

9KEY PLAN NO SCALE

SUPPLY DIFFUSER SCHEDULE

- CONNECT TO EXISTING GAS PIPING CAPPED IN JOIST SPACE BELOW IN THIS AREA. CONTRACTOR SHALL VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION.
- CONNECT TO EXISTING GAS PIPING ON ROOF IN THIS AREA. CONTRACTOR SHALL VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION.

KITCHEN EQUIPMENT SCHEDULE

KITCHEN EQUIPMENT SCHEDULE					
ItemNo	Category	Mfr	Model	Gas MBTU	Gas Size(in)
17	Gas Countertop Griddle	ANETS	A30X48	120.0	3/4"
19	Cheesemelter, Gas	Imperial	ICMA-36	40.0	3/4"
15	Charbroiler, Gas, Floor Model	Magikitchn	FM-RMB-636CR	140.0	
16	Gas Floor Fryer	Pitco	SG14-S	110.0	3/4"
18	Gas Countertop Griddle	ANETS	A30X60	150.0	3/4"
20	HD Range, 36", 6 Open Burners	Imperial	IMR-6-M CHICAGO	400,000	3/4"
	HD Range, 24", 4 Open Burners	Imperial	IMR-4-M CHICAGO	210.0	1-1/4"
22	Convection Oven, Gas	Blodgett Oven	ZEPH-200-G-ES SGL	50.0	3/4"

HOOD INFORMATION - Job#3420302

HOOD NO.	TAG	MODEL	LENGTH	EXHAUST PLENUM RISER(S)						MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG.	SWITCHES	
				TOTAL EXH CFM	WIDTH	LENG.	HEIGHT	DIA.	CFM						
1	H-1L	5424 ND-2-ACPSP-F	10' 0"	600 Deg.	2750		4"	18"	2750	1556	-0.864"	2000	560	430 SS Where Exposed	LEFT ALONE FRONT LEFT FACE
2	H-2M	5424 ND-2-ACPSP-F	10' 0"	600 Deg.	2250		4"	16"	2250	1611	-0.737"	2000	560	430 SS Where Exposed	MIDDLE ALONE
3	H-2M	5424 ND-2-ACPSP-F	10' 0"	600 Deg.	2500		4"	16"	2500	1790	-0.909"	2000	560	430 SS Where Exposed	RIGHT ALONE
4	H-4	4224 VHB-G-ND	7' 0"	700 Deg.	1050		4"	10"	525	963	-0.069"	0	0	430 SS 100%	ALONE ALONE 1 FAN 1 LIGHT FRONT LEFT FACE

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S)			LIGHT(S)			UTILITY CABINET(S)									
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM	ELECTRICAL	SWITCHES	FIRE SYSTEM PIPING	HANGING WHTG	
1	H-1L	Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO	Wall Mnt	12"x66"x24"	Ansul R102	3.0/3.0/3.0	DCV-3111	1 Light 1 Fan	YES	746 LBS
2	H-2M	Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO						YES	605 LBS	
3	H-2M	Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO						YES	670 LBS	
4	H-4						2	L55 Series E26	NO					FRONT LEFT FACE	NO	255 LBS	

HOOD OPTIONS

HOOD NO.	TAG	OPTION	
		FIELD WRAPPER 18.00" High Front, Left	
		FIELD WRAPPER 18.00" High Front, Left	
1	H-1L	BACKSPLASH 80.00" High X 360.00" Long 430 SS Vertical LEFT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS	
2	H-2M	FIELD WRAPPER 18.00" High Front	
3	H-2M	RIGHT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS	
4	H-4	FIELD WRAPPER 18.00" High Front, Left, Right	

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)					
							WIDTH	LENG.	DIA.	CFM	S.P.	
1	H-1L	Front	120"	28"	6"	MUA	12"	28"		666	0.169"	
							12"	28"		666	0.169"	
							12"	28"		666	0.169"	
							8"	16"		280	0.073"	
2	H-2M	Front	120"	28"	6"	MUA	12"	24"		666	0.197"	
							12"	24"		666	0.197"	
							12"	24"		666	0.197"	
							8"	16"		280	0.073"	
3	H-2M	Front	120"	28"	6"	MUA	12"	24"		666	0.197"	
							12"	24"		666	0.197"	
							8"	16"		280	0.073"	
							8"	16"		280	0.073"	

PATENT NUMBERS

AC-PSP (United States) - US Patent 7963830 B2
 AC-PSP Wall (Canada) - CA Patent 2820509
 AC-PSP Island (Canada) - CA Patent 2520330

SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

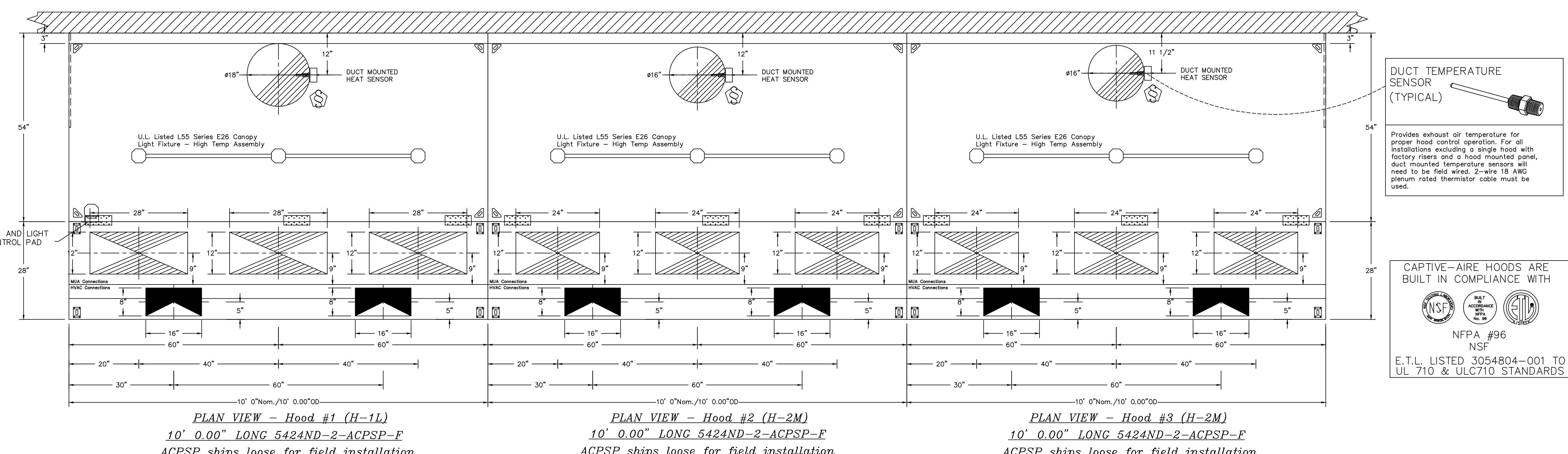
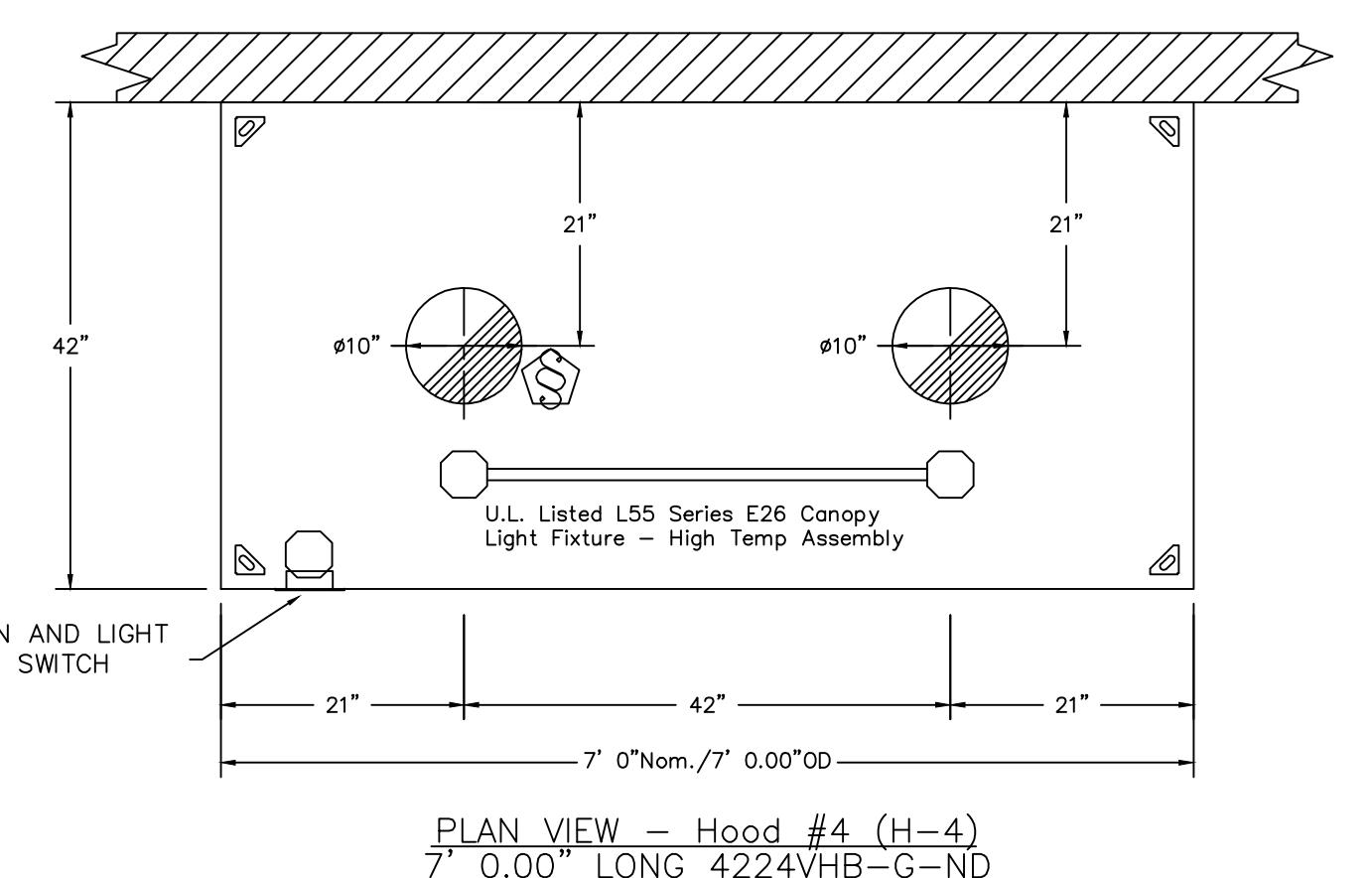
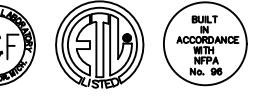
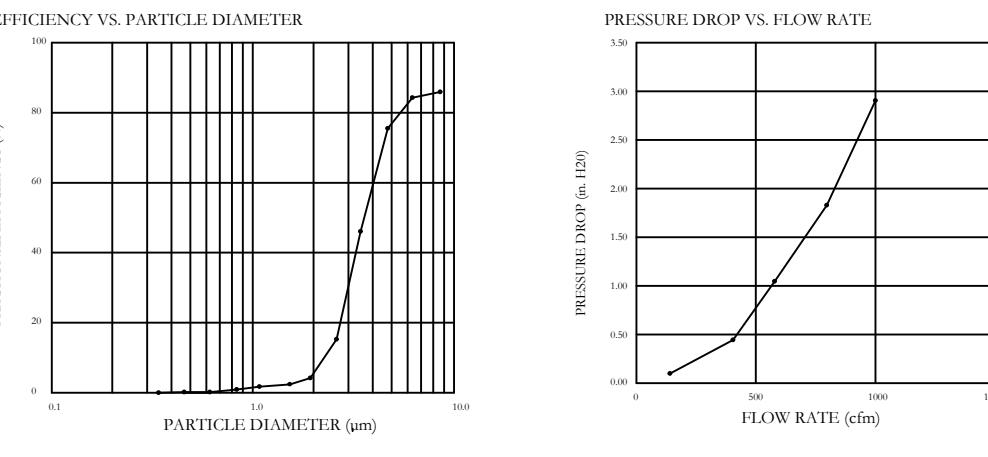
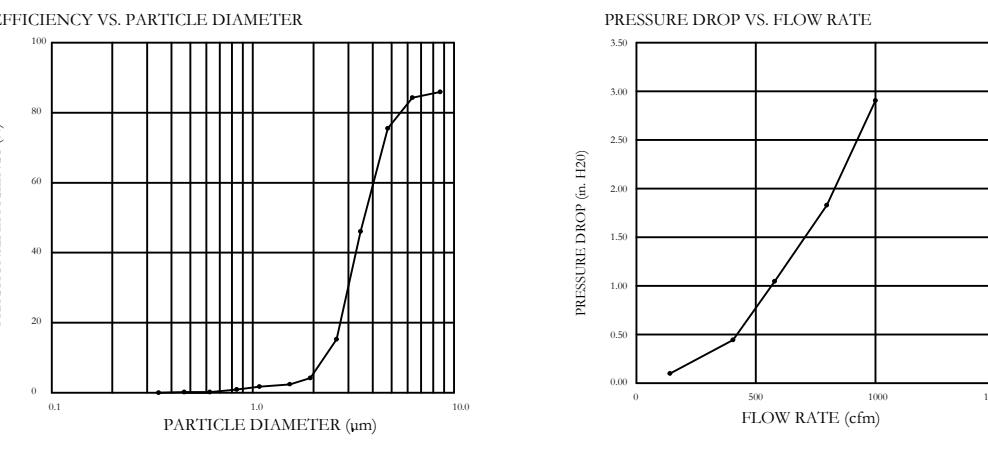
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNELS.

