HOOD INFORMATION – JOB#5148796

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	HOOD 1	5412 SND-2-PSP-F	CAPTIVEAIRE	14' 0"	600 DEG	I	HEAVY	206	2884			4"	16"	2884	2066	-1.452"	2170	430 SS WHERE EXPOSED	ALONE	ALONE
2	DISH	4218 VHB-G	CAPTIVEAIRE	3' 6"	700 DEG	II	N/A	129	450			4"	10"	450	825	-0.051"	0	304 SS 100%	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	HOOD 1	CAPTRATE SOLID FILTER	10	16"	16"	85% SEE FILTER SPEC	5	LSS SERIES E26	NO	WALL MNT	12"x48"x24"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	800 LBS
2	DISH						0									NO	117 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	HOOD 1	BACKSPLASH 68.00" HIGH X 168.00" LONG 430 SS VERTICAL.
		BACKSPLASH 101.00" HIGH X 22.00" LONG 430 SS VERTICAL.
		BACKSPLASH 101.00" HIGH X 32.00" LONG 430 SS VERTICAL.
		BACKSPLASH – OUTSIDE CORNER 101.00" HIGH X 2.00" LEG LENGTH 430 SS VERTICAL.
		BACKSPLASH – OUTSIDE CORNER 101.00" HIGH X 2.00" LEG LENGTH 430 SS VERTICAL.
		RIGHT QUARTER END PANEL 27" TOP WIDTH, 0" BOTTOM WIDTH, 27" HIGH 430 SS.
		LEFT QUARTER END PANEL 27" TOP WIDTH, 0" BOTTOM WIDTH, 27" HIGH 430 SS.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		SENSOR-CV.
2	DISH	SHOP WRAPPER 5.00" HIGH FRONT, LEFT.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1	HOOD 1	Front	168"	16"	6"	MUA	12"	24"		723	0.198"
						MUA	12"	24"		723	0.198"
						MUA	12"	24"		723	0.198"

WALL-MOUNT UTILITY CABINET

HOOD NO	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	WEIGHT
1	WALL MNT	12"x48"x24"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	340.00 LBS

EXHAUST FAN INFORMATION – JOB#5148796

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF1	1	USBI18DD-RM	CAPTIVEAIRE	2884	1.500	1280	ODP,PREMIUM	2.000	1.1970	3	208	6.1	1478 FPM	402	18.4
3	EF DISH	1	DU33HFA	CAPTIVEAIRE	525	0.500	1196	TEAO-ECM	0.333	0.1040	1	115	4.3	260 FPM	63	10

CONDENSER DETAILS

FAN UNIT NO	TAG	FAN UNIT MODEL #	CONDENSER NO	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX FUSE SIZE	MIN WIRE SIZE	SEER
2	KMUA	A1-D.500-15D-MPU	1	2.5	208-230	3 PHASE	60 HZ	11.2 AMPS	9.07 AMPS	20 AMPS	14 AWG	14
			2	2.5	208-230	3 PHASE	60 HZ	11.2 AMPS	9.07 AMPS	20 AMPS	14 AWG	14

MUA FAN INFORMATION – JOB#5148796

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
2	MUA	1	A1-D.500-15D-MPU	15MF-1-MOD	A1-D.500	1800	2125	0.300	2230	ODP,PREMIUM	3.000	1.7790	3	208	8.6	10.8A	15A	1076	24

COILS – JOB#5148796

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY
2	MUA	DX	2125	90.0°F	74.0°F	73.6°F	66.8°F	55.3 MBH	36.0 MBH	19.3 MBH

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MUA	123550	113666	50°F	7 IN. W.C. – 14 IN. W.C.	NATURAL	92

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST GREASE CUP	EXHAUST GRAVITY DAMPER	EXHAUST WALL MOUNT	SUPPLY SIDE DISCHARGE	SUPPLY GRAVITY DAMPER	SUPPLY MOTORIZED DAMPER	SUPPLY WALL MOUNT
1	EF1	YES						
2	KMUA				YES		YES	
3	EF DISH							

