



# MECHANICAL VENTILATION CHECKLISTS

Suite D, 180 North Third Avenue, Williams Lake, BC V2G 2A4  
Unit 3 - 170 Cedar Avenue, Box 2260, 100 Mile House, BC V0K 2E0  
102 - 410 Kinchant Street, Quesnel, BC V2J 7J5

Ph: 250-392-3351 Fax: 250-392-2812  
Ph: 250-395-3838 Fax: 250-395-4898  
Ph: 250-992-7400 Fax: 250-992-7414

**Please complete the appropriate attached Mechanical Ventilation Checklist.**

**Framing Inspections will not be done until the form is completed, signed and sealed by a Certified Teca Designer and returned to the CRD Building Department.**

**\*\*Ensure mechanical ventilation design matches P.C.C.R.**

## Mechanical Ventilation Checklists

(Please complete the appropriate attached checklist)

<b>Checklist 1</b>	<b>Forced Air Systems</b> Forced air heating system ducts intake and distribute ventilation air.
<b>Checklist 2</b>	<b>HRV Systems</b> Centrally ducted HRV (heat recovery ventilator) is used alone or in combination with a Forced Air Heating System to meet principal ventilation system requirements.
<b>Checklist 3</b>	<b>Distributed CRV Systems</b> Ducted Central Recirculating Ventilator (CRV) is used to meet the fresh air intake and distribution requirements, and a Principal Exhaust fan meets the exhaust requirements.
<b>Checklist 4</b>	<b>Exhaust fan &amp; Passive Inlets</b> Use this checklist for small (less than 1800 sq ft) single level, non-forced air heated dwellings located in climate areas where winter design temperatures is warmer than -20C.

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Questions about the collection of your personal information may be referred to the Cariboo Regional District’s Manager of Corporate Services, Suite D, 180 North Third Avenue, Williams Lake, BC, V2G 2A4, 250-392-3351 or mailbox@cariboord.ca”

# 1 Ventilation Checklist 1—Forced Air Systems SENTENCE 9.32.3.4(2)

Use this Checklist where **forced air heating system ducts intake and distribute** ventilation air.

Civic Address _____		Permit No. _____	
Climate Zone: _____	Number of Bedrooms	<input type="text"/>	(A) A bedroom is a room with an openable window (minimum dimensions apply), a closet and a closing interior door.
	Total Floor area of living space	<input type="text"/> ft <sup>2</sup>	(B)
	Total Interior Volume of Dwelling	<input type="text"/> ft <sup>3</sup>	Total volume includes all heated interior spaces (including crawlspace if heated).
.5 ACH (air changes/hr) = Volume x 0.5 ÷ 60 =		<input type="text"/> cfm	(C) Exhaust appliances exceeding .5 ACH may require make-up air.

### 1. Principal Ventilation System Exhaust Fan Minimum Air-flow Rate

Use the bedroom count from Box (A) and Total square footage from Box (B) above and Table 9.32.3.5. to determine

**Minimum Required Principal Exhaust System Capacity**  cfm (D)

### 2. Principal System Fan Choice

a) Exhaust Fan continuous running Make \_\_\_\_\_ Model \_\_\_\_\_ Sone Rating \_\_\_\_\_

Location: \_\_\_\_\_ **Capacity at 0.2 ESP**  cfm (E) Must be ≥ than Box (D)  
If CEV, capacity @0.4ESP

### 3. Fan Duct Size and Equivalent Length

a) Installed Equivalent Length:  
Length of duct \_\_\_\_\_ ft + Ext. hood **30 ft +** ( \_\_\_\_\_ # elbows at 10 ft each = \_\_\_\_\_ ) =  ft (F)

b) Choose type of duct: Flex duct  or Rigid (smooth) duct

c) Duct size required to flow Box E cfm through Box F equivalent length of duct =  in Ø  
Use Table 9.32.3.8 (3) to determine duct size.

### 4. Required Kitchen and Bathroom Exhaust Fans: Re-list below if Principal Exhaust Fan meets all or part of Kitchen/Bathroom spot Exhaust requirements.

