

**HOOD INFORMATION - JOB#5584294**

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL CFM	EXHAUST PLENUM				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD END TO END	HOOD CONFIG
										WIDTH	LENG	HEIGHT	DIAM				
1	HD1	5424 ND-2-PSF-F	CAPTIVEAIRE	14' 6"	600 DEG	I	HEAVY	200	2900	4'	18'	2900	1641	-1.132'	2400	430 SS	ALONE

**HOOD INFORMATION**

HOOD NO	TAG	TYPE	FILTER(S)			EFFICIENCY @ 7 MICRONS	LIGHT(S)			UTILITY CABINET(S)			ELECTRICAL	SWITCHES	FIRE SYSTEM	HOOD HANGING WEIGHT	
			QTY	HEIGHT	LENGTH		QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE					SIZE
1	HD1	CAPTRATE SOLID FILTER	10	16"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0	DCV-1111_M44	1 LIGHT 1 FAN	YES	1266 LBS

**PERFORATED SUPPLY PLENUM(S)**

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)			
							WIDTH	LENG	DIAM	CFM
1	HD1	Front	186"	14"	6"	MUA	12"	24"	800	0.240"
							12"	24"	800	0.240"
							12"	24"	800	0.240"

**EXHAUST FAN INFORMATION - JOB#5584294**

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	WEIGHT (LBS)	SONES	
1	EF-PCU1	1		KB18	CAPTIVEAIRE	2900	1.700	1615	TEFC,HIGHTMP,WASHDOWN	3.000	2.6600	3	208	8.4	1957	26

**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	MUA-MPU1	A2-D.500-20D-MPU	20M2-2-MDD	A2-D.500	2000	2400	0.500	1116	IDP,PREMIUM	2.000	0.7520	3	208	6.1	7.7A	15A	1346	8.4

**MUA FAN INFORMATION - JOB#5584294**

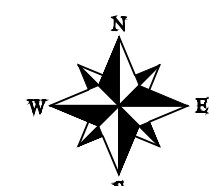
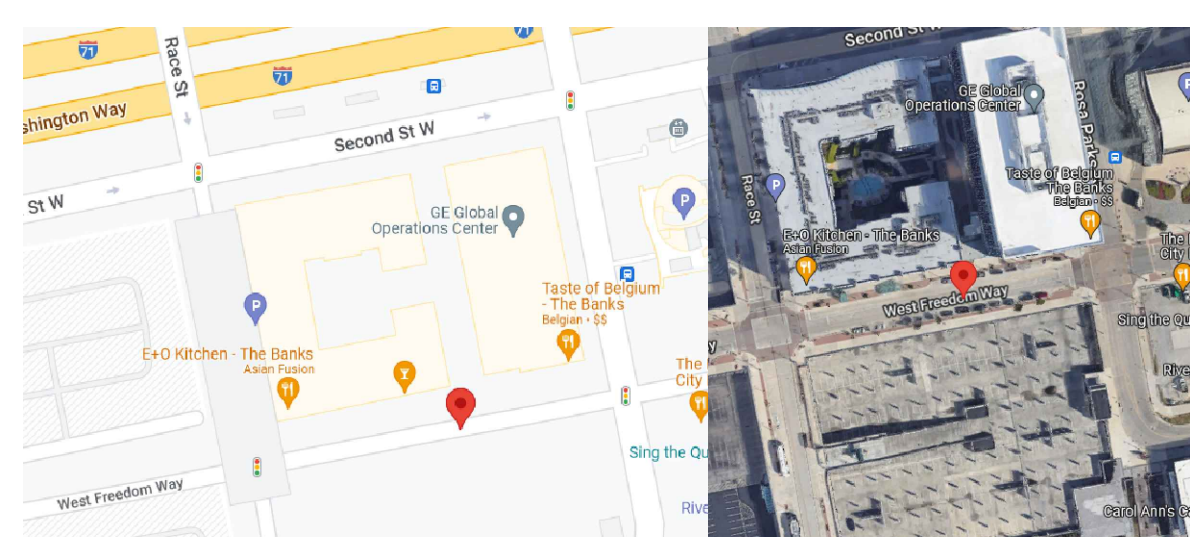
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLDWR	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MDCP	WEIGHT (LBS)	SONES
2	MUA-MPU1	1	A2-D.500-20D-MPU	20M2-2-MDD	A2-D.500	2000	2400	0.500	1116	IDP,PREMIUM	2.000	0.7520	3	208	6.1	7.7A	15A	1346	8.4

