Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Decision Rendered - Reconsideration of ID 25035

Appeal ID: 26447	**Project Address:** 3905 SE 91st Ave
Hearing Date: 1/26/22	**Appellant Name:** Nicholas Sukkau
Case No.: B-006	**Appellant Phone:** (503) 916-3195
Appeal Type: Building	**Plans Examiner/Inspector:** John Cooley, Joe Thornton
Project Type: commercial	**Stories:** 1 **Occupancy:** E **Construction Type:** V-B
Building/Business Name: Marshall HS New CTE Building	**Fire Sprinklers:** Yes - throughout
Appeal Involves: Erection of a new structure,Reconsideration of appeal,other: 2nd reconsideration	**LUR or Permit Application No.:** 20-210264-CO
Plan Submitted Option: pdf [File 1] [File 2] [File 3] [File 4]	**Proposed use:** high school

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	2020 NFPA 664
Requires	2020 NFPA 664 is referenced by 2019 OSSC 426 Combustible Dusts and by 2016 City of Portland Fire Code, Chapter 22 Combustible Dust Producing Operations, Table 2204.1 Explosion Protection Standards. 2020 NFPA 664 9.3.4 Enclosureless dust collectors may only be located indoors if all of the following criteria are met: -The collector is located at least 6.1 m (20 ft) from any means of egress or area routinely occupied by personnel. -Multiple collectors in the same room are separated from each other by at least 6.1 m (20 ft) Per discussion with Fire Marshall Joe Thornton, this appeal is being submitted as a building code appeal rather than a fire code appeal.
Code Modification or Alternate Requested	The intent is to allow for temporary use of portable enclosureless dust collectors in lieu of the "enclosed" portable dust collectors approved under the current permit.
Proposed Design	For a period of no more than 90 days from occupancy, the facility will utilize portable enclosureless dust collectors (Jet model DC-1100VX-CK). Dust collectors will be attached and in use while dust producing equipment is operational. Dust Collector locations will be per the attached plans, with a total of (6) in room D-7 Construction, (2) in room D-13 Tech Geometry, and (1) in room D-9 CNC. Although the code-required spacing cannot be achieved in all areas, the collectors will be fairly well spaced out. The Dust Collectors will be stationary for the duration of their use as the dust collection system.

RECONSIDERATION TEXT: An analysis of dust hazard issues has been provided, as requested - see attached. The recommendations of this analysis will be adopted in operating the temporary dust collectors.

RECONSIDERATION 2 TEXT: This second reconsideration is submitted as a request for a time extension only. Instead of using portable dust collectors for 90 days as originally proposed above, a period of 180 days is now proposed.

Reason for alternative

A central dust collection system is now being pursued for the CTE Annex building instead of the portable dust collectors. Due to availability of materials and shift in design direction through consultation with the City of Portland and the District, the system will not be operational by the date that school begins in the fall. Once the central dust collection system is installed and operational, use of the proposed temporary portable dust collectors will cease permanently. As part of the required housekeeping plan necessary for the completion of the project's Dust Hazard Analysis, direction will be included specifically for the use of the proposed temporary Dust Collectors, including but not limited to frequent housekeeping to prevent dust accumulations from reaching hazardous levels, maintenance of equipment in accordance with OEM recommendations, and other requirements as outlined in the Dust Hazard Analysis.

RECONSIDERATION TEXT: An analysis of dust hazard issues has been provided, as requested - see attached. The recommendations of this analysis will be adopted in operating the temporary dust collectors.

RECONSIDERATION 2 TEXT: This second reconsideration is submitted as a request for a time extension only. Instead of using portable dust collectors for 90 days as originally proposed above, a period of 180 days is now proposed. The COVID pandemic has presented many challenges to completing the permanent central dust collection system, including supply chain problems, extended equipment lead times and material and labor shortages. In addition, some of the project subcontractors have experienced COVID outbreaks which have slowed their progress. At this point, the central dust collection system permit revision has been approved by the City, so progress towards completion is being made. However, the system will not be completed within the 90 day duration, so an extension to 180 days duration is proposed.

