with supply and exhaust fans in accordance with Section 403.4.6.1, 403.4.6.2, 403.4.6.3, or 403.4.6.4. The whole house ventilation system shall operate continuously at the minimum ventilation rate determined in accordance with Section 403.4.2 unless configured with intermittent off controls in accordance with Section 403.4.6.5. The whole house supply fan shall provide ducted outdoor ventilation air to each habitable space within the residential unit.

Exceptions:

1. *Interior adjoining spaces that are ventilated from another habitable space are not required to have outdoor air ducted directly to the adjoining space. These systems are considered not distributed whole house ventilation systems and shall use the “not distributed” quality adjustment system coefficient in accordance with Section 403.4.3.*
2. *Interior adjacent rooms that are ventilated from another habitable space are not required to have outdoor air ducted directly to the interior adjacent room. These systems are considered not distributed whole house ventilation systems and shall use the “not distributed” quality adjustment system coefficient in accordance with Section 403.4.3. The interior adjacent room shall be provided with a transfer fan with a minimum airflow rate of 30 cfm or with relief air inlet with a minimum airflow of 20 cfm that is connected to the exhaust/relief air inlet of an ERV/HRV whole house ventilation system. Transfer fans that ventilate interior adjacent rooms shall meet the same rating in accordance with Section 403.3.6 and shall have whole house ventilation controls in accordance with Section 403.4.5.*

403.4.5 Whole house ventilation system controls. Controls for the whole house ventilation system shall comply with the following:

1. The whole house ventilation system shall be controlled with manual switches, timers or other means that provide for automatic operation of the ventilation system that have ready access for the occupant.
2. The whole house mechanical ventilation system shall be provided with controls that enable manual override off of the system by the occupant during periods of poor outdoor air quality. Controls shall include permanent text or a symbol indicating their function. Recommended control permanent labeling to include text similar to the following: “Leave on unless outdoor air quality is very poor.” Manual controls shall have ready access for the occupant.
3. Whole house ventilation systems shall be configured to operate continuously except where intermittent off

controls are provided in accordance with Section 403.4.6.5 and allowed by Section 403.4.4.2.

403.4.6 Whole house ventilation system component requirements. Whole house ventilation supply and exhaust fans specified in this section shall have a minimum efficacy as prescribed in the *Washington State Energy Code*. The fans shall be rated for sound at a maximum of 1.0 sone at design airflow and static pressure conditions. Design and installation of the system or equipment shall be carried out in accordance with manufacturer's installation instructions.

Exceptions:

Central supply or exhaust fans serving multiple residential units do not need to comply with the maximum fan sone requirements.

~~Interior joining spaces provided with a 30 cfm transfer fan or a 25 square foot permanent opening do not require supply ventilation air directly to the space. Transfer fans shall meet the sone rating above and have whole house ventilation controls in accordance with Section 403.4.5.~~

403.4.6.1 Exhaust fans. Exhaust fans required shall be ducted directly to the outside in accordance with Section 501.3. Exhaust air outlets shall be designed to limit the pressure difference to the outside to limiting the outlet free area maximum velocity to 500 feet per minute and equipped with backdraft dampers or motorized dampers in accordance with *Washington State Energy Code*. Exhaust fans shall be tested and rated in accordance with HVI 915, HVI 916, and HVI 920. Exhaust fans required in this section may be used to provide local ventilation. Exhaust fans that are designed for intermittent exhaust airflow rates higher than the continuous exhaust airflow rates in Table 403.4.3 shall be provided with occupancy sensors or humidity sensors to automatically override the fan to the high speed airflow rate. The exhaust fans shall be tested and the testing results shall be submitted and posted in accordance with Section 403.4.6.7.