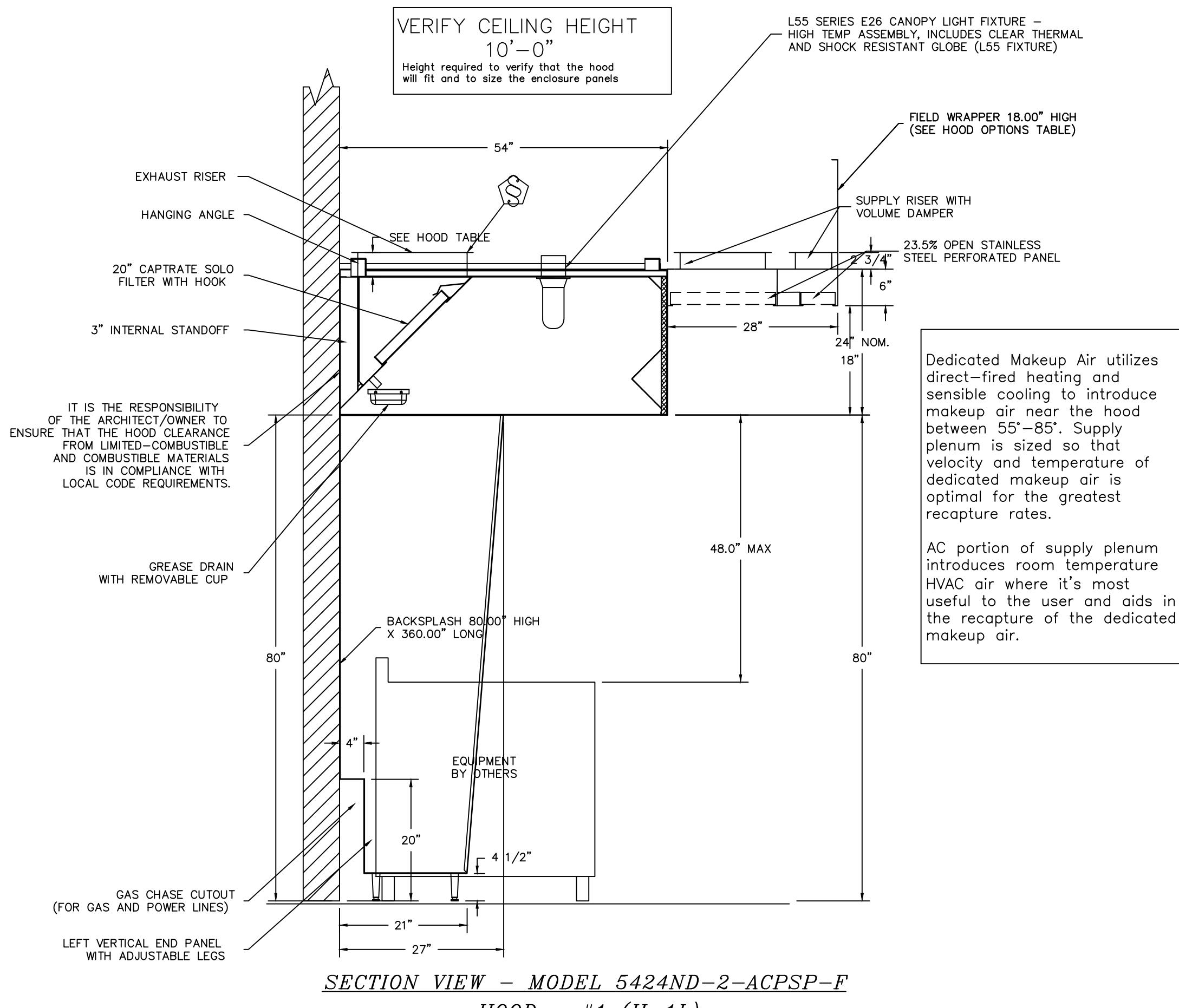
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES 7 MICRONS AND LARGER, AND 85% GREASE PARTICLES 7 MICRONS IN SIZE, AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

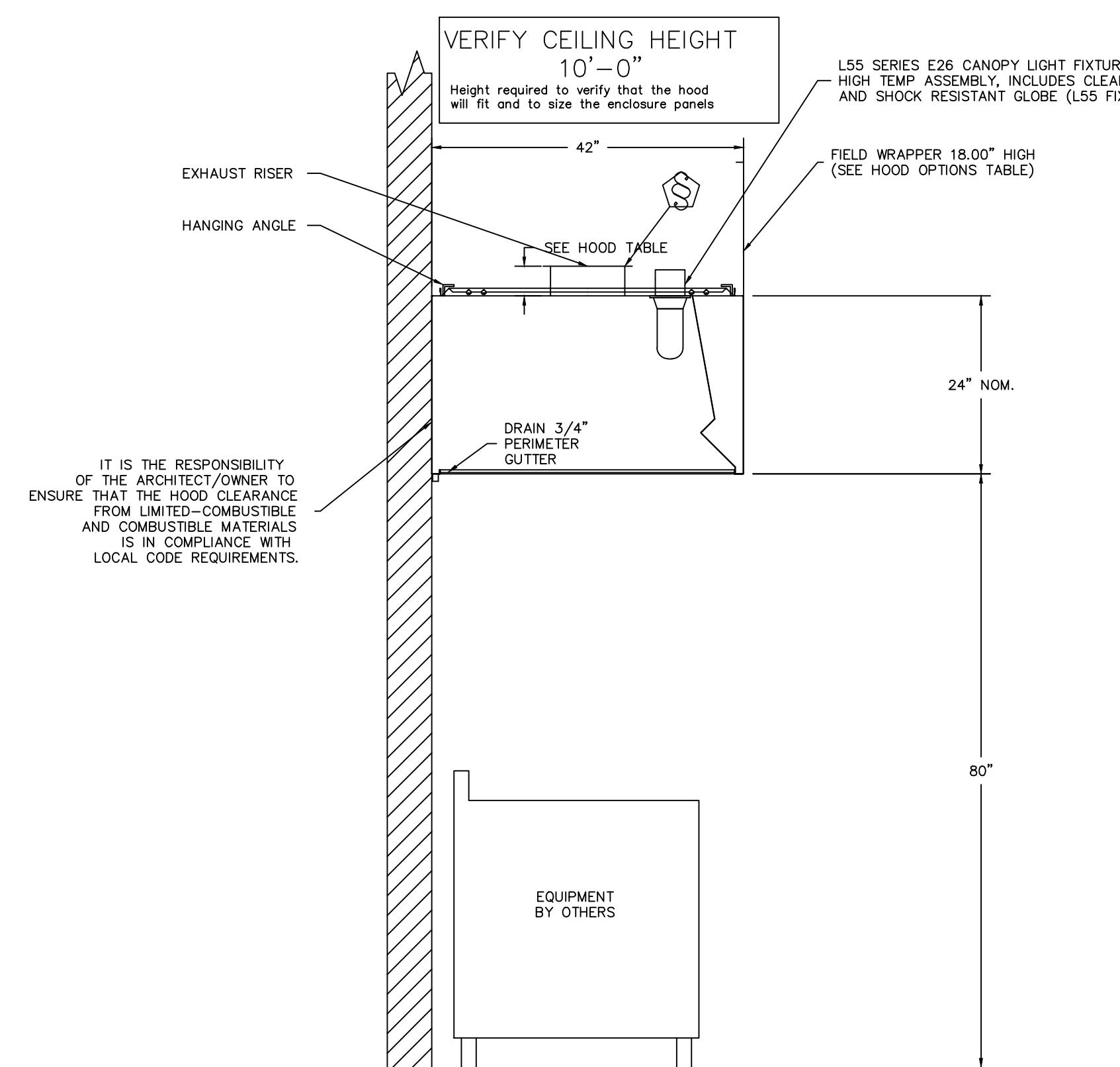
THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.

EFFICIENCY VS. PARTICLE DIAMETER





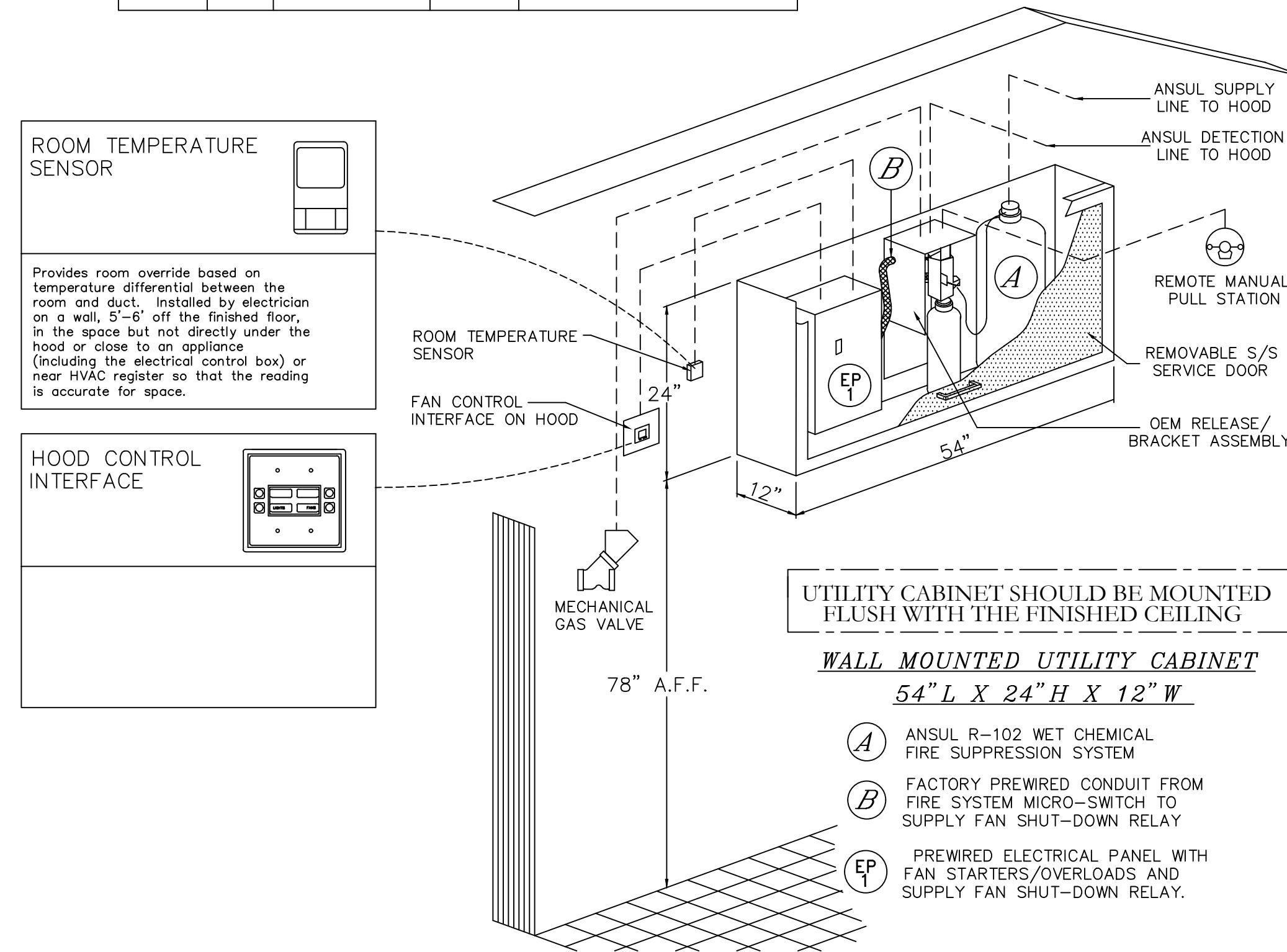
SECTION VIEW - MODEL 5424ND-2-ACPSPI
HOOD - #1 (H-1L)



SECTION VIEW - MODEL 4224VHB-G-ND
HOOD - #4 (H-4)

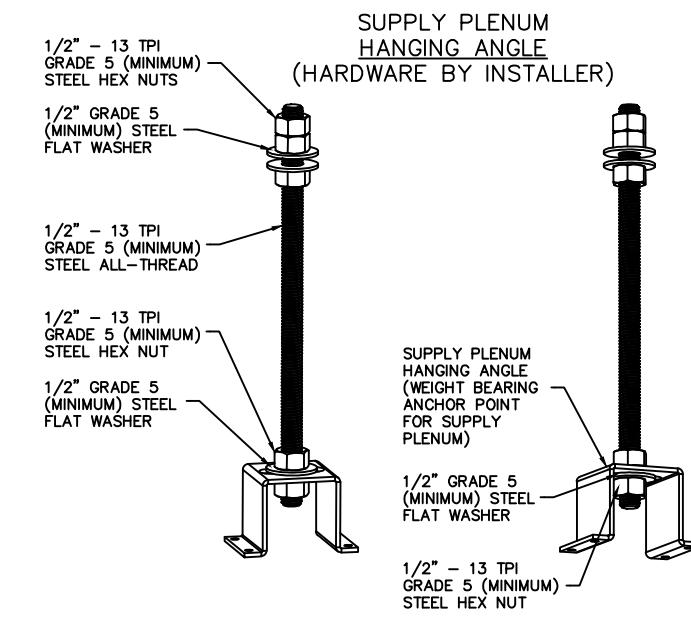
Fire System Information - Job#3420302						
FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1	FS-1	Ansul R102	3.0/3.0/3.0	7	Wall Utility Cabinet Left	N/A

AS VALVE(S)				
FIRE SYSTEM NO.	TAG	TYPE	SIZE	SUPPLIED BY
1	FS-1	Mechanical	2.000	Distributor



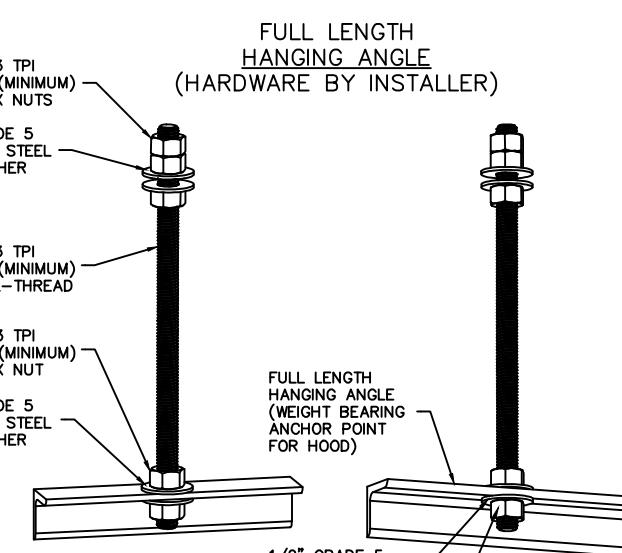
WALL MOUNTED UTILITY CABINET
54" L X 24" H X 12" W

- A** ANSUL R-102 WET CHEMICAL FIRE SUPPRESSION SYSTEM
- B** FACTORY PREWIRED CONDUIT FROM FIRE SYSTEM MICRO-SWITCH TO SUPPLY FAN SHUT-DOWN RELAY
- E P
1** PREWIRED ELECTRICAL PANEL WITH FAN STARTERS/OVERLOADS AND SUPPLY FAN SHUT-DOWN RELAY.