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	EF1	25 LBS	RAIL	4.000"W X 48.000"L X 10.000"H 2.000-12.000 PITCH ALONG WIDTH, RIGHT COMES AS A SET OF 2.
2	# 2		83 LBS	RAIL	6.000"W X 21.000"L X 12.000"H LOW.
2	# 2	MUA	83 LBS	CURB	21.000"W X 71.000"L X 12.000"H ALONG LENGTH, LOW INSULATED.
3	# 3	EF DISH	24 LBS	CURB	19.500"W X 19.500"L X 18.000"H 2.000-12.000 PITCH ALONG LENGTH, RIGHT HINGED.
4		EXHAUST SHAFT	22 LBS	CURB	24.000"W X 24.000"L X 20.000"H 2.000-12.000 PITCH ALONG LENGTH, RIGHT VENTED.
5		SUPPLY SHAFT	31 LBS	CURB	24.000"W X 24.000"L X 16.000"H 2.000-12.000 PITCH ALONG LENGTH, RIGHT INSULATED.
6		SUPPORT LEGS	10 LBS	RAIL	4.000"W X 4.000"L X 36.000"H ALONG LENGTH, RIGHT.
7		CONDENSERS	15 LBS	RAIL	4.000"W X 24.000"L X 12.000"H ALONG LENGTH, RIGHT.

AIR BALANCE SCHEDULE

TAG	ROOMS SERVED	O.A. CFM	EXHAUST CFM
KEF1	KITCHEN	–	– 2884
MUA	KITCHEN	+ 2125	–
EF2	KITCHEN	–	– 525
HVAC	BUILDING	+ 1284 (MIN)	–
NET		0 CFM	

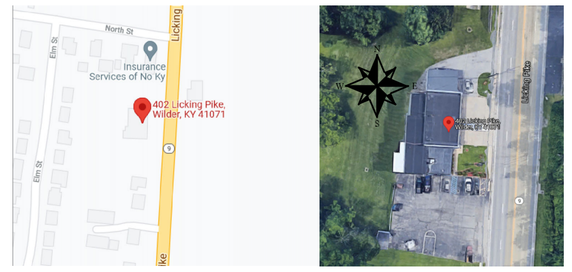
KITCHEN TO MAINTAIN A SLIGHTLY NEGATIVE PRESSURE. OVERALL BUILDING PRESSURE TO BE BETWEEN –0.02" TO +0.02" WC PER IMC COMMENTARY RECOMMENDATIONS