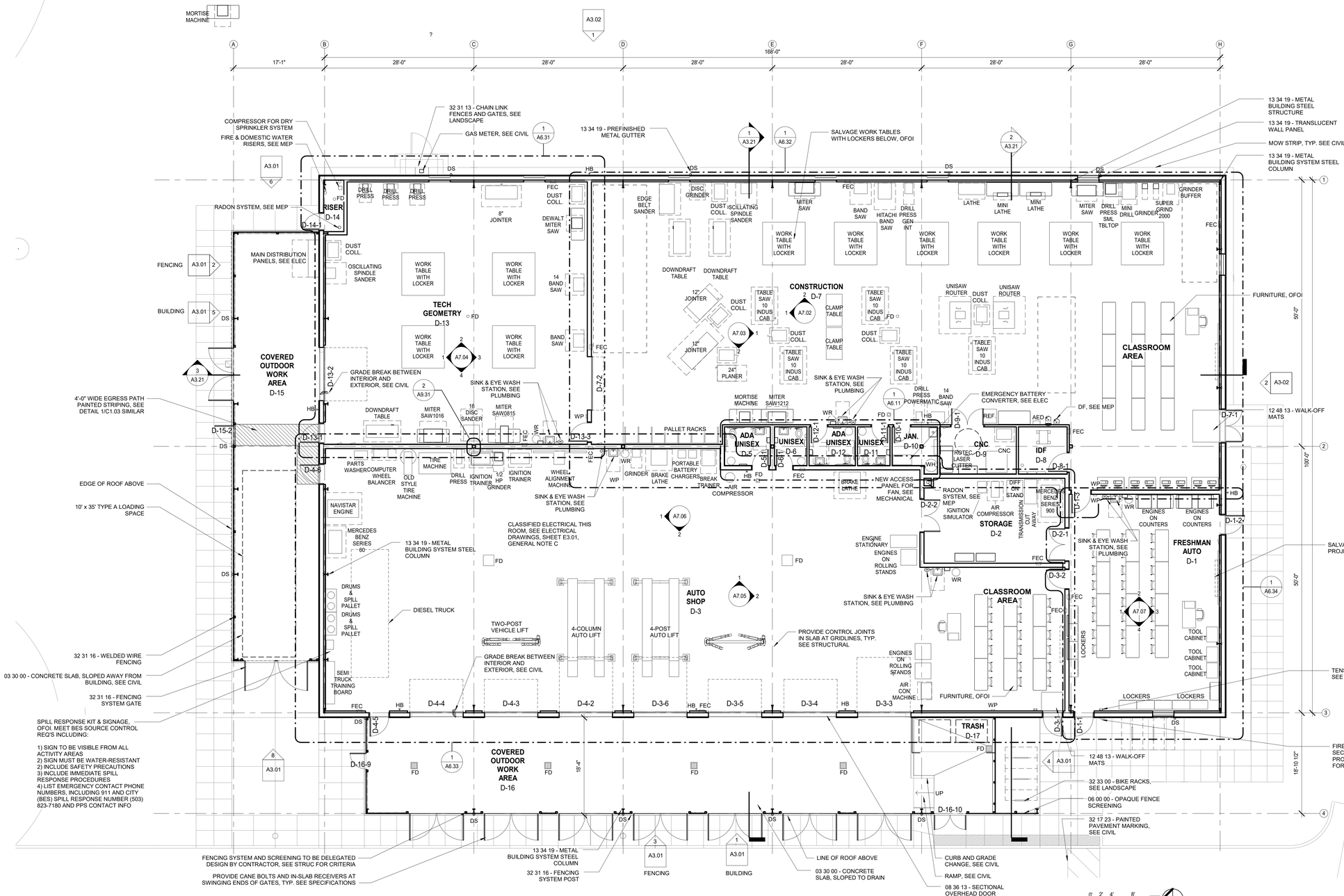
APPEAL DECISION

Ninety day extension of granted appeal #25035 to allow temporary use of portable dust collectors: Granted provided use is limited to no more than 180 days from occupancy.
Note: The District Fire inspector shall have the authority to summarily void this approval if any of the appeal provisions are violated.
Appellant may contact John Butler (503 865-6427) or e-mail at John.Butler@portlandoregon.gov with questions.

The Administrative Appeal Board finds with the conditions noted, that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

OVERALL BUILDING PLAN FOR REFERENCE



1 MARSHALL NEW BUILDING - FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

1. ALL NEW WALLS TO EXTEND TO STRUCTURE ABOVE, UNO. SEE WALL TYPE INDICATIONS FOR LOCATIONS OF PARTIAL HEIGHT WALLS.
2. EXTERIOR WALLS TO BE TYPE AA, UNO
3. INTERIOR WALLS TO BE TYPE A30, UNO.
4. DO NOT SCALE DRAWINGS. COORDINATE DIMENSIONS SHOWN ON DRAWINGS WITH ACTUAL FIELD MEASUREMENTS. NOTIFY ARCHITECT OF DISCREPANCIES.
5. REFERENCE METAL BUILDING DRAWINGS FOR LOCATIONS OF PRIMARY AND SECONDARY STRUCTURAL STEEL ELEMENTS, INCLUDING COLUMNS, BASE PLATES, BEAMS, GIRTS, ETC.
6. ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CONCRETE, OUTER EDGE OF METAL BUILDING BENTS, CENTERLINE OF OPENING, CENTERLINE OF COLUMNS, AND CENTER LINE OF FIXTURES, UNO.
7. PROVIDE PENETRATION FIRESTOPPING AT ALL ITEMS PASSING THROUGH FIRE RATED WALLS, TYP.
8. ROUTE UTILITIES IN CONCEALED SPACES WHERE POSSIBLE. WHERE NOT POSSIBLE, USE SURFACE MOUNTED RACEWAYS LOCATED 8'0" AFF OR HIGHER.
9. EQUIPMENT IS OFCI, UNO. OWNER'S MOVER WILL DELIVER EQUIPMENT TO THE SITE AND SET IN PLACE, CONTRACTOR WILL INSTALL MEP CONNECTIONS AND SECURE TO STRUCTURE.
10. PROVIDE BACKING AND BLOCKING IN FRAMED WALLS WHERE REQUIRED TO SUPPORT WALL MOUNTED ITEMS. BACKING FOR WALL MOUNTED SINKS TO BE MINIMUM 1/4" STEEL PLATE DRILLED AND TAPPED FOR WALL CARRIER. BLOCKING AND BACKING FOR OTHER ITEMS TO BE MINIMUM 1" FIR PLYWOOD. LIGHT GAUGE BACKING NOT ACCEPTABLE FOR ANY ITEMS.
11. AT METAL BUILDING WALLS AND ROOF, PROVIDE BACKING MEMBERS FOR ALL WALL AND ROOF MOUNTED ITEMS REQUIRING THEM. COMPLY WITH METAL BUILDING LOADING REQUIREMENTS. REFERENCE METAL BUILDING DRAWINGS FOR SECONDARY FRAMING LOCATIONS.
12. AT FULL HEIGHT WALL HEADS, SEE DETAIL 16/A9.31, AT FIRE-RATED WALL HEADS, SEE DETAIL 17/A9.31.
13. THERE SHALL NOT BE ANY METAL WELDING (GAS, MIG, TIG, STICK, ETC) OR METAL CUTTING (LASERS, TORCHES, ETC) OTHER THAN THE LASER REFERENCED IN THE DUST HAZARD ANALYSIS.
14. PROVIDE CORNER GUARDS AT OUTSIDE WALL CORNERS, SEE INTERIOR ELEVATIONS FOR LOCATIONS
15. ALL EQUIPMENT DUST COLLECTION TO BE ACHIEVED VIA PORTABLE DUST COLLECTORS. NO PERMANENT DUST COLLECTION SYSTEM PROPOSED
16. LIMITED PORTABLE MOTOR VEHICLE BATTERY CHARGERS WILL BE USED, GENERALLY NO MORE THAN ONE CHARGER WILL BE IN USE AT A TIME
17. PORTABLE FIRE EXTINGUISHERS SHALL BE LOCATED IN CONSPICUOUS LOCATIONS ALONG NORMAL PATHS OF TRAVEL. MAXIMUM DISTANCE OF TRAVEL TO EXTINGUISHERS SHALL NOT EXCEED 50 FEET. EXTINGUISHER TYPE: 4-A:80-B:C, 10 LB.
18. PROVIDE RADON SYSTEM BELOW SLAB WITH OPEN GRADED FILL TO PERMIT CIRCULATION OF GASES, SEE MECH DWGS AND DETAIL 26/A5.31
19. PROVIDE J-BOX EXTENSIONS OR OTHER ALIGNMENT MEANS AS REQUIRED FOR MOUNTING DEVICES OR OTHER ITEMS ON SCHEDULED WALL PANELS.
20. CLASSIFIED ELECTRICAL IS NOT PROPOSED FOR THE WOOD WORKING AREAS AS NO COMBUSTIBLE DUST ATMOSPHERE WILL EXIST DUE TO HOUSEKEEPING, TRAINING AND OTHER MITIGATING MEASURES AS REFERENCED IN THE DUST HAZARD ANALYSIS.
21. PROPOSED CHANGES IN THIS REVISION TO COMBUSTIBLE DUST GENERATING EQUIPMENT AND ANY DUST COLLECTORS (PORTABLE OR OTHERWISE) SHALL BE CONSISTENT WITH THE DUST HAZARD ANALYSIS BY FAUSKE & ASSOCIATES AND APPROVED BY BASSETTI ARCHITECTS ON MARCH 1, 2021, FOR THE ORIGINAL PERMIT DRAWINGS.