Exceptions:

1. Central exhaust fans serving multiple residential units do not need to comply with the HVI testing requirements.
- ~~1.2. Outlet free area maximum velocity may exceed 500 feet per minute when a factory-built combined exhaust/intake termination fitting is used. In accordance with ASHRAE 62.2 Exception 4 of Section 6.8 the factory-built combined exhaust/intake termination fitting manufacturer testing shall demonstrate that the exhaust air concentration within the outdoor air intake airflow does not exceed 10%.~~

403.4.6.2 Supply fans. Supply fans used in meeting the requirements of this section shall supply outdoor air from intake openings in accordance with Sections 401.4 and 401.5. Intake air openings shall be designed to limit the pressure difference to the outside to limiting the inlet free area maximum velocity to 500 feet per minute and when designed for intermittent off operation shall be equipped with motorized dampers in accordance with the *Washington State Energy Code*. Supply fans shall be tested and rated in accordance with HVI 915, HVI 916, and HVI 920. Where outdoor air is provided to each habitable dwelling unit or sleeping unit by supply fan systems the outdoor air shall be filtered. The filter shall be provided with access for regular maintenance and replacement. The filter shall have a Minimum Efficiency Rating Value (MERV) of at least 8.

Exceptions:

1. Central supply fans serving multiple residential units do not need to comply with the HVI testing requirements.
- ~~1. Inlet free area maximum velocity may exceed 500 feet per minute when a factory-built combined exhaust/intake termination fitting is used. In accordance with ASHRAE 62.2 Exception 4 of Section 6.8 the factory-built combined exhaust/intake termination fitting manufacturer testing shall demonstrate that the exhaust air concentration within the outdoor air intake airflow does not exceed 10%.~~

403.4.6.3 Balanced whole house ventilation system. A balanced whole house ventilation system shall include both supply and exhaust fans. The supply and exhaust fans shall have airflow that is within 10 percent of each other. The tested and balanced total mechanical exhaust airflow rate is within 10 percent or 5 cfm, whichever is greater, of the total mechanical supply airflow rate. The flow rate test results shall be submitted and posted in accordance with Section 403.4.6.6. The exhaust fan shall meet the requirements of Section 403.4.6.2. The supply fan shall meet the requirements of Section 403.4.6.3. For Group R-2 dwelling and sleeping units, the system is required to have balanced whole house ventilation but is not required to have distributed whole house ventilation where the not distributed system coefficient from Table 403.4.2 is utilized to correct the whole house mechanical ventilation rate. The system shall be design and balanced to meet the pressure equalization requirements of Section 501.4. Intermittent dryer exhaust, intermittent range hood exhaust, and intermittent toilet room exhaust airflow rates above the residential dwelling or sleeping unit minimum ventilation rate are exempt from the balanced airflow calculation.

403.4.6.4 Furnace integrated supply. Systems using space condition heating and/or cooling air handler fans for outdoor air supply air distribution are not permitted.

Exception: Air handler fans shall be permitted that have multi-speed or variable speed supply airflow control capability with a low speed operation not greater than 25 percent of the rated supply air flow capacity during ventilation only operation. Outdoor air intake openings must meet the provisions of Sections 401.4 and 401.5 and must include a motorized damper that is activated by the whole house ventilation system controller. Intake air openings shall be designed to limit the pressure difference to the outside to limiting the inlet free area maximum velocity to 500 ft per min. The motorized damper must be controlled to maintain the outdoor airflow intake airflow within 10 percent of the whole house mechanical exhaust airflow rate. The supply air handler shall provide supply air to each habitable space in the residential unit. The whole house ventilation system shall include exhaust fans in accordance with Section 403.4.6.2 to meet the pressure equalization requirements of Section 501.4. The flow rate for the outdoor air intake must be tested and verified at the minimum ventilation fan speed and the maximum heating or cooling fan speed. The results of the test shall be submitted and posted in accordance with Section 403.4.6.6.

403.4.6.5 Intermittent off operation. Whole house mechanical ventilation systems shall be provided with advanced controls that are configured to operate the system with intermittent off operation and shall operate for a least two hours in each four-hour segment. The whole house ventilation airflow rate determined in accordance with Section 403.4.2 as corrected by Section 403.4.3 shall be multiplied by the factor determined in accordance with Table 403.4.6.5.

