

AIR BALANCING SPECIALTY INC.

MENLO PARK ELEMENTARY SCHOOL 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:

MENLO PARK ELEMENTARY SCHOOL - PORTLAND, OREGON

OWNER:

DAVID DOUGLAS SCHOOL DISTRICT

DATE STARTED:

03/16/21

DATE FINISHED:

03/16/21

MECHANICAL ENGINEER:

WORK PERFORMED BY:

DALE NEFFENDORF

WILLIAM NEFFENDORF

GENERAL CONTRACTOR:

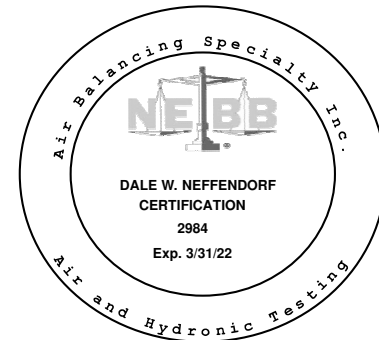
CERTIFIED BY:

DATE:

MECHANICAL CONTRACTOR:

SHEET METAL CONTRACTOR:

CONTROL CONTRACTOR:



IN BUSINESS SINCE 1964

AIR BALANCING SPECIALTY INC.

CERTIFIED NEBB No. 2984

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CERTIFIED TEST AND BALANCE REPORT

PROJECT NO.: 21-4253-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: MENLO PARK ELEMENTARY SCHOOL - 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: MENLO PARK ELEMENTARY SCHOOL - PORTLAND, OREGON

PROJECT NO.: 21-4253-DW

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	Classroom UV	1					1.00			11487		945	4.94					
	DH	Classroom UV	2					1.00			11681		1045	5.37					
	DH	Classroom UV	3					1.00			11746		1005	5.13					
	DH	Classroom UV	4					1.00			11710		1075	5.51					
	DH	Classroom UV	5					1.00			11626		540	2.79					
	DH	Classroom UV	6					1.00			11664		1100	5.66					
1	DH	Classroom UV	7					1.00			11694		0	0.00					
	DH	Classroom UV	8					1.00			11608		1025	5.30					
	DH	Library UV	9					1.00			15800		1460	5.54					
	DH	Library UV	10					1.00			11690		1035	5.31					
	DH	Classroom UV	11					1.00			11635		1120	5.78					
	DH	Classroom UV	12					1.00			11854		970	4.91					
	DH	Classroom UV	13					1.00			11765		1065	5.43					
	DH	Classroom UV	14					1.00			11878		995	5.03					
	DH	Classroom UV	15					1.00			11753		970	4.95					
	DH	Classroom UV	16					1.00			11824		1010	5.13					
	DH	Classroom UV	17					1.00			11830		950	4.82					
	DH	Classroom UV	18					1.00			11880		1015	5.13					
	DH	Classroom UV	19					1.00			11780		1015	5.17					

Ref. Note: (1) Unit not running - cover is off.

AIR BALANCING SPECIALTY, INC. 3532 SE Milwaukie Avenue, Portland, Oregon 97202-2751 Phone: (503) 230-2332 Fax: (503) 230-2820

CONSTANT VOLUME - FPM

AIR BALANCE DATA SHEET

PROJECT NO.: 21-4253-DW

PROJECT: MENLO PARK ELEMENTARY SCHOOL - PORTLAND, OREGON

DATE START: 03/16/21

FINISH: 03/16/21

SYSTEM: Classrooms and Library 1-19

SECTION:

BY: DN / WN

PAGE: 1 OF 3

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	
	DH	Classroom UV	20				1.00			9137		1135	7.45					
	DH	Classroom UV	21				1.00			9137		950	6.24					
	DH	Classroom UV	22				1.00			9228		930	6.05					
	DH	Classroom UV	23				1.00			9210		1025	6.68					
	DH	Classroom UV	24				1.00			9210		795	5.18					
	DH	Classroom UV	25				1.00			9137		1015	6.67					
	DH	Classroom ERC	28				1.00			5821		460	4.74					
	DH	Classroom Speech	29				1.00			8494		355	2.51					
	DH	Classroom RR Supply	29				1.00			924		90	5.84					
	DH	Classroom RR Exhaust	29				1.00			924		110	7.14					
	DH	Gym Office					1.00			817		135	9.91					
	DG	Gym			40x18x4		15.00			113792	370	5550	2.93					
	DG	Cafetorium			18x40x4		15.00			65248	442	6630	6.10					
	R	Teachers Room			18x6	SW	0.53			2936	840	445	9.10					
	R	Counselor			18x6	SW	0.53			2603	780	413	9.53					
	DH	Office Counselor				SW	1.00			434		75	10.37					
	DH	Office - Main				SW	1.00			3587		200	3.35					
	DH	Principal				SW	1.00			1767		335	11.38					
	DH	Work Room				SW	1.00			3086		345	6.71					
	DH	Work Room Office					1.00			590		90	9.15					
	R	Work Room Office			6x6	SW	0.18			1554	470	85	3.27					

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CONSTANT VOLUME - FPM

AIR BALANCE DATA SHEET

PROJECT NO.: 21-4253-DW

PROJECT: MENLO PARK ELEMENTARY SCHOOL - PORTLAND, OREGON

DATE START: 03/16/21

FINISH: 03/16/21

SYSTEM: Classrooms 20 - 29, Gym, Cafetorium, Counselor, Principal, Work Room

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		
	R	Staff RR Supply			8x4			0.15			151		0	0.00					
	R	Staff RR Exhaust			8x4			0.15			151	340	51	20.26					
	R	Counselor RR Supply			8x4	SW		0.15			169		0	0.00					
	R	Counselor RR Exhaust			8x4	SW		0.15			169	300	45	15.98					
		Restroom																	
		Men's / Boy's																	
		Women's / Girl's																	
	DH	RR (by storage)						1.00			509		0	0.00	FAN OR MOTOR IS RUNNING				
	DH	Kitchen RR Exhaust						1.00			198		30	9.09					
	DH	Boys						1.00			2021		0	0.00	FAN NOT RUNNING				
	DH	Girls						1.00			1833		0	0.00	FAN NOT RUNNING				

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CONSTANT VOLUME - FPM

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PROJECT NO.: 21-4253-DW

PROJECT: MENLO PARK ELEMENTARY SCHOOL - PORTLAND, OREGON

DATE START: 03/16/21

FINISH: 03/16/21

SYSTEM: Exhaust

SECTION:

BY: DN / WN

PAGE: 3 OF 3