

Efficient Home

Design & Solutions

Efficient Home Design and Solutions

96 Smith Rd. Oxford Station Ontario K0G 1T0 ☎ 613-240-7980
REA#9Q01 BCIN#110695 HRAI#14967 📧 tim@efficienthome.ca
www.efficienthome.ca



Notes:

Based on info from contractors & others. Not responsible for errors/omissions due to lack of or faulty information. Design to be followed exactly. Always follow applicable codes. All installations to be done by qualified trades, including sealing of all joints. No changes are to be made without designers' knowledge & written consent. Orientation to be correct to 22.5 degrees.

Building is existing and orientation is known to be South West.

Cooling load calculated using triple glaze windows with a .35 Solar Heat Gain Co-Efficient (SHGC), no internal shading. Designer is to be notified if a higher SHGC is used so designs can be updated.

ASHP is sized off heating load requirements, using a lower SHGC window will not result in changes to the ductwork or sizing of heat pump unit despite the decrease in cooling load.

ERV is to be connected according to manufacturer specifications using exhaust ducted connections.

ERV exhaust duct sizes can be found on mechanical layout.

ERV 5" round duct servicing main floor bathroom and ensuite may be exchanged for 3x10 stack duct without requiring revision to design.



Project Summary

Efficient Home Design & Solutions

Date: Oct 18, 2022
Plan: Taylor Renovation

Cert #: 14967(RHLG, RASD)

96 Smith Road, Oxford Station, On K0G 1T0 Phone: 613-240-7980 Email: tim@efficienthome.ca Web: www.efficienthome.ca License: 110695

Project Information

For:

Notes:

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Design Information

Weather: Ottawa (M-C Int'l Airport), ON, CA

Winter Design Conditions

Outside db -13 °F
Inside db 72 °F
Design TD 85 °F

Summer Design Conditions

Outside db 86 °F
Inside db 75 °F
Design TD 11 °F
Daily range M
Relative humidity 50 %
Moisture difference 40 gr/lb

Heating Summary

Structure 30979 Btuh
Ducts 0 Btuh
Central vent (SER=84% 45 cfm) 661 Btuh
Heat recovery
Humidification 0 Btuh
Piping 0 Btuh
Equipment load **31771 Btuh**

Sensible Cooling Equipment Load Sizing

Structure 0 Btuh
Ducts 0 Btuh
Central vent (SER=84% 0 cfm) 0 Btuh
Heat recovery
Blower 0 Btuh
Use manufacturer's data y
Rate/swing multiplier 1.00
Equipment sensible load **22585 Btuh**

Infiltration

Method F280-12
Expos. categ Light local shielding
Const. categ Energy Tight (ACH=1.5)
Number of stories 1.0

	Heating	Cooling
Area (ft²)	4384	0
Volume (ft³)	36427	0
Air changes/hour	0.09	0
Equiv. AVF (cfm)	57	0

Latent Cooling Equipment Load Sizing

Structure 0 Btuh
Ducts 0 Btuh
Central vent (0 cfm) 0 Btuh
Heat recovery
Equipment latent load **6776 Btuh**
Equipment Total Load (Sen+Lat) 29361 Btuh
Req. total capacity at 0.77 SHR 2.4 ton

Heating Equipment Summary

Make Mitsubishi
Trade
Model PUZ-HA36NKA
AHRI ref
Efficiency 9.91 HSPF
Heating input
Heating output 38000 Btuh @ 47°F
Temperature rise 37 °F
Actual air flow 956 cfm
Air flow factor 0.031 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 64 °F
Backup: Mitsubishi
Input = 10 kW, Output = 34121 Btuh, 100 AFUE

Cooling Equipment Summary

Make Mitsubishi
Trade
Cond PUZ-HA36NKA
Coil PVA-A36AA7
AHRI ref
Efficiency 18.2 SEER
Sensible cooling 25410 Btuh
Latent cooling 7590 Btuh
Total cooling 33000 Btuh
Actual air flow 956 cfm
Air flow factor 0 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0