**COILS - JOB#5584294**

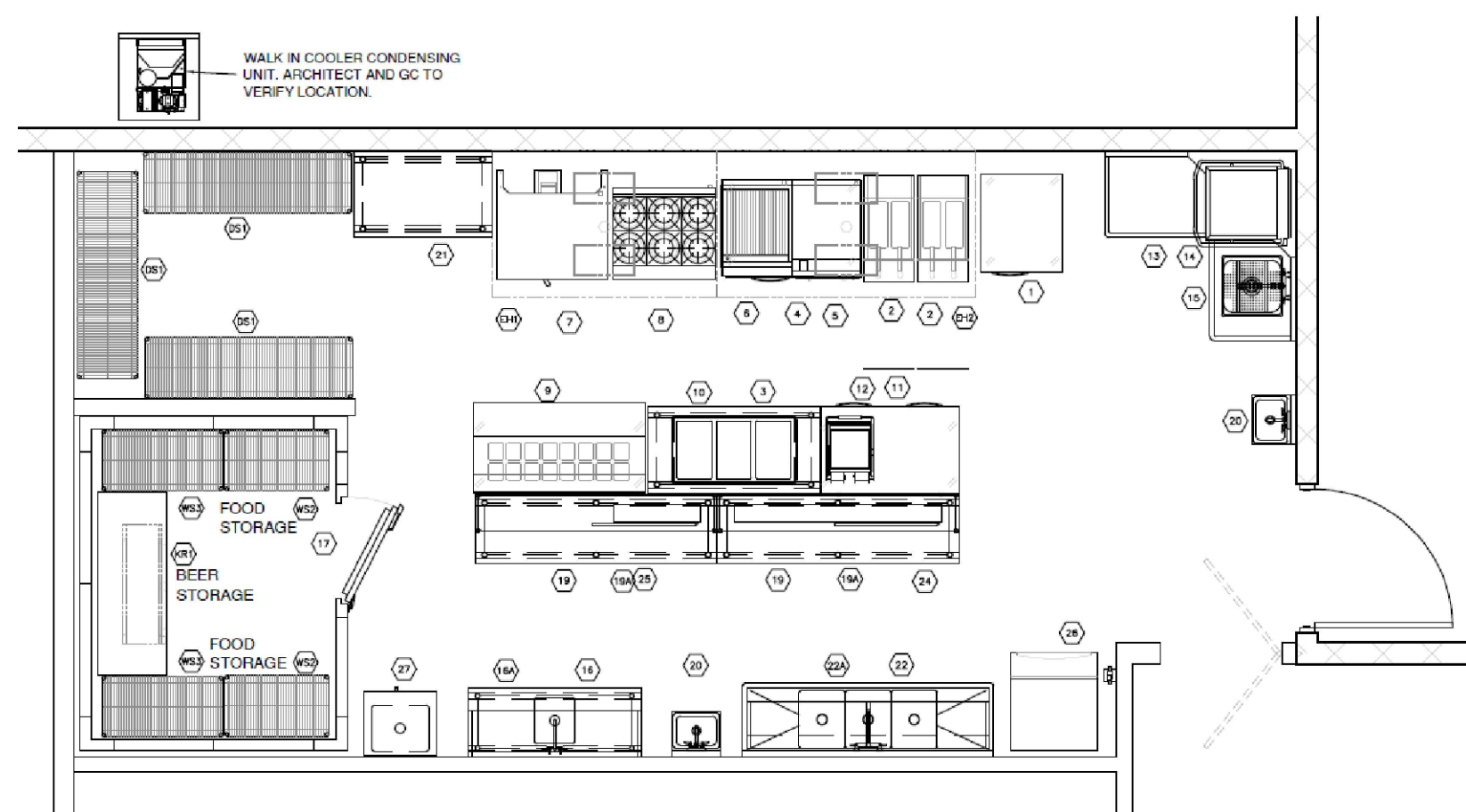
FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	ENTERING DB TEMP				LEAVING DB TEMP				FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP							
2	MUA-MPU1	DX	2400	90.0°F	74.0°F	76.8°F	68.3°F	---	---	---	---	---	---	50.1 MBH	32.9 MBH	17.2 MBH