ROOM	REQUIRED EXHAUST RATE Table 9.32.3.6	EXHAUST EQUIPMENT						Ex.Fan/CEV Principal System CFM
		Spot Exhaust Kitchen & Bath WALL/CEILING FANS					Principal System CFM	
		Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duct Sizing per Table 9.32.3.8.(3)		Installed Equiv. Length		
			rigid	flex	Max. Equiv. Length per table			

\* For fan capacities **exceeding** 175cfm in Table 9.32.3.8(3), follow manufacturer's installation instructions or use good engineering practice to size duct. See *Ventilation Guidelines* Appendix page 16-A, *Duct Sizing for Larger Fans*.

TOTAL (must = Box E)

**5. Fresh Air must be ducted from outside to Return Air of Forced Air Heating for distribution.**

- a) Ventilation air duct is connected not more than 15ft, nor less than 10ft upstream of the heating appliance, unless a flow control device is used.
- b) Duct Size for Fresh Air intake to RA. Choose one.
  - Rigid Duct: 4" Ø minimum, must be insulated & vapour barriered for full length, OR
  - Flex Duct: 5"Ø minimum, must be insulated & vapour barriered for full length.

**6. Forced Air Heating System is ducted to supply air to every bedroom and any level without a bedroom.**

**7. If Heated Crawlspace present, (Choose one)**

- Minimum of one RA grille located in the crawlspace, OR
- No RA grille in crawlspace, choose ventilation Option 1, 2, or 3 per sentence 9.37.3.7 (2)

**MAKE-UP AIR Requirements**

**1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or radon present in dwelling unit? (per Sentence 9.32.4.1)**

- No, Omit Steps 2 & 3
- Yes, Proceed to Step 2

**2. Exhaust Appliance present which exceeds Box C 0.5 ACH:**

- No such appliance. Omit Step 3
- Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg 24)
- Yes, Proceed to Step 3

**3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)**

**Make-up Air Fan required:**

**Exhaust Appliance Actual Installed Cfm** \_\_\_\_\_

Fan Make \_\_\_\_\_ Model \_\_\_\_\_

**Make-up Air Fan Cfm** \_\_\_\_\_

Duct diameter \_\_\_\_\_ inches

Fan Location \_\_\_\_\_ Fan ducted to \_\_\_\_\_

**a) Active Make-up Air delivered to an Unoccupied Area first (not directly to room containing the appliance).**

i) Tempering Required per 9.32.4.1.(4)(a):

Show calculation how make-up air will be tempered to at least 34°F (1°C) before entering unoccupied area.

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (34^\circ \text{ F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{Duct Heater (kw)}$$

ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill size \_\_\_\_\_ sq. in. Location \_\_\_\_\_

iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupied area: Show calculation and **describe how make-up air will be further tempered** to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ \text{ F} - 34^\circ \text{ F})}{3412 \text{ BTUH/kw}} = \text{Heat from unoccupied area required to raise temp by } 20^\circ \text{ F (kw)}$$

**Tempered by:** \_\_\_\_\_

**OR b) Active Make-up Air delivered to an Occupied Area: Tempering Required.** Show calculation how make-up air will be tempered to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ \text{ F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{Duct Heater (kw)}$$

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**Installer Certification:**

I hereby certify that the design and installation of the ventilation system complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment.

**2012 TECA Ventilation Certification Stamp**



Date \_\_\_\_\_

Print Name \_\_\_\_\_

Signature \_\_\_\_\_

Company \_\_\_\_\_

Phone \_\_\_\_\_

Checklist 1, page2of2

# 2 Ventilation Checklist 2—HRV Systems SENTENCE 9.32.3.4 (3) & (4)

Use this checklist when a centrally ducted HRV (heat recovery ventilator) is used alone or in combination with a Forced Air Heating System to meet principal ventilation system requirements.

Civic Address _____		Permit No. _____	
Climate Zone: _____	Number of Bedrooms	<input type="text"/>	(A) A bedroom is a room with an openable window (minimum dimensions apply), a closet and a closing interior door.
	Total Floor area of living space	<input type="text"/> ft <sup>2</sup>	(B)
	Total Interior Volume of Dwelling	<input type="text"/> ft <sup>3</sup>	Total volume includes all heated interior spaces (including crawlspace if heated).
.5 ACH (air changes/hr) = Volume x 0.5 ÷ 60 =		<input type="text"/> cfm	(C) Exhaust appliances exceeding .5 ACH may require make-up air.