Bold/italic values have been manually overridden



Load Short Form

Efficient Home Design & Solutions

Date: Oct 18, 2022

Plan: Taylor Renovation

Cert.#: 14967(RHLC, RASD)

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Project Information

For:

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	-13	86	Method	F280-12
Inside db (°F)	72	75	Expos. categ	Light local shielding
Design TD (°F)	85	11	Const. categ	Energy Tight (ACH=1.5)
Daily range	-	M	Number of stories	1.0
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	33	40		

HEATING EQUIPMENT

Make	Mitsubishi
Trade	
Model	PUZ-HA36NKA
AHRI ref	
Efficiency	9.91 HSPF
Heating input	
Heating output	38000 Btuh @ 47°F
Temperature rise	37 °F
Actual air flow	956 cfm
Air flow factor	0.031 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 64 °F	

Backup: Mitsubishi

Input = 10 kW, Output = 34121 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Mitsubishi
Trade	
Cond	PUZ-HA36NKA
Coil	PVA-A36AA7
AHRI ref	
Efficiency	18.2 SEER
Sensible cooling	25410 Btuh
Latent cooling	7590 Btuh
Total cooling	33000 Btuh
Actual air flow	956 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Living	360	3200	0	99	0
Ensuite	119	715	0	22	0
Master	240	2124	0	66	0
Music Room	129	1022	0	32	0
Bath	90	224	0	7	0
Entry	44	676	0	21	0
Kitchen	346	3223	0	99	0
Family	273	1906	0	59	0
Hall	99	0	0	0	0
Sun Room	357	6166	0	190	0
Dining Room	308	0	0	0	0
Pantry	23	419	0	13	0
Storage	126	1393	0	43	0
Cedar Closet	44	0	0	0	0

Bold/italic values have been manually overridden

Storage Closet		78	12	0	0	0
B Bedroom		227	2173	0	67	0
B Bath		56	453	0	14	0
Kitchenette		131	0	0	0	0
Utility		94	0	0	0	0
B Stairs		61	0	0	0	0
B Stairs 2		49	0	0	0	0
Basment		914	5172	0	160	0
B Living		214	2102	0	65	0
██████████	d	4384	30979	0	956	956
Other equip loads			661	0		
Equip. @ 1.00 RSM				22585		
Latent cooling				6776		
TOTALS		4384	31771	29361	956	956

Bold/italic values have been manually overridden

Heat loss and gain calculation summary sheet

CSA-F280-M12
Standard Form No. 1

These documents issued for the use of **Efficient Home Design & Solutions** and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.

Project no.

Building location

Model:	Taylor Renovation	Site:	
Address:		Lot:	
City and Province:	Ottawa On	Postal code:	

Calculations based on

Dimensional information based on:			
Attachment:	Detached	Front facing:	Southwest Assumed? No
Number of storeys:	1 + basement	Air tightness:	Energy Tight (ACH=1.5) Assumed? Yes
Weather location:	Ottawa (M-C Int'l Airport), ON, CA	Wind exposure:	Light local shielding
HRV?	Lifebreath MAX XTR	Internal shading:	(none) Occupants: 3
Recovery %:	84 %	Units:	Imperial (I-P)

Heating design conditions

Cooling design conditions

Outdoor temp:	-13 °F	Indoor temp:	72 °F	Mean soil temp:	48 °F	Outdoor temp:	86 °F	Indoor temp:	75 °F	Latitude:	45 °N	S'Trange:	18 °F
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Above grade walls

Below grade walls

Style A:	ne,se,sw,nw - Blk wall, r-10 bd ins, 2"x4" wood int frm r-14 cav ins, 1/2" gypsum	Style A:	BCIN_1: Bsmnt, 6.5 ft BG, conc fndatn, wall R-20, flr unis
Style B:	ne,se,sw,nw - Siding, 1/2" wood sheathing, R14+6ci Cavity Insulation, 2"x4" wood frm, 16" o.c. stud, 1/2" gypsum board	Style B:	
Style C:	ne - Siding, 1/2" wood sheathing, R24+6ci Cavity Insulation, 2"x6" wood frm, 16" o.c. stud, 1/2" gypsum board	Style C:	
Style D:		Style D:	