6/28/2021 12:24:32 PM

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AT FULL SIZE

#	REVISIONS	DATE
5	ASI#02	05/04/21
4	ASI#01	02/02/21
3	Addendum #4	01/28/21
2	Addendum #1	01/05/21
1	permit rev 1	11/30/20

PORTLAND PUBLIC SCHOOLS

BENSON MARSHALL SWING SITE NEW BUILDING

3905 SE 91ST AVE
PORTLAND, OREGON 97266

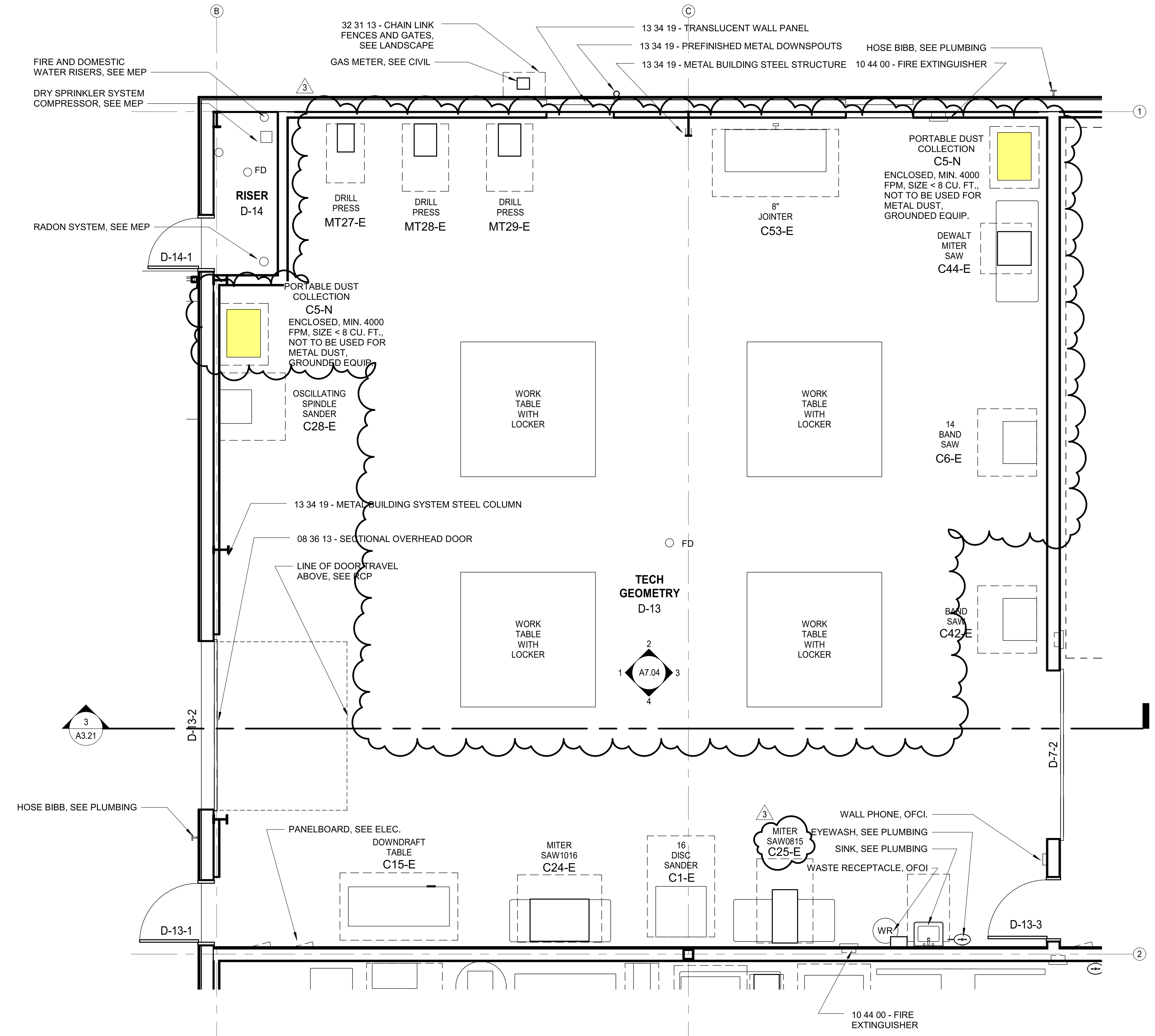
JOB NO: 1909
ISSUE DATE: 10 / 20 / 2020

Jurisdiction Stamp Area

REGISTERED ARCHITECT 2019 DAVID T. HYMAN PORTLAND, OREGON STATE OF OREGON

FLOOR PLAN

A2.01



1 ENLARGED PLAN - TECH GEOMETRY
1/4" = 1'-0"

0' 1' 2' 4'