**TABLE 403.4.6.5
INTERMITTENT WHOLE HOUSE MECHANICAL VENTILATION RATE FACTORS^{a,b}**

Run-time Percentage in Each 4-hour Segment	50%	66%	75%	100%
Factor ^a	2	1.5	1.3	1.0

- a. For ventilation system run-time values between those given, the factors are permitted to be determined by interpolation.
- b. Extrapolation beyond the table is prohibited.

403.4.6.6 Testing. Whole house mechanical ventilation systems shall be tested, balanced and verified to provide a flow rate not less than the minimum required by Sections 403.4.2 and 403.4.3. Testing shall be performed according to the ventilation equipment manufacturer's instructions, or by using a flow hood, flow grid, or other airflow measuring device at the mechanical ventilation fan's inlet terminals, outlet terminals or grilles or in the connected ventilation ducts. Where required by the building official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official and shall be posted in the residential unit in accordance with Section 403.4.6.7.

403.4.6.7 Certificate. A permanent certificate shall be completed by the mechanical contractor, test and balance contractor or other approved party and posted on a wall in the space where the furnace is located, a utility room, or an *approved* location inside the building. When located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels. The certificate shall list the flow rate determined from the delivered airflow of the whole house mechanical ventilation system as installed and the type of mechanical whole house ventilation system used to comply with Section 403.4.3.

403.4.7 Local exhaust. Bathrooms, toilet rooms and kitchens shall include a local exhaust system. Such local exhaust systems shall have the capacity to exhaust the minimum airflow rate in accordance with Table 403.4.7 and Table 403.3.1.1, including notes. Fans required by this section shall be provided with controls that enable manual override or automatic occupancy sensor, humidity sensor or pollutant sensor controls. An "on/off" switch shall meet this requirement for manual controls. Manual fan controls shall be provided with ready access in the room served by the fan.

TABLE 403.4.7 MINIMUM EXHAUST RATES

<u>Area to be exhausted</u>	<u>Exhaust Rate</u>	
	<u>Intermittent</u>	<u>Continuous</u>
<u>Kitchens</u>	<u>100 cfm</u>	<u>30 cfm</u>
<u>Bathrooms - Toilet rooms</u>	<u>50 cfm</u>	<u>20 cfm</u>

403.4.7.1 Whole house exhaust controls. If the local exhaust fan is included in a whole house ventilation system in accordance with Section 403.4.6, the exhaust fan shall be controlled to operate as specified in Section 403.4.5.

403.4.7.2 Local exhaust fans. Exhaust fans shall meet the following criteria.

1. Exhaust fans shall be tested and rated in accordance with HVI 915, HVI 916, and HVI 920.

Exception: Where a range hood or down draft exhaust fan is used for local exhaust for a kitchen, the device is not required to be rated per these standards.

2. Fan airflow rating and duct system shall be designed and installed to deliver at least the exhaust airflow required by Table 403.4.4. The airflows required refer to the delivered airflow of the system as installed and tested using a flow hood, flow grid, or other airflow measurement device. Local exhaust systems shall be tested, balanced and verified to provide a flow rate not less than the minimum required by this section.
3. Design and installation of the system or equipment shall be carried out in accordance with manufacturers' installation instructions.
4. Fan airflow rating and duct system shall be designed and installed to deliver at least the exhaust airflow required by Table 403.4.3.

Exceptions:

1. An exhaust airflow rating at a pressure of 0.25 in. w.g. may be used, provided the duct sizing meets the prescriptive requirements of Table 403.4.7.2.
2. Where a range hood or down draft exhaust fan is used to satisfy the local ventilation requirements for kitchens, the range hood or down draft exhaust shall not be less than 100 cfm at 0.10 in. w.g.