Floors on soil

Ceilings

Style A:	BCIN_1: Bsmnt, 6.5 ft BG, conc fndatn, wall R-20, flr unis HLR=5675 Btuh	Style A:	No Attic ceiling, asphalt shingles, R-31 Insulation, 1/2" gypsum board int fnsh, 10" thkns
Style B:		Style B:	No Attic ceiling, asphalt shingles, R-40 Insulation, 1/2" gypsum board int fnsh, 12" thkns
Style C:		Style C:	R60 Attic (Gable, Hip, Scissor) (Attic ceiling, asphalt shingles roof mat, r-60 cell ins, 1/2" gypsum board int fnsh)

Exposed floors

Doors

Style A:	Exposed floor, 10" frame, R-48 cavity ins, Finished floor	Style A:	ne,se,sw - 23E0 (Door, mtl pur core type)
Style B:		Style B:	

Windows

Skylights

Style A:	ne,nw - U 0.22, SHGC 0.35; NFRC rated (SHGC=0.35); 6.67 ft head ht	Style C:	
Style B:	ne,se,sw,nw - Double Glaze Average E-Star Window (U 0.22, SHGC 0.35; NFRC rated (SHGC=0.35); 6.67 ft head ht)	Style B:	
Style C:		Style A:	
Style D:		Style B:	

Attached documents:

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Calculations performed by

Name:	
Company:	Efficient Home Design & Solutions
Address:	96 Smith Road
City and Province:	Oxford Station On
Postal code:	K0G 1T0
Telephone:	613-240-7980
Fax:	
E-mail:	



HRAI cert.#: 14967 (Loads,Ducts)



Duct System Summary

Efficient Home Design & Solutions

Date: Oct 18, 2022
Plan: Taylor Renovation

Cert.#: 14967(RHLG, RASD)

96 Smith Road, Oxford Station, On K0G 1T0 Phone: 613-240-7980 Email: tim@efficienthome.ca Web: www.efficienthome.ca License: 110695

Project Information

For:

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0.25 in H2O	0.25 in H2O
Available static pressure	0.25 in H2O	0.25 in H2O
Supply / return available pressure	0.102 / 0.148 in H2O	0.102 / 0.148 in H2O
Lowest friction rate	0.049 in/100ft	0.049 in/100ft
Actual air flow	956 cfm	956 cfm
Total effective length (TEL)	512 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
B Bath	h 453	14	0	0.080	4.0	0x 0	ShMt	27.5	100.0	st2
B Bedroom	h 1086	34	0	0.060	5.0	0x 0	ShMt	40.5	130.0	st2
B Bedroom-A	h 1086	34	0	0.082	5.0	0x 0	ShMt	34.3	90.0	st2
B Living	h 1051	32	0	0.054	5.0	0x 0	ShMt	30.5	160.0	st2
B Living-A	h 1051	32	0	0.049	5.0	0x 0	ShMt	30.0	180.0	st1
Basment	h 1293	40	0	0.076	5.0	0x 0	ShMt	34.0	100.0	st2
Basment-A	h 1293	40	0	0.062	5.0	0x 0	ShMt	15.0	150.0	st1
Basment-B	h 1293	40	0	0.050	5.0	0x 0	ShMt	33.8	170.0	st6
Basment-C	h 1293	40	0	0.050	5.0	0x 0	ShMt	15.5	190.0	st2
Bath	h 224	7	0	0.057	4.0	0x 0	ShMt	10.8	170.0	st2
Ensuite	h 715	22	0	0.094	5.0	0x 0	ShMt	29.5	80.0	st2
Entry	h 676	21	0	0.066	5.0	0x 0	ShMt	15.0	140.0	st1
Family	h 953	29	0	0.061	5.0	0x 0	ShMt	38.0	130.0	st1
Family-A	h 953	29	0	0.076	5.0	0x 0	ShMt	45.5	90.0	st5
Kitchen	h 1611	50	0	0.075	5.0	0x 0	ShMt	26.0	110.0	st1
Kitchen-A	h 1611	50	0	0.054	6.0	0x 0	ShMt	51.3	140.0	st6
Living	h 1600	49	0	0.067	5.0	0x 0	ShMt	32.0	120.0	st2
Living-A	h 1600	49	0	0.060	5.0	0x 0	ShMt	22.3	150.0	st2
Master	h 1062	33	0	0.065	5.0	0x 0	ShMt	46.8	110.0	st2
Master-A	h 1062	33	0	0.058	5.0	0x 0	ShMt	37.8	140.0	st2
Music Room	h 1022	32	0	0.049	5.0	0x 0	ShMt	28.3	180.0	st2
Pantry	h 419	13	0	0.051	4.0	0x 0	ShMt	41.8	160.0	st6
Storage	h 1393	43	0	0.052	5.0	0x 0	ShMt	48.0	150.0	st6
Storage Closet	h 12	0	0	0.070	4.0	0x 0	ShMt	26.3	120.0	st1
Sun Room	h 1233	38	0	0.061	5.0	0x 0	ShMt	38.0	130.0	st5
Sun Room-A	h 1233	38	0	0.069	6.0	0x 0	ShMt	57.5	90.0	st5
Sun Room-B	h 1233	38	0	0.063	5.0	0x 0	ShMt	43.3	120.0	st5
Sun Room-C	h 1233	38	0	0.067	5.0	0x 0	ShMt	53.0	100.0	st5
Sun Room-D	h 1233	38	0	0.065	5.0	0x 0	ShMt	48.0	110.0	st5