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED

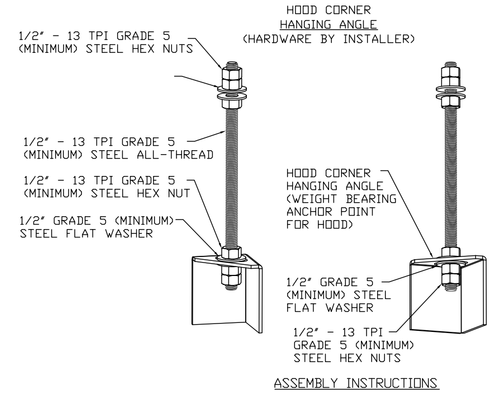
ETL LISTED FILE# 3054804-001

HOOD SYSTEM IS FABRICATED & DESIGNED PER UL-710 STANDARDS



SITE / ROOF PLAN VIEW

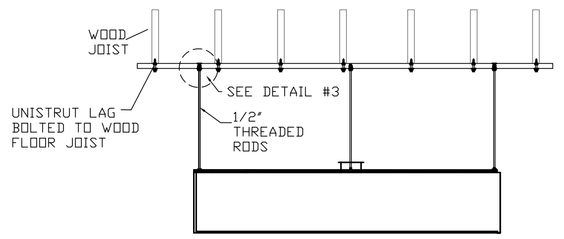
DETAIL #1: HOOD HANGING ASSEMBLY



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

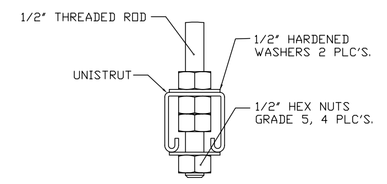
DETAIL# 2: HOOD SUPPORT

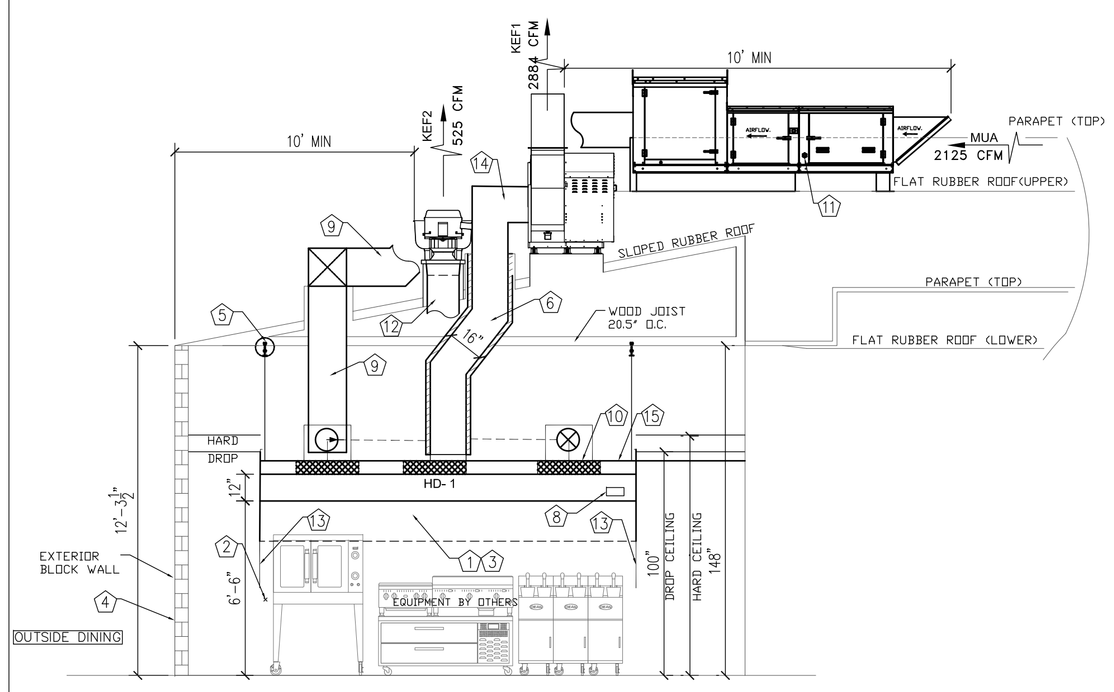


HOOD SUPPORT REQUIREMENTS HOOD LENGTH	NUMBER OF HANGING POINTS
14'	6

DETAIL #3: HANGING ROD TO UNISTRUT

(HARDWARE BY INSTALLER)