JET DUST COLLECTORS PROPOSED IN LIEU OF DIVERSEAIR MAXFLO PC

EQUIPMENT SCHEDULE

ID tag	Name	Manufacturer	Model #	Qty	Weight	Size	Working Size	Anchorage Data	Volts	Phase	Amps	HP	Elec Conn	UL List	Lighting	Comp Station	Compressed Air	Fume Exhaust Req	Dust Coll. (Y/N)	Dust Coll. Conn	Dust Coll. Notes	Material	Furnish/Install	Comments
C1-E	16" Disc Sander	Apex/relund electric		1		36 x 36	48 x 72	4 bolts. 3/8" bolts. 1/2" hole. 19" x 16"	208/220/420/440		5/4.8/2.54/2.4								Yes			Wood	OFCI	
~~C5-N~~	~~Portable Dust Collector~~	~~Diversair~~	~~MAXFLO PC 1200~~		~~111~~	~~47"x20"x54"~~			120	1	60													
C6-E	14" Bandsaw	Powermatic	PWBS-14	1		24 x 30	36 x 48	4 bolts, 1/2" holes, 14x15	120	1		1.5	SP	NO	60				Yes			Wood		*PIN COULD NOT FIND 2, THIS SHOULD NOT BE A PROBLEM WITH UL PAE 1-15-21: qty = 1 or 2? only one seen on plan*
C15-E	Downdraft Table	Denray Downdraft Tables, Barbo Machinery	2872	2		28 x 72	36 x 84		115		20/10								Yes (Point of Use)			Wood	OFOI	
C24-E	Miter Saw1016	Makita	LS1016L	1		30 x 42	48 x 60	tabletop	120		15								Yes	1 1/2"		Wood	OFOI	
C25-E	Miter Saw0815	Makita	LS0815F	1		18 x 38	40 x 60	tabletop	120	1	10.5								Yes	1 1/2"		Wood	OFOI	
C28-E	Oscillating Spindle Sander	JET	JOVS-10	1		24 x 24	48 x 48	4 bolts, 3/8" holes, 11" x 16.5"	120	1		1							Yes	4"		Wood	OFCI	
C42-E	18" Band Saw	Jet	JWBS-18	1		34 x 24	42 x 48	4 bolts, 3/8" bolts. 15.5" x 24.75"	120	1		1/2												
C44-E	Dewalt mitre saw	dewalt		1				tabletop	120	1	15								Yes	1 1/2"		Wood	OFOI	
C53-E	8" Jointer	Powermatic	60/60 B	1		30 x 72	48 x 84	2 total holes. 3/8" holes, 1 on either side. 21" apart.	230	3	8.4	3							Yes	4"		Wood	OFCI	PAE 1/16/21: Duplicate tag as jointer in tech geo but different model number, can we assign new tag for one of them for tracking? different qty of ports, etc. BA 1/21/21 - yes this one will be re numbered to C53-E and is going to be in the construction shop
MT27-E	Drill Press	General International		1		20x12x65			110/220	1	12/6	3/4							No					
MT28-E	Drill Press	Delta Rockwell	66-022	1		23x16x71			208	3		1/2							No					
MT29-E	Drill Press	Rockwell	62-225	1		23x16x66			115/230	1	10.4/5.2	3/4							No					
	Work Tables w/ Lockers			6				Anchor work tables to floor with (4) 1/2" dia/ x 4" Amchors per table	120 power drops								Yes							

EQUIPMENT SCHEDULE NOTES

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2. ANCHOR EACH PIECE OF EQUIPMENT TO FLOOR STRUCTURE WITH (4) BOLTS, UNO. BOLTING IS DELEGATED DESIGN, BY CONTRACTOR
3. VERIFY ALL EQUIPMENT REQUIREMENTS WITH OWNER
4. CONTRACTOR TO PROVIDE ANY BLOCKING OR BACKING REQUIRED IN WALL FOR EQUIPMENT INSTALLATION, SEE SCHEDULE
5. CONTRACTOR TO PROVIDE ASSEMBLY, INSTALLATION, BLOCKING AND BOLTING FOR OFCI ITEMS INDICATED IN THE PLAN THAT ARE NOT SCHEDULED, SUCH AS TABLES, SHELVING, MARKER BOARDS AND OTHER ITEMS

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5/12/2021 5:10:24 PM

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AT FULL SIZE

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3	ASI#02	05/04/21
2	ASI#01	02/02/21
1	Addendum #4	01/28/21

PORTLAND PUBLIC SCHOOLS
BENSON MARSHALL SWING SITE NEW BUILDING

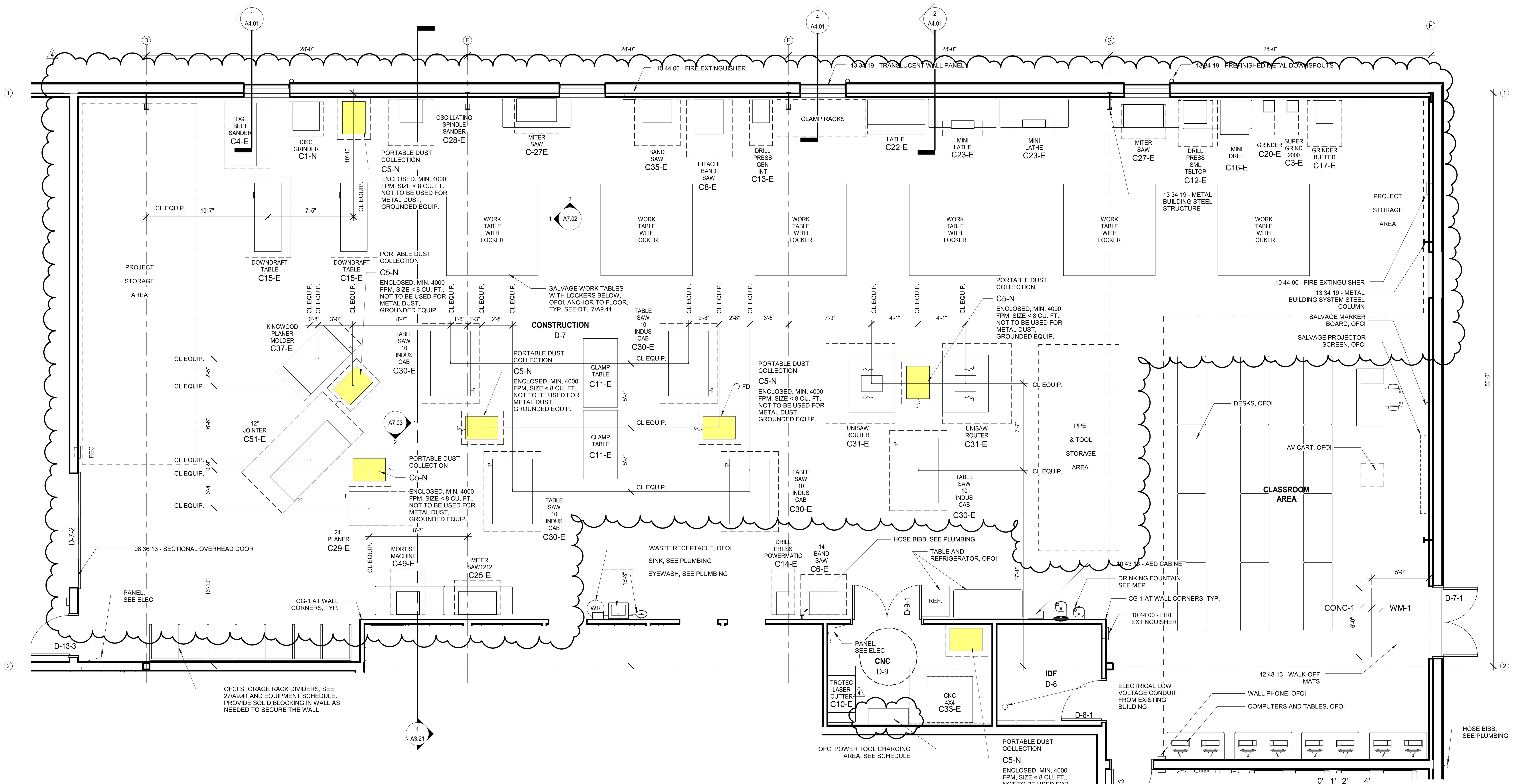
3905 SE 91ST AVE
PORTLAND, OREGON 97266

JOB NO: 1909
ISSUE DATE: 05 / 11 / 2021

Jurisdiction Stamp Area
REGISTERED ARCHITECT
2919
DAVID T. HYMAN
PORTLAND, OREGON
STATE OF OREGON