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	418	0	0.049	627	11.7	8 x 12	ShtMetl	st1
st5	Peak AVF	220	0	0.061	494	7.0	8 x 8	ShtMetl	
st1	Peak AVF	538	0	0.049	605	12.9	8 x 16	ShtMetl	
st6	Peak AVF	146	0	0.050	545	7.0	0 x 0	ShtMetl	

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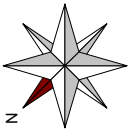
Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb5	14x 3	101	0	178.0	0.083	377	7.0	0 x 0		ShMt	rt3A
rb1	30x 3	196	0	185.8	0.079	310	7.8	2-3.25x14		SJSp	rt2
rb6	14x 3	76	0	185.8	0.079	388	6.0	0 x 0		ShMt	rt2A
rb3	14x 4	113	0	302.3	0.049	359	7.0	3.25x14		SJSp	rt2A
rb4	14x 4	113	0	149.0	0.099	421	7.0	0 x 0		ShMt	rt2
rb7	14x 4	119	0	233.0	0.063	377	7.0	3.25x14		SJSp	rt2A
rb8	14x 4	115	0	275.0	0.054	364	7.0	3.25x14		SJSp	rt2A
rb2	14x 4	123	0	139.3	0.106	389	6.2	3.25x14		SJSp	rt3

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt2A	Peak AVF	424	0	0.049	636	14.5	8 x 12	ShtMetl	rt2
rt2	Peak AVF	732	0	0.049	659	14.5	8 x 20	ShtMetl	rt1
rt3	Peak AVF	224	0	0.083	168	8.4	8 x 24	ShtMetl	rt1
rt3A	Peak AVF	101	0	0.083	377	7.0	0 x 0	ShtMetl	rt3
rt1	Peak AVF	956	0	0.049	574	16.0	10 x 24	ShtMetl	

