

Executive Summary

This technical report will provide an analysis on the amount of ventilation air supplied to the Suburban Wellness Center and its compliance with ASHRAE Standard 62.1-2007. Suburban Wellness Center is a 57,200 sq. ft. two story fitness center / medical offices located in Germantown, MD.

Rooftop Unit 1 and Rooftop Unit 2 supply conditioned air to the majority of the building with maximum capacities of 32,000 CFM and 39,000 CFM respectively. The air that comes from RTU-1 and RTU-2 serves the spaces through VAV boxes. Air Handling Unit 1 supplies dehumidified air strictly to the fitness center's swimming pool facility at a rate of 10,500 CFM.

The ventilation rate procedure was applied to the three air conditioning units. If one of the spaces being taken into account didn't fall into an occupancy category, a similar category was chosen or a conservative category was created. While two of them passed, one of the units failed to meet Standard 62.1-2007. RTU-2 failed to meet the standard by 30% however there could be several possibilities as to why this roof top unit did not expel the minimum outdoor air requirement. One of these reasons could be due to different occupancy space categorization which could easily vary based on designer.

	Area (sq. ft.)	Req. OA (cfm)	Supply OA (cfm)	Complies with
RTU-1	12204	3040	4240	Yes
RTU-2	26992	6591	5100	No
AHU-1	4850	2328	7500	Yes
	44046	11960	16840	

Table 1 – Standard 62.1 Compliance Summary

Table 1 summarizes the outdoor air requirements for each of the air conditioners. Listed are the areas each unit serves, the required outdoor air to be supplied, the actual outdoor air being supplied and the compliance verdict of each. The area and supply OA are taken from the construction drawings provided by Meta Engineers PC.