

**GRAYS HARBOR COUNTY
PLANNING AND BUILDING DIVISION
DEVELOPMENT ASSISTANCE BULLETIN**

23

**VENTILATION AND INDOOR AIR QUALITY (VIAQ) COMPLIANCE
WORKSHEET**

Owner's Name: _____ **Permit #:** _____

JOB TYPE	OCCUPANCY	# OF BEDROOMS	DUCTED FURNACE
<input type="checkbox"/> New	<input type="checkbox"/> Single Family	<input type="checkbox"/> 2 or less	<input type="checkbox"/> YES
<input type="checkbox"/> Remodel	<input type="checkbox"/> Multi-Family	<input type="checkbox"/> 3	<input type="checkbox"/> NO
<input type="checkbox"/> Addition		<input type="checkbox"/> 4	
		<input type="checkbox"/> ____	

VENTILATION OPTION:

- A: Compliance by Calculations or Testing (VIAQ Section 302.1.1)
- B: Intermittent Whole House Ventilation Using Exhaust Fans (VIAQ Section 303.4.1)*
- C: Intermittent Whole House Ventilation Integrated with a Forced-Air (ducted) Furnace (VIAQ Section 303.4.2)
- D: Intermittent Whole House Ventilation Using a Supply Fan (VIAQ Section 303.4.3)
- E: Intermittent Whole House Ventilation Using a Heat Recovery Ventilation System (VIAQ Section 303.4.4)

*** Exhaust-only systems do not require individual room outdoor air inlets if the home has a ducted forced-air heating system communicating with all habitable rooms and the interior doors are undercut a minimum of 1/2" above the finish floor covering**

REQUIRED PLAN PAGE ANNOTATIONS (as applicable):

- Size (CFM) and Location of Whole House Fan
- Type and Location of Fan Controls (Label: WHOLE HOUSE VENTILATION FAN)
- Location of Air intakes (Individual Room / Furnace Return-Air Duct)
- Location / Size (CFM) of Source Specific Exhaust Fans (Kitchen, Bathroom, Water Closet, Laundry, Pool, Spa, Other)
- Exterior Termination Location of Exhaust Fan(s) Wall / Roof Cap
- Annotation of Minimum Insulation Level (R-4) for Ducts Located In Unconditioned Spaces

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MINIMUM SOURCE SPECIFIC VENTILATION CAPACITY REQUIREMENTS

	Bathrooms	Kitchens
Intermittently operating	50 cfm	100 cfm
Continuous operation	20 cfm	25 cfm

VENTILATION RATES FOR ALL GROUP R OCCUPANCIES FOUR STORIES AND LESS Minimum and Maximum Ventilation Rates: Cubic Feet Per Minute (CFM)

Floor Area, ft ²	Bedrooms													
	2 or less		3		4		5		6		7		8	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
<500	50	75	65	98	80	120	95	143	110	165	125	188	140	210
501-1000	55	83	70	105	85	128	100	150	115	173	130	195	145	218
1001-1500	60	90	75	113	90	135	105	158	120	180	135	203	150	225
1501-2000	65	98	80	120	95	143	110	165	125	188	140	210	155	233
2001-2500	70	105	85	128	100	150	115	173	130	195	145	218	160	240
2501-3000	75	113	90	135	105	158	120	180	135	203	150	225	165	248
3001-3500	80	120	95	143	110	165	125	188	140	210	155	233	170	255
3501-4000	85	128	100	150	115	173	130	195	145	218	160	240	175	263
4001-5000	95	143	110	165	125	188	140	210	155	233	170	255	185	278
5001-6000	105	158	120	180	135	203	150	225	165	248	180	270	195	293
6001-7000	115	173	130	195	145	218	160	240	175	263	190	285	205	308
7001-8000	125	188	140	210	155	233	170	255	185	278	200	300	215	323
8001-9000	135	203	150	225	165	248	180	270	195	293	210	315	225	338
>9000	145	218	160	240	175	263	190	285	205	308	220	330	235	353

*For residences that exceed 8 bedrooms, increase the minimum requirement listed for 8 bedrooms by an additional 15 CFM per bedroom. The maximum CFM is equal to 1.5 times the minimum.

PRESCRIPTIVE INTEGRATED FORCED AIR SUPPLY DUCT SIZING

Required Flow (CFM) Per Table 3-2	Minimum Smooth Duct Diameter	Minimum Flexible Duct Diameter	Maximum Length ¹	Maximum Number of Elbows ²
50 - 80	6"	7"	20'	3
80 - 125	7"	8"	20'	3
115 - 175	8"	10"	20'	3
170 - 240	9"	11"	20'	3

1. For lengths over 20 feet increase duct diameter 1 inch.
2. For elbows numbering more than 3 increase duct diameter 1 inch.

PRESCRIPTIVE SUPPLY FAN DUCT SIZING

Supply Fan Tested CFM at 0.40" WG		
Specified Volume from Table 3-2	Minimum Smooth Duct Diameter	Minimum Flexible Duct Diameter
50 - 90 CFM	4 inch	5 inch
90 - 150 CFM	5 inch	6 inch
150 - 250 CFM	6 inch	7 inch
250 - 400 CFM	7 inch	8 inch