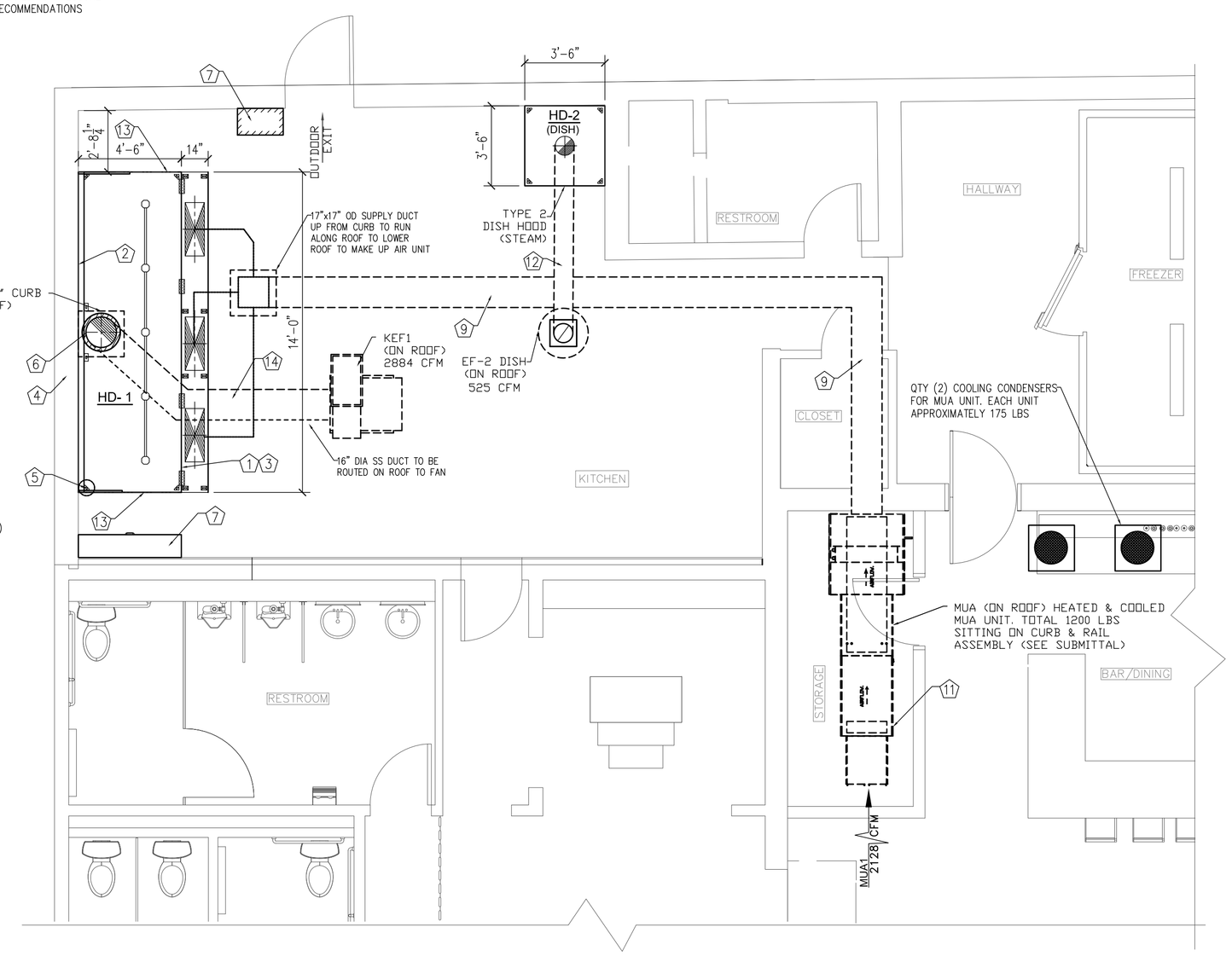


ELEVATION VIEW - HOOD #1 (HD-1) & DISHWASHER HOOD

SCALE: 1/4" = 1'-0"