**GAS FIRED MAKE-UP AIR UNIT(S)**

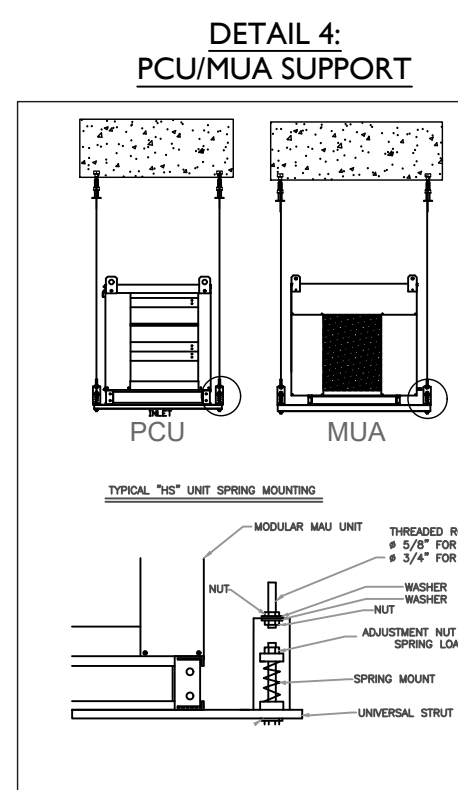
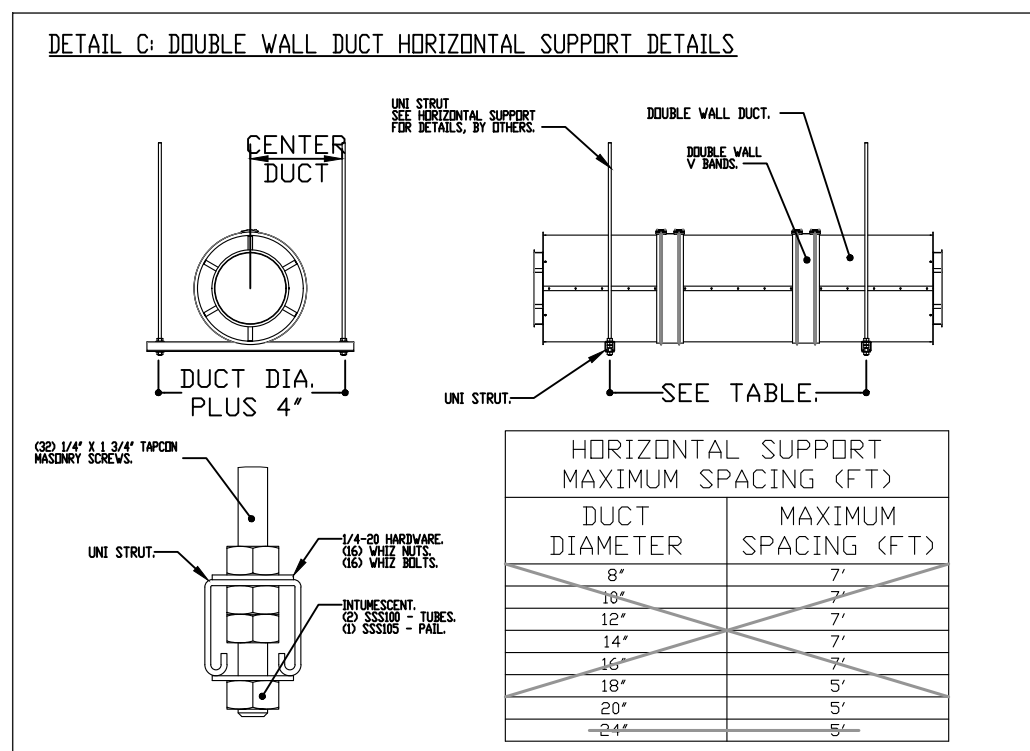
FAN UNIT NO	TAG	INPUT BTUS	OUTPUT BTUS	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MUA-MPU1	171992	158233	63°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92