Bold/italic values have been manually overridden



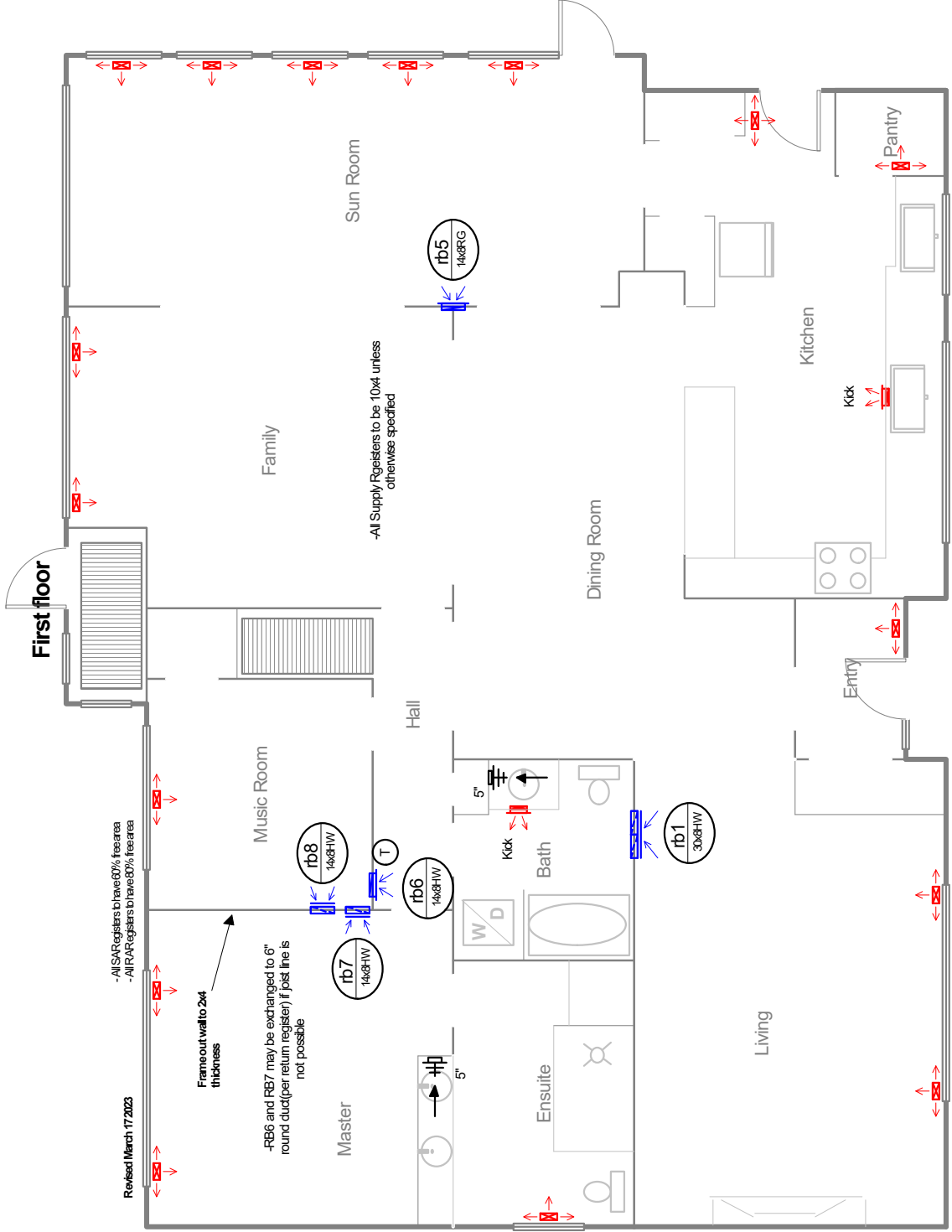
Revised March 17 2023

- All SAR registers to have 60% free area
- All PAR registers to have 80% free area

Frame out wall to 2x4 thickness

- RB6 and RB7 may be exchanged to 6" round duct (per return register) if just line is not possible

-All Supply Registers to be 10x4 unless otherwise specified



Scale: 1/8" = 1'0"
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Efficient Home Design & Solutions

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Design Notes and Code References

62.16: Heat Recovery Ventilators

- (1) Except as provided in Sentence (2), heat recovery ventilators with rated capacities of not less than 25 L/s and no more than 200 L/s shall be installed in accordance with Article 9.32.31.1.
- (2) Where electric space heating other than forced air electric heating systems is provided in buildings of residential occupancy within the scope of Part 9, the mechanical ventilation system shall include heat recovery ventilators designed to provide the greater of:

(a) the minimum rated efficiency required by the Green Energy Act, 2008; or

(b) a minimum 55% sensible heat recovery efficiency when tested below temperature thermal and ventilation performance test methods in CAN/CSA C-439 "Rating the Performance of Heat Energy-Recovery Ventilators" at a Static Test Temperature of -25°C and an airflow not less than 30 L/s.