ENLARGED PLAN - TECH GEOMETRY

A6.31



1 ENLARGED PLAN - CONSTRUCTION CTE

1/4" = 1'-0"

JET DUST COLLECTORS PROPOSED IN LIEU OF DIVERSEAIR MAXFLO PC

EQUIPMENT SCHEDULE

ID tag	Name	Manufacturer	Model #	Qty	Weight	Size	Working Size	Anchorage Data	Volts	Phase	Amps	HP	Elec Conn	UL List	Lighting	Comp Station	Compressed Air	Fume Exhaust Req	Dust Coll. (Y/N)	Dust Coll. Conn	Dust Coll. Notes	Material	Furnish/Install	Comments
C1-N	20" Disc Sander	Jet	J-4421-2	2	400	30x28x53	28 x 11	4x 3/8' anchors per manufacturer specifications	220	3		3							Yes	3"			OFCI	PAE 1/15/21: Tag = 16" diameter, cutsheet = 20", confirm direction, 440 vs 540 cfm
C3-E	Grinder-Super Grind 2000	Tormek	SE-71[illegible]23	1		12 x 12	12 x 36		115				3P	NO	60				Yes (Steel / grinder particles)	NONE		Steel	OFCI	Used for sharpening tools
C4-E	Edge Belt Sander	Ritter	R7C1	1		34 x 66	[illegible]2 x 48	No integral anchorage holes available. Base dims: 24" x 42".	115/230				3P	NO					Yes	4"		Wood	OFCI	
C5-N	Portable Dust Collector	Diversair	MAXFLO PC 1200		441	47"x30"x54"			120	1	60													
C6-E	14" Band Saw	Powermatic	PWBS-14	1		24 x 30	36 x 48	4 bolts. 1/2" holes. 14"x15".	120	1		1.5	3P	NO	60				Yes			Wood		PIN COULD NOT FIND 2, THIS SHOULD NOT BE A PROBLEM WITH UL PAE 1-15-21: qty = 1 or 2? only one seen on plan
C8-E	Bandsaw	Hitachi	B-600A	1		30 x 36	60 x 48	4 bolts, 1/2" holes. 17"x 9"	120	1	11	1/2	3P	NO	60				Yes	NONE		Wood		
C10-E	Laser Cutter Speedy 360	Trotec	Speedy + Air Scrubber	1					120	1	15		3P			Yes, OTIS Computer		two 3" ports. currently collected by a scrubber. preference to be collected to the exterior. See attachments				Wood	OFCI	
C11-E	Clamp Table	Ritter	R-1475	2		36 x 72	36 x 72									Yes	yes						OFOI	
C12-E	Drill press - mortise machine	General international	75-075MI	1		24 x 24	48 x 36	table top	120	1	10	1			60				No			Wood	OFCI	PIN-COULD NOT LOCATE IN SPACE
C13-E	Drill Press	Portland machines co/ General international	75-200M1NC	1		18 x 24	24 x 48	3 bolts. 3/8" holes. 9.5"x16"	120	1	12	3/4	HW	NO	60				No			Wood	OFCI	PIN-110V REQUIRED FOR TASK LIGHT
C14-E	Drill Press	Powermatic/portland machinery co	1100	1		14 x 24	24 x 48	3 bolts, 3/8" holes, 9.5"x16".	208	3	3	3/4	TWISTLOCK	NO					No			Wood	OFCI	PIN-110V REQUIRED FOR TASK LIGHT
C15-E	Downdraft Table	Denray Machine	2872 B	2		28 x 72	48 x 84	on wheels	120	1	12		3P NEMA 5-20R	NO	60				Yes	Internal FIlter		Wood	OFOI	PIN-THIS SHOULD BE OK ON UL
C16-E	Mini Drill	Blum	2002	1		30 x 36	36 x 48		220		5		?	CE	60		80-90 psi needed		Yes	NO PORT	Needs retrofit. needs shroud	Wood	OFCI	PIN-NEEDS ENCLOSURE FOR CAPTURE
C17-E	Grinder Buffer	Baldor		1		18 x 24	36 x 48	Tabletop on wheels	120	1	6	1/2	3P	NO					Yes (Steel / grinder particles)	3.5X2	Use Jet JDCS-505 Collectorew Dust Extraction base	Steel	OFCI	Confirm if used only for tool sharpening and quantity.Equipment sits on top of Pedestal Dust Collector indicated in Dust Collection Notes column. Both the Equipment and Dust Collector require individual power suppy.
C20-E	Grinder, tool sharpening			1				table top	110	1			3P	NO					Yes	NO PORT	Use Jet JDCS-505 Collector and shroud	Steel	OFCI	Used only for tool sharpening. Equipment sits on top of Pedestal Dust Collector indicated in Dust Collection Notes column. Both the Equipment and Dust Collector require individual power suppy.
C22-E	Lathe	Laguna Revo 18/36	MLAREVO 1836-110-150	1		60 x 26 x 47		on wheels	208	3	5	1.5	3P	CSA	60				No	NO PORT		Wood	OFCI	PIN-NO PORTS NO SHIELDS
C23-E	Mini Lathe	Jet	JML - 1014	2		8 x 24	16 x 42		120	1		1/2	3P	CSA	60				No	NO PORT		Wood	OFCI	PIN-NO PORTS NO SHIELDS
C25-E	Miter Saw	Makita	LS0815F	1		24 x 40	60 z 192 table		120		15 Amps		3P	YES	50-60				Yes (Point of Use)	1.5"	connect to central dust extraction	Wood	OFCI	PIN-PORTABLE UNIT
C27-E	Mitre Saw	Bosch	GCM12SD. 12" Dual bevel hinge slide mitre saw	2					120	1	15		3P	YES					Yes (Point of Use)	1.5"	connect to central dust extraction	Wood	OFOI	PIN-PORTABLE UNIT
C28-E	Oscillating Spindle Sander	JET	JOVS-10	1		24 x 24	48 x 48	4 anchors, 3/8" holes, 12"x 18.5"	120	1	18	1.5	3P	NO					Yes	4"		Wood	OFCI	PIN-THIS SHOULD BE OK FOR UL Tech geo has one, e110 has one, e116 has one, KEEP
C29-E	24' Planer			1		36 x 42	42 x 60	4 holes, 5/8" holes, 43"x17"	208	3		5	HW	NO					Yes	6"		Wood	OFCI	
C30-E	Table saw "10" industrial cabinet saw"	Saw stop		6		42 x 68	60 x 84	no anchorage available.	208/240	3	12	5	3P	NO	60				Yes	4"		Wood	OFCI	PIN-THIS SHOULD BE OK FOR UL
C31-E	Unisaw routers	Delta		2		48 x 60	72 x 84	On wheels	120	1	6	1/2	(2) 3P	NO					Yes	4"	Retrofit with 3 pans each with a 2" ports	Wood	OFCI	PIN-THIS SHOULD BE OK FOR UL
C33-E	CNC 4X4								110 (x2)							Yes, OTIS Computer						Wood		
C35-E	14" Band Saw	Rockwell	28-200	1		24 x 30	[illegible] x 48	(4) 1/2" holes, 13" x 13"	208	3		1	3P	NO	60				Yes	2"		Wood	OFCI	Ideally all band saws will be removed and replaced with 5 new SawStop bandsaws (not yet on the market)
C37-E	Kingwood Planer Molder	Kingwood		1		42 x 60	42 x 84	4 holes. 5/8". Concealed. 16 1/4" x 36 3/4"	208	3	40	7	HW	NO			Yes		Yes	2 ports, 4"		Wood	OFCI	Potentially up for replacement after Marshall. Consider Barbo Machinery
C49-E	Mortise machine	Shop fox		1					120	1	8	3/4											OFCI	
C55-E	Air Compressor	Craftsman		1					120	1		6							No				OFOI	
C56-E	Air Compressor	Rol-air (blue)		1					120	1	14	1/2							No				OFOI	
C57-E	Air Compressor	Rol-air (green		1					120	1	7								No				OFOI	
C51-E	12" jointer.	Powermatic		1		84x38		4 anchors, 1/2" holes. 12"x26".	220	3														PAE 1/16/21: shown on plan, but not listed in room on Smartsheet, please confirm, model # not listed, dust collection not listed but assume its required
	Work Tables w/ Lockers			6				Anchor work tables to floor with (4) 1/2" dia/ x 4" Amchors per table	120 power drops								Yes							
	Pallet Racks			8				Anchor rack dividers to floor and wall with (2) 1/2" dia lag screws into wall blocking at each rack	N/A	–	–	–	–	–										
	Power Tool Charging Area							On Shelves attached to wall	120															28-30 120v plugs for charging battery operated tools, about 7-8 per shelf