**Revised Kitchen Layout-7/29/22**



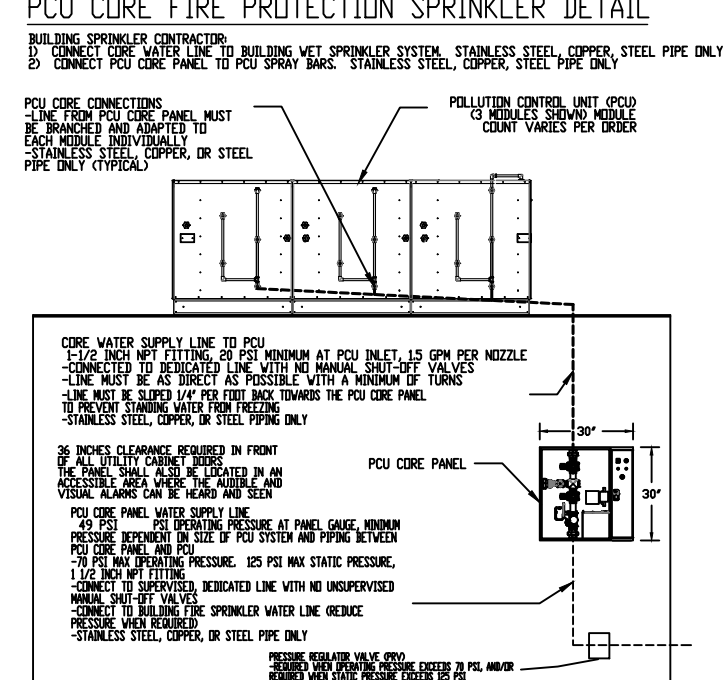
**COOKING EQUIPMENT