

AIR BALANCING SPECIALTY INC.

**FIR RIDGE CAMPUS
PORTLAND, OREGON**

PROJECT NO: 21-4253-DW

AIR BALANCING SPECIALTY INC. 3532 S.E. MILWAUKIE AVENUE PORTLAND, OREGON 97202-2751
IN BUSINESS SINCE 1964 CERTIFIED NEBB FIRM - CERTIFICATION NO. 2984
PHONE (503) 230-2332 FAX (503) 230-2820

PROJECT NAME: **FIR RIDGE CAMPUS - PORTLAND, OREGON**

OWNER: DAVID DOUGLAS SCHOOL DISTRICT

DATE STARTED: 04/20/21

DATE FINISHED: 04/20/21

MECHANICAL ENGINEER:

WORK PERFORMED BY: DALE NEFFENDORF
WILLIAM NEFFENDORF

GENERAL CONTRACTOR:

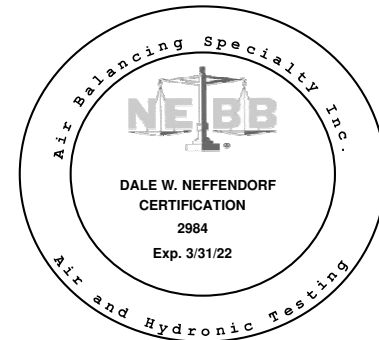
CERTIFIED BY: _____

MECHANICAL CONTRACTOR:

DATE: _____

SHEET METAL CONTRACTOR:

CONTROL CONTRACTOR:



IN BUSINESS SINCE 1964

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CERTIFIED NEBB No. 2984

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CERTIFIED TEST AND BALANCE REPORT

PROJECT NO.: 21-42253-DW

INSTRUMENT AIR	MODEL NO.	SERIAL NO.	RANGE	CALIBRATION DATE
(D) Shortridge Airdata Multimeter ADM Accessories	ADM860	M98375	0.0001 to 60.00" WC.	1/12/2021
(DH) Datameter Flow Hood	8400		25 - 2500 CFM	
(DP) Datameter Pitot Tube	12", 18", 24", 36", 48" & 60"		50 - 30000 FPM	
(DA) Datameter Airfoil	AFP18		50 - 5000 FPM	
(DG) Datameter Velgrid	VLG84		50 - 2500 FPM	
(R) Rotating Vane Anemometer	A4/-4"	83072B	200 - 10000 FPM	1/14/2021
Amprobe Ammeter	Fluke 335	99330394	0 - 750 Volts / 0 - 300 Amps	1/8/2021
Shimpo Tachometer	DT-207L	D26B0033	6 - 30,000 RPM	1/12/2021
WATER				
Hydrodata Meter	HDM-250	W01025	DP -10 to +300 PSI	1/12/2021

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EQUIPMENT USED IN BALANCING

PROJECT: FIR RIDGE CAMPUS - PORTLAND, OREGON

PROJECT NO.: 21-4253-DW

PAGE ABBREVIATION KEY

AK - GRILLE AREA OR RESTRICTION VALUE

VEL - VELOCITY

CFM - CUBIC FEET PER MINUTE

FPM - FEET PER MINUTE

ACH - AIR CHANGES PER HOUR

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PROJECT: FIR RIDGE CAMPUS - PORTLAND, OREGON

PROJECT NO.: 21-4253-DW

Ref	Ins	AREA SERVED			OUTLET		AK	DESIGN		CUBIC FEET	TEST #1				TEST #2			
		Rm.#	No.	Size	Blow	Vel		CFM	FPM		CFM	ACH	PRESSURE	FPM	CFM	ACH	PRESSURE	
	R	Classroom	1		20x6x2		1.08			6292	530	572	5.46					
	R	Classroom	2		20x6x2		1.08			10227	580	626	3.67					
	R	Classroom	3		20x6x2		1.08			6443	555	599	5.58					
	R	Classroom	4		20x6x2		1.08			10500	570	616	3.52					
	R	Classroom	5		20x6x2		1.08			6781	565	610	5.40					
	R	Classroom	6		20x6x2		1.08			10355	600	648	3.75					
	R	Classroom	7		20x6x2		1.08			6615	590	637	5.78					
	R	Classroom	8		20x6x2		1.08			10242	360	389	2.28					
	R	Classroom	9		20x6x2		1.08			6847	650	702	6.15					
	R	Classroom	10		20x6x2		1.08			9771	430	464	2.85					
	R	Classroom	11		20x6x2		1.08			6633	660	713	6.45					
	R	Classroom	12		20x6x2		1.08			10317	675	729	4.24					
	R	Classroom	14				1.00			3697		160	2.60					