TABLE 403.4.7.2 PRESCRIPTIVE EXHAUST DUCT SIZING

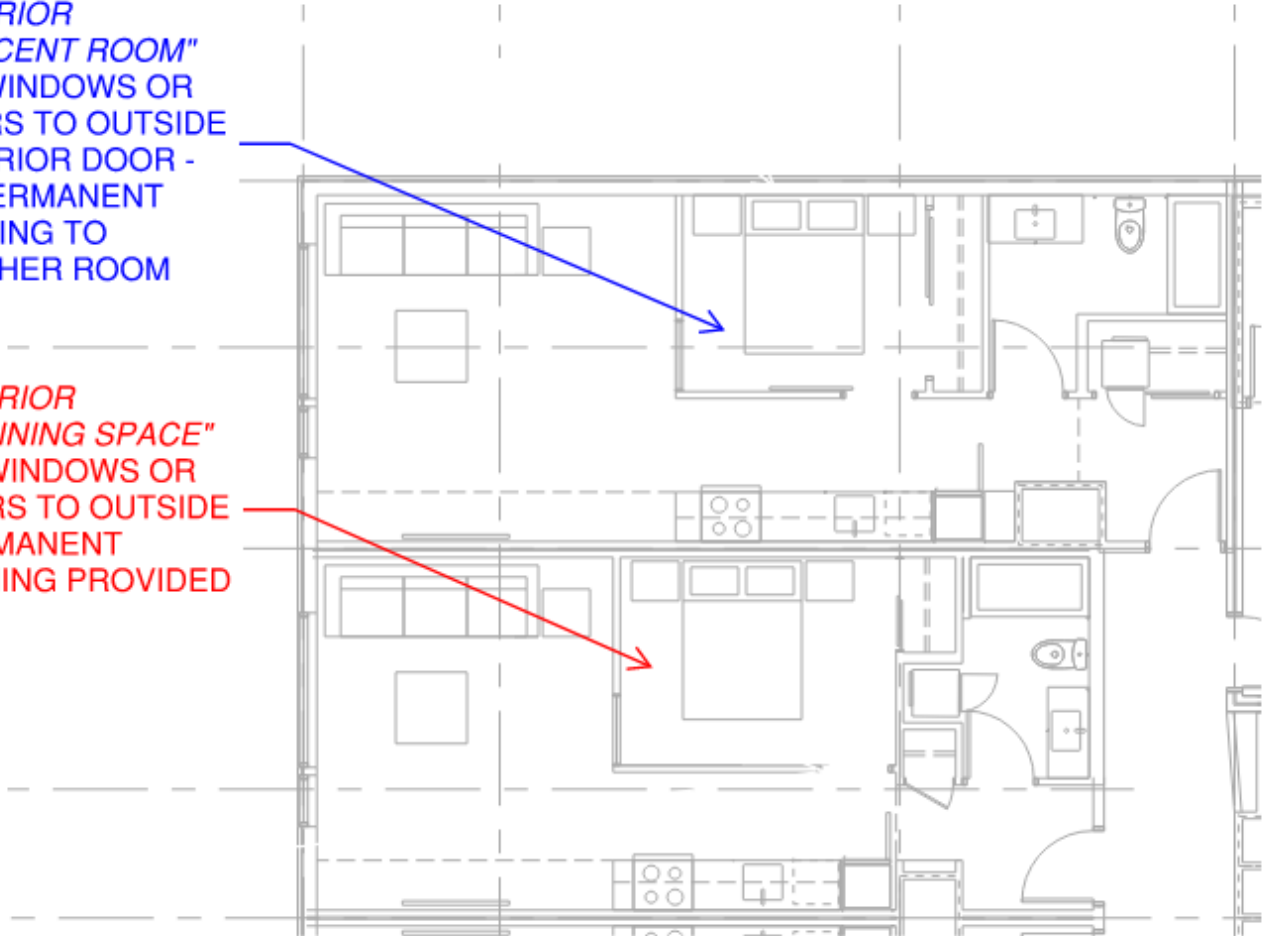
Fan Tested cfm at 0.25 inches w.g.	Minimum Flex Diameter	Maximum Length in Feet	Minimum Smooth Diameter	Maximum Length in Feet	Maximum Elbows ^a
50	4 inches	25	4 inches	70	3
50	5 inches	90	5 inches	100	3
50	6 inches	No Limit	6 inches	No Limit	3
80	4 inches ^b	NA	4 inches	20	3
80	5 inches	15	5 inches	100	3
80	6 inches	90	6 inches	No Limit	3
100	5 inches ^b	NA	5 inches	50	3
100	6 inches	45	6 inches	No Limit	3
125	6 inches	15	6 inches	No Limit	3
125	7 inches	70	7 inches	No Limit	3

- a. For each additional elbow, subtract 10 feet from length.
- b. Flex ducts of this diameter are not permitted with fans of this size.