LAYOUT**



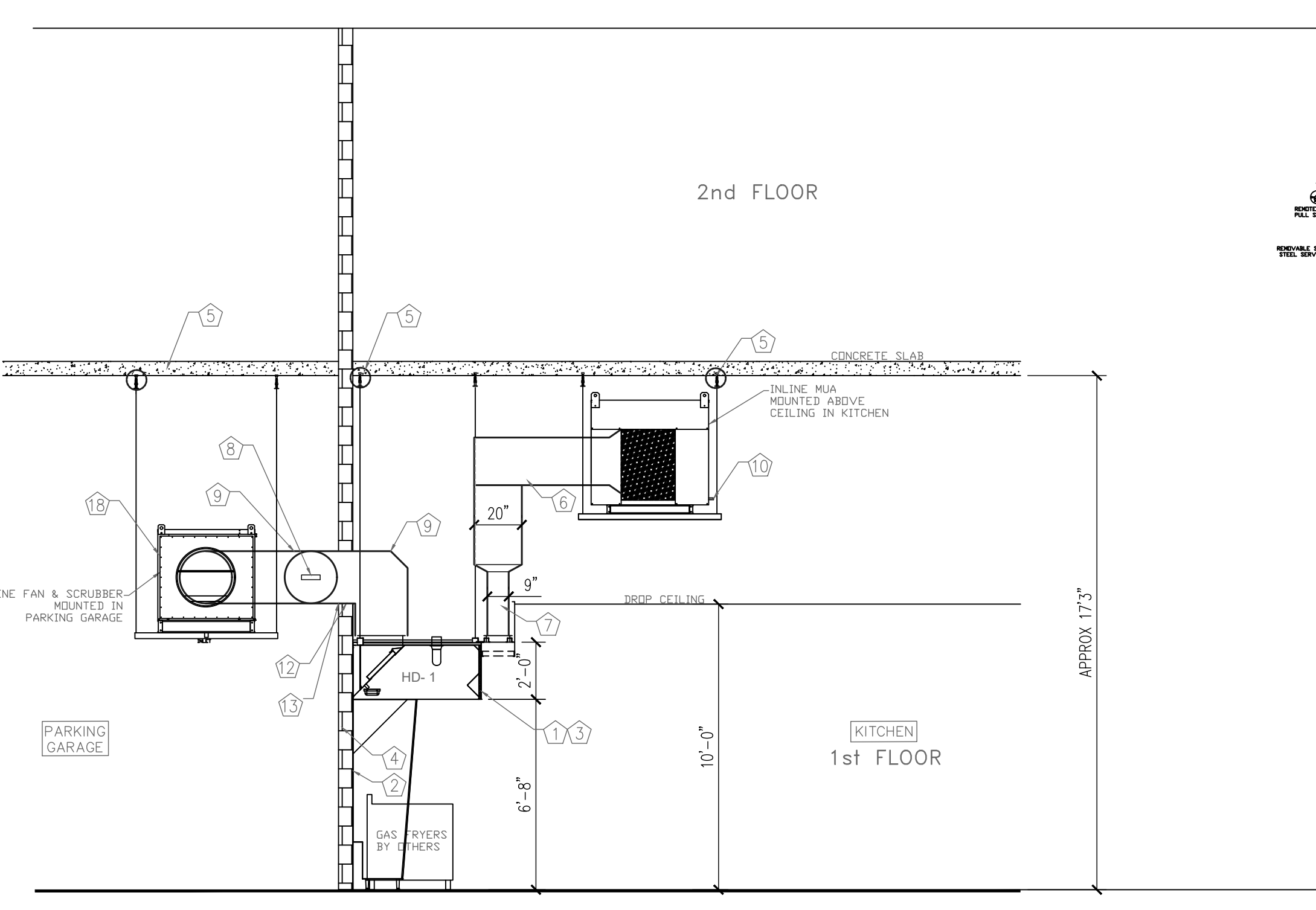
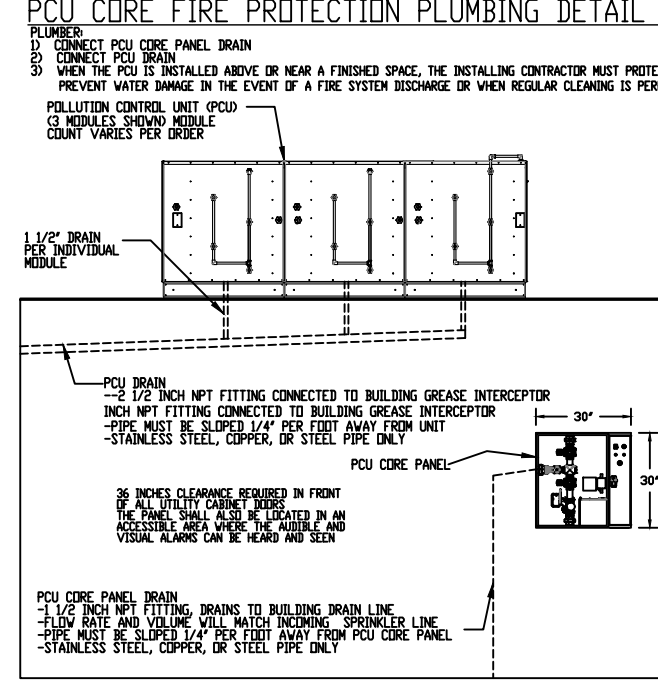
**Key Notes**

- Captive-Aire ETL Listed hood in accordance to UL710 see Captive-Aire Shop Dwg's.
- Stainless stl. wall panel below & left of hood from floor to ceiling. Also 18" pass the hood to left & right (minimum).
- Canopy Type Hood. To Overhang on front by 6" from cooking service (see Captive-Aire Listing Sheet).
- Block wall & sheet rock
- Hanging Rod (see Details #1, #2 & #3)
- 20"x16" (or equiv) duct to MUA-1 inline in space and then out to front louver (exterior).
- 12" x 24" Supply risers for hood supply plenum for hood. (Qty 3)
- Grease Cleanout Door (removably by hand)
- 18" (ID) & 23" (OD) Captive-Aire listed grease doublewall ductwork (see spec's on this page)
- Gas fired mud gas, connected by plumber, access system to system on this side.
- Hood to be supplied with the UL300 cabinet to house the UL300 Ansil system & listed Captive-Aire control panel (see C.A.S. drawings).
- G.C. /Owner to provide holes in the exterior wall for exhaust & supply duct & then close up around duct system.
- Fire rating at wall by general contractor & to match rating of wall.
- Service access this side for MUA.
- 5-ton cooling condenser mounted on wall or floor to location that allows fire-sprinkler water to be discharge. Also run drain off SCRUBBER CONTROL PANEL MOUNTED IN SPACE TO APPROVED DRAIN (IN-DIRECT) SPRINKLER CONTRACTOR TO CONNECT SPRINKLER SYSTEM TO SCRUBBER CONTROL PANEL MOUNTED IN SPACE. ENSURE PROPER PRESSURE REGULATORS & REQUIRED BACKFLOW PREVENTER ARE INSTALLED PER CODE & DWGS.
- Plumber or sprinkler contractor to run piping from SCRUBBER CONTROL PANEL MOUNTED IN SPACE TO SCRUBBER IN GARAGE & CONNECT TO FIRE SYSTEM PIPING ON SCRUBBER.
- PCU-scrubber control panel mounted in kitchen to be piped to PCU in garage and also to indirect drain in space for testing.
- Wire 120v between scrubber panel to hood controls on left side of hood.
- Sprinkler contractor to pipe to panel and then to PCU-scrubber.
- Discharge clean exhaust air just beyond garage service area entrance up high in corner of garage.
- Intake louver (by others) on front of building above door entrance. Flush mounted.
- Transition duct to 24" x 24" or equivalent to louver.

**PCU CORE FIRE PROTECTION SPRINKLER DETAIL**



**PCU CORE FIRE PROTECTION PLUMBING DETAIL**



**ELEVATION VIEW - HOOD #1 (HD-1)**

**AIR BALANCE SCHEDULE**

TAG	ROOMS SERVED	O.A. CFM	EXHAUST CFM
EF-1	KITCHEN	-	- 2900
MUA	KITCHEN	+ 2400	-
HVAC	BUILDING	+ 500 (MIN)	-
NET		0 CFM	

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

**Key Notes**

**EQUIPMENT SCHEDULE**

Item No	Qty	Equipment Category
1	1	Freezer, Reach-In
2	2	Fryer, Deep Fat, Gas w/Fiber
3	1	Oven's Tabco
4	1	Griddle, Storage, Refrigerator
5	1	Griddle, Counter-top, Gas
6	1	Charbroiler, Counter-top, Gas
7	1	Oven, Convection, Gas
8	1	Range, Restaurant, Gas
9	1	Refrigerator, Sandwich/Salad Prep
10	1	Drop-In, Hot Wells
11	1	Charbroiler, Undercounter, Compact
12	1	Grill, Sandwich
13	1	DishTable, Clean
14	1	Warewasher, High Temp, Ventless
15	1	DishTable, Sliced
16	1	Prep Table w/14 x 16 Sink
16A	1	Shelf, Wall Mount
17	1	Walk In Cooler
19	2	Table, Work
19A	2	Overhead Table Mount
20	2	Sink, Hand, Wall Mount
21	1	Table, Work
22	1	Sink, Scullery, 3 Compartments
22A	1	Shelf, Wall Mount w/Pul Rock
24	1	Warmer, Food Overhead
25	1	Warmer, Food Overhead
26	1	Ice Maker w/Bin & Filter
27	1	Map Sink Cabinet
DS1	3	Shelving Unit, Wire, 21x72
CH1	1	Hood, Exhaust
E12	1	Hood, Exhaust
KR1	1	Keap Storage Rack
WS2	2	Shelving Unit, Wire, 21x36
WS3	2	Shelving Unit, Wire, 21x42