**1. Use the bedroom count (Box A above) and total square footage (Box B above) to determine the minimum principal Air Flow rate required by Table 9.32.3.5**

**Minimum Required Rate**  cfm (D)

**2. HRV Make** \_\_\_\_\_ **Model** \_\_\_\_\_

**3. HRV Capacity: CFM @ 0.4 ESP.** Box E must meet Box D requirement.  cfm (E)

**4. List Exhaust Grilles Locations:** 1 minimum @ 6 ft or higher from floor of uppermost level.


**5. Required Kitchen and Bathroom Exhaust**

If HRV used to meet all or part of Kitchen/Bathroom spot exhaust requirements list below.

ROOM	REQUIRED EXHAUST RATE Table 9.32.3.6	EXHAUST EQUIPMENT						Principal System CFM		
		Spot Exhaust Kitchen & Bath WALL/CEILING FANS							HRV	
		Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duct Sizing per Table 9.32.3.8.(3)					Max. Equiv. Length per table	Installed Equiv. Length
				Duct Dia (in Ø)		Length	Length			
rigid	flex									
							TOTAL (must = Box E)			

\* For fan capacities **exceeding** 175cfm in Table 9.32.3.8(3), follow manufacturer's installation instructions or use good engineering practice to size duct. See *Ventilation Guidelines* Appendix page 16-A, *Duct Sizing for Larger Fans*. © March 2015 TECA All Rights Reserved Checklist 2, pg1of2

**6. HRV Fresh Air Distribution** (Choose a or b)

**a) Supply Air from HRV direct connect to Return Air of a Forced Air Heating System:**

- FA system fan and HRV fan continuous operation and
- FA system ducted to supply air to every bedroom and each floor level without a bedroom

**b) Supply Air from HRV distributed independently**

- Ducted to every bedroom and each floor level without a bedroom and
- HRV fan continuous operation

**7. If Heated Crawlspace present,** (Choose one)

- Minimum of one Forced Air System RA grille located in the crawlspace, OR
- No RA grille in crawlspace, choose ventilation Option 1, 2, or 3 per sentence 9.37.3.7 (2)

**MAKE-UP AIR Requirements**

**1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or radon present in dwelling unit?** (per Sentence 9.32.4.1)

- No, Omit Steps 2 & 3
- Yes, Proceed to Step 2

**2. Exhaust Appliance present which exceeds Box C 0.5 ACH:**

- No such appliance. Omit Step 3
- Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg 24)
- Yes, Proceed to Step 3

**3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)**

**Make-up Air Fan required:**

**Exhaust Appliance Actual Installed Cfm** \_\_\_\_\_

Fan Make \_\_\_\_\_ Model \_\_\_\_\_

**Make-up Air Fan Cfm** \_\_\_\_\_

Duct diameter \_\_\_\_\_ inches

Fan Location \_\_\_\_\_ Fan ducted to \_\_\_\_\_

**a) Active Make-up Air delivered to an Unoccupied Area first** (not directly to room containing the appliance).

i) Tempering Required per 9.32.4.1.(4)(a):

Show calculation how make-up air will be tempered to at least 34°F (1°C) before entering unoccupied area.

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (34^\circ \text{ F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{Duct Heater (kw)}$$

ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill size \_\_\_\_\_ sq. in. Location \_\_\_\_\_

iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupied area: Show calculation and **describe how make-up air will be further tempered** to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ \text{ F} - 34^\circ \text{ F})}{3412 \text{ BTUH/kw}} = \text{Heat from unoccupied area required to raise temp by } 20^\circ \text{ F (kw)}$$

**Tempered by:** \_\_\_\_\_

**OR b) Active Make-up Air delivered to an Occupied Area: Tempering Required.** Show calculation how make-up air will be tempered to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ \text{ F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{Duct Heater (kw)}$$

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**Installer Certification:**

I hereby certify that the design and installation of the ventilation system complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment.

Date \_\_\_\_\_

Print Name \_\_\_\_\_

Signature \_\_\_\_\_

Company \_\_\_\_\_

Phone \_\_\_\_\_

Checklist 2, pg2of2

**2012 TECA Ventilation Certification Stamp**



# 3

## Ventilation Checklist 3—Distributed CRV Systems SENTENCE 9.32.3.4(5)

Use this Checklist when a ducted Central Recirculating Ventilator (CRV) is used to meet the fresh air intake and distribution requirements and a Principal Exhaust fan meets the exhaust requirements.