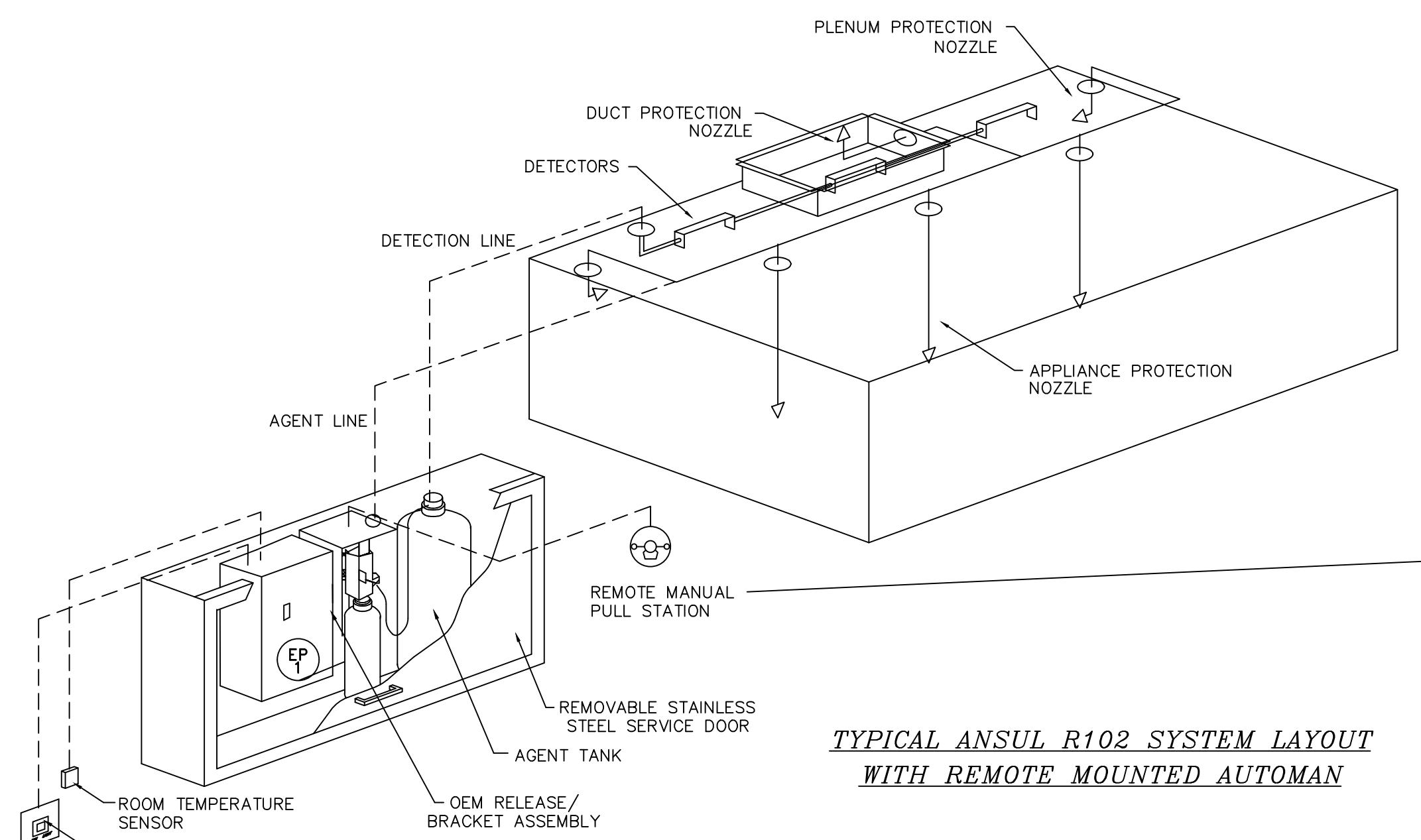
ASSEMBLY INSTRUCTIONS

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 ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

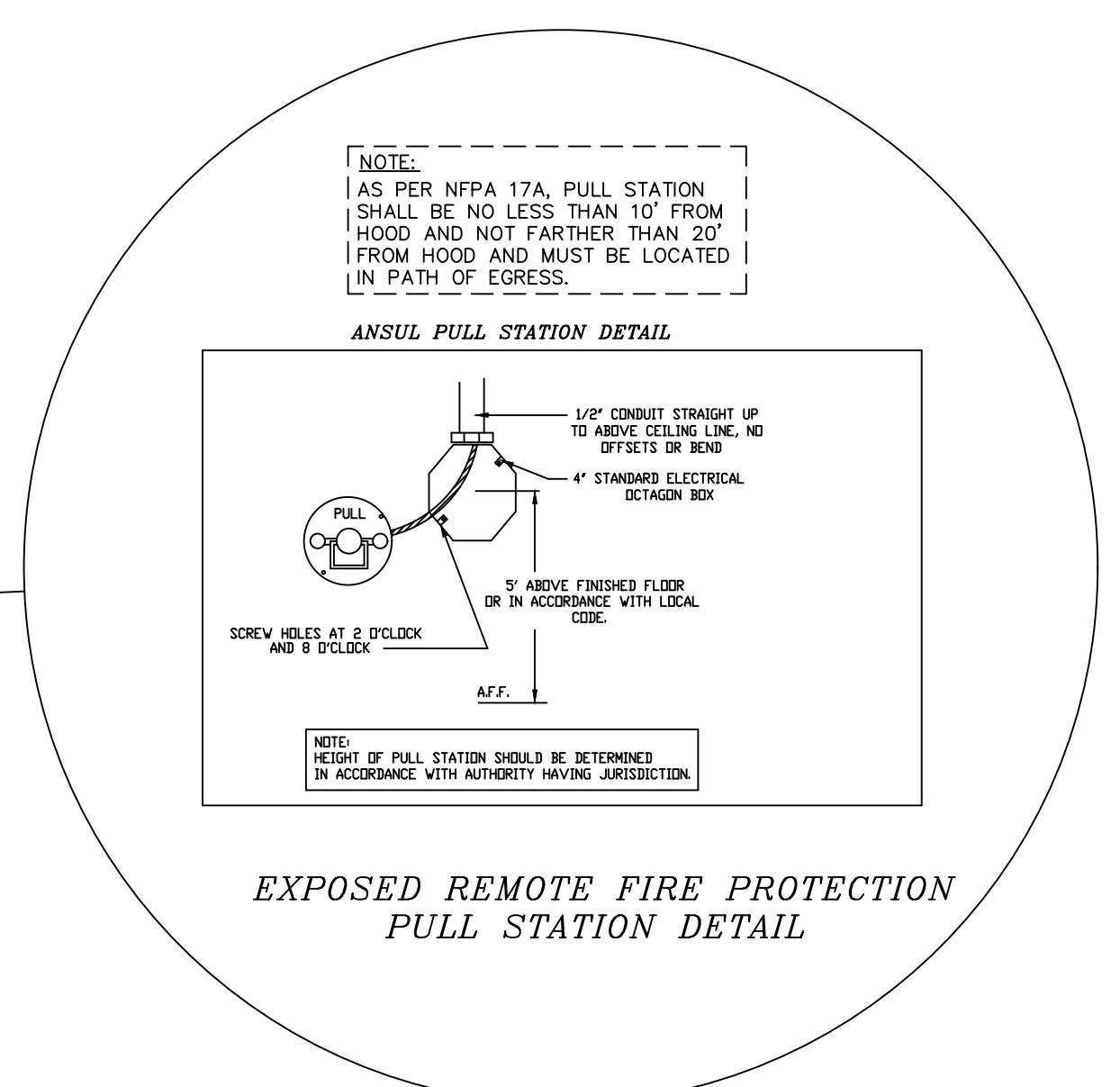


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TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN



*EXPOSED REMOTE FIRE PROTECTION
PULL STATION DETAIL*



EXHAUST FAN INFORMATION - Job#3420302

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1	EF-1	DU180HFA	2750	1.100	1166	1.500	0.8310	3	208	4.4	635 FPM	163	16.1
2	EF-2	DU180HFA	2250	1.000	1042	1.000	0.5890	3	208	3.8	520 FPM	153	12
3	EF-3	DU180HFA	2500	1.100	1118	2.000	0.7300	3	208	6.1	577 FPM	161	13.6
4	EF-4	DU50HFA	1050	0.375	1118	0.500	0.1540	1	115	5.6	399 FPM	70	9.1

MUA FAN INFORMATION - Job#3420302

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	WEIGHT (LBS.)	SONES	BURNER EFFICIENCY(%)
5	MUA-1	A3-D.500-24D	24MF-3-MOD	A3-D.500	3500	6000	0.500	1425	10.000	5.5640	3	208	27.0	1064	14.7	92

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE
5	MUA-1	536942	493987	80 deg F	7 in. w.c. - 14 in. w.c.	Natural

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)											
1	EF-1	1	- Grease Box										
		1	- Fan Base Ceramic Seal - Ship Loose - For Grease Ducts										
2	EF-2	1	- Grease Box										
		1	- Fan Base Ceramic Seal - Ship Loose - For Grease Ducts										
3	EF-3	1	- Grease Box										
		1	- Fan Base Ceramic Seal - Ship Loose - For Grease Ducts										
4	EF-4	1	- ECM Wiring Package-Exhaust - Manual or 0-10VDC Reference Speed Control (NIDEC Motor)										
		1	- AC Interlock Relay - 24VAC Coil										
		1	- Motorized Backdraft Damper for A3-D Housing										
		1	- Low Fire Start										
5	MUA-1	1	- Inlet Pressure Gauge, 0-35"										
		1	- Manifold Pressure Gauge, -5 to 15" wc										
		1	- Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only										

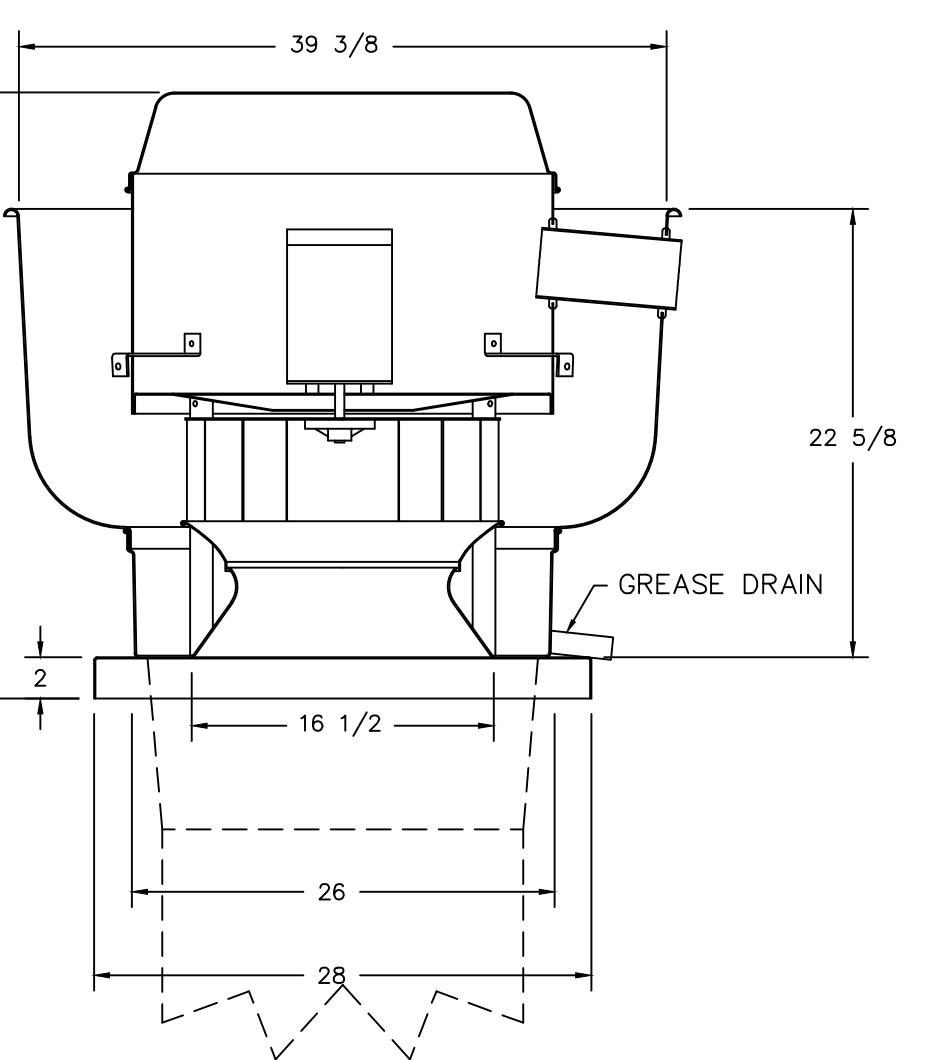
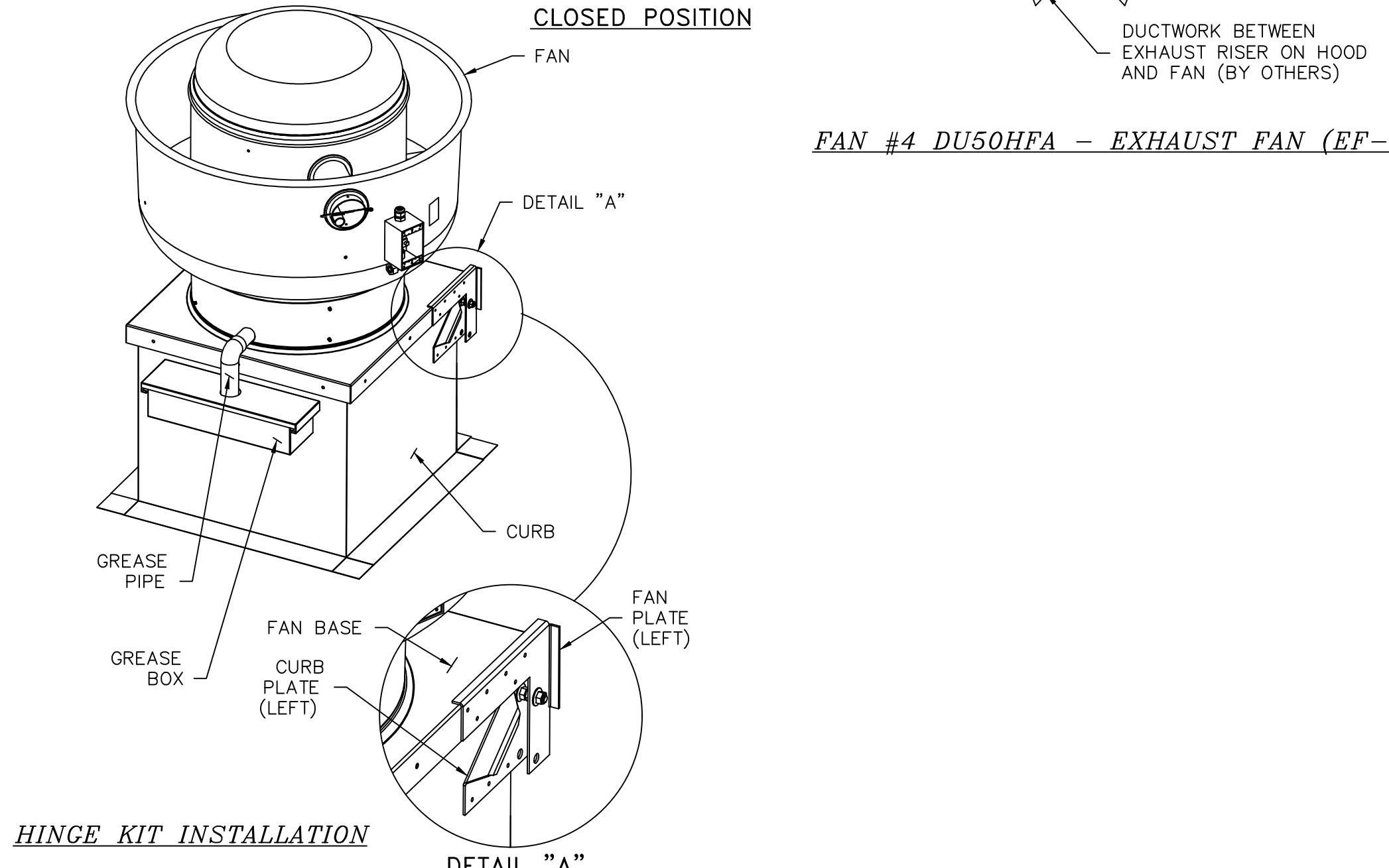
FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST		SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER
1	EF-1	YES					
2	EF-2	YES					
3	EF-3	YES					
4	EF-4						
5	MUA-1			YES			