**REQUIREMENTS FOR HOOD INSTALLER/FEC CONTRACTOR (OWNER DIRECT)**

- HOOD, FANS, SCRUBBER & ALL ASSOCIATED EXHAUST & SUPPLY DUCTWORK IS PROVIDED & INSTALLED BY HOOD INSTALLER.
- HOOD SYSTEM TO BE STARTED & BALANCED UP BY CONTRACTOR
- SMOKE TEST ON THE HOODS IN FRONT OF THE OWNER TO ENSURE SATISFACTION WITH COOKING EQUIPMENT ON.
- PROVIDE ENGINEERED DRAWINGS & ANY HOOD PERMITS TO BE PROVIDED.
- FIRE SYSTEM PERMIT FOR THE HOOD & SCRUBBER BY CAPTIVE-AIRE.
- RECEIVE HOOD SYSTEM & HANG HOOD & WALL STAINLESS AROUND HOOD IN KITCHEN.
- REMOVE THE EXHAUST FAN/SCRUBBER OUT IN GARAGE AS INDICATED ON THE PRINTS. THE UNIT WILL BE HUNG FROM SLAB ABOVE.
- INSTALL/HANG THE HEATED-COOLED MAKE UP AIR (MUA) DEDICATED TO THE HOOD IN KITCHEN AREA AS SHOWN ON PLANS. SET CONDENSER IN GARAGE & RUN CONDENSER LINES TO MUA UNIT ABOVE KITCHEN.
- INSTALL ALL LISTED DOUBLE WALL GREASE DUCT FROM HOOD TO SCRUBBER IN GARAGE & THEN TO EXIT OF GARAGE.
- INSTALL SUPPLY DUCT (HARD PIPE) FROM FRONT OF BUILDING TO MUA IN SPACE & THEN TO HOOD.
- FEC FIRE SYSTEM CONTRACTOR TO COMPLETE THE INSTALLATION OF THE FIRE SYSTEM TO INCLUDE WIRING OF ALL FIRE STATS, AND LOW VOLTAGE INTERLOCK OF THE HOOD FIRE SYSTEM & SCRUBBER FIRE SYSTEM, INSTALL ALL REMOTE PULL STATIONS & SUPPLY GAS VALVE.
- CAPTIVE AIRE TO RUN ALL LOW VOLTAGE WIRING IN RESPECT TO HOOD, MUA, EXHAUST FAN, AND SCRUBBER.
- 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.
- CLEAN-UP & START UP OF EACH SYSTEM & PERFORM ANY CITY INSPECTIONS IN RESPECT TO THE SYSTEM.

**NOTES (REQUIREMENTS) FOR ELECTRICIAN/FIRE ALARM CONTRACTOR:**

- FIELD WIRE FROM BUILDING PANEL TO CAPTIVE AIRE CONTROLS CABINET (HOOD MOUNTED PANEL) 3 PHASE (208V) 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.
- WIRE 120V, 1 PHASE FROM H1/N1 OF HD PANEL TO MUA UNIT FOR HEATER COMPONENTS.
- 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.
- FIELD POWER WIRE (3-PHASE) TO MUA CONDENSER IN GARAGE.
- FIELD WIRE 120V FROM HOOD CONTROL PANEL (G & N1) TO FIRE SYSTEM GAS VALVE LOCATED NEAR HOOD.
- FIELD WIRE THE BUILDING FIRE ALARM SYSTEM INTO THE FIRE SYSTEM TERMINALS AL1 & AL2 LOCATED AT THE RIGHT END OF THE HOOD. INTERLOCK THE SCRUBBER FIRE SYSTEM INTO SAME BUILDING ALARM SYSTEM.
- 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.
- 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.
- WIRE 120V POWER TO SCRUBBER (PCU PANEL) IN KITCHEN.

**(PLUMBER OR FIRE SPRINKLER CONTRACTOR)**

- SITE PLUMBER TO INSTALL THE CAPTIVE-AIRE PROVIDED FIRE SYSTEM GAS VALVE FOR HOOD SYSTEM. PLUMBER TO INSTALL GAS VALVE IN LINE 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.
- PLUMBER TO SUPPLY & INSTALL GAS LINE TO MUA INLINE IN SPACE.
- FIELD PIPE DRAINS OFF SCRUBBER DOWN TO FLOOR TO LOCATION THAT ALLOWS FIRE-SPRINKLER WATER TO BE DISCHARGE. ALSO RUN DRAIN OFF SCRUBBER CONTROL PANEL MOUNTED IN SPACE TO APPROVED DRAIN (IN-DIRECT) SPRINKLER CONTRACTOR TO CONNECT SPRINKLER SYSTEM TO SCRUBBER CONTROL PANEL MOUNTED IN SPACE. ENSURE PROPER PRESSURE REGULATORS & REQUIRED BACKFLOW PREVENTER ARE INSTALLED PER CODE & DWGS.
- PLUMBER OR SPRINKLER CONTRACTOR TO RUN PIPING FROM SCRUBBER CONTROL PANEL MOUNTED IN SPACE TO SCRUBBER IN GARAGE & CONNECT TO FIRE SYSTEM PIPING ON SCRUBBER.