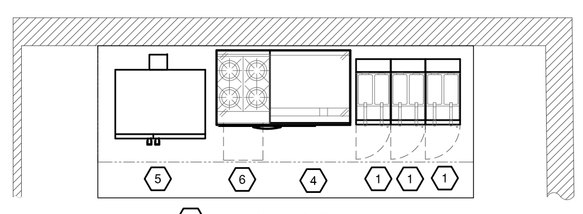
Key Notes

1. CAPTIVE-AIRE ETL LISTED HOOD IN ACCORDANCES TO UL710 SEE CAPTIVE-AIRE SHOP DWGS.
2. STAINLESS STL. WALL PANEL BELOW & RIGHT & LEFT OF HOOD FROM FLOOR TO CEILING. ALSO 18" PASS THE HOOD TO LEFT & RIGHT (MINIMUM).
3. CANOPY TYPE HOOD. TO OVERHANG ON FRONT BY 6" FROM COOKING SERVICE (SEE CAPTIVE-AIRE LISTING SHEET).
4. BRICK WALL WITH METAL STUD & SHEET ROCK
5. HANGING ROD (SEE DETAILS #1, #2 & #3)
6. 16" DIA CAPTIVE-AIRE LISTED DUCT WITH QTY (2) LAYERS OF LISTED FIRE WRAP FOR ZERO CLEARANCE. (SEE FIREWRAP SPEC'S)
7. HOOD CONTROLS & ANSUL (UL300) WALL MOUNTED UP HIGH (VERIFY LOCATION).
8. FAN AND LIGHT SWITCHES.
9. 17"X 17" OD (16"X 16"-ID) (OR EQUIV) DUCT TO MUA-1 ON ROOF. INSULATED ROUTED TO LOWER ROOF TO DUCT CURB.
10. 12"X 24" SUPPLY RISERS FOR SUPPLY PLENUM FOR HOOD. (QTY 3)
11. GAS FIRED COOLED MUA GAS. CONNECTED BY PLUMBER. ACCESS SYSTEM TO SYSTEM ON THIS SIDE. UNIT SITS ON UPPER FLAT ROOF.
12. 10" DIA CAPTIVE-AIRE STAINLESS STEEL DUCTWORK FOR STEAM ONLY. DUCT RUNS BELOW ROOF DECK PARALLEL TO WOOD JOIST. (SEE SPEC'S ON THIS PAGE)
13. QUARTER END PANEL
14. 16" DIA CAPTIVE-AIRE LISTED DUCT RUNNING 18" MIN ABOVE ROOF DECK TO UTILITY SET FAN.
15. FRONT PERFORATED SUPPLY PLENUM.



PLAN VIEW - HOOD #1 (HD-1) & DISHWASHER HOOD

SCALE: 1/4" = 1'-0"



1 Fryer, Deep Fat, Gas
4 Griddle, Gas
5 Oven, Convection, Gas
6 Hot Plate, Gas

COOKING EQUIPMENT LAYOUT

RESPONSIBILTY MATRIX

A) REQUIREMENTS FOR FOOD SERVICE CONTRACTOR (F.E.C.)
1) HOOD, FANS, & ALL ASSOCIATED EXHAUST & SUPPLY DUCTWORK IS PROVIDED & INSTALLED BY FOODSERVICE CONTRACTOR
2) HOOD SYSTEM TO BE STARTED UP BY CONTRACTOR
A) SMOKE TEST ON THE HOODS IN FRONT OF THE OWNER TO ENSURE SATISFACTION WITH COOKING EQUIPMENT ON.
3) HOOD INSTALLER TO START UP MUA HEATER OF MUA, THEN FILL OUT FACTORY STARTUP
4) ALL WALL STAINLESS FOR UNDER & AROUND HOODS SHALL BE INSTALLED ALSO.
5) ASSIST IN PROVIDING & SUBMITTING IN HOOD & ANSUL PERMIT DRAWINGS.
6) MOUNT FANS AS SHOWN ON DRAWINGS INCLUDING MUA.
7) INSTALLER TO ENSURE ALL HOOD AND FAN ACCESSORIES ARE INSTALLED SUCH AS GREASE CUPS, HINGE KITS, FILTER INTAKES, AND ANY OTHER MISC. ITEMS SHIPPED WITH THE PRODUCT.
8) INSTALL ALL LISTED GREASE DUCT FROM CAPTIVE-AIRE SPECIFICATIONS & FIREWRAP FOR INSIDE BUILDING ONLY.
9) INSTALL SUPPLY AND DISH DUCT.

B) NOTES (REQUIREMENTS) FOR ELECTRICIAN:
1) FIELD WIRE FROM BUILDING PANEL TO CAPTIVE AIRE CONTROLS CABINET (WALL MOUNTED PANEL) 3 PHASE POWER FOR EXHAUST & SUPPLY FANS AND THEN FROM CAPTIVE AIRE PANEL TO THE DISCONNECT ON THE EXHAUST & MUA FANS. THE POWER MUST BE IN SEPARATE CONDUITS DUE TO THE VFD'S.
2) WIRE 120V, 1 PHASE FROM SF1/N1 OF HD PANEL TO MUA UNIT. ALSO WIRE A 18-3 GA WIRE FROM HOOD PANEL TO MUA UNIT IN CEILING.
3) FIELD WIRE FROM BUILDING PANEL TO CAPTIVE AIRE CONTROLS CABINET (HOOD MOUNTED) 1 PHASE, 120, 20 AMP CIRCUIT TO BE USED FOR LIGHTS & CONTROLS CIRCUITRY. THE LIGHTS ARE ALREADY CONNECTED TO CONTROL PANEL.
4) VERIFY THAT THE WIRE RED/BROWN WIRES ON ANSUL CABINET TO CAPTIVE-AIRES CONTROL PANEL C1 & AR1 TERMINALS.
5) FIELD WIRE THE DUCT SENSORS LOCATED IN EXHAUST COLLARS TO CAPTIVE AIRE CABINET. CAPTIVE AIRE SUPPLIES THE WHITE STAT WIRE & SHIPPED IN CABINET
6) FIELD WIRE & INSTALL ROOM SENSOR SUPPLIED BY CAPTIVE AIRE. MOUNT SENSOR 6' AWAY FROM HOOD UP HIGH. STAT WIRE PROVIDED BY CAPTIVE AIRE.
7) FIELD WIRE THE BUILDING ALARM SYSTEM (IF APPLICABLE) INTO THE ANSUL MICRO SWITCH LOCATED AT THE RIGHT END OF THE HOOD. IF NO BUILDING ALARM, INSTALL THE CAPTIVE AIRE SUPPLIED 120V HORN/LIGHT STROBE & WIRE TO ANSUL PANEL.
8) ELECTRICIAN MUST CHECK FAN ROTATION BY LOOKING AT YELLOW ARROWS MARKED ON FANS. IF ROTATION IS WRONG, REVERSE ANY 2 OF THE 3 PHASE LEADS ON THE LOAD SIDE.
9) IF ANY ELECTRIC UNDER HOOD, BREAKER MUST BE OF SHUNT TRIP TYPE & ELECTRICIAN TO WIRE FROM ST & N1 TERMINALS OF HOOD PANEL TO SHUNT TRIP DEVICE BY OTHERS.
10) WIRE 120V, 1 PHASE, TO WALL SWITCH AND THEN TO DISH FAN ON ROOF.

C) FIELD NOTES (OTHER TRADES)
1) SITE PLUMBER TO INSTALL THE CAPTIVE-AIRE PROVIDED ANSUL GAS VALVE FOR EACH SYSTEM. PLUMBER TO FIELD INSTALL GAS VALVE INLINE WITH THE GAS PIPING GOING TO THE COOKING EQUIPMENT OF THE SYSTEM. PLUMBER TO COORDINATE WITH THE F.E.C. FOR ALL HOOK UP OF GAS COOKING EQUIPMENT & ENSURE ALL GAS IS VENTED ONCE HOOKED UP. USE GAS REGULATORS TO MAINTAIN 7-14" OF GAS PRESSURE.
2) PLUMBER TO SUPPLY & INSTALL GAS LINE TO MUA ON ROOF.