CURB ASSEMBLIES

NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	EF-1	34 LBS	Curb	26.500" W x 26.500" L x 24.000" H Vented Hinged
2	# 2	EF-2	34 LBS	Curb	26.500" W x 26.500" L x 24.000" H Vented Hinged
3	# 3	EF-3	34 LBS	Curb	26.500" W x 26.500" L x 24.000" H Vented Hinged
4	# 4	EF-4	30 LBS	Curb	19.500" W x 19.500" L x 24.000" H Insulated
5	# 5	MUA-1	82 LBS	Curb	35.000" W x 84.000" L x 20.000" H Insulated

FOR QUESTIONS, CALL
NO. ILLINOIS FOOD SERVICE SALES/ENGINEERING OFFICE
1652 E. Main St., Suite 20 St. Charles, IL 60174
PHONE: 630-377-2611 FAX: 919-516-8738



FANS #1 (EF-1), #2 (EF-2), #3 (EF-3) - DU180HFA EXHAUST FAN

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300F (149C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST

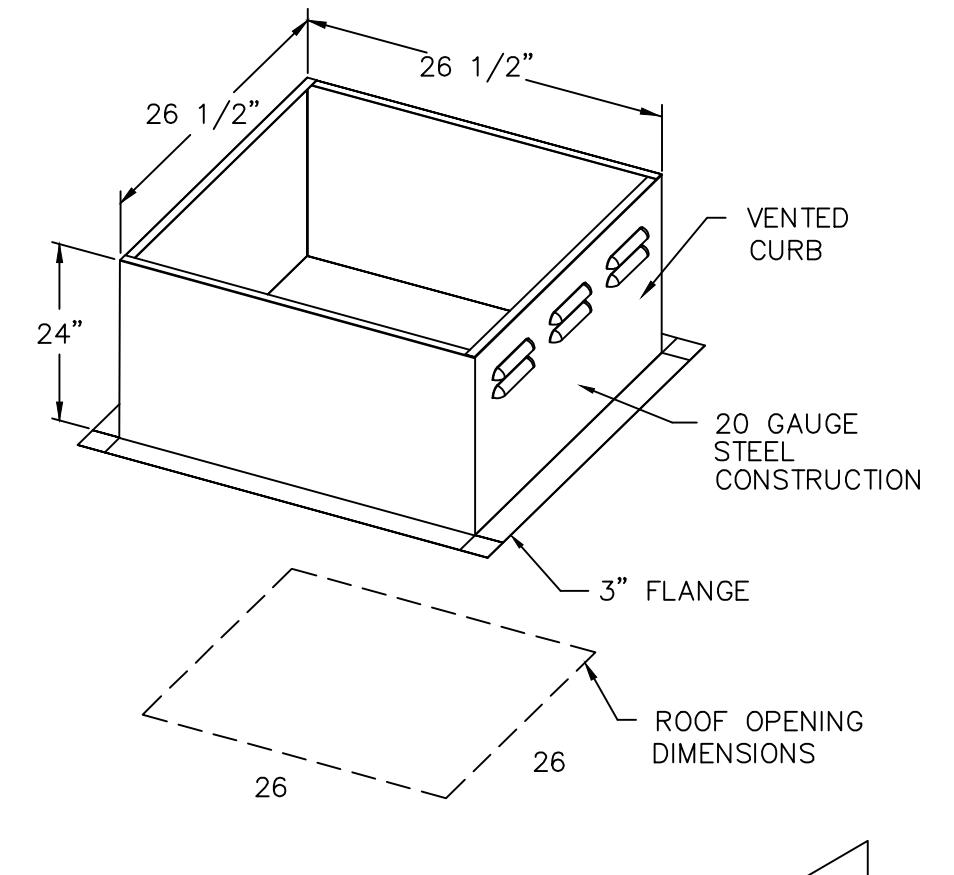
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300F (149C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST

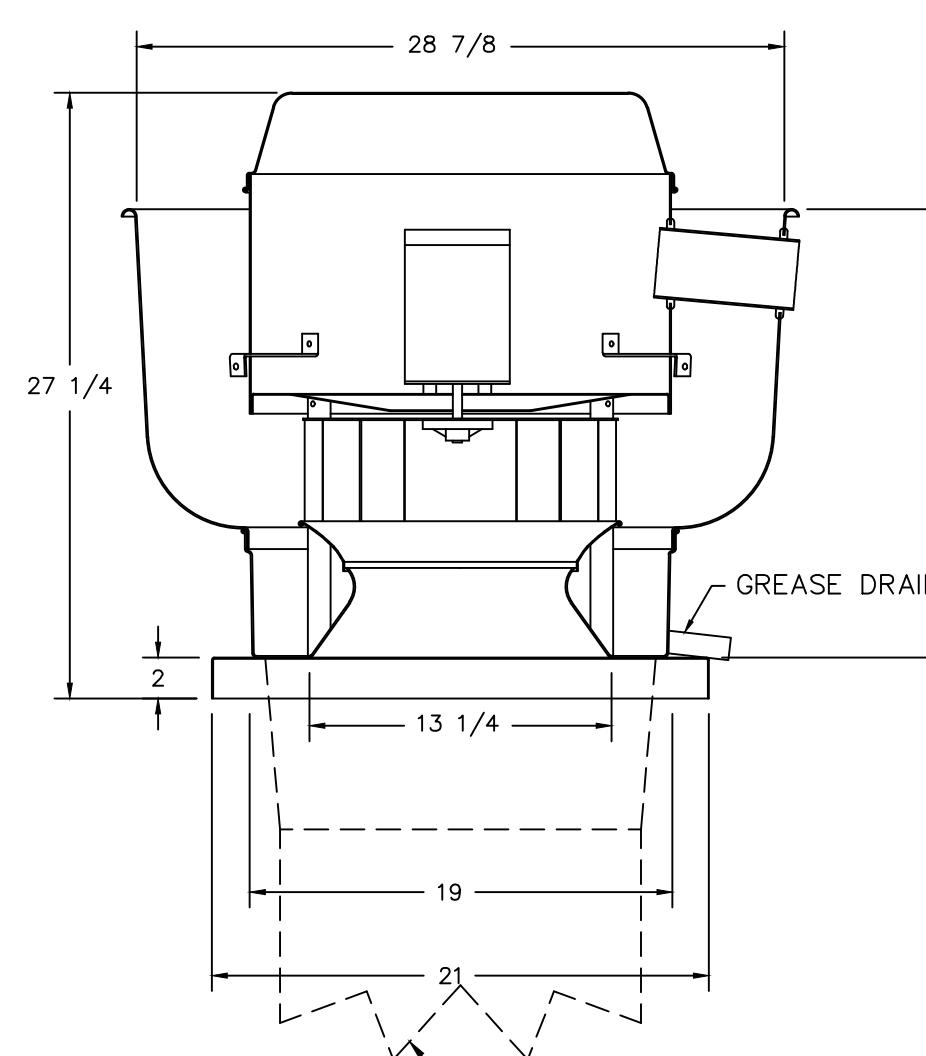
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600F (316C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

GREASE BOX
FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE



FAN #4 DU50HFA - EXHAUST FAN (EF-4)

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300F (149C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST

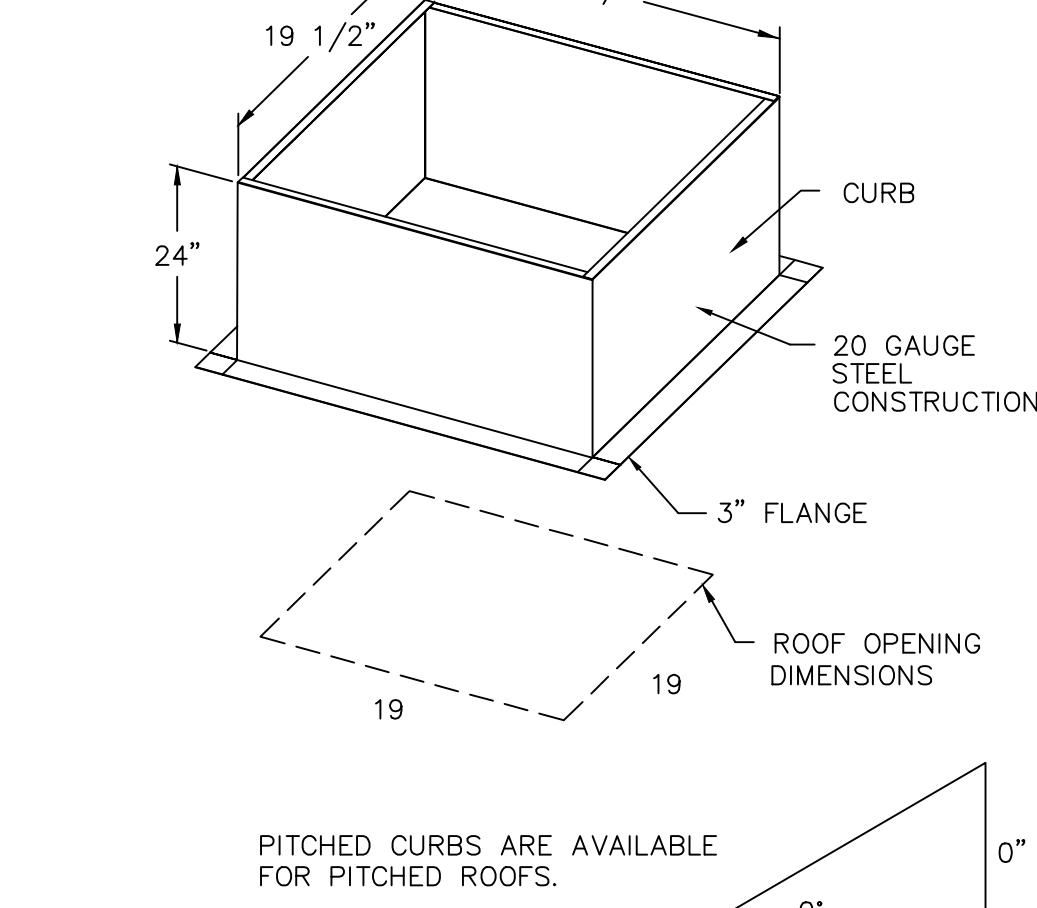
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300F (149C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600F (316C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

GREASE BOX
ECM WIRING PACKAGE-EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (NIDEC MOTOR)



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

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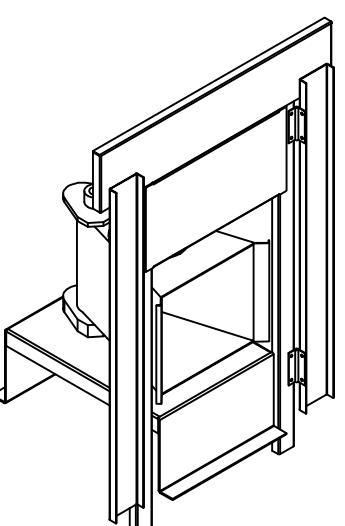
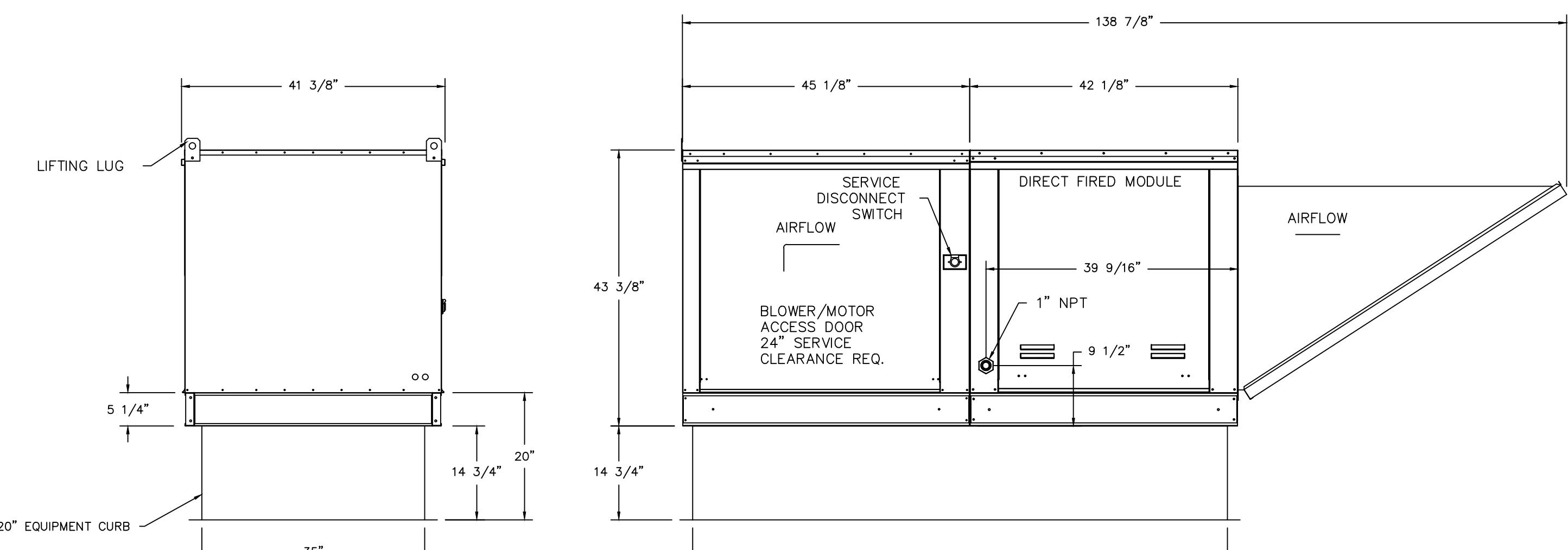
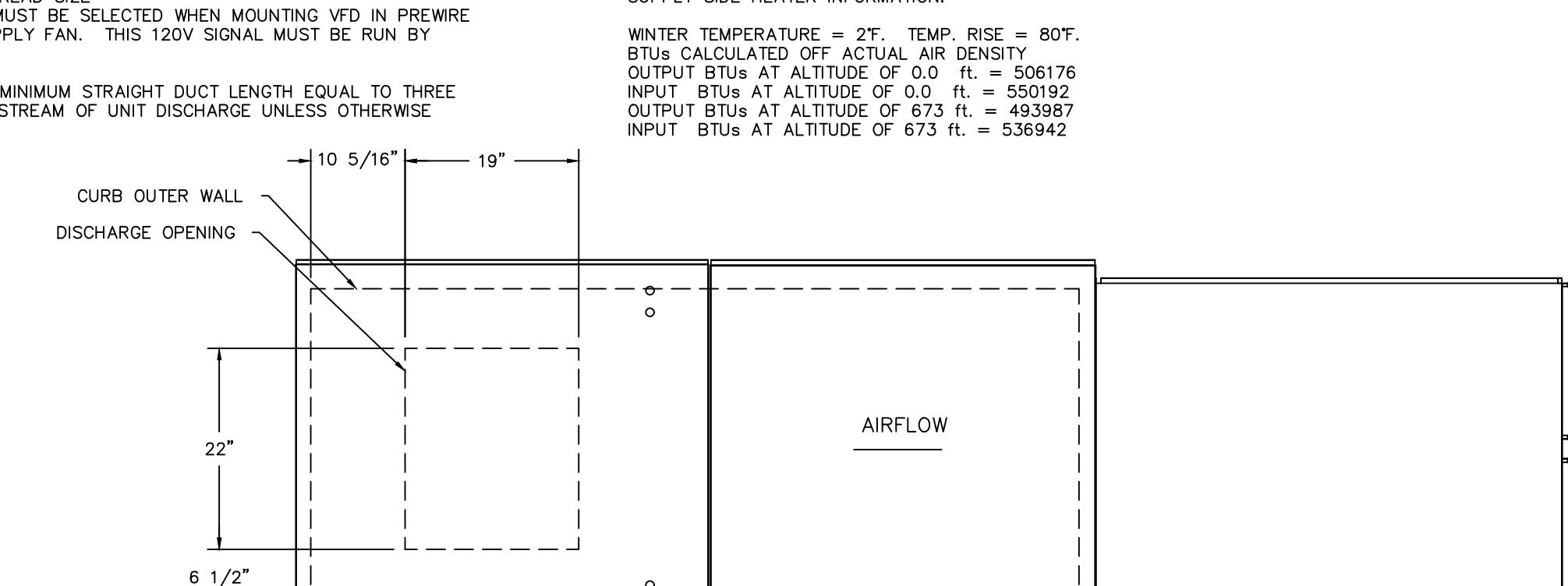
CAPTIVE AIR
Chicago Foodservice Division
www.captiveaire.com

DWG.#:
3420302
DRAWN BY: WEM
10/10/02
10/10/02
10/10/02

SHEET NO:
M3.2

FAN #5 A3-D.500-24D - HEATER (MUA-1)
 1. DIRECT FIRED HEATERS MAKE UP AIR UNIT WITH 24" DIRECT DRIVE FAN AND 12" BURNER.
 2. IN-LINE FILTER 1000 CFM FILTERS.
 3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
 4. COOLING INTERLOCK RELAY, 24VAC COIL, 120V CONTACTS, LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
 5. MOTORIZED BACK DRAFT DAMPER 30" X 30" FOR SIZE 3 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 5/8" REINFORCED SHAFT, 1/2" NFBUP-S ACTUATOR INCLUDED.
 6. LOW FIRE START - LOW THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
 7. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
 8. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE.
 9. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV PACKAGE.

NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH EQUAL TO THREE TIMES THE SUPPLY DUCT EQUIVALENT DIAMETER MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE UNLESS OTHERWISE SPECIFIED. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY.



Direct Fired (DF) Profile Plate Assembly

Direct Fired Profile Plate Specifications:

Description:
 Direct fired burners shall have patented (US Patent No.: US6620523B2), self-adjusting profile plates designed to ensure proper air velocity and pressure drop across the burner. Profile plates shall allow burners to achieve clean combustion by limiting by-product levels to a maximum of 5ppm of carbon monoxide (CO), and 0.5ppm of nitrogen dioxide (NO₂). Direct Fired units shall be configured with the blower mounted downstream of the burner. This arrangement will ensure a consistent airflow, regardless of inlet air temperature.

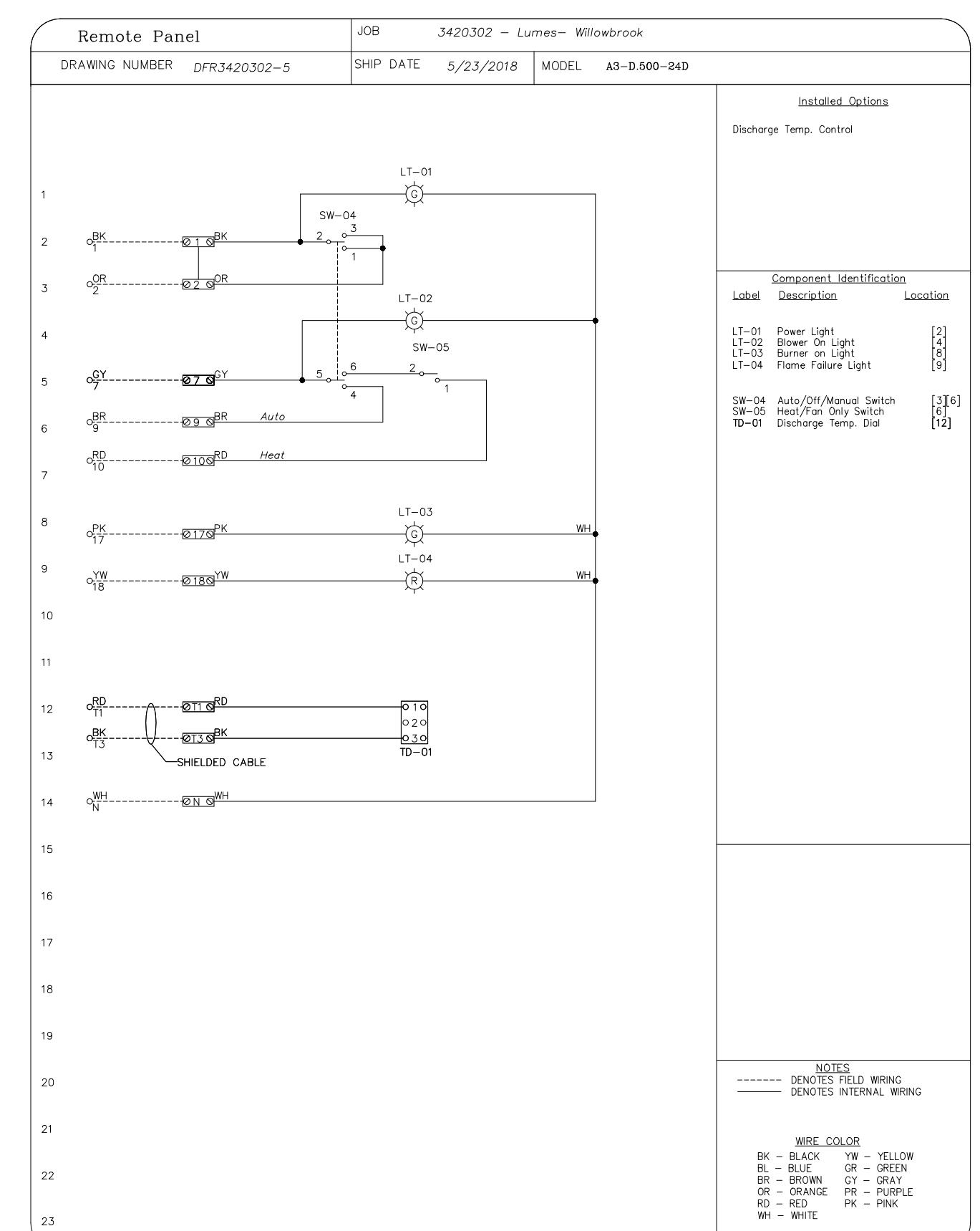
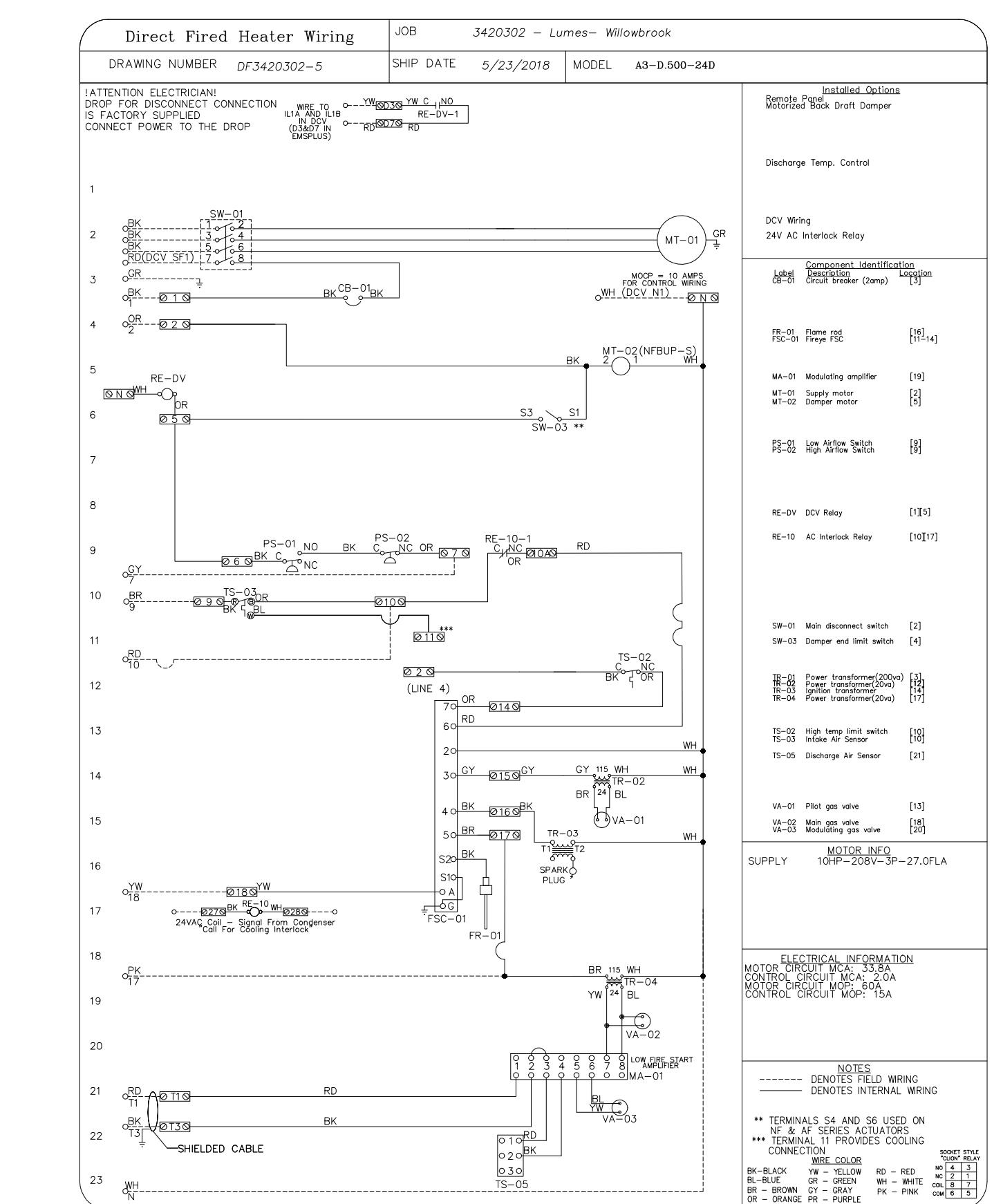
Application:
 Spring-loaded burner profile plates are engineered to automatically react to the momentum of a fresh air stream, without the need for any motors or actuators to mechanically adjust them. With this feature, all DF units are designed for demand control ventilation (DCV) requirements.

Certifications:
 All profile plate assemblies shall be included in the DF unit's ETL listing and comply with combined safety standards ANSI Z83.4 and CSA 3.7 (non-recirculating DF heaters) and ANSI Z83.18 (recirculating DF heaters).

General Construction:
 -Profile plates shall be formed from 0.016 galvanized steel.
 -Profile plates shall vary in size per unit.
 -Profile plates shall be mounted along the same plane as the discharge of the burner.
 -Design shall incorporate properly torqued, permanently mounted spring hinges.
 -Spring hinges shall be made from plated steel.

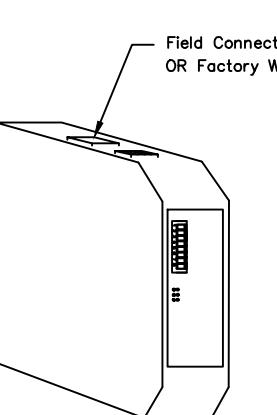
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ELECTRICAL PACKAGE - Job#3420302

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	H.P.	VOLT	FLA.
1	ECP-1	DCV-3111	Wall Utility Cabinet Left	01 - Face Mount Left Side of Hood	1 Light	Smart Controls DCV	EF-1	Exhaust	3	1.500	208	4.4
				Hood # 1	1 Fan		EF-2	Exhaust	3	1.000	208	3.8
				18 - Face of ECP			EF-3	Exhaust	3	2.000	208	6.1
2		Heater Remote		01 - Face Mount Left Side of Hood	1 Light		MUA-1	Supply	3	10.000	208	27.0
3	ECP-2	Switches		Hood # 2	1 Fan							



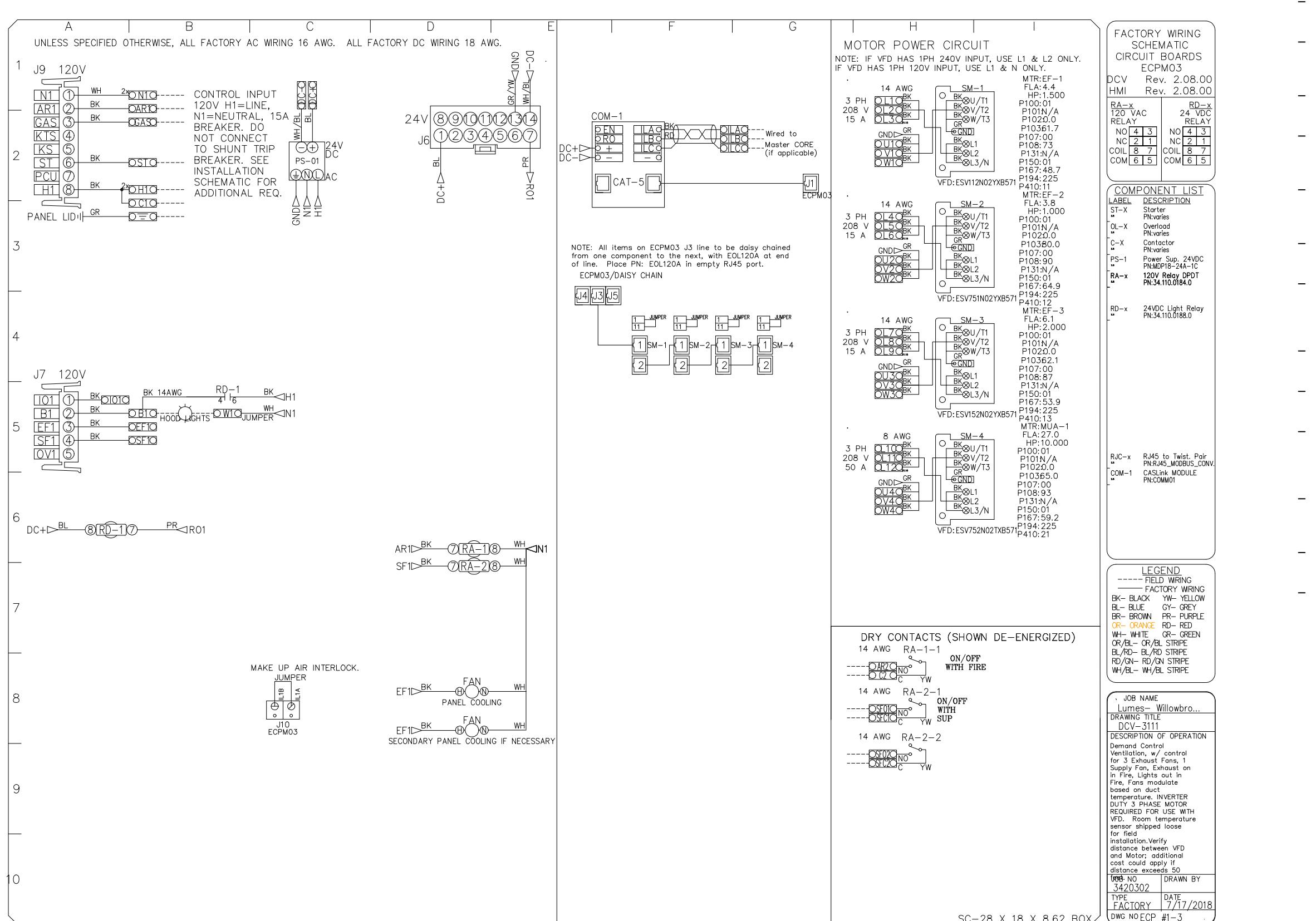
CASlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System
- Hood control panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood control panel to allow remote changes to system setting such as: VFD frequencies, ECM speeds, temperature set points, fan and wash schedules, etc.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MIA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCI Faults	MONITOR
PCI Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Press Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

SC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MIA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
PCI Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fan Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL



Demand Control Ventilation Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system turndown requirements outlined in EEC 403.2.8 (2015).
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood enclosure. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital controller shall be provided to activate the hood exhaust fans dynamically based on a fixed differential between the ambient and duct temperatures sensors. This function shall meet the requirements of I.M.C. 5.7.1.
- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- Variable Frequency Drives (VFDs) shall be provided for fans as required. The digital controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint. The duct temperature sensor input(s) to the digital controller shall be used to calculate the speed reference signal.
- The VFD speed range of operation shall be from 0% to 100% for the system, with the actual minimum speed set as required to meet minimum ventilation requirements.
- An internal algorithm to the digital controller shall modulate supply fan VFD speed proportional to all exhaust fans that are located in the same fan group as the supply fan.
- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when sufficient heat remains underneath the hood system during cooking operations have completed. Operation during either of these periods will disable the supply fans and provide exhaust fan speed that is equal to the minimum ventilation requirement.
- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically when fire condition is detected on a covered hood.
- A digital controller shall allow for external BMS fan control via Dry Contact (external control shall not override fan operation logic as required by code).
- An LCD interface shall be provided with the following features:
 - a. On/Off push button fan & light switch activation
 - b. Integrated gas valve reset for electronic gas valves (no reset relay required)
 - c. VFD Fault display & visual alarm activation
 - d. Room temperature sensor failure detection with audible & visual alarm notification
 - e. Mist-wired duct temperature sensor detection with audible & visual alarm notification
 - f. A single low voltage Cat-5 RJ45 wiring connection
- g. An energy savings indicator that utilizes measured kWh from the VFDs

System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

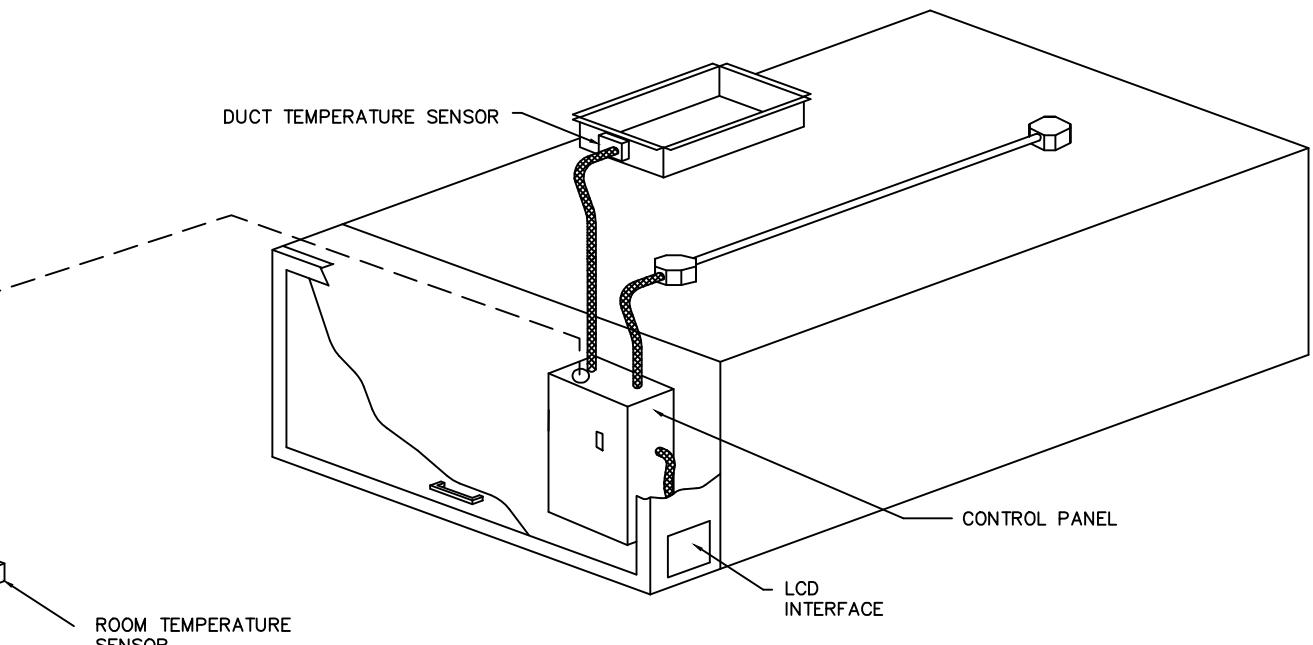
Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.

FOR HOOD DESIGN AND INSTALLATION QUESTIONS, CALL
NO. ILLINOIS FOOD SERVICE SALES/ENGINEERING OFFICE
1652 E. Main St., Suite 20 St. Charles, IL 60174
PHONE: 630-377-2611 FAX: 919-516-8738

CAPTIVEAIRE
Chicago Foodservice Division
www.captiveaire.com

DWG.#:
3420302
DRAWN BY:
NEM
REV: 1
SHEET NO.:
M3.4



TYPICAL HOOD CONTROL PANEL INSTALLATION

Sequence of Operations:

The hood control panel is capable of operating in one or more of the following states at any given time:

- Automatic:** The system operates based on the differential between room temperature and the temperature of the hood cavity or exhaust duct collar. Fans activate at a configurable temperature differential threshold. Depending on the job configuration each fan zone can be configured as static or dynamic. These terms refer to whether a variable motor (such as EC Motors or VFD driven motors) modulate with temperature. If the panel is equipped with variable speed fans and the zone is defined as "dynamic", these will modulate within a user-defined range based on the temperature differential. Panels equipped with variable speed fans and a fan zone defined as "static", fans will run at a set speed calculated for the drive. Demand control ventilation systems are capable of modulating exhaust and make up air fan speeds per the requirements outlined in IECC 403.2.8.
- Manual:** The system operates based on human input from an HMI.
- Schedule:** A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.
- Other:** The system operates based on the input from an external source (DDC, BMS or hard-wired interlock).

Tag	Part #	CFM	S.P.	Weight	Velocity	QTY	Description	
P1	DW1690ASY	2250	-0.1365	13.60	1611.44	1	Single Wall Duct 90 Degree Elbow, 16" Duct, Assembly.	
P2	DW1616LT	2250	-0.0055	9.46	1611.44	1	Single Wall Duct 16" diameter, 16" long, flange at both ends, Stainless Steel.	
P3	DW1624AJDKIT	2250	-0.0055	16.29	1611.44	1	Single Wall Duct Adjustable, 16" diameter, 23.5" long, flange at one end With a 16" Adjustable Collar - Stainless Steel.	
P4	DW16SUBRASY			14.82		1	Duct Support Bracket Assembly, 16" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P5	Assembled w/P6	DW16TEASY	2250	-0.156	15.55	1611.44	1	Single Wall Duct Tee, 16" Duct, Assembly.
P6	Assembled w/P5	DW1617ADIASY			19.33		1	Duct Access Door - Insulated - Used With 16" Duct - Grease Dam Included - Assembly.
P7	DW1659LT	2250	-0.0198	42.44	1611.44	1	Single Wall Duct 16" diameter, 59" long, flange at both ends, Stainless Steel.	
P8	DW1629SLT	2250	-0.0099	25.94	1611.44	1	Single Wall Duct 16" diameter, 29.5" long, flange at both ends, Stainless Steel.	
P9	DW1648AJDKIT	2250	-0.0093	37.27	1611.44	1	Single Wall Duct Adjustable, 16" diameter, 47.5" long, flange at one end With a 16" Adjustable Collar - Stainless Steel.	
P10	Assembled w/P11	DW1618ADP	2250	-0.006	12.00	1611.44	1	Single Wall Duct Adapter, 16" Duct Dia to 18" Duct Dia, Standard Part.
P11	Assembled w/P10	DW2618TP	2250	0	10.58	1273.24	1	Duct to Curb Transition, 26-1/2" Curb to 18" Duct, 16 GA Aluminized, Used on BDU18 & 20.
System of P11								
P12	DW1690ASY	2750	-0.1313	16.50	1556.18	1	Single Wall Duct 90 Degree Elbow, 18" Duct, Assembly.	
P13	DW1629LT	2750	-0.0059	18.23	1556.18	1	Single Wall Duct 16" diameter, 29" long, flange at both ends, Stainless Steel.	
P14	DW1648AJDKIT	2750	-0.0051	41.89	1556.18	1	Single Wall Duct Adjustable, 18" diameter, 47.5" long, flange at one end With a 18" Adjustable Collar - Stainless Steel.	
P15	Assembled w/P16	DW16TEASY	2750	-0.12	18.53	1556.18	1	Single Wall Duct Tee, 18" Duct, Assembly.
P16	Assembled w/P15	DW1619ADIASY			22.96		1	Duct Access Door - Insulated - Used With 18" Duct - Grease Dam Included - Assembly.
P17	DW1624SLT	2750	-0.0051	14.71	1556.18	1	Single Wall Duct 18" diameter, 24.5" long, flange at both ends, Stainless Steel.	
P18	DW1648AJDKIT	2750	-0.0059	41.89	1556.18	1	Single Wall Duct Adjustable, 18" diameter, 47.5" long, flange at one end With a 18" Adjustable Collar - Stainless Steel.	
P19	DW1636LT	2750	-0.0078	20.84	1556.18	1	Single Wall Duct 18" diameter, 36" long, flange at both ends, Stainless Steel.	
P20	Assembled w/P21	DW1648AJDKIT	2750	-0.0082	41.89	1556.18	1	Single Wall Duct Adjustable, 18" diameter, 47.5" long, flange at one end With a 18" Adjustable Collar - Stainless Steel.
P21	Assembled w/P20	DW2618TP	2750	0	10.58	1556.18	1	Duct to Curb Transition, 26-1/2" Curb to 18" Duct, 16 GA Aluminized, Used on BDU18 & 20.
System of P21								
P22	DW16SUBRASY			18.06		1	Duct Support Bracket Assembly, 18" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P23	DW1659LT	2500	-0.0246	42.44	1790.49	1	Single Wall Duct 16" diameter, 59" long, flange at both ends, Stainless Steel.	
P24	DW164350LT	2500	-0.0179	25.94	1790.49	1	Single Wall Duct 16" diameter, 43.50" long, flange at both ends, Stainless Steel.	
P25	DW1660AJDKIT	2500	-0.0175	34.00	1790.49	1	Single Wall Duct Adjustable, 16" diameter, 59.5" long, flange at one end With a 16" Diameter - 4" Tall - Adjustable Collar - Stainless Steel.	
P26	Assembled w/P27	DW1618ADP	2500	-0.007	12.00	1790.49	1	Single Wall Duct Adapter, 16" Duct Dia to 18" Duct Dia, Standard Part.
P27	Assembled w/P26	DW2618TP	2500	0	10.58	1414.71	1	Duct to Curb Transition, 26-1/2" Curb to 18" Duct, 16 GA Aluminized, Used on BDU18 & 20.
System of P27								
P28	DW16SUBRASY			14.82		1	Duct Support Bracket Assembly, 16" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P29	DW16SUBRASY			14.82		1	Duct Support Bracket Assembly, 16" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P30	DW16SUBRASY			18.06		1	Duct Support Bracket Assembly, 18" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P31	DW16SUBRASY			14.82		1	Duct Support Bracket Assembly, 16" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P32	DW16SUBRASY			14.82		1	Duct Support Bracket Assembly, 16" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
P33	DW16SUBRASY			18.06		1	Duct Support Bracket Assembly, 18" Duct, Used for Hanging Duct, 12 GA Steel, Clear Zinc Coating - 2 Rings, 4 Brackets Plus Hardware.	
3M-2000PLUS		0.80		7			7 Duct - 3M Fire Barrier 2000 Plus Silicone - Used as sealant to Seal Duct Joints.	
834680600587XL		52.00		17			17 Duct - Duct insulation for zero clearance to combustibles - 300" x 24" x 1-1/2" Roll, Pyroscat Wrap.	
BANDING,5		5.00		5			5 Duct - Fire Barrier Wrap Stainless Steel Banding .5" Width - 200 FT Per Roll.	
DW16CLASY		1.50		13			13 Duct "V" Clamp With new design 14 Ga Brackets, 16" Duct, Assembly.	
DW18CLASY		1.60		9			9 Duct "V" Clamp With new design 14 Ga Brackets, 18" Duct, Assembly.	
SEAL,50-50		0.50		6			6 Duct - Fire Barrier Wrap Stainless Steel Banding Seal .5" Width. Quantity of 50.	
TAPEALUM		0.25		4			4 Duct - Fire Barrier Wrap Aluminum Foil Tape - 3" x 150' Roll.	
Total Weight				1656.22				

FACTORY BUILT GREASE DUCT SPECIFICATION

Furnish single-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

for venting air and grease vapors from commercial cooking operations as described in NFPA-96.

The duct wall shall be constructed of .036 thick type 430 stainless steel and be available in diameters 8" through 24".

All supports, fan adapters, hood connections, fittings and expansion joints required to install grease duct shall be included.

Roof penetrations shall comply with listed clearance to combustibles, see "Clearance to Combustibles" guide for details.

The grease duct will terminate at the fan adapter plate, will be fully welded to the fan adapter plate and the fan adapter plate will be fastened to the curb using a suitably sized fastener provided by others; see page 12 of the "Installation, Operation and Maintenance Manual" for details.

Grease duct joints shall be held together by means of formed vee clamps and sealed with 3M Fire Barrier 2000+. Screws used to secure the vee clamps shall be of the hex-head type with flanged stops and tapered "lead in" threads for easy starting. Nuts shall be retained by means of a free-floating cage to allow easy alignment.

Single-Wall Grease Duct shall be installed in accordance with the manufacturer's "Installation, Operation and Maintenance Manual", ETL listing and state and local codes.

Grease duct installed outside of the building shall be protected against accidental damage or vandalism.

Support vertically installed grease duct from the building structure using rigid structural supports. Anchor supports to the structure by welding or bolting steel expansion anchors or concrete inserts. Support horizontally installed grease duct from the building structure using above method or use Duct Mate, Wire Rope & Clutchers, part numbers WR20 & CL20. 1/2" Threaded rod and saddles may also be used for the support of horizontal grease duct.

Fans shall be supported independently from the grease duct sections. Protect grease duct from twisting or movement caused by fan torque or vibration.

ADJUSTABLE DUCT OVERLAP - MINIMUM	
DIAMETER	OVERLAP
8"	4"
10"	5"
12"	6"
14"	6"
16"	6"
18"	6"
20"	6"
24"	6"

HORIZONTAL SUPPORT SPACING - FEET	
DIAMETER	SPACING - FEET
8"	10'
10"	10'
12"	10'
14"	10'
16"	10'
18"	10'
20"	10'
24"	10'

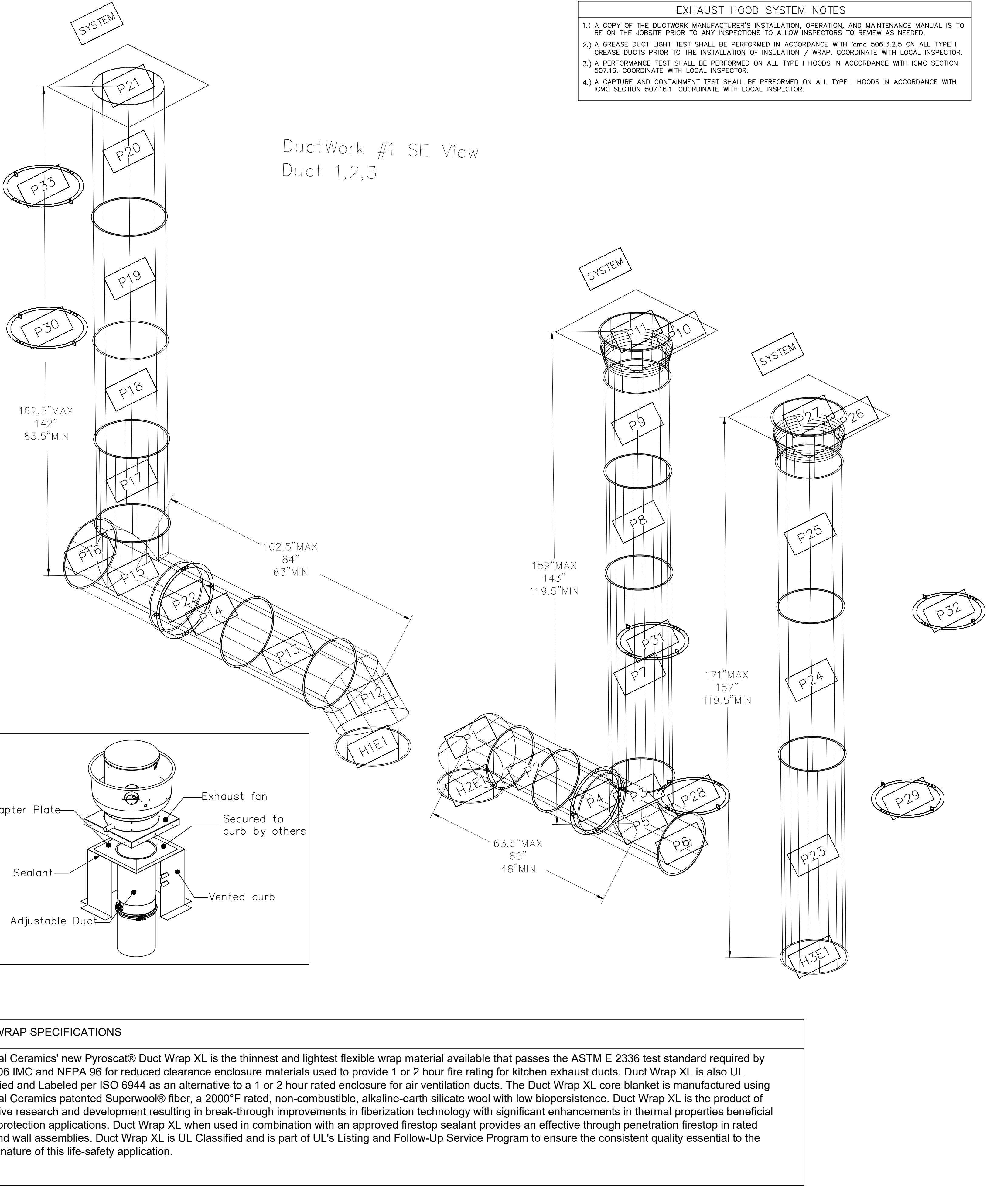
VERTICAL SUPPORT MAXIMUM SPACING (FT)	
DUCT DIAMETER	MAXIMUM SPACING (FT)
8"	10'
10"	10'
12"	10'
14"	10'
16"	10'
18"	10'
20"	10'
24"	10'

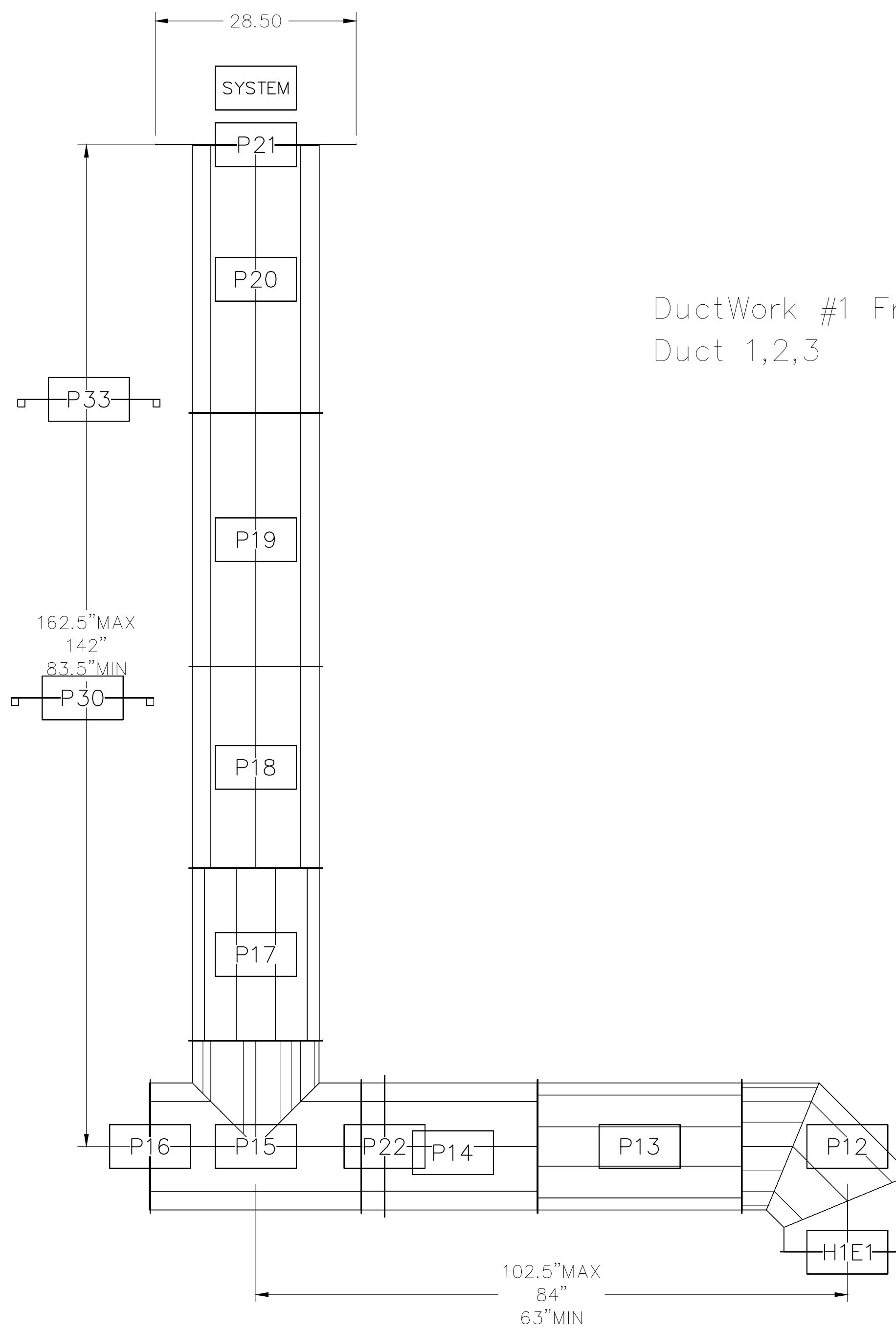
CLEARANCE TO COMBUSTIBLES			
DIAMETER	COMBUSTIBLES	LIMITED COMBUSTIBLES	NON COMBUSTIBLES
8"	18"	3"	0"
10"	18"	3"	0"
12"	18"	3"	0"
14"	18"	3"	0"
16"	18"	3"	0"
18"	18"	3"	0"
20"	18"	3"	0"
24"	18"	3"	0"

FOR HOOD DESIGN AND INSTALLATION QUESTIONS, CALL
NO. ILLINOIS FOOD SERVICE SALES/ENGINEERING OFFICE
1652 E. Main St., Suite 20 St. Charles, IL 60174
PHONE: 630-377-2611 FAX: (919) 516-8738