EQUIPMENT SCHEDULE NOTES

1. ALL NEW EQUIPMENT SHOWN ON PLAN IS OFCI, UNO. OWNER'S MOVER WILL DELIVER EQUIPMENT TO THE SITE AND SET IN PLACE, CONTRACTOR WILL INSTALL MEP CONNECTIONS AND SECURE TO STRUCTURE.
2. ANCHOR EACH PIECE OF EQUIPMENT TO FLOOR STRUCTURE WITH (4) BOLTS, UNO. BOLTING IS DELEGATED DESIGN, BY CONTRACTOR
3. VERIFY ALL EQUIPMENT REQUIREMENTS WITH OWNER
4. CONTRACTOR TO PROVIDE ANY BLOCKING OR BACKING REQUIRED IN WALL FOR EQUIPMENT INSTALLATION, SEE SCHEDULE
5. CONTRACTOR TO PROVIDE ASSEMBLY, INSTALLATION, BLOCKING AND BOLTING FOR OFCI ITEMS INDICATED IN THE PLAN THAT ARE NOT SCHEDULED, SUCH AS TABLES, SHELVING, MARKER BOARDS AND OTHER ITEMS

FLOOR PLAN NOTES

1. ALL NEW WALLS TO EXTEND TO STRUCTURE ABOVE, UNO. SEE WALL TYPE INDICATIONS FOR LOCATIONS OF PARTIAL HEIGHT WALLS.
2. EXTERIOR WALLS TO BE TYPE AA, UNO
3. INTERIOR WALLS TO BE TYPE A30, UNO.
4. DO NOT SCALE DRAWINGS. COORDINATE DIMENSIONS SHOWN ON DRAWINGS WITH ACTUAL FIELD MEASUREMENTS. NOTIFY ARCHITECT OF DISCREPANCIES.
5. REFERENCE METAL BUILDING DRAWINGS FOR LOCATIONS OF PRIMARY AND SECONDARY STRUCTURAL STEEL ELEMENTS, INCLUDING COLUMNS, BASE PLATES, BEAMS, GIRTS, ETC.
6. ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CONCRETE, OUTER EDGE OF METAL BUILDING BENTS, CENTERLINE OF OPENING, CENTERLINE OF COLUMNS, AND CENTER LINE OF FIXTURES, UNO.
7. PROVIDE PENETRATION FIRESTOPPING AT ALL ITEMS PASSING THROUGH FIRE RATED WALLS, TYP.
6. ROUTE UTILITIES IN CONCEALED SPACES WHERE POSSIBLE. WHERE NOT POSSIBLE, USE SURFACE MOUNTED RACEWAYS LOCATED 8'0" AFF OR HIGHER.
7. EQUIPMENT IS OFCI, UNO. OWNER'S MOVER WILL DELIVER EQUIPMENT TO THE SITE AND SET IN PLACE, CONTRACTOR WILL INSTALL MEP CONNECTIONS AND SECURE TO STRUCTURE.
8. PROVIDE BACKING AND BLOCKING IN FRAMED WALLS WHERE REQUIRED TO SUPPORT WALL MOUNTED ITEMS. BACKING FOR WALL MOUNTED SINKS TO BE MINIMUM 1/4" STEEL PLATE DRILLED AND TAPPED FOR WALL CARRIER. BLOCKING AND BACKING FOR OTHER ITEMS TO BE MINIMUM 1" FIR PLYWOOD. LIGHT GAUGE BACKING NOT ACCEPTABLE FOR ANY ITEMS.
9. AT METAL BUILDING WALLS AND ROOF, PROVIDE BACKING MEMBERS FOR ALL WALL AND ROOF MOUNTED ITEMS REQUIRING THEM. COMPLY WITH METAL BUILDING LOADING REQUIREMENTS. REFERENCE METAL BUILDING DRAWINGS FOR SECONDARY FRAMING LOCATIONS.
10. AT FULL HEIGHT WALL HEADS, SEE DETAIL 16/A9.31, AT FIRE-RATED WALL HEADS, SEE DETAIL 17/A9.31.
11. THERE SHALL NOT BE ANY METAL WELDING (GAS, MIG, STICK, ETC) OR METAL CUTTING (LASERS, TORCHES, ETC) OTHER THAN THE LASER REFERENCED IN THE DUST HAZARD ANALYSIS.
12. PROVIDE CORNER GUARDS AT OUTSIDE WALL CORNERS, SEE INTERIOR ELEVATIONS FOR LOCATIONS
13. ALL EQUIPMENT DUST COLLECTION TO BE ACHIEVED VIA PORTABLE DUST COLLECTORS. NO PERMANENT DUST COLLECTION SYSTEM PROPOSED
14. LIMITED PORTABLE MOTOR VEHICLE BATTERY CHARGERS WILL BE USED, GENERALLY NO MORE THAN ONE CHARGER WILL BE IN USE AT A TIME
15. PROVIDE FIRE EXTINGUISHERS SHALL BE LOCATED IN CONSPICUOUS LOCATIONS ALONG NORMAL PATHS OF TRAVEL, MAXIMUM DISTANCE OF TRAVEL TO EXTINGUISHERS SHALL NOT EXCEED 50 FEET, EXTINGUISHER TYPE: 4-A:80-B:C, 10 LB.
16. PROVIDE RADON SYSTEM BELOW SLAB WITH OPEN GRADED FILL TO PERMIT CIRCULATION OF GASES. SEE MECH DWGS AND DETAIL 26/A5.31
17. PROVIDE J-BOX EXTENSIONS OR OTHER ALIGNMENT MEANS AS REQUIRED FOR MOUNTING DEVICES OR OTHER ITEMS ON SCHEDULED WALL PANELS.
18. CLASSIFIED ELECTRICAL IS NOT PROPOSED FOR THE WOOD WORKING AREAS AS NO COMBUSTIBLE DUST ATMOSPHERE WILL EXIST DUE TO HOUSEKEEPING, TRAINING AND OTHER MITIGATING MEASURES AS REFERENCED IN THE DUST HAZARD ANALYSIS.

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PERMIT

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ONE INCH
AT FULL SIZE

#	REVISIONS	DATE
4	ASI#02	05/04/21
3	ASI#01	02/02/21
2	Addendum #4	01/28/21
1	Addendum #3	01/27/21

PORTLAND PUBLIC SCHOOLS

BENSON MARSHALL SWING SITE NEW BUILDING

3905 SE 91ST AVE
PORTLAND, OREGON 97266

JOB NO: 1909
ISSUE DATE: 05 / 11 / 2021

Jurisdiction Stamp Area

REGISTERED ARCHITECT
2919
DAVID T. HYMAN
PORTLAND, OREGON
STATE OF OREGON

ENLARGED PLAN - CONSTRUCTION CTE

A6.32

DC-1100VX-CK DUST COLLECTOR, 1.5HP 1PH 115/230V, 2-MICRON CANISTER KIT

708659K

The JET® DC-1100VX features the exclusive Vortex Cone™ which improves chip separation to prevent clogging of the filter, and increases packing efficiency of the collector bag. The high air velocity (CFM) stands up to any competitive specifications, and the industrial controls are designed for years of durable use. Collection bags have a snap ring for fast installation and removal. Casters offer maneuverability within the shop.

FEATURES

- Eliminates premature filter clogging for sustained performance
- High air velocity (CFM) design stands up to any competitive specifications
- Includes four casters for maneuverability and total portability
- Industrial controls designed for years of trouble-free use
- Permanently lubricated, totally enclosed, fan-cooled motors are rated for continuous-duty
- Quick-connect collection bags with elastic band for fast, easy installation and removal
- Single-stage design for economical and quiet operation
- Vortex Cone improves chip separation and collector bag packing efficiency

JET RED ASSURANCE 5-YEAR WARRANTY

JET warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these JPW Industries Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

DC-1100VX-CK DUST COLLECTOR, 1.5HP 1PH 115/230V, 2-MICRON CANISTER KIT

708659K

SPECIFICATIONS

Air Flow @ 4" (CFM)	1100
Style (Type)	Canister
Velocity @ 4" (FPM)	12,571
Static Pressure (Wc.)	10-1/2
Efficiency (Micron)	2
Bag Diameter (In.)	20
Collection Bag Capacity (Cu. Ft.)	5-3/10
Collection Bag Length (In.)	29
Sound Rating (Db.)	70 - 80
Impeller Material	Steel
Motor Power (HP)	1-1/2
1-Hose Connection Diameter (In.)	6
2-Hoses Connection Diameter (In.)	4
Prewired Voltage (V.)	115
Motor Amps	11/5.5

DC-1100VX-CK DUST COLLECTOR, 1.5HP 1PH 115/230V, 2-MICRON CANISTER KIT

708659K

FULL SERIES

STOCK NO	MODEL NO	AIR FLOW @ 4" (CFM)	STYLE (TYPE)	VELOCITY @ 4" (FPM)	NUMBER OF AIR INLETS	EFFICIENCY (MICRON)
708658K	DC-1100VX-5M	1100	Bag	12,571		5
708657K	DC-1100VX-BK	1100	Bag			30
708659K	DC-1100VX-CK	1100	Canister	12,571		2
710701K	DC-1200VX-BK1	1200	Bag	13,745		30
710703K	DC-1200VX-BK3	1200	Bag	13,745		30
710702K	DC-1200VX-CK1	1200	Canister			2
710704K	DC-1200VX-CK3	1200	Canister	13,745		2

BENSON POLYTECHNIC HIGH SCHOOL
MARSHALL SWING SITE

PORTLAND PUBLIC SCHOOLS (PPS)

DUST HAZARD ANALYSIS
APPENDIX A – DUST COLLECTOR ANALYSIS AND RECOMMENDATIONS
REVISED AUGUST 2, 2021

This document has been digitally signed

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This dust hazard analysis by Fauske & Associates, LLC has been reviewed for conformance with 2019 NFPA 652.

Recommendations by the authoring engineer of record affecting the design have been incorporated into the construction documents.

Operations and housekeeping requirements are the responsibility of the owner.