Sketch added for examples of Adjoining Space and Adjacent Room

"INTERIOR
ADJACENT ROOM"
*NO WINDOWS OR
DOORS TO OUTSIDE
*INTERIOR DOOR -
NO PERMANENT
OPENING TO
ANOTHER ROOM

"INTERIOR
ADJOINING SPACE"
*NO WINDOWS OR
DOORS TO OUTSIDE
*PERMANENT
OPENING PROVIDED



2021 IMC For Reference

[BG] 402.3 Adjoining spaces.

Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining rooms shall be unobstructed and shall have an area not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.3 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

2021 IBC For Reference

1202.5 Natural ventilation.

Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.

1202.5.1 Ventilation area required.

The openable area of the openings to the outdoors shall be not less than 4 percent of the floor area being ventilated.

1202.5.1.1 Adjoining spaces.

Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining room shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.3 m²). The openable area of the openings to the outdoors shall be based on the total floor area being ventilated.

Exception: Exterior openings required for ventilation shall be allowed to open into a sunroom with thermal isolation or a patio cover provided that the openable area between the sunroom addition or patio cover and the interior room shall have an area of not less than 8 percent of the floor area of the interior room or space, but not less than 20 square feet (1.86 m²). The openable area of the openings to the outdoors shall be based on the total floor area being ventilated.

ASHRAE 62.2-2019 For Reference

6.8 Air Inlets. Air inlets that are part of the ventilation design shall be located a minimum of 10 ft (3 m) from known sources of contamination such as a stack, vent, exhaust hood, or vehicle exhaust. The intake shall be placed so that entering air is not obstructed by snow, plantings, or other material. Forced air inlets shall be provided with rodent/insect screens (mesh not larger than 1/2 in. [13 mm]).

Exceptions to 6.8:

1. Ventilation openings in the wall may be as close as a stretched-string distance of 3 ft (1 m) from sources of contamination exiting through the roof or dryer exhausts.
2. No minimum separation distance shall be required between windows and local exhaust outlets in kitchens and bathrooms.
3. Vent terminations covered by and meeting the requirements of the *National Fuel Gas Code* (NFPA 54/ANSI Z223.1) or equivalent.
4. Where a combined exhaust/intake termination is used to separate intake air from exhaust air originating in a living space other than kitchens, no minimum separation distance between these two openings is required. For these combined terminations, the exhaust air concentration within the intake airflow shall not exceed 10% as established by the manufacturer.

5. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Clarify residential ventilation code requirements based on SBCC interpretations for 2018 WSMC and other items that have not been clear with the new residential ventilation code from 2018.

Specifically corrections are recommended for the adjoining space criteria, not balanced, and not distributed adjustment coefficients.

6. **Specify what criteria this proposal meets.** You may select more than one.

- The amendment is needed to address a critical life/safety need.
- The amendment clarifies the intent or application of the code.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. **Is there an economic impact:** Yes No

If no, state reason: [Clarify code requirements and correct errors/omissions only.](#)

If yes, provide economic impact, costs and benefits as noted below in items a – f.

- a. **Life Cycle Cost.** Use the OFM Life Cycle Cost [Analysis tool](#) to estimate the life cycle cost of the proposal using one or more typical examples. Reference these [Instructions](#); use these [Inputs](#). Webinars on the tool can be found [Here](#) and [Here](#)). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.
- b. **Construction Cost.** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

\$[Click here to enter text.](#)/square foot

(For residential projects, also provide \$[Click here to enter text.](#)/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages
- c. **Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:
- d. **Small Business Impact.** Describe economic impacts to small businesses:
- e. **Housing Affordability.** Describe economic impacts on housing affordability:
- f. **Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed: