# WESTVIEW HIGH SCHOOL CAREER TECHNICAL EDUCATION RENOVATION

## **PROJECT TEAM**

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# **GENERAL NOTES**

- 1. THE INFORMATION HEREIN IS OF A PROPRIETARY NATURE AND IS SUBMITTED IN CONFIDENCE 6. SLOPE ALL GRADES AT PLANTING AREAS, SIDEWALKS AND ASPHALT PARKING PAVING FOR USE BY OTAK, INC. CLIENTS ONLY. IT HAS BEEN PREPARED FOR THIS PROJECT AT THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION OR OWNER WITHOUT WRITTEN CONSENT OF OTAK, INC. UNAUTHORIZED REPRODUCTION, PUBLICATION OR DISSEMINATION, IN WHOLE OR IN PART IS EXPRESSLY PROHIBITED. INFORMATION CONTAINED HEREIN REMAINS PROPERTY OF OTAK, INC., AND RECEIPT OR POSSESSION OF THIS INFORMATION CONFERS NO RIGHT IN OR LICENSE TO USE OR DISCLOSE TO OTHERS THE SUBJECT MATTER CONTAINED HEREIN FOR ANY BUT AUTHORIZED PURPOSES. ALL RIGHTS RESERVED. COPYRIGHT 2019.
- 2. THE CONTRACT DOCUMENTS CONSIST OF THE AGREEMENT BETWEEN OWNER AND CONTRACTOR, CONDITIONS OF THE CONTRACT (GENERAL, SUPPLEMENTARY, AND OTHER 9. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS AND CONDITIONS), DRAWINGS, SPECIFICATIONS, ADDENDA ISSUED PRIOR TO AGREEMENT AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT.
- ANY DOCUMENT IN THIS SET WHICH HAS BEEN PREPARED BY ANY SUBCONTRACTOR. 3. DESIGNER, AND/OR SUBCONSULTANT WHO IS UNDER A CONTRACT DIRECTLY WITH THE OWNER AND/OR CONTRACTOR IS ONLY INCLUDED IN THIS SET FOR PURPOSES OF REFERENCE AND COORDINATION. OTAK DISCLAIMS ALL LIABILITY RELATING TO THE DRAWING AND CONSTRUCTION OF THE IMPROVEMENTS OR SYSTEMS IT DEPICTS EXCEPT AS SPECIFICALLY ASSUMED IN A WRITTEN CONTRACT SIGNED BY OTAK AND THE OWNER.
- THE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS, INCLUDING THOSE IN 4. ELECTRONIC FORM, PREPARED BY THE ARCHITECT AND THE ARCHITECT'S CONSULTANTS ARE INSTRUMENTS OF SERVICE THROUGH WHICH THE WORK TO BE EXECUTED BY THE CONTRACTOR IS DESCRIBED. UNLESS INDICATED OTHERWISE, THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL BE DEEMED THE AUTHORS OF THEM AND WILL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, IN ADDITION TO THE COPYRIGHTS.
- IF COORDINATION OF ARCHITECTURAL, CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, 5. ELECTRICAL, PLUMBING AND SPRINKLER ELEMENTS RESULT IN CONFLICTS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING ANY WORK OF ELEMENTS RESULTING IN CONFLICTS.

- WITHIN 5' OF A BUILDING AWAY FROM THE BUILDING. IF CONFLICTS OCCUR, NOTIFY ARCHITECT IMMEDIATELY. SEE CIVIL DRAWINGS FOR FINISHED GRADES ADJACENT TO BUILDINGS.
- 7. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK.
- 8. DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS, DO NOT SCALE DRAWINGS, NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
- SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF CONSTRUCTION UNTIL FINAL LATERAL AND VERTICAL CARRYING SYSTEMS ARE COMPLETED.
- 10. DIMENSIONS ARE SHOWN TO FACE OF STUD. FACE OF CONCRETE, FACE OF MASONRY. GRID/COLUMN LINE, CENTERLINE OF ELEMENT, COUNTERTOP EDGE, OR AS NOTED.
- 11. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND COORDINATION OF SUBCONTRACTOR WORK, COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS, AND ACCURATE LOCATION OF STRUCTURAL MEMBERS, OPENINGS FOR MECHANICAL, ELECTRICAL, AND MISCELLANEOUS EQUIPMENT. CONTRACTOR SHALL VERIFY DIMENSIONS AND OPENING SIZES (CLEARANCES REQUIRED) FROM THE MANUFACTURERS PRIOR TO CONSTRUCTION OF OR INSTALLATION OF EQUIPMENT, FURNISHINGS, AND ACCESSORIES.
- 12. PROVIDE ACCESS PANELS AS REQUIRED. LOCATION, FINISH, AND TYPE SHALL BE APPROVED BY ARCHITECT PRIOR TO OBTAINING AND INSTALLING. ACCESS PANEL LOCATIONS NOT APPROVED BY ARCHITECT WILL BE SUBJECT TO MODIFICATION AT NO ADDITIONAL COST. PROVIDE RATED ACCESS PANELS WITH THE SAME RATING AS THE ASSEMBLY IN WHICH THEY ARE INSTALLED. ACCESS PANELS IN SHAFT WALLS, RATED FLOOR/CEILINGS OR RATED ROOF/CEILINGS SHALL BE SMOKE SEALED.

# DRAWING SHEET INDEX

CODE SUMMARY AND FIRE LIFE SAFETY PLANS

COVER SHEET

KEY PLAN

GENERAL G0.00 G0.01

G0.11

DEMOLITION DEMOLITION PLANS AND DETAILS

D1.01

ARCHITECTURE A1.01 CONSTRUCTION ASSEMBLIES AND SCHEDULES A2.01 FLOOR AND REFLECTED CEILING PLANS A3.01 WALL SECTIONS AND INTERIOR ELEVATIONS A4.01 DETAILS A4.02 DETAILS

PLUMBING P001 PD201U PD201 P201 P201U

SYMBOLS LIST AND GENERAL NOTES - PLUMBING UNDERGROUND OVERALL DEMO PLAN - PLUMBING FIRST FLOOR OVERALL DEMO PLAN - PLUMBING FIRST FLOOR OVERALL PLAN - PLUMBING UNDERGROUND OVERALL PLAN - PLUMBING

MECHANICAL M001 M002 MD101 M101 M201 M301 M601

SYMBOL LIST AND GE SCHEDULES - MECHA FIRST FLOOR OVERA FIRST FLOOR OVERA ENLARGED PLAN - ME ROOF OVERALL PLAN DETAILS - MECHANIC

#### ABBREVIATIONS

ŧ	NUMBER	GA	GALIGE GYPSUM ASSOCIATION	PLAM
x	AND	GAL	GALVANIZED	PL
È	CENTERLINE	GB	GRAB BAR	PLYWD
		GPM	GALLONS PER MINUTE	PNL
AC	ACRE	GYP	GYPSUM	PNT
		Цр		
		пь HC-PHB		
	FXTERNAL		HARDBOARD	PT
	DEFIBRILLATOR	HDR	HEADER	
\FF	ABOVE FINISH FLOOR	HDW	HARDWARE	
ADJ	ADJUSTABLE	HM	HOLLOW METAL	R
		HORIZ	HORIZONTAL	R&S
			HOUR HEATING VENTILATION AND AIR	RD
APT	APARTMENT	111/10	CONDITIONING	REF
				REFL
3D	BOARD	IBC	INTERNATIONAL BUILDING	REFR
BDRM	BEDROOM		CODE	REQD
BLDG	BUILDING			REST
RM	BEAM	INFO	INFORMATION INSULATE(D) (ION)	RO
BOT	BOTTOM	INT	INTERIOR	
BR	BEDROOM		-	SAMF
		JAN	JANITOR'S	
CIP	CAST-IN-PLACE	JST	JOIST	SD
U I		крни		SF SHTHG
JL CIG	CEILING	KIT	KITCHEN	SIM
CLR	CLEAR(ANCE)		it i on Elit	SPEC
CMU	CONCRETE MASONRY UNIT	LAM	LAMINATE	STD
CPT	CARPET	LAUN	LAUNDRY	STL
	COLUMNS	LD		STOR
CONC	CONCRETE		LIGHT	STRUCT
CORR	CORRIDOR	LVT	LUXURY VINYL TILE	SV
		LW	LIVE/WORK	
)	DRYER			T
DBL		MAINT	MAINTENANCE	T&G
		MAIL	MATERIAL MAXIMUM	TG
DIM	DIMENSION	MDF	MEDIUM DENSITY FIBERBOARD	THK
ON	DOWN	MECH	MECHANICAL	ТО
DR	DOOR	MEMB	MEMBRANE	TP
DS	DOWN SPOUT	MFR	MANUFACTURER	T/S
	DWELLING UNIT	MIN		IYP
)WG	DRAWING	MISC	MISCELLANEOUS	UNO
		MTL	METAL	UNFIN
Ā	EACH			
IJ	EXPANSION JOINT	N	NORTH	VCT
		NA		
I FV	FLEVATOR	NO	NUMBER	
P	ELECTRICAL PANEL	NR	NON RATED	W
EQUIP	EQUIPMENT	NTS	NOT TO SCALE	W/
EQ	EQUAL	~~		WD
				WH
	EXTERIOR	000	(IES)	WIN
CP	FIBER CEMENT PANEL	OLF	OCCUPANT LOAD FACTOR	WP
D	FLOOR DRAIN	OPP	OPPOSITE	WR
EC	FIRE EXTINGUISHER CABINET	OPNG	OPENING	WRB
-IN	FINISH	ORD	OVERFLOW ROOF DRAIN	
	FOUNDATION	OSSC	OREGON STRUCTURAL	
0	FACE OF		SPECIALTY CODE	
-0C	FACE OF CONCRETE	OVFL	OVERFLOW	
OF	FACE OF FINISH			
-0S	FACE OF STUD			
T	FAGE OF WALL			
TG				
T	FEET			



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NOTFORTION

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	ELECTF
ENERAL NOTES - MECHANICAL	E001
ANICAL	ED101
LL DEMO PLAN - MECHANICAL	ED201
LL PLAN - MECHANICAL	E101
ECHANICAL	E201
N - MECHANICAL	E301
CAL	E501
	E601

ELECTRICAL

SYMBOL LIST AND GENERAL NOTES - ELECTRICAL FIRST FLOOR OVERALL DEMO PLAN - LIGHTING FIRST FLOOR OVERALL DEMO PLAN - ELECTRICAL FIRST FLOOR OVERALL PLAN - LIGHTING FIRST FLOOR OVERALL PLAN - ELECTRICAL **ROOF OVERALL PLAN - ELECTRICAL** SINGLE LINE DIAGRAMS - ELECTRICAL SCHEDULES - ELECTRICAL



WATER RESISTANT

WATER RESISTANT BARRIER



estview High School Career Technical Education Renovation	0 NW 185th Ave tland, OR 97229	VER SHEET
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REVISIONS ST DRAWN BY BID SET STATUS 02.27.2020 DATE 19399 PROJECT N	K C	J HECK BY
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**SYMBOLS** 

# INTERIOR ELEVATION TAG

**BUILDING SECTION TAG** 

ASSEMBLY TAG

WINDOW TAG

WALL SECTION TAG

**GRID LINE/ GRID BUBBLE** 

ROOM TITLE

TEMPERED GLAZING **GRAPHIC SCALE** 

**REVISION TAG AND CLOUD** 

**KEYNOTE TAG** 











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NOTFORTION CONSTRUCTION

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Westview High School Career Technical Education Renovation	4200 NW 185th Ave Portland, OR 97229	KEY PLAN
TITLE # DATE	DESCRI	PTION
REVISIONS ST DRAWN BY BID SET STATUS 02.27.2020 DATE 19399 PROJECT NU <b>GCO</b>		J НЕСК ВҮ

1   SCOPE & ADMINISTRATION	6   TYPES OF CONSTRUCT
CODE PATH	FIRE RESISTANCE RATING RE
BUILDING CODE: THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC) MECHANICAL CODE: THE 2019 OREGON MECHANICAL SPECIALTY CODE PLUMBING CODE: THE 2017 OREGON PLUMBING SPECIALTY CODE ELECTRICAL CODE: THE 2017GON ELECTRICAL SPECIALTY CODE FIRE CODE: THE 2012 NTERNATIONAL FIRE CODE (IFC) AS AMENDED BY THE STATE OF OREGON FIRE MARSHAL AND TUALATIN VALLEY FIRE AND RESCUE ABATEMENT CODE: THE 1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS ACCESSIBLITY: ICC/ANSI A117.1-2009 ACCESSIBILITY MUNICIPAL CODE: BEAVERTON DEVELOPMENT CODE	TYPE II-B PRIMARY STRUCTURAL FRAME EXTERIOR BEARING WALLS INTERIOR BEARING WALLS STRUCTURAL FRAME SUPPORTING FLOORS & SECONDARY MEMBERS ROOF CONSTRUCTION
3   USE & OCCUPANCY	FIRE RESISTANCE RATI
OCCUPANCY GROUPS	FIRE SEPARATION DISTANCE
E: EDUCATION	
5   BUILDING CONSTRUCTION	X > 30
CONSTRUCTION TYPE	
CONSTRUCTION TYPE:II-B, SPRINKLERED	
HEIGHT IN FEET	
NO CHANGES.	INTERIOR EXIT STAIRWAYS & RAMPS & EXIT PASSAGEWAY
NUMBER OF STORIES	— Е В
NO CHANGES	9   FIRE PROTECTION SYS
GROSS BUILDING AREA SUMMARY	- :
NO CHANGES	- SPRINKLER SYSTEM IS EXISTING. ADJUS TO MAINTAIN COVERAGE IN NEW CEILIN
FIRE-RATING REQUIREMENTS FOR BUILDING ELEMENTS	_

CLASSROOM TO SHOP AREA: 1-HR

LASER LOAD CHANGED (1.25 OCCUPANTS ADDED) -157 SF LOAD CHANGED (2.5 OCCUPANTS ADDED) -LOAD CHANGED (5 OCCUPANTS ADDED) LOAD UNCHANGED 866 SF LOAD UNCHANGED LOAD CHANGED (2.5 OCCUPANTS ADDED) -LOAD CHANGED (OCCUPANTS ADDED) -╔╼╼╼╼╞╤╧╡ 44' COMMON PATH 6.64 6.65 OF TRAVEL 155 165 



![](_page_3_Figure_0.jpeg)

D1.01 SCALE: 1/4" = 1'-0"

![](_page_3_Figure_3.jpeg)

#### <sup>3</sup> DEMOLITION PLAN - PHOTO LAB D1.01 SCALE: 1/4" = 1'-0"

![](_page_3_Figure_6.jpeg)

<sup>2</sup> DEMOLITION REFLECTED CEILING PLAN - STICKER ROOM

DEMOLITION PLAN - STICKER ROOM D1.01 SCALE: 1/4" = 1'-0"

## **DEMOLITION NOTES**

COORDNATE SALVAGE, REINSTALLATION, OR DISPOSAL OF ALL DEMOLISHED ITEMS AND REMOVED EQUIPMENT WITH SCHOOL.

#### KEYNOTE LEGEND $\overline{}$

- REMOVE WALL, COMPLETE FROM FLOOR TO STRUCTURE ABOVE, D1 INCLUDING ALL DOORS, WINDOWS, TRIM, EQUIPMENT, ETC. SEE NEW WORK PLANS FOR EXTENTS. CAP ELECTRIC AND DATA AT CEILING, SEE MEP DRAWINGS.
- REMOVE DOOR, INCLUDING FRAME AND TRIM. COORDINATE WITH D2 SCHOOL FOR DISPOSAL OR REUSE. REMOVE RELITE, INCLUDING FRAME AND TRIM, AND PORTION OF D3
- WALL BELOW FOR INSTALLATION OF DOOR. REMOVE CASEWORK, COUNTER, TRIM, AND ALL ACCESSORIES. D4
- REMOVE SINK AND ALL ACCESSORIES. CAP PLUMBING PER MEP D5 DRAWINGS. COORDINATE WITH SCHOOL FOR DISPOSAL OR REUSE.
- REMOVE SINK AND ALL ACCESSORIES AND SALVAGE FOR D6
- REINSTALLATION. CAP PLUMBING PER MEP DRAWINGS. D7 REMOVE ALL WALL MOUNTED EQUIPMENT, WALL BASE, ELECTRICAL ACCESSORIES, ETC FROM BOTH SIDES OF WALL AND RETAIN FOR REINSTALLATION. REMOVE GYPSUM BOARD FROM BOTH SIDES OF WALL, STUDS TO REMAIN. DO NOT DISTURB EXISTING ELECTRICAL, MECHANICAL, OR PLUMBING IN WALL, SUPPORT AND PROTECT AS NEEDED DURING CONSTRUCTION.
- REMOVE FLOOR FINISHES AND WALL BASE. PREP SURFACE FOR D8 NEW FINISH.
- REMOVE CEILING AND LIGHT FIXTURES. CAP ELECTRICAL AND DATA D9 FOR RELOCATION. BRACE DIFFUSERS AND/OR RETURNS FOR REINSTALLATION INTO NEW CEILING AS NECESSARY. SEE MEP DRAWINGS.
- REMOVE SOFFIT OR BULKHEAD. D10

D13

D14

- D11 REMOVE RELITE INCLUDING FRAME AND TRIM. REMOVE PORTION OF WALL FOR INSTALLATION OF NEW RELITE. SEE D12
  - RELITE SCHEDULE AND NEW WORK PLANS FOR EXTENTS. REMOVE DOOR AND FRAME, SALVAGE DOOR FOR REINSTALLATION. VERIFY EXISTING CONSTRUCTION. NOTIFY ARCHITECT IF EXISTING DOES NOT MATCH PROPOSED ADJACENT AS DRAWN.

![](_page_3_Figure_23.jpeg)

Otak

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![](_page_3_Picture_26.jpeg)

![](_page_3_Figure_27.jpeg)

![](_page_3_Figure_28.jpeg)

![](_page_3_Figure_29.jpeg)

#### **DOOR SCHEDULE**

![](_page_4_Figure_4.jpeg)

![](_page_4_Figure_5.jpeg)

FRAME

![](_page_4_Figure_6.jpeg)

![](_page_4_Figure_7.jpeg)

3

2 -

ASSEMBLY: WP 1072

ASSEMBLY: WP1072

![](_page_4_Figure_8.jpeg)

ASSEMBLY NOTES

PROVIDE FIRE BLOCKS AND DRAFT STOPS PER 2014 OREGON 1 STRUCTURAL SPECIALTY CODE SECTION 718.

- 2. PROVIDE ADDITIONAL FRAMING, BLOCKING, AND FINISHES AS REQUIRED FOR PLUMBING ACCESS PANELS.
- 3. PROVIDE ADDITIONAL BLOCKING AS REQUIRED TO SUPPORT SHELVING, TOWEL BARS, RAILINGS, AND ALL OTHER WALL-MOUNTED ACCESSORIES AND EQUIPMENT.
- 4. PROVIDE UL APPROVED THROUGH PENETRATION AND MEMBRANE PENETRATION FIRESTOP SYSTEMS AS REQUIRED BY CODE AT ALL ELECTRICAL, PLUMBING, AND MECHANICAL PENETRATIONS IN FIRE-RATED ASSEMBLIES. SEE 9/A4.01 AND 10/A4.01.

![](_page_4_Picture_14.jpeg)

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![](_page_4_Picture_16.jpeg)

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GA FILE NO. WP 1072 ONE LAYER 5/8" TYPE X GYPSUM

WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF 3-5/8", 18 MIL STEEL STUDS 24" O.C. WITH 1" TYPE S SCREWS 8" O.C. AT VERTICAL JOINTS AND 12" O.C. AT FLOOR AND CEILING RUNNERS AND INTERMEDIATE STUDS. JOINTS STAGGERED 24" ON EACH SIDE AND ON OPPOSITE SIDES

FIRE: 1-HR STC: NA

 (1) 5/8" TYPE 'X' GYPSUM BOARD
 EACH SIDE
 GA FILE NO. WP 1072
 ONE LAYER 5/8" TYPE X GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF 3-5/8", 18 MIL STEEL STUDS 24" O.C. WITH 1" TYPE S SCREWS 8" O.C. AT VERTICAL JOINTS AND 12" O.C. AT FLOOR AND CEILING RUNNERS AND INTERMEDIATE STUDS. JOINTS STAGGERED 24" ON EACH SIDE AND ON OPPOSITE SIDES

6" METAL STUD WALL - 1-HR RATED

FIRE: 1-HR STC: NA

FIRE: NR STC: NA

Westview High School Career Technical Education Renovation	4200 NW 185th Ave Portland, OR 97229	CONSTRUCTION ASSEMBLIES AND SCHEDULES					
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![](_page_5_Picture_1.jpeg)

![](_page_5_Figure_2.jpeg)

![](_page_5_Picture_3.jpeg)

![](_page_5_Picture_7.jpeg)

#### NEW WORK PLAN NOTES 1. ALL DIMENSIONS ARE TO FACE OF STUD AND CENTERLINE OF ROUGH OPENING

UNLESS OTHERWISE NOTED.

- 2. FOR ARCHITECTURAL ABBREVIATIONS & SYMBOL LEGEND SEE SHEET G0.00.
- 3. FOR CONSTRUCTION ASSEMBLY DESCRIPTIONS AND DETAILS SEE SHEET A1.01.
- 4. FOR ROOM FINISH SCHEDULE AND FOR DOOR AND WINDOW TYPES AND SCHEDULES SEE SHEET A1.01.
- 5. FOR MECHANICAL SYSTEMS & EQUIPMENT SEE MECHANICAL DRAWINGS.
- 6. FOR ELECTRICAL LIGHTING & EQUIPMENT SEE ELECTRICAL DRAWINGS.
- 7. COORDINATE SIGNAGE CHANGES AT LASER CUTTER ROOM AND STICKER ROOM. SEE SPECIFICATIONS FOR SIGNAGE STANDARDS, COORDINATE REVISED ROOM NAMES AND NUMBERS WITH SCHOOL.
- 8. RELOCATED SPRINKLER HEADS AS NECESSARY IN NEW CEILINGS TO MAINTAIN COVERAGE.

NEW 12X12 VCT FLOORING ARMSTRONG - SANDY BEACH

## LEGEND

#### FLOOR PLAN

- NEW FLOORING EXTENTS NEW 12X12 VCT FLOORING ARMSTRONG - ACCENT COLOR TBD

#### REFLECTED CEILING PLAN

MAT | 10' - 0" CEILING TAG - MATERIAL AND HEIGHT AFF

- EXISTING ACOUSTIC TILE CEILING TO REMAIN
- NEW 2X4 ACOUSTIC CEILING TILE ARMSTRONG SCHOOL ZONE FINE FISSURED 1714
- NEW LIGHT FIXTURE SEE ELECTRICAL
- EXISTING LIGHT FIXTURE SEE ELECTRICAL
- FIRE LIFE/SAFETY

 $\otimes$ 

LIGHTING FIXTURES

EXIT SIGN

# **KEYNOTE LEGEND**

- NEW WALL INCLUDING WALL BASE. FINISH TO EXCEED LEVEL 4. INSTALL SALVAGED DOOR IN NEW PAINTED HOLLOW METAL FRAME. A2
- A3 NEW INTERIOR HOLLOW METAL RELITE, SEE RELITE SCHEDULE FOR TYPE.
- PATCH GYPSUM BOARD AS REQUIRED TO MATCH EXISTING A4 ADJACENT FINISH, FINISH TO EXCEED LEVEL 4.
- A5 VCT FLOORING TO MATCH ADJACENT EXISTING IN COLOR AND PATTERN. EXPAND DEMOLITION EXTENTS SO THAT FULL TILES ARE REPLACED WHERE POSSIBLE. ARMSTRONG STANDARD EXCELON 51929 SANDY BEACH (FIELD COLOR) AND 51858 SANDRIFT WHITE (ACCENT COLOR).
- 2X4 ACOUSTIC TILE CEILING TO MATCH EXISTING. ARMSTRONG A6 SCHOOL ZONE FINE FISSURED 1714. SEE MEP DRAWINGS FOR LIGHTING AND MECHANICAL EQUIPMENT LOCATIONS.
- RELOCATE EXISTING SINK, REINSTALL WITH BLOCKING AS A7 REQUIRED.
- NEW LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS, TYP. A9
- NEW EXIT SIGN, SEE ELECTRICAL. A10
- A11 WINDOW BLINDS. A12 METAL CORNER PROTECTOR.

A13

NEW GYPSUM BOARD ON EXISTING STUDS TO ACHIEVE 1HR RATED WALL. REINSTALL ALL WALL MOUNTED EQUIPMENT, WALL BASE, ELECTRICAL ACCESSORIES, ETC.

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TITLE

# DATE DESCRIPTION

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Otak

![](_page_5_Figure_43.jpeg)

STAMP

![](_page_5_Picture_45.jpeg)

![](_page_5_Picture_46.jpeg)

![](_page_5_Picture_47.jpeg)

![](_page_6_Figure_1.jpeg)

![](_page_7_Figure_0.jpeg)

MAX. VERT. SPAN OF ASSEMBLY

![](_page_7_Figure_4.jpeg)

5/8" GYPSUM BOARD, BOTH SIDES TYPE 'X' AT 1-HR RATED WALL

- SEALANT AT 1-HR RATED WALL, BOTH SIDES - HOLLOW METAL FRAME, PAINT RATED AT 1-HR RATED WALL HOLLOW METAL STOP, PAINT RATED AT 1-HR RATED WALL

METAL STUD, SEE WALL TYPE FOR SIZE AND SPACING - 1/4" GLAZING RATED GLAZING AT 1-HR RATED WALL

![](_page_7_Picture_8.jpeg)

![](_page_7_Figure_9.jpeg)

5/8" TYPE 'X' GYPSUM BOARD INSTALLED PER RATED WALL REQUIREMENTS

BATT INSULATION PER WALL TYPE

- METAL STUD, SEE WALL TYPE FOR SIZE AND SPACING

PIPE RISER

CAULKING AND RELATED MATERIALS SPECIFIED IN UL SYSTEMS MUST BE APPROVED MATERIALS TO MEET THE REQUIREED FIRE RATING.

\* UL SYSTEM NO WL1001 AT METALLIC PIPE OR CONDUIT CONDITIONS

UL SYSTEM NO WL2003 AT NON-METALLIC PIPE OR CONDUIT CONDITIONS

![](_page_7_Figure_17.jpeg)

5/8" GYPSUM BOARD, BOTH SIDES TYPE 'X' AT 1-HR RATED WALL SEALANT AT 1-HR RATED WALL, BOTH SIDES - METAL STUD, SEE WALL TYPE FOR SIZE AND SPACING - 1/4" GLAZING RATED GLAZING AT 1-HR RATED WALL SEALANT AT 1-HR RATED WALL, BOTH SIDES HOLLOW METAL STOP, PAINT RATED AT 1-HR RATED WALL - HOLLOW METAL FRAME, PAINT RATED AT 1-HR RATED WALL - 5/8" GYPSUM BOARD, BOTH SIDES TYPE 'X' AT 1-HR RATED WALL

PLUMBING PENETRATION AT 1-HR WALL A4.01 SCALE: 1 1/2" = 1'-0"

![](_page_7_Figure_20.jpeg)

![](_page_7_Figure_21.jpeg)

![](_page_7_Figure_22.jpeg)

SEALANT AT 1-HR RATED WALL, BOTH SIDES METAL STUD, SEE WALL TYPE FOR SIZE AND SPACING 5/8" GYPSUM BOARD, BOTH SIDES TYPE 'X' AT 1-HR RATED WALL

![](_page_7_Picture_24.jpeg)

![](_page_7_Picture_25.jpeg)

![](_page_7_Figure_26.jpeg)

![](_page_8_Figure_0.jpeg)

![](_page_8_Figure_3.jpeg)

## CONCRETE GENERAL NOTES

WORK IS TO BE DONE IN ACCORDANCE WITH THE 2019 OSSC.

- 2. CONCRETE TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF F'C = 4000PSI.

![](_page_8_Picture_13.jpeg)

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![](_page_8_Picture_15.jpeg)

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NOTE: This is a	a standard symbol list and not all items listed may be used.		
Abbroviatio	one	General	
(A)	ABANDON IN PLACE	<u>Oenerai</u>	
AFF	ABOVE FINISHED FLOOR		CONTINUATION
AP	ACCESS PANEL		
&			
A Ø	AQUASTAT, ARCHITECT, ANCHOR, AMPHERE AT		EQUIPMENT IDENTIFICATION
BFP	BACKFLOW PREVENTER	200,1101	
BFF	BELOW FINISHED FLOOR	$\bullet$	EXTENT OF DEMOLITION
BTUH	BRITISH THERMAL UNITS PER HOUR		
BLDG		_	
CO	CLEANOUT	X	FIXTURE TAG (LEVEL BELOW FIXTURE)
CW	COLD WATER		
CD	CONDENSATE DRAIN	$\langle \mathbf{x} \rangle$	KEYED NOTE
CONT.			
CFH			
(X)	DEMOLISH	$\bullet$	POINT OF CONNECTION
DW	DISHWASHER, DOMESTIC WATER		
DET	DOMESTIC EXPANSION TANK		DEMOLISH
DCVA	DOUBLE CHECK VALVE ASSEMBLY		DEMOLICIT
DN DS			
DSN	DOWNSPOUT NOZZLE		EXISTING WORK
D	DRAIN		
DFU	DRAINAGE FIXTURE UNIT		
DWV	DRAINAGE, WASTE AND VENT		
DF EWC	DRINKING FOUNTAIN ELECTRIC WATER COOLER		
EWH	ELECTRIC WATER HEATER	<i>—/ / / </i>	PIPE OR CONDUIT BELOW GRADE
(E)	EXISTING		
FT	FEET	Piping Fitting	<u>IS</u>
FFE	FINISHED FLOOR ELEVATION	ГЛ АР	
			ACCESS PANEL
FCO	FLOOR FLOOR CLEANOUT		
FD	FLOOR DRAIN		ΔΟΠΑΣΤΑΤ
FV	FLUSH VALVE	<u>T</u>	AQUASTAT
,	FOOT, FEET		
(F)	FUTURE		BLIND FLANGE
GPM CW/H	GALLONS PER MINUTE		
GWH	GAS WATER HEATER HEATING VENTILATING AND AIR CONDITIONING		
HZ	HERTZ		CAP
HB	HOSE BIBB		
HW	HOT WATER		CLEANOUT TO GRADE
HWFU	HOT WATER FIXTURE UNIT	+ <u>cong</u>	CELANOUT TO GRADE
HWR	HOT WATER RETURN		
IN, " IM/	INCHES INDIRECT WASTE	>	CONCENTRIC REDUCER
INV	INVERT ELEVATION		
L	LAVATORY	DON	
MIN	MINIMUM		DOWNSPOUT NOZZLE
MX	MIXING VALVE		
MS	MOP SINK	~	
(N) N			
NIC	NOT IN CONTRACT		
NTS	NOT TO SCALE	——• <u>FCO</u>	FLOOR CLEANOUT
#	NUMBER		
NO.	NUMBER	FD	
OD			FLOOR DRAIN
	OWNER FURNISHED, OWNER INSTALLED		
PLBG	PLUMBING	FS FS	FLOOR SINK
Р	PLUMBING, PUMP		
POC	POINT OF CONNECTION		
PSI	POUNDS PER SQUARE INCH	<b></b>	FLOW DIRECTION
PD	PRESSURE DROP, PLUMBING DEMOLITION, PUMPED DISCHARGE		
0TY		h	
RWL	RAINWATER LEADER		HUSE DIDD / WALL TIDKANI
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER		
(R)	RELOCATE / RELOCATED LOCATION		OVERFLOW ROOF DRAIN
RD		J	
SAN	SANITART SERVICE BOX		
SHT	SHEET	ວ	PIPE DROP
SA	SHOCK ARRESTOR		
SOV	SHUT OFF VALVE	0	PIPE RISE
S, SK		5	
SF			
SD SD	SUMP PUMP, STATIC PRESSURE	©	PUMP
TEMP	TEMPERATURE		
TP	TRAP PRIMER, TOTAL PRESSURE	~ RD	
TYP	TYPICAL	<u> </u>	
U, UR			
		Ş	SHOCK ABSORBER / WATER HAMMER ARRESTOR
		L	
W	WASTE		
WC	WATER COLUMN, WATER CLOSET	<u> </u>	STRAINER
WHA	WATER HAMMER ARRESTOR		
WH		<u>ل</u> ام	
WSFU		⊺↓	TAF NELIEF VALVE WITH MME TO DRAIN
VV/	VVII 🗖		
			TEE DOWN ON PIPE
		o	TEE UP ON PIPE
		, VTR	
		(0)	
		<u></u> <u>wco</u>	WALL CLEANOUT

## PLUMBING SYMBOL LIST

Piping Syster	<u>ns</u>
	COLD WATER PIPING
D	CONDENSATE / INDIRECT DRAIN PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
2#G	NATURAL GAS PIPING, 2 LB
G	NATURAL GAS PIPING, 7" WC PRESSURE
OD	OVERFLOW DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
	SANITARY VENT PIPING
	SANITARY WASTE OR SOIL PIPING ABOVE GRADE OR FINISHED FLOOR
	SANITARY WASTE OR SOIL PIPING BELOW GRADE OR FINISHED FLOOR
SD	STORM DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
— — SD — —	STORM DRAIN PIPING BELOW GRADE OR FINISHED FLOOR
TP	TRAP PRIMER PIPING
Valves	
BFP	BACKFLOW PREVENTER
—ī—	CHECK VALVE
—⋈—	SHUTOFF VALVE, GENERAL

			PLU	MBING FI	<b>XTURE SCHEDULE</b>					
				BAS	IS OF DESIGN		CONNE	ECTION		
SYMBOL	FIXTURE TYPE	DESCRIPTION	MFR	MODEL	ACCESSORIES	W	V	CW	НW	NOTES
EW-1	EYE WASH	DECK MOUNTED	HAWS	8904	MIXING VALVE: HAWS 9201EFE			1/2"	1/2"	LOCATE EYEWASH ON THE RIGHT HAND SIDE OF THE BACK SPLASH BETWEEN THE EXISTING FAUCETS
RELOCATED SINK	WALL HUNG SINK					2"	1-1/2"	1/2"	1/2"	CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION. NOTE 1
NOTES:		•				-	-			
1	SEE ARCHITECTURAL D	RAWINGS FOR ALL FIXTURE MOUNTING	HEIGHTS AND LOCATIONS.							
*	UNLESS NOTED OTHER	WISE ON DRAWINGS								

![](_page_9_Picture_6.jpeg)

#### SHEET INDEX

P001	SYMBOL LIST AND GENERAL NOTES - PLUMBING
PD201U	UNDERGROUND OVERALL DEMO PLAN - PLUMBING
PD201	FIRST FLOOR OVERALL DEMO PLAN - PLUMBING
P201U	UNDERGROUND OVERALL PLAN - PLUMBING
P201	FIRST FLOOR OVERALL PLAN - PLUMBING

![](_page_10_Figure_0.jpeg)

![](_page_10_Figure_2.jpeg)

# **UNDERGROUND DEMOLITION PLAN - PLUMBING**

0' <u>4' 8' 1</u>6' 1/8" = 1'-0"

\_\_\_\_\_

Otak Archit 808 SW Third Avenue Portland main 50 ww FILED PROFE 84929 Aunual Office 84929 Aunual Office 8	RFACE E E R I N G
Westview High School Career Technical Education Renovati 4200 NW 185th Ave Portland, OR 97229	UNDERGROUND OVERALL DEMO PLAN - PLUMBING
TITLE # DATE DESCRIF	PTION
REVISIONS TK JN DRAWN BY C 100% CD/PERMIT SET STATUS 02.27.2020 DATE 19399 PROJECT NUMBER PDD200 © 2017 OTAK, INC.	M HECK BY

![](_page_10_Picture_8.jpeg)

![](_page_11_Figure_1.jpeg)

![](_page_11_Figure_4.jpeg)

Contact Todd Kolibaba Project 2019-0486 CONTACT Todd Kolibaba 100 SW Main Street, Suite Portland, OR 97204 TEL 503 382 2266	tects, Inc. e, Suite 300 , OR 97204 3.287.6825 w.otak.com
Action View High School Career Technical Education Renovation 4200 NW 185th Ave Portland, OR 9729	FIRST FLOOR OVERALL DEMO PLAN - PLUMBING
# DATE DESCRI REVISIONS TK JI DRAWN BY C 100% CD/PERMIT SET	PTION M HECK BY
02.27.2020 DATE 19399 PROJECT NUMBER <b>PDD20</b> © 2017 OTAK, INC. If this drawing is not 24" x 3 reduced/enlarged. Scale ac	6", it has been cordingly.

![](_page_11_Picture_7.jpeg)

#### 

0' 4' 8' 16' 1/8" = 1'-0"

![](_page_12_Figure_1.jpeg)

Vector High, Greyscale \_\_\_\_\_ 100% Zoom Center, 36  $\boldsymbol{\times}$ 24 46% Zoom Center,  $\sim$  $\overline{}$ ×  $\overline{}$  $\sim$ 

#### 

Otak Arch 808 SW Third Aven Portlan main 5 w STAMP	Litects, Inc. ue, Suite 300 d, OR 97204 503.287.6825 ww.otak.com ESCO N LIN 1/20 ERFAC
ENGI PROJECT 2019-0486 CONTACT Todd Kolibak 100 SW Main Street, Sui Portland, OR 97204 TEL 503.382.2266 www.interfaceengineerin	N E E R I N ba te 1600 g.com
Westview High School Career Technical Education Renc 4200 NW 185th Ave Portland, OR 97229	UNDERGROUND OVERALL PLAN - PLUMBING
TITLE # DATE DESCF	RIPTION
REVISIONS TK DRAWN BY 100% CD/PERMIT SET STATUS 02.27.2020 DATE 19399 PROJECT NUMBER <b>POJECT NUMBER</b>	JM CHECK BY

zo	∝⊢т

Plot Date: 2/27/2020 4:15:22 PM

![](_page_13_Figure_2.jpeg)

PROJECT 2019-0486 CONTACT Todd Kolibaba 100 SW Main Street, Suite Portland, OR 97204 TEL 503.382.2266 www.interfaceengineering.	, OR 97204 , OR 97204 13.287.6825 w.otak.com 20 <b>R F A C</b> 1600 1600
Westview High School Career Technical Education Renovation 4200 NW 185th Ave Portland, OR 97229	FIRST FLOOR OVERALL PLAN - PLUMBING
TITLE # DATE DESCRI	PTION
REVISIONS TK JI DRAWN BY C 100% CD/PERMIT SET STATUS 02.27.2020 DATE 19399 PROJECT NUMBER DOOL	M HECK BY

![](_page_13_Picture_4.jpeg)

NOTE: This is a s	standard symbol list and not all items listed may be used.	
Abbreviati	ons	Dampers
AFF		Dumporo
AD	ACCESS DOOR	
A/C	AIR CONDITION(ED)	
BDD	BACKDRAFT DAMPER	
BFP	BACKELOW PREVENTER	
BFF	BELOW FINISHED FLOOR	
BHP	BRAKE HORSEPOWER	
CD	CEILING DIFFUSER	Diffusers and Grilles
CV	CHECK VALVE	
COP	COEFFICIENT OF PERFORMANCE	100 DIFFUSER OR GRILLE IDENTIFICATION
CW	COLD WATER	
CD	CONDENSATE DRAIN	
CU	CONDENSING UNIT	🖂 🚫 EXHAUST AIR
CONT.	CONTINUATION	
DB	DECIBEL	
DIA	DIAMETER	C RETURN AIR
DX	DIRECT EXPANSION	
D	DROP	
DB	DRY BULB	
EFF	EFFICIENT	
ELECT	ELECTRICAL	Ductwork Fittings
EER	ENERGY EFFICIENCY RATING	
EAT	ENTERING AIR TEMPERATURE	ACOUSTICALLY LINED DUCT (SIZES SHOWN ARE NET INSIDE)
EWT		
EXH	EXHAUST	
EF		
FI		
FLA	FULL LOAD AMPS	
GAL		
GPH		
GPM HD		
итр		
HTG	HEATING	
HP	HORSEPOWER	
HWC	HOT WATER COIL	
IN	INCHES	
ID	INSIDE DIAMETER	
IE	INVERT ELEVATION	<b>~ </b>
KW	KILOWATT	
LH	LATENT HEAT	- +
LAT	LEAVING AIR TEMPERATURE	
MAX	MAXIMUM	
MIN	MINIMUM	
MA	MIXED AIR	
MD	MOTORIZED DAMPER	
N/A	NOT APPLICABLE	
NIC	NOT IN CONTRACT	
NTS	NOT TO SCALE	$\int_{1}$ $f \rightarrow \frac{1}{2}$ RECTANGULAR MAIN WITH RECTANGULAR BRANCH
NO.	NUMBER	
00	ON CENTER	
OBD		
FII LBS		RECTANGULAR OFFSET LESS THAN 15%%d
PSI	POUNDS PER SQUARE INCH	
PD	PRESSURE DROP	
PRV	PRESSURE REDUCING VALVE	
QTY	QUANTITY	
RET	RETURN	
RA	RETURN AIR	
RPM	REVOLUTIONS PER MINUTE	
R	RISE	
SEER	SEASONAL ENERGY EFFICIENCY RATING	
SH	SENSIBLE HEAT	
SOV	SHUT OFF VALVE	
SF	SQUARE FEET	
SP	STATIC PRESSURE	
SA	SUPPLY AIR	
T, TEMP	TEMPERATURE	
TD		
MBH		→→→
		ν ⊢⊐μ
IP V		
V		〕 上一 祊 MITERED ELBOW WITH TURNING VANES
۷۷ \//R		
VVD \\\/	WITH	$\mathcal{J} \longrightarrow \mathcal{J}$ RADIUSED ELBOW
V V /		
		General
		30X16 RECTANGULAR DUCT SIZING

30"Ø ROUND DUCT SIZING

 $\sim$ 

## **GENERAL MECHANICAL NOTES**

- A. CONDITIONS SHOWN ON THE PLANS RELATIVE TO THE WORK TO BE PERFORMED ARE BASED ON THE BEST INFORMATION AVAILABLE BUT ARE SUBJECT TO VERIFICATION. VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES. CORRECT DEFICIENCIES CAUSED BY FAILURE TO PERFORM SUCH VERIFICATIONS AT NO EXPENSE TO OWNER. IMMEDIATELY NOTIFY ARCHITECT OF CONDITION IN CONFLICT WITH THE PLANS.
- B. COORDINATE INSTALLATION OF DUCTWORK, PIPING, FIXTURES, EQUIPMENT, ETC. WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND FIRE PROTECTION SYSTEMS PRIOR TO INSTALLATION.
- C. PROVIDE CEILING ACCESS PANELS FOR ALL DUCT DAMPERS OR CONCEALED VOLUME DAMPER REGULATORS LOCATED ABOVE INACCESSIBLE CEILING SYSTEMS. MAINTAIN FIRE RATINGS WHERE REQUIRED.
- D. COORDINATE EXACT LOCATION OF ALL CEILING GRILLES AND DIFFUSERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, ARCHITECTURAL INTERIOR ELEVATIONS, LIGHTING, AND STRUCTURAL CONDITIONS.ARCHITECTURAL PLANS TO PROVIDE FINAL GRILLE AND DIFFUSER LOCATIONS IN THE EVENT OF A CONFLICT. E. ALL WORK PERFORMED AND MATERIAL SUPPLIED SHALL CONFORM TO ALL STATE
- AND LOCAL CODES AND ALL OTHER APPLICABLE LAWS AND STATE REGULATIONS INCLUDING APPLICABLE SEISMIC ZONE REQUIREMENTS. F. MAINTAIN ALL OUTSIDE AIR INTAKE OPENINGS MINIMUM 10'-0" FROM ALL MECHANICAL
- VENTS, PLUMBING VENTS AND EXHAUST FANS. G. PAINT ALL DIFFUSERS, REGISTERS AND GRILLES PER ARCHITECTURAL
- INSTRUCTIONS. ANY GRILLES INSTALLED IN GYPSUM BOARD WALLS AND CEILINGS ARE TO BE FURNISHED WITH FACTORY MILL OR PRIMER FINISH, READY FOR PAINTING IN THE FIELD. H. DIFFUSER/GRILLE RUNOUTS ARE SAME SIZE AS DIFFUSER/GRILLE NECK SIZE UNLESS
- OTHERWISE NOTED ON PLANS. MAINTAIN REQUIRED CLEARANCES TO COMBUSTIBLE CONSTRUCTION AS SPECIFIED 1 IN THE LISTING AND MANUFACTURER'S INSTRUCTIONS.
- EQUIPMENT TO BE ACCESSIBLE FOR INSPECTION, SERVICE, REPAIR AND REPLACEMENT WITHOUT REMOVING WITHOUT REMOVING PERMANENT CONSTRUCTION, OTHER EQUIPMENT, VENTING SYSTEMS, PIPING, OR DUCTS CONNECTED TO THE EQUIPMENT BEING SERVICED.
- K. MAINTAIN MINIMUM DISTANCE OF 3'-0" BETWEEN ALL EXHAUST OUTLETS AND DOORS/OPERABLE WINDOWS.
- PROVIDE ONE BALANCING DAMPER FOR EACH AIR INLET/ OUTLET SHOWN ON PLAN. WHERE DAMPER IS LOCATED ABOVE A HARD LID CEILING, PROVIDE REMOTE CABLE CONTROL FOR DAMPER.
- M. FOR ALL DUCT CONNECTIONS TO MECHANICAL EQUIPMENT, PROVIDE TRANSITION FROM DUCT SIZE SHOWN TO EQUIPMENT CONNECTION SIZE.
- N. INSTALL ALL EQUIPMENT SUCH THAT MANUFACTURER RECOMMENDED CLEARANCES
- ARE MAINTAINED. O. DETAILS APPLY WHETHER REFERENCED ON THE DRAWINGS OR NOT.

![](_page_14_Picture_20.jpeg)

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INTERFACE ENGINEERING

**PROJECT** 2019-0486 **CONTACT** John Kotas

100 SW Main Street, Suite 1600 Portland, OR 97204 TEL 503.382.2266

www.interfaceengineering.com

![](_page_14_Picture_28.jpeg)

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# **SHEET INDEX**

M001 M002	SYMBOL LIST AND GENERAL NOTES - MECHANICAL SCHEDULES - MECHANICAL
MD101	FIRST FLOOR OVERALL DEMO PLAN - MECHANICAL
M101	FIRST FLOOR OVERALL PLAN - MECHANICAL
M201	ENLARGED PLAN - MECHANICAL
M301	ROOF OVERALL PLAN - MECHANICAL
M601	DETAILS - MECHANICAL

SYMBOL

SYMBOL

SYMBOL

## AFTER-FILTER SCHEDULE

DESCRIPTION

AF-1 7,000 CFM HEPA AFTER FILTER WITH HOUSING, NOMINAL FILTER SIZE 24"X24"; OVERALL FILTER HEIGHT IS (2) FILTERS, OVERALL FILTER WIDTH IS MAX PRESSURE DROP = 1.35" W.G. AT 8,000 CFM (NOTE: CATALOG DATA NOT AVAILABLE FOR 7,000 CFM) FILTER SHALL BE MOUNTED ON CONTRACTOR FIELD-FABRICATED SUPPORTS. PROVIDE SEISMIC BRACING. ESTIMATED WEIGHT OF FILTERS AND HOUSING IS 360 LBS; CONTRACTOR TO CONFIRM.

# ABORT GATE SCHEDULE

ABORT GATE IN ACCORDANCE WITH NFPA 664 STANDARDS. ABORT GATE SHALL BE WELDED GALVANIZED STEEL WITH 14-GAUGE BODY AND 16-GAUGE COWL. PROVIDE REINFORCED ANGLE IRON FOR STABILITY. DIVISION 26 TO PROVIDE 120 VAC FROM SPARK DETECTION PANEL TO ABORT GATE. PROVIDE BIRD SCREEN ON COWL. MOUNT ON FIELD FABRICATED SUPPORTS. PROVIDE SEISMIC BRACING.

# DUST COLLECTOR SCHEDULE

DESCRIPTION

 DC-1
 SHAKER DUST COLLECTOR

 25 HP DIRECT DRIVE BLOWER MOTOR

 NON-SPARKING AMCA "C" BLOWER, 960 SQ.FT. FILTER AREA, 1.5" WIDE TYPE FILTER SPACING, CATTON SATTEEN 4-24 MULTI-POCKET

 MODULES 24"X30", MAGNETIC STARTERS FOR BLOWER AND SHAKER, FACTORY WIRED CONTROLLER IN NEMA 4 ENCLOSURE, (2) STEEL

 55 GALLON DRUMS, PRIMED WITH EPOXY AND EXTERIOR FINISHED WITH STERNVENT GRAY URETHANE ENAMEL.

 OPTIONS: NFPA EXPLOSION RELIEF DOOR, IBC SEISMIC AND WIND CONSTRUCTION

 DIMENSIONS: 159.5"H x 83"W x 71"D WEIGHT: 4,600 LB

 7,000 CFM @ 12" WG EXTERNAL STATIC PRESSURE

	FAN SCHEDULE														
		BASIS O	F DESIGN							ELEC	TRIC	AL			
						AIR							APPROX.	MAX	
						FLOW	TSP	MAX	SOUND				DIMS	WT	
SYMBOL	AREA SERVED	MFR	MODEL	TYPE	DRIVE	(CFM)	(IN H2O)	RPM	(DB)	VOLTS	PH	MHP	(LxWxH)	(LBS)	NOTES
EF-1	LASER CUTTERS	GREENHECK	IP-5-01	FLAT BLADE MATERIAL HANDLING VENT SET	BELT	500	7	4564	83	208	3	1.5	16x25x25	150	1
EF-2	PLASMA CUTTER	GREENHECK	USF-16	UTILITY VENT SET	DIRECT	1600	0.5	846	55	120	1	1/2	30x23x32	150	1
NOTES:															

1 DIV. 26 TO PROVIDE INTERLOCKING RELAY WITH PLASMA / LASER CUTTER. EXHAUST FAN TO OPERATE WHEN RESPECTIVE PIECE OF EQUIPMENT IS ENABLED. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

DIFFUSER, REGISTER AND GRILLE SCHEDULE							
SYMBOL	ТҮРЕ	FACE	FRAME	DAMPER	BASIS OF DESIGN	REMA	
SG-1	SUPPLY GRILLE	LOUVERED	DUCT	-	TITUS 300FL	1	
NOTES							
1	COORDINATE DIFFUSER FINISH WITH ARCHITE	CT.					

s: 2/27/2020 3:36:07 PM

		BASIS O	FC	DESIGN		
6 (2) FILT	ERS,	CAMF	IL S	SAD3		
		SIDELOCK (	CR/	ANK-TYPE		
		HEPA/ULPA	SID	E-ACCESS		
	BASIS OF	DESIGN				
т	HANSEKTEK 24-180					
	ELEC	TRICAL		BASIS OF	DESIGN	
	480 V / 3 PH			STERNVENT		
	25 HP	MOTOR		DKPD 9	2025-2	
	1					

ARKS

Otak Architects, Inc. 0 tak Architects, Inc. 0 tak Architects, Inc. 0 tak Architects, Inc. 0 portland, OR 97204 main 503.287.6825 www.otak.com						
EXPIR STAMP PROJECT CONTACT 100 SW Ma Portland, C TEL 503.38 www.interfa	ES: 12/31/ INTE ENGIN 2019-0486 John Kotas in Street, Suite R 97204 2.2266 accengineering.	<b>RFACE</b> IEERING 1600				
Westview High School Career Technical Education Renovation	4200 NW 185th Ave Portland, OR 97229	SCHEDULES - MECHANICAL				
TITLE # DATE	DESCRI	PTION				
REVISIONS JK DRAWN BY 100% CD/PEF STATUS 02.27.2020 DATE 19399 PROJECT NU MCC © 2017 OTAK If this drawing	JI C RMIT SET MBER DO22 G, INC. is not 24" x 30	M HECK BY				

# Vector High, Greyscale \_\_\_\_\_ 100% Zoom Center, 36 $\boldsymbol{\times}$ 24 46% Zoom Center, $\sim$ $\overline{}$ × $\overline{}$ 1

Date: 2/27/2020 3:36:12 PM

![](_page_16_Figure_2.jpeg)

![](_page_16_Figure_3.jpeg)

## **1 DEMOLITION FLOOR PLAN - MECHANICAL**

0' 4' 8' 1/8" = 1'-0" 

Cotak Architects, Inc. Bos SW Third Avenue, Suite 300 Portland, OR 97204 main 503.287.6825 www.otak.com		itects, Inc. itects, Inc. it
	VESTVIEW TIGN 3Chool Career Lechnical Equication Renovation 4200 NW 185th Ave Portland, OR 97229	FIRST FLOOR OVERALL DEMO PLAN - MECHANICAL
REVISION JK DRAWN 100% C STATUS 02.27.20 DATE 19399 PROJEC MO © 2017 If this du reduced	ONS I BY D/PERMIT SET S D20 CT NUMBER ID 1 ( OTAK, INC. rawing is not 24" x d/enlarged. Scale a	JM CHECK BY

![](_page_17_Figure_0.jpeg)

![](_page_17_Figure_2.jpeg)

\_\_\_\_\_

# **1 FIRST FLOOR PLAN - MECHANICAL**

0' 4' 8' 1/8" = 1'-0"

![](_page_17_Figure_6.jpeg)

![](_page_18_Figure_0.jpeg)

Grey High, *'ector* >%00% 1 Coom N enter 36 × 4 Ň 46% Zoom Center,  $\frown$ × 

Plot Date: 2/27/2020 3:

# **1 ROOF PLAN - MECHANICAL**

0' 4' 8' 16 1/8" = 1'-0"

![](_page_19_Picture_4.jpeg)

1 M601 EF-1

✓ 12"Ø EXH DN WITH MOTORIZED DAMPER IN ROOF OPENING.

	<image/>
	Westview High School Career Technical Education Renovation         4200 NW 185th Ave         Portland, OR 97229         ROOF OVERALL PLAN - MECHANICAL
- Viciti	REVISIONS       JK     JM       DRAWN BY     CHECK BY       100% CD/PERMIT SET       STATUS       02.27.2020       DATE       19399       PROJECT NUMBER       MARANDA SALA       O2017 OTAK, INC.       If this drawing is not 24" x 36", it has been reduced/enlarged. Scale accordingly.

![](_page_19_Picture_8.jpeg)

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

NO SCALE

![](_page_20_Figure_4.jpeg)

#### NOTES:

A. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ROOF OPENINGS AND ROOFING DETAILS. B. SEAL ALL DUCT JOINTS AND SEAMS EXPOSED TO WEATHER. SEE SPECIFICATIONS FOR MATERIALS.

1" CLEARANCE

#### **4 DUCT PENETRATION THROUGH ROOF - ROUND DUCT** NO SCALE

ROOF DECK -----

![](_page_20_Figure_9.jpeg)

### **3 DUST COLLECTOR SECTION** 0' 2' 4'

	1/4" = 1'-0"	
A.	GENERAL NOTES THIS DETAIL ALL WELDED HOODS TO BE 16 GAUGE SHEET METAL, ALL WELDED CONSTRUCTION. PAINT INSIDE AND OUTSIDE OF HOOD AND OUTSIDE OF DUCT WITH COLOR AS SELECTED BY ARCHITECT.	HOOD DIMENSIONS FUME HOOD I: "A" = 2'-0" "B" = 4'-0" CFM = 1600 "C" = 4'-0"
	EXTEND SUPPORT AND ATTACH TO STRUCTURE AS REQUIRED CONNECT DUCT TO HOOD AS REQUIRED WELD SUPPORT TO HOOD ALL FOUR CORNERS	BEND SHEET METAL AROUND SO ALL EDGES ARE SMOOTH

#### **5 PLASMA CUTTER FUME HOOD** NO SCALE

STAMP PROJECT CONSULTANT	Dtak Archit Third Avenue Portland main 50 ww EED PROFE 84929 WHC OREGON MES, 20 MAES,	ECTS, INC. Solute 300 OR 97204 3.287.6825 w.otak.com Com 1600
Westview High School Career Technical Education Renovation	4200 NW 185th Ave Portland, OR 97229	DETAILS - MECHANICAL
TITLE # DATE	DESCRI	PTION
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AFC AFF ANSI AWG A	ABOVE FINISHED CEILING ABOVE FINISHED FLOOR AMERICAN NATIONAL STANDARDS INSTITUTE		COMBINATION ADJUSTABLE FREQUENCY DRIVE WITH SAFET
AFF ANSI AWG A	ABOVE FINISHED FLOOR	VFD	COMBINATION ADJUSTABLE FREQUENCT DRIVE WITH SAFET
ANSI AWG A			DISCONNECT SWITCH
AWG			
A			
		×4	COMBINATION MOTOR STARTER/FUSED DISCONNECT SWITC
		<b>—</b> .	
CA	CABLE		HEAVY DUTY FUSED DISCONNECT SWITCH
CLG		Ŋ	MOTOR CONNECTION
	COPPER	_	
dB	DECIBEI		NON-FUSED DISCONNECT SWITCH
(X)	DEMOLISH		
DTL	DETAIL		
DIA	DIAMETER	T	IRANSFORMER
DIM	DIMENSION		
DIV	DIVISION		
DN	DOWN	FSD	FIRE SMORE DAMPER
DWG	DRAWING		
EA	EACH		
EMT	ELECTRICAL METALLIC TUBING	SD	SMOKE DAMPER
EL	ELEVATION		
Е	EMERGENCY	$\sim$	
EF	EXHAUST FAN	$\bigcirc$	CEILING MOUNTED JUNCTION BOX
(E)	EXISTING		
FA	FIRE ALARM	Ē	
FMC	FLEXIBLE METAL CONDUIT	IJ	FLOOK MOUNTED JUNCTION BOX
FT	FOOT, FEET		
FBO	FURNISHED BY OTHERS	$\bigcirc$	
G, GND	GROUND	¥	WALL-MOUNTED JUNCTION BOX
GFCI	GROUND FAULT CIRCUIT INTERRUPTER		
GFI	GROUND FAULT INTERRUPTER	<u>General</u>	
GFP	GROUND FAULT PROTECTION		
HT	HEIGHT	$\begin{pmatrix} X \\ \hline X \end{pmatrix}$	DETAIL NUMBER AND SHEET LOCATION
ID	IDENTIFICATION	$\checkmark$	
IN			
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS	( xx-x )	EQUIPMENT IDENTIFICATION
IG	ISOLATED GROUND	LOCATION	
KV	KILOVOLT		
KVA		$\langle 1 \rangle$	KEYED NOTE
KW	KILOWATT	$\Box$	
LED			
LFMC		(XX)	SHOP AND CLASSROOM EQUIPMENT TAG
LV	LOW VOLTAGE		
MOCP			
MIN		XX	DEMOLISH
MCA			
MISC			
			- FXISTING WORK
NEC			
NESC			NEW WORK
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		
		Lighting	
N/A		Lighting	
N.I.C.		_	EXIT SIGN CEILING MOUNTED ARROW/SUNDICATES DIRECT
NIS		$\overline{\otimes}$	SHOWN
OC .	ON CENTER		
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	<b>_</b>	
PNL	PANEL	Ø	SHOWN
PH		<u> </u>	
PWR	POWER		RECESSED 2' X 4' LUMINAIRE
(ת) סבי			
			SAFETY CIRCUIT
	SHEET	O	RECESSED LUMINAIRE
ত। হেচ			
SDU			
SW/RD	SWITCHBOARD		RECESSED LUMINAIRE CONNECTED TO EMERGENCY/LIFE SA
TRD			
YEMR			
			SURFACE OR PENDANT MOUNTED 1' X 4' LUMINAIRE
TVD			
			SURFACE OR PENDANT MOUNTED 1' X 4' LUMINAIRE CONNEC
			I O EMERGENCY/LIFE SAFETY CIRCUIT
V \\/			SURFACE OR PENDANT MOUNTED LUMINAIRE CONNECTED 1
	WEATHERPROOF	•	EMERGENCY/LIFE SAFETY CIRCUIT
vv/U	WITHOUT	$\circ$	
		Y	
			WALL MOUNTED LUMINAIRE CONNECTED TO EMERGENCY/LI
		T	SAFETY CIRCUIT
		Miscellaneo	us
			BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO
			BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MIN
		#10	BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MIN UNLESS NOTED OTHERWISE. SHORT TICK MARKS INDICATE CONDUCTORS. LONG TICK MARKS INDICATE NEUTRAL

<u>cellaneou</u>	<u>IS</u>
#10 	BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MINIMUM UNLESS NOTED OTHERWISE. SHORT TICK MARKS INDICATE PHASE CONDUCTORS. LONG TICK MARKS INDICATE NEUTRAL CONDUCTORS. A SINGLE CURVED TICK MARK INDICATES INSULATED GREEN GROUND CONDUCTOR. SECOND CURVED TICK MARK INDICATES "ISOLATED GROUND" (GREEN INSULATION WITH YELLOW STRIPE) CONDUCTOR.
	BRANCH PANEL
	CIRCUIT BREAKER
	DRY TYPE TRANSFORMER

FLUSH WALL MOUNTED BRANCH PANEL 

### ELECTRICAL SYMBOL LIST

GB		<b>Telecommunications</b>
	GROUND BAR	RACEWAY ONLY DATA/TELEPHONE OUTLET. PROVIDE DOUBLE GANG BACK BOX AND SINGLE GANG ADAPTER PLATE WITH 1" C. AND PULLSTRING TO ACCESSIBLE CEILING SPACE. (MULTIPLE LETTERS INDICATE MULTIPLE OPTIONS)
Raceways	MAIN DISTRIBUTION PANEL / SUB DISTRIBUTION PANEL	$\nabla$ A = ABOVE COUNTER C = CEILING MOUNTED ABOVE ACCESSIBLE CEILING F = FLUSH CEILING MOUNTED D = CUEFACE MOUNTED ON PACEWAY
	CONDUIT CONCEALED IN WALL OR CEILING SPACE	R = SURFACE MOUNTED ON RACEWAY RACEWAY ONLY TELEPHONE OUTLET. PROVIDE DOUBLE GANG BACK BOX AND SINGLE GANG ADAPTER PLATE WITH 3/4" C. AND PULLSTRING TO ACCESSIBLE CEILING SPACE. SEE LETTER CODE
	- CONDUIT ROUTED BELOW FLOOR / GRADE	LIST AT DATA/TELEPHONE OUTLET FOR OPTIONS.
•	CONDUIT ELLED DOWN	
———————————————————————————————————————	CONDUIT ELLED UP	
	CONDUIT/WIRING CONTINUATION	
3	CONDUIT/WIRING STUBBED OUT WITH END CAP OR INSULATED PLASTIC BUSHING	
~~~~~		
Switches and	d Receptacles	
	DUPLEX RECEPTACLE (MULTIPLE LETTERS INDICATE MULTIPLE OPTIONS)	
	A = ABOVE COUNTER B = CLOCK HANGER	
	C = FLUSH CEILING MOUNTED	
	E = EMERGENCY F = ARC FAULT PROTECTED BY BREAKER IN PANEL	
	G = GROUND FAULT CIRCUIT INTERRUPTER H = HOSPITAL GRADE	
ሐ		
V	P = PENDANT MOUNTED WITH CORD GRIPS. VERIFY PENDANT	
	R1 = HALF SWITCHED BY OCCUPANCY SENSOR RELAY	
	R2 = FULLY SWITCHED BY OCCUPANCY SENSOR RELAY S = SPLIT WIRED	
	T = TAMPER RESISTANT SHUTTERED RECEPTACLE U = USB PORT(S)	
	W = WEATHERPROOF CONTINUOUS USE COVER, GFCI PROTECTED, WITH WEATHER-RESISTANT RECEPTACLE	
$\square$	DUPLEX RECEPTACLE, FLUSH FLOOR	
•	DOUBLE DUPLEX RECEPTACLE, FLUSH FLOOR	
#	DOUBLE DUPLEX RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS	
۲	EQUIPMENT ELECTRICAL CONNECTION	
	RECEPTACLE CONFIGURATION	
$\odot$	LX-XXR = NEMA CONFIGURATION TWIST-LOCK RECEPTACLE X-XXR = NEMA CONFIGURATION STRAIGHT BLADE RECEPTACLE	
	P = PENDANT MOUNT WITH CORD GRIPS. VERIFY PENDANT LENGTH X = COORDINATE RECEPTACLE CONFIGURATION WITH EQUIPMENT BEING SUPPLIED	
	CEILING MOUNTED OCCUPANCY SENSOR	
OS	D = DUAL TECHNOLOGY	
ٽٽ	U = ULIRASONIC, 360 DEG RANGE H = ULTRASONIC, HALLWAY PATTERN v (LOWERCASE) = VACANCY CONTROL DESIGNATION	
	WALL MOUNTED OCCUPANCY SENSOR	
os-	P = PASSIVE INFRARED D = DUAL TECHNOLOGY	
	S = PASSIVE INFRARED WITH INTEGRAL "OFF" SWITCH	
ss-	N - DUAL NELAT FASSIVE INFRARED WITH TWO INTEGRAL "UFF" SWITCHES D - DASSIVE INEDADED WITH INTEGRAL DIMMED TO OFF	
	v (LOWERCASE) = VACANCY CONTROL DESIGNATION	
	MULTIPLE CHANNEL SURFACE METAL RECEPTACLE RACEWAY WITH LOW VOLTAGE DIVIDERS, LENGTH AND RECEPTACLES AS INDICATED	
ନ	PHOTO ELECTRIC SWITCH D = CONTINUOUS DIMMING PHOTOCELI	
G	S = SWITCHED PHOTOCELL	
	SINGLE POLE SWITCH 2 = DOUBLE POLE SWITCH	
	3 = THREE-WAY SWITCH 4 = FOUR-WAY SWITCH	
	a THRU z (LOWERCASE) = LUMINAIRE CONTROL DESIGNATION	
	F = FAN SPEED CONTROL	
\$	K = KEY OPERATED SWITCH L = LIGHTED HANDLE	
	M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD P = SWITCH WITH PILOT LIGHT	
	S = SENTRY SWITCH T = INTERVAL TIMER	
	W = WEATHERPROOF SWITCH	
	V - LOW VOLIAGE SWITCH	

![](_page_21_Picture_9.jpeg)

# **GENERAL ELECTRICAL NOTES**

- A. COORDINATE WITH SCHOOL PRIOR TO COMMENCEMENT OF ALL WORK. B. ENSURE THAT EXISTING WIRING, DEVICES, AND EQUIPMENT TO REMAIN ARE NOT
- DAMAGED BY WORK.

#### SHEET INDEX

E001	SYMBOL LIST AND GENERAL NOTES - ELECTRICAL
ED101 ED201	FIRST FLOOR OVERALL DEMO PLAN - LIGHTING FIRST FLOOR OVERALL DEMO PLAN - ELECTRCAL
E101 E201 E301	FIRST FLOOR OVERALL PLAN - LIGHTING FIRST FLOOR OVERALL PLAN - ELECTRICAL ROOF OVERALL PLAN - ELECTRICAL
E501	SINGLE LINE DIAGRAMS - ELECTRICAL
E601	SCHEDULES - ELECTRICAL

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# **DEMOLITION REFLECTED CEILING PLAN - LIGHTING**

0' 4' 8' 16' 1/8" = 1'-0"

![](_page_22_Figure_4.jpeg)

If this drawing is not 24" x 36", it has beer
reduced/enlarged. Scale accordingly.

![](_page_23_Figure_2.jpeg)

![](_page_23_Figure_3.jpeg)

0' 4' 8' 1/8" = 1'-0"

![](_page_23_Picture_5.jpeg)

(E)

(E)~

(E

(E)

○ SHEET KEYNOTES

1. REMOVE RECEPTACLE. PROTECT EXISTING CIRCUIT FOR REUSE.

![](_page_23_Picture_7.jpeg)

REVISIONS MO DRAWN BY CHECK BY 100% CD/PERMIT SET STATUS 02.27.2020 DATE 19399 PROJECT NUMBER EC © 2017 OTAK, INC. If this drawing is not 24" x 36", it has been reduced/enlarged. Scale accordingly.

![](_page_23_Figure_9.jpeg)

Plot Date: 2/27/2020 3:39:38 PM

# **1 FIRST FLOOR PLAN - LIGHTING**

0' 4' 8' 1/8" = 1'-0"

![](_page_24_Figure_4.jpeg)

![](_page_24_Picture_5.jpeg)

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0' 4' 8' 1/8" = 1'-0"

![](_page_25_Figure_1.jpeg)

### **GENERAL SHEET NOTES**

- A. BOND ALL NEW DUCTWORK AND EQUIPMENT FOR DUST COLLECTION SYSTEM WITH A RESISTANCE OF LESS THAN 1.0 x 10^-6 OHMS TO GROUND.
- B. ALL SHOP AND CLASSROOM EQUIPMENT LOCATIONS ANNOTATED WITH OVAL TAGS ARE ESTIMATED. LOCATE EQUIPMENT AND ASSOCIATED ELECTRICAL CONNECTIONS PER OWNER REQUIREMENTS.
- C. CONNECT NEW DRUM SANDER VIA SLOW BLOW FUSED DISCONNECT AND 208V-230V 15 KVA BUCK BOOST TRANSFORMER ADJACENT.
- D. PROVIDE STEEL BUS DROP SAFETY SPRINGS FOR ALL EQUIPMENT POWERED VIA CEILING DROPS.

![](_page_25_Picture_9.jpeg)

![](_page_25_Picture_14.jpeg)

NOT USED. 2. NOT USED. 3. NOT USED

1

- 4. CONNECT TO EXISTING CIRCUIT AT THIS LOCATION.
- 5. PROVIDE INTERLOCK RELAY WITH 30 MINUTE ADJUSTABLE TIME DELAY FOR EXHAUST FAN CONTROL 'ON' WITH CUTTER. EXACT LOCATIONS OF ALL OWNER FURNISHED EQUIPMENT AND ASSOCIATED ELECTRICAL DEVICES ARE TO BE DETERMINED BY OWNER. EXHAUST FANS ARE TO OPERATE IMMEDIATELY UPON THE START OF CUTTER OPERATION AND FOR A MINIMUM 15 OF MINUTES FOLLOWING CUTTER SHUTOFF. OWNER TO DETERMINE FINAL DURATION OF OPERATION.
- 6. CONNECT SIGNAL WIRE FROM SPARK DETECTION PANEL TO ABORT GATE.
- 7. PROVIDE DIRECT CONNECTION DROP TO EQUIPMENT AND CONCEAL WIRE TO PANELBOARD WITHIN DROP CEILING.

![](_page_25_Picture_20.jpeg)

DRAWN BY

STATUS 02.27.2020

DATE

19399

100% CD/PERMIT SET

PROJECT NUMBER

E20

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CHECK BY

E T W DC-1 AG-1 6	

![](_page_25_Picture_22.jpeg)

Plot Date: 2/27/2020 3:39:38 PM

![](_page_26_Figure_2.jpeg)

0' 4' 8' 1/8" = 1'-0"

(J) <sup>(E)</sup>

![](_page_26_Picture_4.jpeg)

EF-1 1 \$ WM MOTORIZED DAMPER

![](_page_26_Picture_6.jpeg)

![](_page_26_Picture_7.jpeg)

![](_page_27_Figure_1.jpeg)

![](_page_27_Picture_6.jpeg)

PANEL 'E4D' IS LOCATED IN ROOM PHONE D124. 1.

![](_page_27_Picture_8.jpeg)

MINIMUM SIZE EQUIPMENT GROUNDING CONDUCTORS FOR GROUNDING **RACEWAY & EQUIPMENT** PER TABLE 250.122 N.E.C. SIZE (AWG/kcmil) RATING OR SETTING OF AUTOMATIC OVER CURRENT ALUMINUM OR DEVICE IN CIRCUIT AHEAD OF EQUIPMENT, CONDUIT ETC. COPPER-CLAD NOT EXCEEDING (AMPERES) COPPER ALUMINUM 14 15 12 10 10 100 200 300 400 500 1/0 600 2/0 800 1/0 3/0 1000 2/0 4/0 1200 3/0 250 1600 4/0 350 2000 250 400 2500 350 600 400 3000 600 4000 500 750 5000 700 1200 6000 800 1200 EQUPMENT GROUNDING CONDUCTORS MAY NEED TO BE SIZED LARGER THAN SPECIFIED IN THIS SCHEDULE IN ORDER TO COMPLY WITH N.E.C. SECTION 250.4(A)(5) or (B)(4)

GROUNDING ELECTRODE CONDUCTOR FOR AC SYSTEMS PER TABLE 250.66 N.E.C. SIZE OF LARGEST SERVICE ENTRANCE CONDUCTOR OR EQUIVALENT SIZE OF AREA FOR PARALLEL CONDUCTORS (AWG/kcmil) GROUNDING ELECTRODE CONDUCTOR ALUMINUM OR ALUMINUM OR COPPER-CLAD COPPER-CLAD COPPER ALUMINUM ALUMINUM COPPER 2 OR SMALLER 1/0 OR SMALLER 8 6 1 OR 1/0 2/0 OR 3/0 2/0 OR 3/0 4/0 OR 250 kcmil 300 kcmil THROUGH 500 kcmil 4/0 THRU 350 kcmil 1/0 400 kcmil THROUGH 600 kcmil 600 kcmil THROUGH 900 kcmil 1/0 3/0 750 kcmil THROUGH 1100 kcmil 1000 kcmil THROUGH 1750 kcmil 2/0 4/0 OVER 1750 kcmil 250 OVER 1100 kcmil 3/0 WHERE MULTIPLE SETS OF SERVICE-ENTRANCE CONDUCTORS ARE USED AS PERMITTED IN N.E.C. ARTICLE 230.40, EXCEPTION NO. 2, THE EQUIVALENT SIZE OF

THE LARGEST SERVICE-ENTRANCE CONDUCTOR SHALL BE DETERMINED BY THE SUM OF THE AREAS OF THE CORRESPONDING CONDUCTORS OF EACH SET. WHERE THERE ARE NO SERVICE-ENTRANCE CONDUCTORS, THE GROUNDING ELECTRODE CONDUCTOR SIZE SHALL BE DETERMINED BY THE EQUIVALENT SIZE OF THE LARGEST SERVICE ENTRANCE CONDUCTOR REQUIRED FOR THE LOAD TO BE SERVED. SIZE THE MAIN BONDING JUMPER PER NEC 250.102 (C)(1)

	LUMINAIRE SCHEDULE											
TYPE	DESCRIPTION	HOUSING	SHIEL DING	MOUNTING	FINISH	UL/IP BATING	DRIVER/ POWER SUPPLY	ССТ	INPUT WATTS		MEG/CATALOG #	NOTES
'A'	2' X 4' RECESSED LED TROFFER	DIE FORMED	WHITE ACRYLIC	RECESSED	WHITE	DRY	INTEGRAL	4000K		UNV	LITHONIA, COOPER, ETC, OR PHILIPS	HOTEO
ALT 1 'A'	2' X 4' SURFACE LED TROFFER	DIE FORMED STEEL	WHITE ACRYLIC	SURFACE	WHITE	DRY	INTEGRAL	4000K		UNV	LITHONIA, COOPER, ETC, OR PHILIPS	
ALT 1 'B'	2' X 2' RECESSED LED TROFFER	DIE FORMED STEEL	WHITE ACRYLIC	RECESSED	WHITE	DRY	INTEGRAL	4000K		UNV	LITHONIA, COOPER, ETC, OR PHILIPS	
'X'	EXIT SIGN	DIE CAST ALUMINUM		WALL		UL DAMP	INTEGRAL	MATCH EXISTING	2	UNV	EVENLITE RAZO SERIES, ISOLITE, PATHWAY, SURE-LITES TPX, BARRON LIGHTING OR APPROVED	

2019-0486

2019-0486

1. Provide 30 mA GFEP circuit breaker.

#### (E) Panel 'E4D'

#### 277/480V, 3 Ph., 4 W.; 100A Bus with Main Lug Only Surface Mounted Panelboard

Ckt.		Load	ł	C.B.				C.B.	Load	ł		Ckt.
No.	Description / Location	(VA) Ty	/pe	A/Pole	Note	Ph.	Note	A/Pole	(VA) Ty	/pe	Description / Location	No.
1	(E) EXIT AREA C	272	L	20/1		Α		20/1	1,079	L	(E) HL AREA E	2
3	(E) HL AREA C	1,079	L	20/1		В		20/1	2,752	L	(E) EXIT AREA E	4
5	(E) SPARE			20/1		С		20/1	1,442	L	(E) HL AREA F	6
7	(E) SPARE			20/1		Α		20/1	254			8
9	(E) EXIT AREA D	224	L	20/1		В		20/1	2,233	L	(E) HL AREA H	10
11	(E) HL AREA D	2,196	L	20/1		С		20/1	144	L	(E) EXIT AREA H	12
13	(E) SPARE			20/1		Α		20/1			(E) SPARE	14
15	(E) SPARE			20/1		В		20/1			(E) SPARE	16
17	(E) SPARE			20/1		С		20/1			(E) SPARE	18
Total	Connected Load: Ph. A	1,605	VA	. 6	Amps				Panel C	Conn	ected Load: 11.4 KVA 13.7 Amps	
Total	Connected Load: Ph. B	6,288	VA	23	Amps			S	ub-Fed C	Conn	ected Load: 0.0 KVA 0.0 Amps	
Total	Connected Load: Ph. C	3,782	VA	14	Amps				Total	Den	nand Load: 14.3 KVA 17.2 Amps	
		-										

#### (E) Panel '2HS' Section 1 120/208V, 3 Ph., 4 W.; 400A Bus with Main Lug Only Surface Mounted Panelboard

-															
Ckt.		Load		C.B.				C.B.	Load			Ckt.			
No.	Description / Location	(VA) Ty	ре	A/Pole	Note	Ph.	Note	A/Pole	(VA) Typ	pe	Description / Location				
1	(E) REC PAINT	180	R	20/1		Α		20/1	1,800	R	(E) R	2			
3	(E) R	360	R	20/1		В		20/1	1,800	R	(E) R	4			
5	(E) R	360	R	20/1		С		20/1	180	R	(E) R	6			
7	(E) R	900	R	20/1		Α		20/1	180	R	(E) R	8			
9	(E) MOTOR	864	М	20/1		В		20/1	180	R	(E) R	10			
11	(E) R	180	R	20/1		С		20/1	180	R	(E) R	12			
13	(E) R	180	R	20/1		Α		20/1	540	R	(E) R-EXTERIOR	14			
15	(E) R	180	R	20/1		В		20/1	180	R	(E) R	16			
17	(E) R	180	R	20/1		С		30/2	1,250	R	(E) R	18			
19	(E) R	180	R	20/1		Α		-	1,250	R		20			
21	(E) R	180	R	20/1		В		30/2	1,250	R	(E) R	22			
23	(E) R	180	R	20/1		С		-	1,250	R		24			
25	(N) DUST COLLECTION CONTROL PANEL	360	G	20/1		Α		40/3	3,840	М	(N) PLASMA CUTTER	26			
27	(E) SPARE			20/1		В		-	3,840	Μ		28			
29	(E) 80 WELDER	3,850	G	60/2		С		-	3,840	Μ		30			
31		3,850	G	-		Α		50/3	4,000	М	(E) BUSWAY NO.2	32			
33	(E) 81 MIG WELDER	3,750	G	60/2		В		-	4,000	М		34			
35		3,750	G	-		С		-	4,000	М		36			
37	(E) BUSWAY NO.1	4,000	М	50/3		Α		50/3	4,000	М	(E) BUSWAY NO.3	38			
39		4,000	М	-		В		-	4,000	М		40			
41		4,000	М	-		С		-	4,000	Μ		42			
Tota	Connected Load: Ph. A	48,156	VA	401	Amps				Panel C	Conn	ected Load: 77.0 KVA 213.9 Amps				
Total	Connected Load: Ph. B	49,400	VA	411	Amps				Sub-Fed C	Conn	ected Load: 66.8 KVA 185.4 Amps				
Tota	Connected Load: Ph. C	46,296	VA	386	Amps				Total	Den	mand Load: 135.7 KVA 376.7 Amps				

(E) Panel '2HS' Section 2	2 120/208V, 3 Ph., 4 W.; 400A Bus with Main Lug Only Surface Mounted Panelboard											
kt. Io. Description / Location	Load (VA) Typ	e	C.B. A/Pole	Note	Ph.	Note	C.B. A/Pole	Load (VA) Ty	l /pe	Description / Location	Ck Ni	
43 (E) SPARE-CEIL. J-BOX - CONCESSIONS	1,920	R	20/1		Α		50/2	4,800	R	(E) SPARE TO 12X12	4	
15 (E) SPARE-CEIL. J-BOX - CONCESSIONS	1,920	R	20/1		В		-	4,800	R	(E) SPARE-CEIL. J-BOX - CONCESSIONS	4	
47 (E) SPARE-CEIL. J-BOX - CONCESSIONS	1,920	R	20/1		С		30/3	2,880	М	(E) PLANER	4	
19 (E) SPARE-CEIL. J-BOX - CONCESSIONS	1,920	R	20/1		Α		-	2,880	М			
51 (E) SPARE-CEIL. J-BOX - CONCESSIONS	1,920	R	20/1		В		-	2,880	М		ļ	
53 (E) SPARE		Μ	20/1		С		20/1			(E) SPARE		
55 (E) SPARE		Μ	20/1		Α		20/1			(E) SPARE		
57 (E) SPARE		Μ	20/1		В		20/1			(E) SPARE		
59 (N) DRUM SANDER	3,696	Μ	60/3		С		20/1			(E) SPARE		
61	3,696	Μ	-		Α		30/3	2,880	Μ	(E) LATHE		
63	3,696	Μ	-		В		-	2,880	Μ			
65 (N) PLASMA CUTTER TABLE	1,000	G	20/1		С		-	2,880	М			
67 (E) SPARE			20/1		Α		30/3	2,880	М	(E) ARBOR SAW	Т	
69 (E) SPARE			20/1		В		-	2,880	М			
71 (E) SPARE			20/1		С		-	2,880	Μ			
73 (E) SPARE			20/1		Α		20/1			(E) SPARE		
75 (E) AIR DRYER	1,920	Μ	20/2		В		20/1			(E) SPARE		
77	1,920	Μ	-		С		20/1			(E) SPARE		
79 (E) AIR COMPRESSOR	1,920	Μ	20/3		Α		20/1			(E) SPARE		
31 (E) AIR COMPRESSOR	1,920	М	-		В		20/1			(E) SPARE		
33 (E) AIR COMPRESSOR	1,920	М	-		С		20/1			(E) SPARE		

19,096 VA 159 Amps

Total Connected Load: Ph. B

Total Connected Load: Ph. C

Sub-Fed Connected Load: 0.0 KVA Total Demand Load:

0.0 Amps Refer to Section 1

	EQUIPMENT CONNECTION SCHEDULE													
			VOLTS /				WIRE /							
ITEM	DESCRIPTION	LOCATION	PHASE	LOAD	MCA	MOCP	CONDUIT	CIRCUIT	NOTES					
1a	PLASMA CUTTER POWERMAX 65	PROJECT LAB 138	208/3	32.0 A		40	403	SEE ONELINE						
1b	4x4 PLASMA CUTTER TABLE	PROJECT LAB 138	120/1	1000.0 W		15	202	(E) R-RM 138						
2	DUAL EXTRUSION 3D PRINTER	STICKER ROOM (TBD)	120/1	1.0 KW		15	202	(E) OR (N) R-RM 120						
3	CNC ROUTER 1	PROJECT LAB 138 (TBD)	120/1	15.0 A		20	202	(E) R-RM 138						
4	CNC ROUTER 2	PROJECT LAB 138 (TBD)	120/1	15.0 A		20	202	(E) R-RM 138						
5	WORK BENCH 1	PROJECT LAB 138 (TBD)	120/1	360.0 W		15	202	(E) R-RM 138						
6	WORK BENCH 2	PROJECT LAB 138 (TBD)	120/1	360.0 W		15	202	(E) R-RM 138						
7	WORK BENCH 3	PROJECT LAB 138 (TBD)	120/1	360.0 W		15	202	(E) R-RM 138						
8	WORK BENCH 4	PROJECT LAB 138 (TBD)	120/1	360.0 W		15	202	(E) R-RM 138						
9	WORK BENCH 5	PROJECT LAB 138 (TBD)	120/1	360.0 W		15	202	(E) R-RM 138						
10	14" BAND SAW 1	138, REPLACE EXISTING	120/1	1.5 HP		20	302	(E) R-RM 138						
11	14" BAND SAW 2	138, REPLACE EXISTING	120/1	1.5 HP		20	302	(E) R-RM 138						
12a	LASER CUTTER 1	LASER CUTTER RM (TBD)	120/1	10.0 A		15	202	2H2-29.						
12b	LASER CUTTER DEDICATED PC	LASER CUTTER RM (TBD)	120/1	500.0 W		15	202	2H2-29.						
13a	LASER CUTTER 2 (POSSIBLE)	LASER CUTTER RM (TBD)	120/1	10.0 A		15	202	2H2-35.						
13b	LASER CUTTER 2 (POSSIBLE) DED. PC	LASER CUTTER RM (TBD)	120/1	500.0 W		15	202	2H2-35.						
14	CNC ROUTER 3 (POSSIBLE MAX)	PROJECT LAB 138 (TBD)	120/1	15.0 A		20	202	(E) R-RM 138						
15	DRUM SANDER (POSSIBLE)	PROJECT LAB 138 (TBD)	208/3	10.3 HP		60	403	2HS2-59,61,63.	1					
16	WIDE FORMAT PRINTER (POSSIBLE)	STICKER ROOM (TBD)	120/1	9.8 A		15	202	(E) OR (N) R-RM 120						
17	3D PRINTER GUIDER II (POSSIBLE)	STICKER ROOM (TBD)	120/1	500.0 W		15	202	(E) OR (N) R-RM 120						
DC-1	DUST COLLECTION SYSTEM	EXTERIOR	480/3	30.0 HP		70	503	4H1-20,22,24.	VIA DC-1a					
DC-1a	DUST COLLECTION CONTROL PANEL	PROJECT LAB 138	120/1	100.0 W		15	202	2HS1-25.						
DC-1b	SPARK DETECTION PANEL	PROJECT LAB 138	120/1	500.0 W		15	202	2H1-24.						
DC-1c	SPARK DETECTION HEAT TRACE	PROJECT LAB 138	120/1	100.0 W		15	202	2H1-34.						
DC-1d	MOTORIZED DAMPER	PROJECT LAB 138	120/1	50.0 W		15	202	2H2-41.						
AG-1	DUST ABORT GATE	EXTERIOR	120/1	200.0 W		15	202	2H1-26.	VIA DC1b ABORT					
EF-1	EXHAUST FAN	ROOF, LASER CUTTER	208/3	1.5 HP		15	203	2H2-32,34,36.	2					
EF-2	EXHAUST FAN	ROOF, PLASMA CUTTER	120/1	0.5 HP		20	202	2H1-25.	2					

#### GENERAL MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES

A. THE ABOVE INFORMATION IS FOR A SPECIFIC MANUFACTURER. ACTUAL MANUFACTURER FOR EQUIPMENT MAY BE DIFFERENT. COORDINATE WITH MECHANICAL EQUIPMENT SUBMITTALS FOR LOADS AND OVER CURRENT PROTECTION REQUIREMENTS PRIOR TO INSTALLATION OF WIRING.

B. MOCP = MAXIMUM OVER CURRENT PROTECTION

MCA = MINIMUM CIRCUIT AMPACITY

C. PROVIDE DISCONNECTING MEANS FOR EACH ITEM OF EQUIPMENT LISTED IN THE SCHEDULE ABOVE, EXCEPT AS SPECIFICALLY NOTED OTHERWISE IN SCHEDULE NOTES, BELOW.

#### MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES

1 CONNECT VIA BUCK BOOST TRANSFORMER AND SLOW BLOW FUSED DISCONNECT. 2 CONNECT 120V/1P MOTORIZED DAMPER VIA EXHAUST FAN CIRCUIT. PROVIDE INTERLOCK RELAY WITH ASSOCIATED EQUIPMENT AS SHOWN ON E201.

- WIRE / CONDUIT SCHEDULE
- 202 2 #12 CU, 1 #12 CU GND., IN 3/4" C.
- 203 3 #12 CU, 1 #12 CU GND., IN 3/4" C.
- 302 2 #10 CU, 1 #10 CU GND., IN 3/4" C.
- 403 3 #8 CU, 1 #10 CU GND., IN 3/4" C.
- 503 3 #6 CU, 1 #10 CU GND., IN 3/4" C.

					•		2019-0486						2019-0486
<u>(E) Panel '2H1'</u>	120/208V, 3 Ph., 4	4 W.; 125A I	Bus with M	lain Lug Or	nly Surface M	ounted Panelboard		<u>(E) Panel '2H3'</u>	120/208V, 3	Ph., 4 W.; 125	A Bus with Main L	ug Only Surface Mounted Panelboard	
Ckt.	Load C.	.В.		C.B.	Load		Ckt.	Ckt.	Load	C.B.	C	C.B. Load	Ckt.
No. Description / Location	(VA) Type A/P	Pole Note	Ph. Note	e A/Pole	(VA) Type	Description / Location	No.	No. Description / Location	(VA) Type	A/Pole Note	Ph. Note A/	Pole (VA) Type Description / Location	No.
<b>1</b> (E) R-G101	20	0/1	A	20/1		(E) EWC 75	2	<b>1</b> (E) R-H103		20/1	A	20/1 (E) R-118	2
3 (E) R-G101	20	0/1	В	20/1		(E) R-G101	4	<b>3</b> (E) R-119		20/1	В	20/1 (E) R-118	4
5 (E) R-G101	20	0/1	C	20/1		(E) R-G101	6	<b>5</b> (E) R-119		20/1	C	20/1 (E) R-118	6
7 (E) R-G101	20	0/1	Α	20/1		(E) R-G103, EXT	8	7 (E) R-119		20/1	A	20/1 (E) R-118	8
<b>9</b> (E) R-G101	20	0/1	В	20/1		(E) R-D163	10	<b>9</b> (E) R-119		20/1	В	20/1 (E) R-118	10
<b>11</b> (E) R-G101	20	0/1	C	20/1		(E) R-D163	12	<b>11</b> (E) R-118		20/1	C	20/1 (E) R-118	12
<b>13</b> (E) R-D161,167	20	0/1	Α	20/1		(E) R-D103, 106	14	<b>13</b> (E) R-H120,121		20/1	A	20/1 (E) R-118	14
15 (E) 45 WASHER	20	0/1	В	20/1		(E) R-D163	16	<b>15</b> (E) R-H120,121		20/1	В	20/1 (E) R-118	16
<b>17</b> (E) R-D162	20	0/1	С	20/1		(E) R-D163	18	<b>17</b> (E) R-H120,121		20/1	C	20/1 (E) R	18
<b>19</b> (E) R-D162	20	0/1	Α	20/1		(E) R-D163	20	<b>19</b> (E) R-H103		20/1	A	20/1 (E) SODA MACHINE	20
<b>21</b> (E) R-D162	20	0/1	В	20/1		(E) HEATER 42	22	<b>21</b> (E) R-H118		20/1	В	20/1 (E) SODA MACHINE	22
23 (E) GAS DRYER 46	20	0/1	С	20/1	360 G	(N) SPARK DETECTION PANEL	24	23 (E) R-H118		20/1	C	20/1 (E) R-H127	24
25 (X) EF-29 / (N) EF-3, DAMPER	<b>1,656 M</b> 20	0/1	Α	20/1	360 G	(N) ABORT GATE	26	<b>25</b> (E) R-H117		20/1	A	20/1 (E) R-H127	26
<b>27</b> (E) EF-4 243	20	0/1	В	20/1		(E) R-COUNTER	28	27 (E) R-H117		20/1	В	20/1 (E) R-H127	28
<b>29</b> (E) R-ROOF	20	0/1	С	20/1		(E) R-COUTNER	30	<b>29</b> (E)R		20/1	C	20/1 (E) R-H127	30
<b>31</b> (E) EF-11A 247	20	0/1	Α	20/1		(E) "OLD" DISHWASHER	32	31 (E)R-OS		20/1	A	20/1 (E) R EXTERIOR	32
33 (E) R-ROOF	20	0/1	B 1	20/1	100 G	(N) SPARK DET. HEAT TRACE	34	33 (E) RANGE 106		20/1	В	20/1 (E) R - COUNTER	34
<b>35</b> (E) EF-11B 248	20	0/1	С	20/1		(E) EF CONTROL	36	<b>35</b> (E) R H129		20/1	C	20/1 (E) R - H106-110	36
37 (E) R-ROOF	20	0/1	Α	50/2		(E) HOBART DISHWASHER	38	37 SPARE		20/1	A	20/1 (E) SODA MACHINE	38
<b>39</b> (E) EF-7	20	0/1	В	-			40	39 (E) BENTO CART		50/2	В	20/1 (E) SODA MACHINE	40
<b>41</b> (E) EF-30	20	0/1	С			(E) VAV BOXES	42	41		-	C	20/1 (E) SODA MACHINE	42
Total Connected Load: Ph. A	2,016 VA	17 Amps		•	Panel Con	nected Load: 2.5 KVA 6	3.9 Amps	Total Connected Load: Ph. A	0 VA	0 Amp	s	Panel Connected Load: 0.0 KVA	0.0 Amps
Total Connected Load: Ph. B	100 VA	<sub>1</sub> Amps		S	Sub-Fed Conr	nected Load: 0.0 KVA 0	) <sub>.0</sub> Amps	Total Connected Load: Ph. B	0 VA	0 Amp	s	Sub-Fed Connected Load: 0.0 KVA	0.0 Amps
Total Connected Load: Ph. C	360 VA	3 Amps			Total De	mand Load: 2.9 KVA 8	3.0 Amps	Total Connected Load: Ph. C	0 VA	0 Amp	S	Total Demand Load: 0.0 KVA	<sub>0.0</sub> Amps
Notes:					Accessories				· · ·				· · · ·

(E) Panel '2H2'	120/208V, 3 Ph., 4 W	.; 225A Bus with Main Lug	2 Dnly Surface Mounted Panelboard	019-0486	(E) Panel '2H4' 12	20/208V, 3 Ph.,	4 W.; 22	25A Bus v	with Main Lug On	y Surface Mounted Panelboard	2019-0486
Ckt.	Load C.B.	C.B	Load	Ckt.	Ckt.		C.B.		C.B.	Load	Ckt.
								ote Ph.			NO.
1 (E) R-H101	20/1	A 20/1			<b>1</b> (E) R-H130, 132		20/1	A	20/1		2
3 (E) R-H106	20/1	B 20/1		4	3 (E) R-H129		20/1	В	20/1		4
5 (E) R-H107	20/1	C 20/1		6	5 (E) DISHWASHER 113		20/1	0	20/1	(E) REFRIGERATOR E86	6
	20/1	A 20/1		8			20/1	A	20/1	(E) WARMER E83	8
9 (E) R-H105	20/1	B 20/1		10	9 (E) R-H129	2	20/1	B	20/1		10
11 (E) R-H104	20/1	C 20/1		12			50/1 00/1	<u> </u>	20/1		12
13 (E) R-H108	20/1	A 20/1	(E) DISHWASHER 113	14	<b>13</b> (E) R-106-110	2	20/1	A	30/1	(E) ESPRESSOR E78	14
15 (E) R-H108	20/1	B 20/1	(E) MICROWAVE 117	16			20/1	<u> </u>	20/1		16
17 (E) R-H108	20/1	C 20/1	(E) R-H110	18			20/1	C	20/1	(E) POPCORN 376	18
<b>19</b> (E) R-H112	20/1	A 20/1	(E) R-H113, 114	20			20/1	A	20/1	(E) BUTTER E74, 75	20
<b>21</b> (E) R-H112	20/1	B 20/1	(E) EWC 116	22	21 (E) CASH SYSTEM E73	2	20/1	B	20/1	(E) CASH SYS E73	22
<b>23</b> (E) R-H112	20/1	<b>C</b> 20/1	(E) EWC 116	24	23 (E) LTG E70	2	20/1	C	20/1	(E) R	24
25 (E) NURSECALL	20/1	<b>A</b> 20/1	(E) LTG H130	26	25 (E) SOFT E80	2	20/2	Α	20/1	(E) DISPOSER 107	26
27 (E) DRYER 111	20/1	<b>B</b> 20/1	360 R (N) R-LASER CUTTER RM	28	27 (E) SOFT E80		-	В	30/1	(E) R-1106-110	28
29 (N) R-LASER CUTTER, PC	1,756 G 20/1	<b>C</b> 20/1	360 R (N) R-STICKER ROOM	30	29 (E) YOGURT MACHINE	3	80/2	С	20/1	(E) R-1106-110	30
<b>31</b> (E) R-H130	20/1	A 20/3	792 M (N) EF-1, DAMPER	32	31 (E) SNACK BAR		-	Α	20/1	(E) R COUNTER	32
<b>33</b> (E) R-H130	20/1	B -	792 M	34	33 (E) R - COUNTER	2	20/1	В	20/1	(E) R COUNTER	34
35 (N) R-LASER CUTTER, PC	1,756 G 20/1	C -	792 M	36	<b>35</b> (E) R - 1106-110	2	20/1	С	20/1	(E) EF-8	36
37 (E) R-H128	20/1	<b>A</b> 50/3	BUSWAY PRINT	38	<b>37</b> (E) R - 1106-110	2	20/1	Α	20/1	(E) EF-31	38
<b>39</b> (E) R-H128	20/1	B -		40	39 (E) OVEN S141	2	20/2	В	20/2	(E) RNGS 141	40
41 (N) DC-1d MOTORIZED DAMPER	<b>50 G</b> 20/1	C -		42	41		-	С	-	(E) RNGS 141	42
Total Connected Load: Ph. A	792 VA	7 Amps	Panel Connected Load: 6.7 KVA 18.5 Amp	;	Total Connected Load: Ph. A	0 VA	0 Ar	nps		Panel Connected Load: 0.0 KVA	J.0 Amps
Total Connected Load: Ph. B	1,152 VA 1	0 Amps	Sub-Fed Connected Load: 0.0 KVA 0.0 Amp	\$	Total Connected Load: Ph. B	0 VA	0 Ar	nps	S	ub-Fed Connected Load: 0.0 KVA	J.0 Amps
Total Connected Load: Ph. C	4,714 VA 39	g Amps	Total Demand Load: 7.3 KVA 20.1 Amp	s	Total Connected Load: Ph. C	0 VA	0 Ar	nps		Total Demand Load: 0.0 KVA	ე.ე <b>Amps</b>

![](_page_28_Picture_30.jpeg)