Civic Address _____		Permit No. _____	
Climate Zone: _____	Number of Bedrooms	<input style="width: 50px; height: 25px;" type="text"/>	(A) A bedroom is a room with an openable window (minimum dimensions apply), a closet and a closing interior door.
	Total Floor area of living space	<input style="width: 50px; height: 25px;" type="text"/> ft <sup>2</sup>	(B)
	Total Interior Volume of Dwelling	<input style="width: 50px; height: 25px;" type="text"/> ft <sup>3</sup>	Total volume includes all heated interior spaces (including crawlspace if heated).
.5 ACH (air changes/hr) = Volume x 0.5 ÷ 60 =		<input style="width: 50px; height: 25px;" type="text"/> cfm	(C) Exhaust appliances exceeding .5 ACH may require make-up air.

### 1. Principal Ventilation System Exhaust Fan Minimum Air-flow Rate

Use the bedroom count from Box (A) and Total square footage from Box (B) above and Table 9.32.3.5. to determine

**Minimum Required Principal Exhaust System Capacity**  cfm (D)

### 2. Principal System Fan Choice

a) Exhaust Fan continuous running Make \_\_\_\_\_ Model \_\_\_\_\_ Sone Rating \_\_\_\_\_

Location: \_\_\_\_\_ **Capacity at 0.2 ESP**  cfm (E) Must be ≥ than Box (D)  
If CEV, capacity @0.4ESP

### 3. Fan Duct Size and Equivalent Length

a) Installed Equivalent Length:  
Length of duct \_\_\_\_\_ ft + Ext. hood **30 ft** + ( \_\_\_\_\_ # elbows at 10 ft each = \_\_\_\_\_ ) =  ft (F)

b) Choose type of duct: Flex duct  or Rigid (smooth) duct

c) Duct size required to flow Box E cfm through Box F equivalent length of duct =  in Ø  
Use Table 9.32.3.8 (3) to determine duct size.

### 4. Required Kitchen and Bathroom Exhaust Fans: Re-list below if Principal Exhaust Fan meets all or part of Kitchen/Bathroom spot Exhaust requirements.

ROOM	REQUIRED EXHAUST RATE Table 9.32.3.6	EXHAUST EQUIPMENT						Principal System CFM	
		Spot Exhaust Kitchen & Bath WALL/CEILING FANS							Ex.Fan/CEV
		Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duct Sizing per Table 9.32.3.8.(3)		Max. Equiv. Length per table	Installed Equiv. Length		Principal System CFM
rigid	flex								

\* For fan capacities **exceeding** 175cfm in Table 9.32.3.8(3), follow manufacturer's installation instructions or use good engineering practice to size duct. See *Ventilation Guidelines* Appendix page 16-A, *Duct Sizing for Larger Fans*. © March 2015 TECA All Rights Reserved Checklist 3, pg1of2

TOTAL (must = Box E)	
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**5. CRV Fresh Air Intake & Mixing Fan** (Choose a or b)

- a) Box F CFM is minimum 2 times Box E cfm for **+5°F and warmer winter design temperature.**
- b) Box F CFM is minimum 3 times Box E for **less than +5°F winter design temperature.**

Make \_\_\_\_\_ Model \_\_\_\_\_ Capacity @ \_\_\_\_\_ cfm (F)

- c) Duct Size for Fresh Air intake into return air of CRV: **0.4 ESP**
- Min 4"Ø rigid duct, must be insulated & vapour barriered for full length, OR
- Min 5"Ø, flex duct, must be insulated & vapour barriered for full length,

**6. CRV Fresh Air Circulation** (Choose a or b)

- a) Draw air from bedrooms and Supply air to common area.
- b) Draw air from common area and Supply air to bedrooms.

**7. If Heated Crawlspace present**

- Choose ventilation option 1, 2, or 3 per sentence 9.37.3.7 (2).