D) GENERAL CONTRACTOR (GC) RESPONSIBILITIES:
1) GC IS RESPONSIBLE TO HOLD A COORDINATION MEETING WITH ALL TRADES TO ENSURE UNDERSTANDING OF REQUIREMENTS AND MAKE SURE THERE ARE NO CONFLICTS THROUGHOUT THE PROJECT & ASSIST AS REQUIRED
2) GC IS RESPONSIBLE FOR ANY BUILDING CONSTRUCTION CHANGES OR STRUCTURAL REQUIREMENTS TO INCLUDE BUT NOT LIMITED TO: HOOD WALL READY TO ACCEPT WALL STAINLESS & HOOD, ANY REQUIREMENTS TO HEAD OFF JOIST FOR DUCT ROUTING, ANY STRUCTURAL SUPPORTS REQUIRED TO SHORE UP BUILDING OR STRUCTURE, AND ANY FINISHED CEILING WORK, CEILING WORK, DEMO, OR COSMETIC & PATCHING WORK.
3) PROVIDE A WORKING CONSTRUCTION SCHEDULE TO ALL TRADES.

TYPE I EXHAUST GREASE DUCT (SPECIFICATIONS):

1) GREASE DUCT SERVING TYPE I HOODS USED IN GREASE APPLICATIONS SHALL BE CONSTRUCTED OF 16 GAGE (0.062") BLACK IRON STEEL, CONTINUOUSLY LIQUID TIGHT WELDED.
2) PROVIDE ALL SQUARE ELBOWS IN GREASE DUCT WITH UNVANED SMOOTH RADIUS CONSTRUCTION WITH RADIUS EQUAL TO 1-1/2 TIMES THE DUCT WIDTH. AVOID SITUATIONS WHICH WOULD REQUIRE 90 DEGREE FITTINGS BACK TO BACK.
3) DUCT TO HOOD JOINTS SHALL BE CONTINUOUS LIQUID TIGHT WELDED.
4) TYPE I HOODS AND GREASE DUCTS SHALL BE SUPPORTED USING NON-COMBUSTIBLE MATERIALS.
5) GREASE DUCT SYSTEMS SHALL BE INSTALLED SO AS TO NOT COLLECT GREASE IN ANY PORTION. SLOPE DUCTWORK A MINIMUM OF 1/4"/FT BACK TOWARDS THE HOOD. CLEAN OUTS SHALL BE PROVIDED AT EVERY CHANGE IN DIRECTION, AS REQUIRED TO PROPERLY CLEAN THE DUCT AND AT A MINIMUM OF ONE EVERY 20 FEET.
6) ALL COMBUSTIBLE MATERIALS SHALL BE KEPT A MINIMUM OF 18" AWAY FROM ANY PART OF A TYPE I HOOD OR THE GREASE DUCT SERVING A TYPE I HOOD. IF THE COMBUSTIBLE MATERIALS CANNOT BE MOVED TO ALLOW 18" CLEARANCE, AN APPROVED CLEARANCE REDUCTION METHOD SHALL BE USED.

SUPPLY DUCT (SPECIFICATIONS):

1) SHEET METAL DUCTWORK SHALL BE FABRICATED OF GALVANIZED STEEL AND INSTALLED IN ACCORDANCE WITH SMACNA AND THE BUILDING AND MECHANICAL CODES
2) INSTALL DAMPERS AT ALL BRANCH DUCTS AS REQUIRED TO PROPERLY BALANCE THE SYSTEM

FISCHER ENGINEERING SERVICES, LLC
MECHANICAL DESIGN & CONSULTING SERVICES
3872 Nottingham Ct.
Cleves, Ohio 45002
Ph: 513-675-1559

DATE: 03/7/22
DRAWN BY: JAH
SCALE: NONE

REVISION	DATE

Wildfire Brewery
402 Licking Pike
Wilder, Kentucky 41071
NEW COMMERCIAL HOOD IN KITCHEN

MANAGED BY:
AIR SOLUTIONS, INC.
1329 E. KEMPER RD
CINCINNATI, OH 45246
PH: (513) 860-5555

STATE OF KENTUCKY * LICENSED PROFESSIONAL ENGINEER * RAYMOND FISCHER 19821 * CERTIFICATE NUMBER

SHEET NO: H-1