62.3: Air Duct Systems

62.3.8: Exhaust Ducts and Outlets

- (7) Exhaust ducts connected to laundry drying equipment shall be:
- (a) independent of other exhaust ducts;
- (b) designed and installed so that the entire duct can be cleaned; and
- (c) constructed of smooth corrosion-resistant material.

62.3.11: Make-up Air

(1) In ventilation systems that exhaust air to the outdoors, provision shall be made for the admission of supply of make-up air in sufficient quantity so that the operation of the exhaust system and other exhaust equipment or combustion equipment is not adversely affected.

(2) Make-up air facilities required by Sentence (1) shall be interlocked with the exhaust devices they serve so that both operate together.

(3) Where make-up air facilities are intended to introduce air directly from the outdoors to occupied parts of the building in winter, they shall incorporate means of tempering that air to maintain the indoor design temperature.

62.3.17: Tape

(1) Tape used for sealing joints in air ducts, plenums and other parts of air duct systems shall meet the flame resistance requirements for fabric in CAN/ULC-S 103, "Flame Tests of Flame-Resistant Fabrics and Linings".

62.4.3: Construction and Installation of Ducts and Plenums

(10) Where a supply duct or return duct is not protected by an insulated exterior wall or where the ducts are exposed to the exterior, the ducts shall be insulated to provide an internal resistance of not less than RSI 2.1.

(11) Where a supply duct or return duct is located in an unconditioned space or outdoors, all joints of the ductwork shall be sealed to a Class A seal level in accordance with the SMCNA "HVAC Duct Construction Standards – Metal and Flexible".

(12) Where a supply duct is located in a conditioned space, the ductwork shall be sealed to a Class C seal level in accordance with the SMCNA "HVAC Duct Construction Standards – Metal and Flexible".

62.4.7: Return Air System

(7) Vertical air ducts shall have openings to return air on no more than 1 floor.

(11) Except for floor levels that are less than 900 mm above or below an adjacent floor level, halls provided with a return-air inlet, at least one return-air inlet shall be provided in each floor level in a dwelling unit.

62.4.7: Return Air System

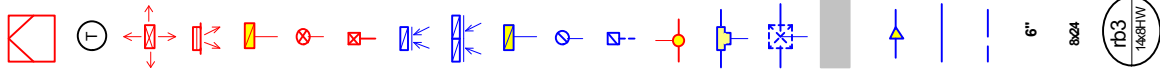
(7) Vertical return ducts shall have openings to return air on no more than 1 floor.

(11) Except for floor levels that are less than 900 mm above or below an adjacent floor level, halls provided with a return-air inlet, at least one return-air inlet shall be provided in each floor level in a dwelling unit.

62.4.12: Make-up Air

(1) In ventilation systems that exhaust air to the outdoors, provision shall be made for the admission of supply of make-up air in sufficient quantity so that the operation of the exhaust system and other exhaust equipment or combustion equipment is not adversely affected.

HVAC Design Legends



Efficient Home Design & Solutions

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Mechanical Design Report

Low rise residential

Location of Installation	Address	House Builder
	Application Number	House Model (if applicable)
Installing Contractor	Name TBD	
	Address	
	City	Postal Code
	Telephone Number	Fax Number