August 2, 2021

Mr. Matt Primovic
Architect
Bassetti Architects
721 NW 9th Ave, Suite 350
Portland, OR 97209

Dear Mr. Primovic:

We have reviewed and analyzed the specifications for the portable enclosureless dust collectors which are planned for usage for up to 90 days at the Benson Marshall Swing Site New Building for Portland Public Schools. The review included evaluation of the equipment specifications with respect to the requirements put forth in NFPA 664 for facilities working with wood dust.

The planned equipment satisfies some of the requirements specified by NFPA 664, however some of the requirements are not satisfied. The analysis in Appendix A identifies measures which can be taken to reduce the risk of a combustible dust deflagration or explosion where Portland Public Schools elects to use the enclosureless dust collectors. Some residual risk would remain once the recommendations are implemented.

Regards,

Casey Allen, Ph.D.
Senior Consulting Engineer

Reviewed by:

Ashok Ghose Dastidar, Ph.D., MBA
Fellow Engineer-Westinghouse Electric Company

Timothy Cullina, P.E.
Senior Process Safety Engineer

Appendix A – Dust Collector Analysis and Recommendations

1. Background

The Benson Marshall facility is comprised of three areas: the *Building Construction Room, Auto Shop Room,* and *Tech Geometry Room*. Dust production will primarily occur in the *Building Construction* and *Tech Geometry Room* in the form of sawdust at multiple tool locations.[1] The school has a long-term plan to manage and capture the dust produced at each tool through use of a centralized dust collector. Detailed specifications for the centralized dust collection system are still being established, but the system will be designed to comply with NFPA 664 requirements for woodworking facilities, and with all NFPA 68 and 69 requirements for explosion protection and isolation.

Due to delays in procuring and installing the centralized dust collection system, the school intends to use nine enclosureless, portable dust collectors for the first 90 days of operation in the facility. The units will be distributed in the facility according to the specifications in A2.01 overall building plan. Subsequent analysis in this appendix summarizes equipment specifications, evaluates compliance with NFPA 664 requirements, and provides recommendations for reducing the risk of a combustible dust deflagration or explosion.

2. Portable Dust Collector Specifications

Specifications for the portable dust collectors are:

Model: Jet DC-1100VX-CK

Type: Enclosureless (filter media not enclosed or in a container)

Filter Bag Capacity: 5.3 ft^3 (additional unknown volume present in cartridge filter)

Volumetric Flow Rate: 1100 CFM

Flow Speed: 5600 feet per minute (single 6” hose), 6300 feet per minute (dual 4” hoses)

3. Dust Collector Analysis

a. Compliance with NFPA 664 Requirements

NFPA 664 specifies several requirements for enclosureless dust collectors. The planned dust collectors comply with some, but not all of the NFPA 664 requirements, which are summarized in the following table. Requirements which are satisfied are identified in the table. For requirements which are not satisfied, recommendations are provided for reducing the risk of a combustible dust explosion. Some residual explosion risk will still remain after implementing these recommendations.

[1] Limited amounts of metal dust production are expected to occur in the *Auto Shop Room*, but the dust load is expected to minimal and will therefore be managed through regular housekeeping.

Requirement		Analysis / Recommendations
9.3.3.2.6.4	[…] use of enclosureless air material separators shall be limited to enclosureless air material separators that meet all of the following criteria:	
(1)	The filtration is accomplished by passing dust-laden air through filter media, collecting the dust on the inside of the filter media, and allowing cleaned air to exit to the surrounding area.	Requirement satisfied by the planned dust collector.
(2)	The filter media are not enclosed or in a container.	Requirement satisfied by the planned dust collector.
(3)	There is no means to mechanically shake or pressure-pulse the filter media while the fan is on.	Requirement satisfied by dust collector design. Additional administrative controls and training should be specified so that students and personnel in the shop do not interact with, adjust or make contact with the dust collector while in operation. Intentional or unintentional contact with the dust collector could dislodge wood dust from the collector, increasing airborne concentrations inside the collector.
(4)	The filter media are under positive pressure.	Requirement satisfied by the planned dust collector.
(5)	Removal of the collected dust is not automatic, continuous, or mechanical.	Requirement satisfied by the planned dust collector.
9.3.4(7)	[Dust collector may be located] Indoors for enclosureless dust collectors meeting all of the following criteria:	
(a)	The collector is used only for dust pickup from wood processing machinery (i.e., no metal grinders and so forth).	Use enclosureless dust collectors exclusively for wood dust.
(b)	The collector is not used on sanders, molders, or abrasive planers having mechanical material feeds through the machine.	*Do not use dust collectors with the stated equipment.*
(c)	Each collector has a maximum air-handling capacity of 2.36 m^3/sec (5000 CFM).	Requirement satisfied by the planned dust collector.
(d)	The fan motor is of a totally-enclosed, fan-cooled design.	Requirement satisfied by the planned dust collector.

(e) The collected dust is removed daily or more frequently if necessary to ensure efficient operation.	*To minimize dust load, it is recommended to empty the dust collectors after each class period (bag and filter).*
(f) The collector is located at least 6.1 m (20 ft) from any means of egress or area routinely occupied by personnel.	The facility layout will not accommodate this requirement. ***Follow other recommendations in this analysis to reduce risk of an explosion or deflagration. Maximize distance between dust collectors and means of egress and areas routinely occupied by personnel.***
(g) Multiple collectors in the same room are separated from each other by at least 6.1 m (20 ft).	The facility layout will not accommodate this requirement. ***Follow other recommendations in this analysis to reduce risk of an explosion or deflagration. Maximize distance between the dust collectors.***

b. Additional Recommendations

In addition to the recommendations provided in section 3a, the following recommendations are provided to further reduce the risk of a combustible dust deflagration or explosion:

1. Follow all previous recommendations outlined in the Fauske & Associates, LLC letter to Bassetti Architects on March 2, 2021.
2. Monitor the area around the dust collector for fugitive dust build up and conduct housekeeping (per recommendations in March 2, 2021 letter) when dust layers approach 1/8". It is recommended to clean the woodworking equipment after each class period.
3. Do not service more than one piece of equipment with a given dust collector. This measure will reduce airborne concentrations of dust inside of the dust collector manifold and filter bag/cartridge.
4. Establish an administrative control to inspect for and remove all wood for tramp metal (e.g., screws, nails, staples) prior to processing on woodworking equipment. The presence of these foreign objects may lead to a spark that could ignite wood dust generated during processing.
5. Inspect the interiors of the dust collector hoses for accumulations of dust and clean where present. The inspection interval should be frequent initially (e.g., daily) and may be adjusted as appropriate based on documented findings.
6. Maintain equipment in accordance with OEM recommendations to reduce combustible dust hazards.