**MAKE-UP AIR Requirements**

**1. NAFFVA** (Naturally Aspirated Fuel Fired Vented Appliance) **or radon present in dwelling unit?** (per Sentence 9.32.4.1)

- No**, Omit Steps 2 & 3
- Yes**, Proceed to Step 2

**2. Exhaust Appliance present which exceeds Box C 0.5 ACH:**

- No such appliance.** Omit Step 3
- Yes**, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg 24)
- Yes**, Proceed to Step 3

**3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)**

**Make-up Air Fan required:** Exhaust Appliance Actual Installed Cfm \_\_\_\_\_  
 Fan Make \_\_\_\_\_ Model \_\_\_\_\_ Make-up Air Fan Cfm \_\_\_\_\_  
 Duct diameter \_\_\_\_\_ inches  
 Fan Location \_\_\_\_\_ Fan ducted to \_\_\_\_\_

**a) Active Make-up Air delivered to an Unoccupied Area first** (not directly to room containing the appliance).

- i) Tempering Required per 9.32.4.1.(4)(a):  
 Show calculation how make-up air will be tempered to at least 34°F (1°C) before entering unoccupied area.

Make-up Fan cfm \_\_\_\_\_ X 1.08 X (34° F – \_\_\_\_\_ °F Winter Design Temp your location) = \_\_\_\_\_ (kw)  
 3412 BTUH/kw Duct Heater

- ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill size \_\_\_\_\_ sq. in. Location \_\_\_\_\_

- iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupied area: Show calculation and **describe how make-up air will be further tempered** to at least 54°F (12°C).

Make-up Fan \_\_\_\_\_ cfm x 1.08 x (54° F – 34°F) = \_\_\_\_\_ (kw) Heat from unoccupied area  
 3412 BTUH/kw required to raise temp by 20°F

Tempered by: \_\_\_\_\_

**OR b) Active Make-up Air delivered to an Occupied Area: Tempering Required.** Show calculation how make-up air will be tempered to at least 54°F (12°C).

Make-up Fan cfm \_\_\_\_\_ x 1.08 x (54° F – \_\_\_\_\_ °F Winter Design Temp your location) = \_\_\_\_\_ (kw)  
 3412 BTUH/kw Duct Heater

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**Installer Certification:**

I hereby certify that the design and installation of the ventilation system complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment.

Date \_\_\_\_\_  
 Print Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Company \_\_\_\_\_  
 Phone \_\_\_\_\_

**2012 TECA Ventilation Certification Stamp**



# 4 Ventilation Checklist 4—Exhaust Fan & Passive Inlets SENTENCE 9.32.3.4(6)

Use this checklist for small ( $\leq 1800$  sqft), single level, **non-forced air** heated dwellings located in coastal climate areas where winter design temperature is warmer than or equal to  $+14^{\circ}\text{F}$ .

Civic Address _____		Permit No. _____	
Climate Zone: _____	Number of Bedrooms	<input style="width: 50px; height: 25px;" type="text"/>	(A) A bedroom is a room with an openable window (minimum dimensions apply), a closet and a closing interior door.
	Total Floor area of living space	<input style="width: 50px; height: 25px;" type="text"/> ft <sup>2</sup>	(B)
	Total Interior Volume of Dwelling	<input style="width: 50px; height: 25px;" type="text"/> ft <sup>3</sup>	Total volume includes all heated interior spaces (including crawlspace if heated).
.5 ACH (air changes/hr) = Volume x 0.5 ÷ 60 =		<input style="width: 50px; height: 25px;" type="text"/> cfm	(C) Exhaust appliances exceeding .5 ACH may require make-up air.

### 1. Principal Ventilation System Exhaust Fan Minimum Air-flow Rate

Use the bedroom count from Box (A) and Total square footage from Box (B) above and Table 9.32.3.5. to determine

**Minimum Required Principal Exhaust System Capacity**  cfm (D)

### 2. Principal System Fan Choice

a) Exhaust Fan continuous running Make \_\_\_\_\_ Model \_\_\_\_\_ Sone Rating \_\_\_\_\_

Location: \_\_\_\_\_ **Capacity at 0.2 ESP**  cfm (E) Must be  $\geq$  than Box (D)  
If CEV, capacity @0.4ESP

### 3. Fan Duct Size and Equivalent Length

a) Installed Equivalent Length:  
Length of duct \_\_\_\_\_ ft + Ext. hood **30 ft +** ( \_\_\_\_\_ # elbows at 10 ft each = \_\_\_\_\_ ) =  ft (F)

b) Choose type of duct: Flex duct  or Rigid (smooth) duct

c) Duct size required to flow Box E cfm through Box F equivalent length of duct =  in  $\varnothing$   
Use Table 9.32.3.8 (3) to determine duct size.