**GENERAL CONTRACTOR (GC) RESPONSIBILITIES:**

- 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
- GC IS RESPONSIBLE FOR ANY BUILDING CONSTRUCTION CHANGES OR STRUCTURAL REQUIREMENTS 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 FOR WEIGHT OF HOOD, MUA, OR SCRUBBER, ANY FINISHED CEILING WORK, CEILING WORK, OR COSMETIC & PATRONIC WORK.
- GC TO PROVIDE HOLE IN BACK WALL FOR GREASE DUCT TO EXIT INTO GARAGE.
- PROVIDE OPENING IN FRONT OF BUILDING FOR MUA INTAKE, ANY SPECIAL REQUIRED LOUVER FOR MUA IS BY GC (IF STANDARD LOUVER-HOOD INSTALLER WILL PROVIDE).
- IF ANY PIPING OR OBSTACLES IN WAY OF MUA, HOOD, OR SCRUBBER WILL BE REQUIRED TO BE MOVED OR COORDINATE WITH HOOD INSTALLER IF THERE IS A REASONABLE WORK AROUND.
- ENSURE ACCESS IS MAINTAINED FOR MUA IN SPACE FOR FUTURE SERVICE.
- PROVIDE A WORKING CONSTRUCTION SCHEDULE TO ALL TRADES.

**Double Wall Grease Duct Specification**

Furnish double wall, factory built grease duct for use with Type I kitchen hoods, which conforms to the requirements of NFPA-96. Products shall be ETL listed to UL-1978 and UL-2221 for venting air and grease vapors from commercial cooking operation. Models DW-2R, 3R and 3Z are used for grease duct applications when installed in accordance with these instructions and National Fire Protection Association "NFPA 96"; Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. Double wall grease ducts are listed for a continuous internal temperature of 500 degrees F and intermittent temperatures of 2000 degrees F.

The duct sections shall be constructed of an inner duct wall and an outer wall with insulation in between. The inner duct wall shall be constructed of .036 inch thick, 430 type stainless steel and be available in diameters 8" through 24". The outer wall shall be constructed of stainless steel at a minimum of .024 inch thickness. The duct, based on model number, shall include layers of Super Wool 607 Plus insulation between the inner and outer wall. Grease duct joints shall be held together by means of formed V clamps and sealed with 3M Fire Barrier 2000+. The duct wall assembly shall be tested and listed at 3/4" or zero inch clearance, according to classifications.

**Classifications and Clearances**

UL 2221: Standard for Fire Resistive Grease Duct Enclosure Assemblies. Chapter 7 of this standard references a test labeled Internal Fire Test. Section 7.1.1 references two installation conditions, Condition A and Condition B. Condition A represents all installation condition except for installation within non-ventilated combustible enclosures. Condition B represents installation within a non-ventilated combustible enclosure.

Model DW-3Z is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a minimum zero clearance to combustibles (sizes 8" to 24" diameter). Model 3Z is listed in accordance with the requirements for duct enclosure Condition A and B.

Model DW-3R is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a reduced clearance to combustibles (sizes 8" to 24" diameter). Model 3R is listed in accordance with the requirements for duct enclosure Condition B.

Model DW-2R is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a reduced clearance to combustibles (sizes 8" to 16" diameter). Model 2R is listed in accordance with the requirements for duct enclosure Condition B.

**SUPPLY DUCT (SPECIFICATIONS):**

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

DATE: 03/01/23

DRAWN BY: JAH

SCALE: NONE

REVISION: DATE

**Red Leprechaun**  
22 West Freedom Way  
Cincinnati, OH 45202  
NEW COMMERCIAL HOOD IN KITCHEN

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

SHEET NO: H-2