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CONSTANT VOLUME - FPM

AIR BALANCE DATA SHEET

PROJECT NO.: 21-4253-DW

PROJECT: FIR RIDGE CAMPUS - PORTLAND, OREGON

DATE START: 04/20/21

FINISH: 04/20/21

SYSTEM: Classrooms 1-12 and 14

SECTION:

BY: DN / WN

PAGE: 1 OF 3

Ref	Ins	AREA SERVED			OUTLET			DESIGN			CUBIC FEET	TEST #1				TEST #2					
					Rm.#	No.	Size	Blow	AK	Vel		CFM	FPM	CFM	ACH	PRESSURE	FPM	CFM	ACH	PRESSURE	
	DH	Staff Work Rm						1.00			8765		1430	9.79							
	DH	Nurse						1.00			735		130	10.61							
	DH	Conference						1.00			610		120	11.80							
	DH	Mail / Copy						1.00			1313		205	9.37							
	DH	Counseling						1.00			601		115	11.48							
	DH	Counseling						1.00			622		115	11.09							
	DH	Principal						1.00			1717		200	6.99							
	DH	Main Office						1.00			4850		490	6.06							
	DH	Library						1.00			9572		1845	11.56							
	DH	Commons						1.00			58764		8937	9.12							
	DG	Gym Filter			54x46			17.25			122400	457	7883	3.86							

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CONSTANT VOLUME - FPM

AIR BALANCE DATA SHEET

PROJECT NO.: 21-4253-DW

PROJECT: FIR RIDGE CAMPUS - PORTLAND, OREGON

DATE START: 04/20/21

FINISH: 04/20/21

SYSTEM: Staff Work, Nurse, Conference, Counseling, Principal, Library, Gym

SECTION:

BY: DN / WN

PAGE: 2 OF 3

Ref	Ins	AREA SERVED			OUTLET			DESIGN			CUBIC FEET	TEST #1				TEST #2			
		Rm.#	No.	Size	Blow	AK	Vel	CFM	FPM	CFM		ACH	PRESSURE	FPM	CFM	ACH	PRESSURE		
	DH	Comm. RR Men's Supply				1.00				2236		250	6.71						
	DH	Comm. RR Men's Exhaust				1.00				2236		320	8.59						
	DH	Comm. RR Women's Supply				1.00				3399		270	4.77						
	DH	Comm. RR Womens's Exhaust				1.00				3399		315	5.56						
	DH	RR Interior Supply				1.00				512		50	5.86						
	DH	RR Interior Exhaust				1.00				512		95	11.13						
	DH	Staff Men's																	
	DH	Staff Women's																	
	DH	Gym RR Right Exhaust				1.00				376		120	19.15						
	DH	Gym RRR Left Exhaust				1.00				381		115	18.11						
	DH	Staff RR Men's Supply				1.00				1641		190	6.95						
	DH	Staff RR Men's Exhaust				1.00				1641		235	8.59						
	DH	Staff. RR Women's Supply				1.00				1687		210	7.47						
	DH	Staff RR Womens's Exhaust				1.00				1687		255	9.07						

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CONSTANT VOLUME - FPM

AIR BALANCE DATA SHEET

PROJECT NO.: 21-4253-DW

PROJECT: FIR RIDGE CAMPUS - PORTLAND, OREGON

DATE START: 04/20/21

FINISH: 04/20/21

SYSTEM: Exhaust

SECTION:

BY: DN / WN

PAGE: 3 OF 3