### 4. Required Kitchen and Bathroom Exhaust Fans: Re-list below if Principal Exhaust Fan meets all or part of Kitchen/Bathroom spot Exhaust requirements.

ROOM	REQUIRED EXHAUST RATE Table 9.32.3.6	EXHAUST EQUIPMENT						Principal System CFM
		Spot Exhaust Kitchen & Bath WALL/CEILING FANS					Ex.Fan/CEV	
		Fan Make & Model	CFM @ 0.2 ESP Manf. Rated	*Duct Sizing per Table 9.32.3.8.(3)		Max. Equiv. Length per table	Installed Equiv. Length	
rigid	flex							

\* For fan capacities **exceeding** 175cfm in Table 9.32.3.8(3), follow manufacturer's installation instructions or use good engineering practice to size duct. See *Ventilation Guidelines* Appendix page 16-A, *Duct Sizing for Larger Fans*. © March 2015 TECA All Rights Reserved Checklist 4, pg1 of 2



**5. Required Inlets for passive Ventilation Air Supply**

- a) High wall installation (minimum 6 ft above floor)
- b) Located in each bedroom and at least one common area
- c) Inlet Free Area greater than or equal to 4 Sq In

**6. If Heated Crawlspace present**

- Choose ventilation option 1, 2, or 3 per sentence 9.37.3.7 (2).

**MAKE-UP AIR Requirements**

**1. NAFFVA (Naturally Aspirated Fuel Fired Vented Appliance) or radon present in dwelling unit?** (per Sentence 9.32.4.1)

- No, Omit Steps 2 & 3
- Yes, Proceed to Step 2

**2. Exhaust Appliance present which exceeds Box C 0.5 ACH:**

- No such appliance. Omit Step 3
- Yes, Commit to Depressurization Test (See CAUTION, TECA Vent Manual pg 24)
- Yes, Proceed to Step 3

**3. Use Active Make-up Air for Exhaust Appliance. (Choose a or b)**

**Make-up Air Fan required:** Exhaust Appliance Actual Installed Cfm \_\_\_\_\_  
 Fan Make \_\_\_\_\_ Model \_\_\_\_\_ Make-up Air Fan Cfm \_\_\_\_\_  
 Duct diameter \_\_\_\_\_ inches  
 Fan Location \_\_\_\_\_ Fan ducted to \_\_\_\_\_

**a) Active Make-up Air delivered to an Unoccupied Area first** (not directly to room containing the appliance).

i) Tempering Required per 9.32.4.1.(4)(a):

Show calculation how make-up air will be tempered to at least 34°F (1°C) before entering unoccupied area.

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (34^\circ\text{F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{_____ (kw) Duct Heater}$$

ii) Transfer Grill Required: Size 1 sq in of gross area per 2 cfm: Transfer grill size \_\_\_\_\_ sq. in. Location \_\_\_\_\_

iii) Additional Tempering Required per 9.32.4.1.(4)(b) before transfer to occupied area: Show calculation and **describe how make-up air will be further tempered** to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ\text{F} - 34^\circ\text{F})}{3412 \text{ BTUH/kw}} = \text{_____ (kw) Heat from unoccupied area required to raise temp by } 20^\circ\text{F}$$

Tempered by: \_\_\_\_\_

**OR b) Active Make-up Air delivered to an Occupied Area: Tempering Required.** Show calculation how make-up air will be tempered to at least 54°F (12°C).

$$\frac{\text{Make-up Fan cfm} \times 1.08 \times (54^\circ\text{F} - \text{Winter Design Temp your location})}{3412 \text{ BTUH/kw}} = \text{_____ (kw) Duct Heater}$$

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**Installer Certification:**

I hereby certify that the design and installation of the ventilation system complies with the 2012 B.C. Building Code, 2014 Section 9.32 Amendment.

Date \_\_\_\_\_  
 Print Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Company \_\_\_\_\_  
 Phone \_\_\_\_\_

**2012 TECA Ventilation Certification Stamp**