SYSTEM DESIGN PARAMETERS

Combustion Appliances 9.32.3.1.(1) a) ☐ Direct vent (sealed combustion) only b) ☐ Positive venting induced draft (except fireplaces) c) ☐ Natural draft, B-vent or induced draft fireplace d) ☒ Solid Fuel (including fireplaces) e) ☐ No Combustion Appliances	Heating System ☒ Forced Air ☐ Non Forced Air ☐ Electric Space Heat ☐ Radiant Floor Heat (attach pipe details) ☐ Geothermal (attach loop, pipe & well details) ☐ High Velocity Residential (attach duct details) ☐ Other:
House Type 9.32.3.1.(2) ☐ I Type a) or b) appliances only, no solid fuel ☒ II Type I except with solid fuel (including fireplace) ☐ III Any Type c) appliance = Part 6 Design ☐ IV Electric space heat ☐ Other: No forced air = Option 4	System Design Option ☐ Exhaust Only/Forced Air System ☒ HRV with Exhaust Ducts/Forced Air System ☐ HRV Simplified Connection to Forced Air System ☐ IIRV – Full Ducting/Not Coupled to Forced Air System ☐ Part 6 Design ☐ Other:

EQUIPMENT DESIGN REQUIREMENTS

Total Ventilation Capacity 9.32.3.3.(1)						TOTAL	
Master Bedroom	1	x	10 L/s	=	10 L/s		
Unfinished Basement	0	x	10 L/s	=	0		
Other Habitable Rooms	12	x	5 L/s	=	60	70	T.V.C.
Principal Ventilation Capacity 9.32.3.4.(1)							
Master Bedroom	1	x	15 L/s	=	15 L/s		
Other Bedrooms	1	x	7.5 L/s	=	7.5	22.5	P.V.C.
Required Supplemental Ventilation Capacity (T.V.C. less P.V.C.) =						10	
Furnace size: KJ or 38,000 BTU							
Air conditioner size: KJ or BTU or 3 Tonnes (If provided / applicable)							
Heating / Cooling Equipment sized according to heat loss/gain calculations of CAN/CSA F280-12:						☒ Yes	☐ No
Geothermal Equipment designed according to CAN/CSA-C448.2:						☐ Yes	☐ No
Hydronic Equipment designed according to CAN/CSA-B214:						☐ Yes	☐ No
Duct (and pipe) schematic attached including sizes, runs and material used:						☒ Yes	☐ No

VENTILATION EQUIPMENT**Heat Recovery Ventilator**Model: Lifebreath MAX XTR71 L/s High 33 L/s Low 62 % Sensible Efficiency @ -25°C**Proposed Exhaust Fans**

	Location	Model	L/s	Sones	Principal or Supplemental
1					
2					
3					
4					

EQUIPMENT EFFICIENCIES (Please also refer to Energy Efficiency Design Summary)Heating system: 9.9 HSPF (Zone V)Cooling system (if applicable): 18Water heater: N/AHRV: % sensible efficiency at 0 degrees: 84% sensible efficiency at -25 degrees: 62**DESIGNER CERTIFICATION**

I hereby certify that this ventilation system has been designed in accordance with the 2012 Ontario Building Code.

Name: _____ Company Name: _____

Date: October 20 2022 BCIN _____ HRAI # _____

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

H. Project Information			
Building number, street name [REDACTED]		Unit no.	Lot/con.
Municipality Ottawa	Postal code [REDACTED]	Plan number/ other description	
I. Individual who reviews and takes responsibility for design activities			
Name		Firm	
Street address		Unit no.	Lot/con.
Municipality		On	E-mail
	Fax number ()	Cell number ()	
J. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]			
☒ House	☒ HVAC – House	☐ Building Structural	
☐ Small Buildings	☐ Building Services	☐ Plumbing – House	
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings	
☐ Complex Buildings	☐ Fire Protection	☐ On-site Sewage Systems	
Description of designer's work			
Heat loss/gain, layout and design of HVAC systems to be constructed, for permit purposes			
K. Declaration of Designer			
I <u>Tim Vander Meer</u> declare that (choose one as appropriate): (print name) ☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____ ☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: _____ Basis for exemption from registration: <u>Div C Part 3 3.2.5.1.1.(a)</u> ☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that: 1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.			
Oct 20 2022 _____ Date Signature of Designer			

NOTE:

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d). of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.