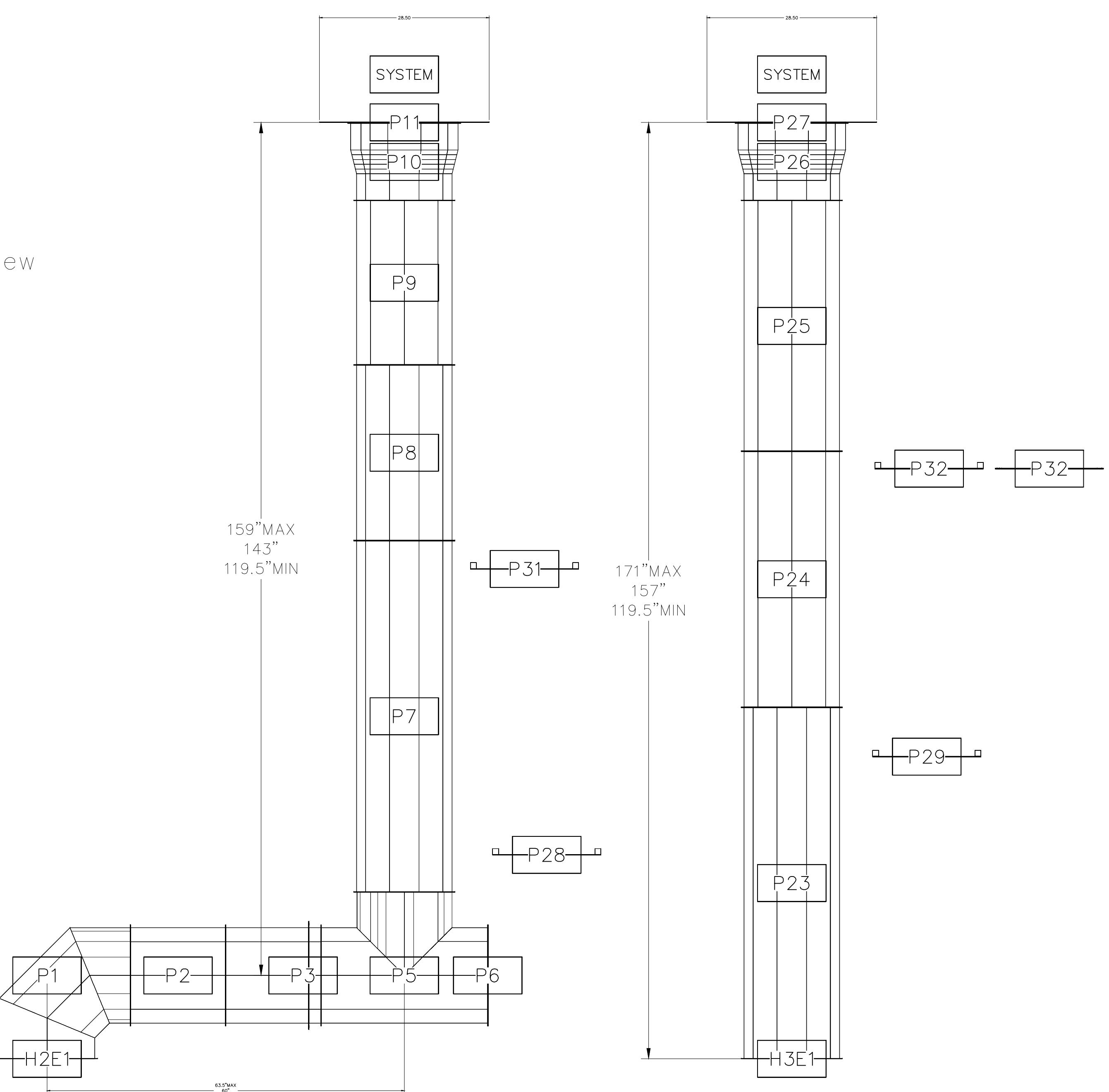
CAPTIVE AIR
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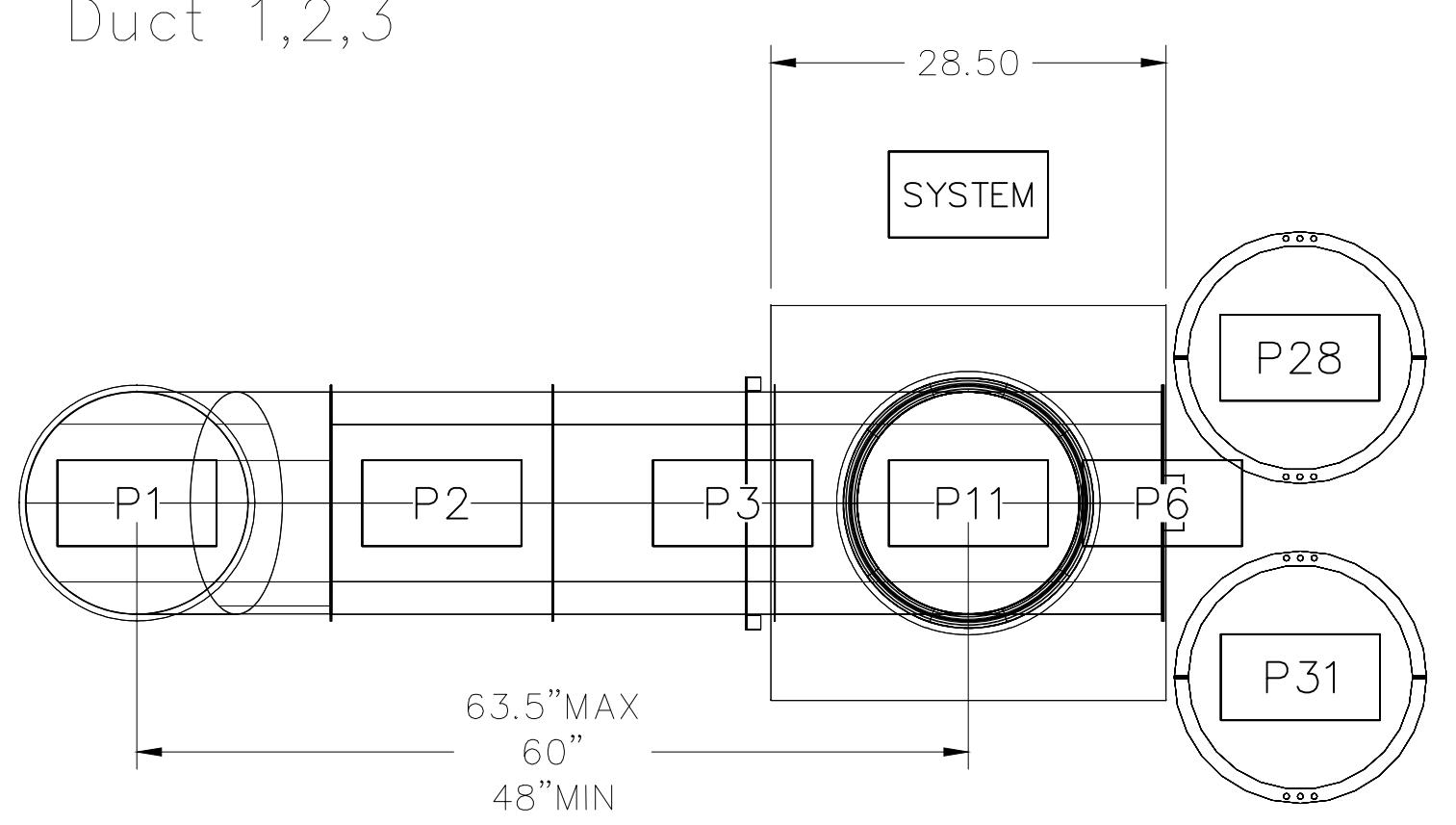
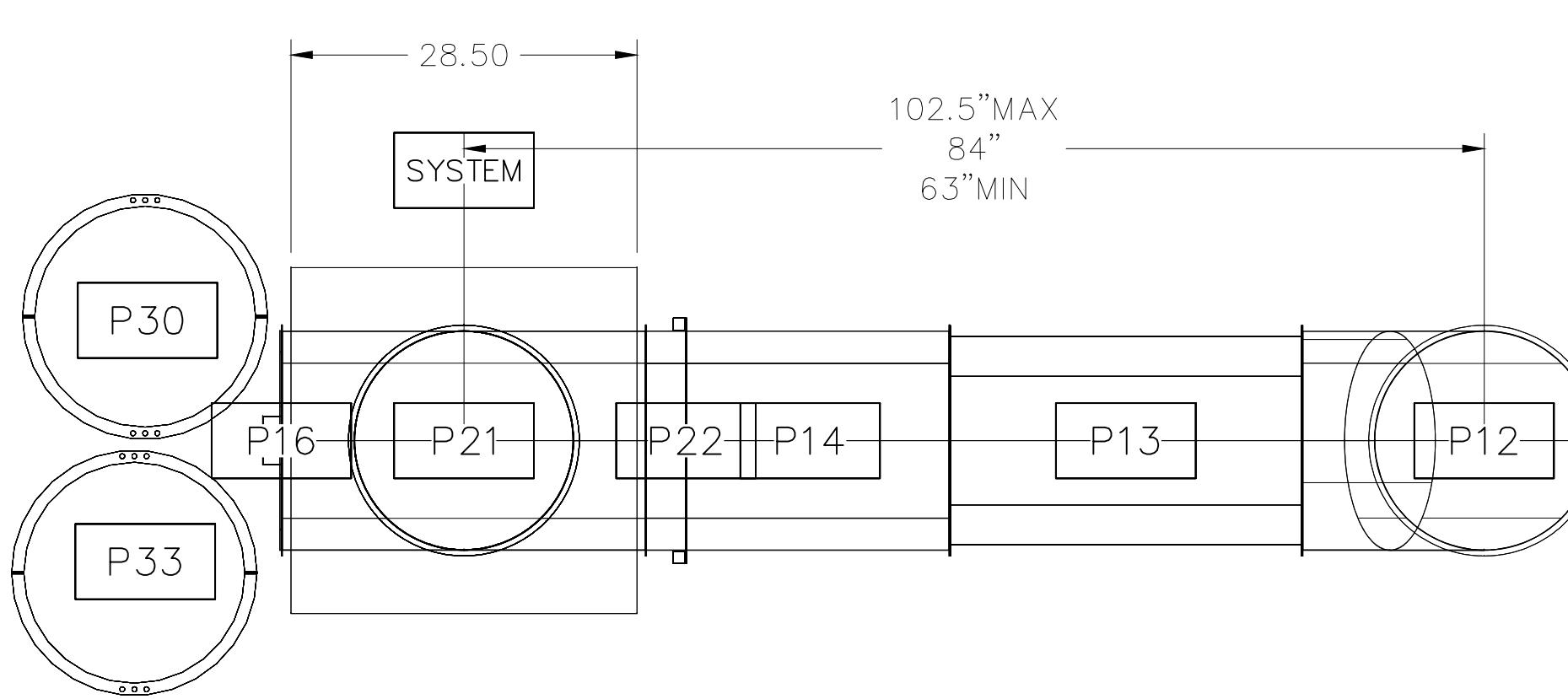


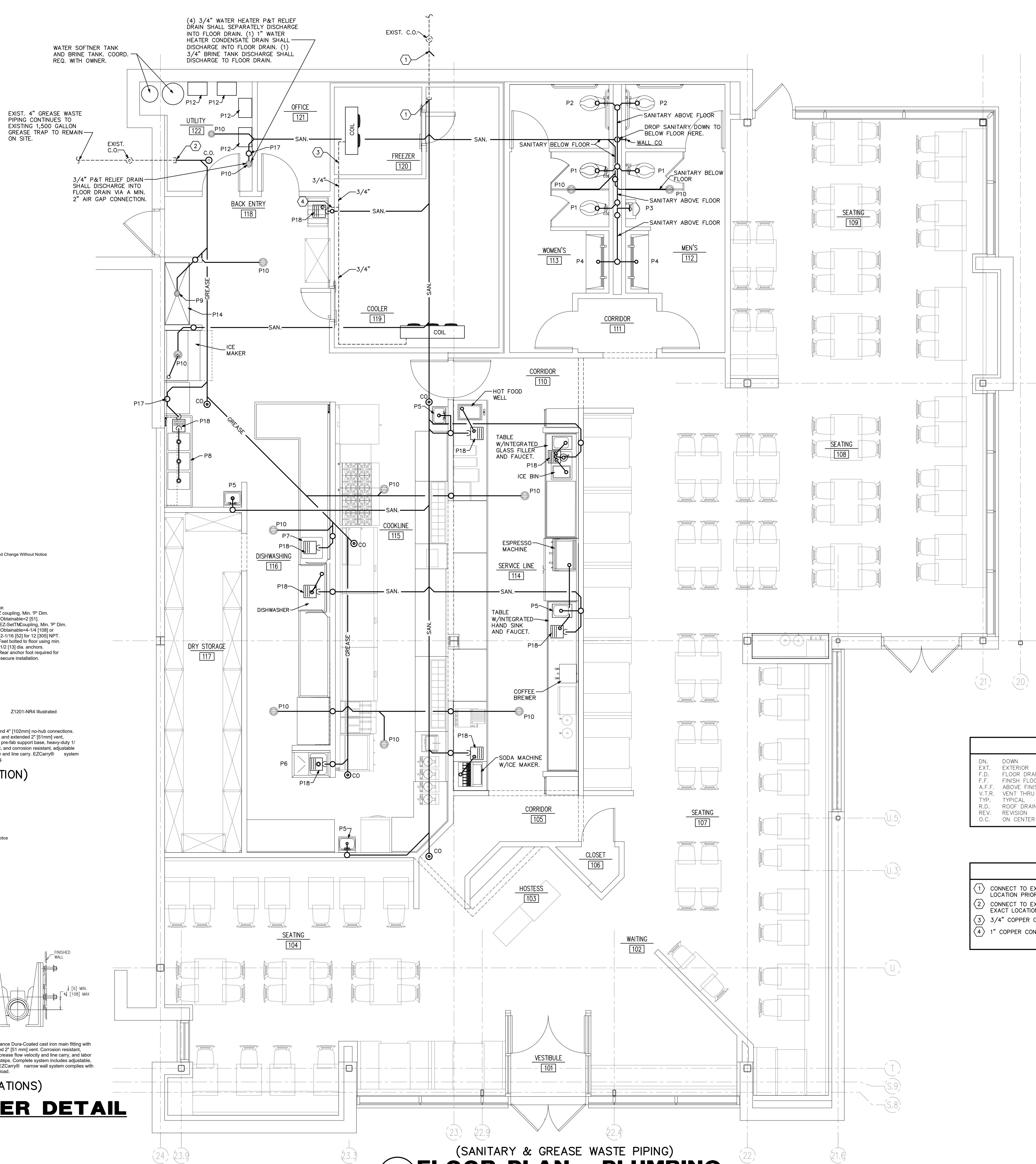


DuctWork #1 Front View
Duct 1,2,3



DuctWork #1 Top View
Duct 1,2,3





2 TOILET CARRIER DETAIL

(SANITARY & GREASE WASTE PIPING)

1 FLOOR PLAN - PLUMBING

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

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

PROPOSED
AREA OF WORK.

9KEY PLAN

NO SCALE

PLUMBING SYMBOLS LEGEND

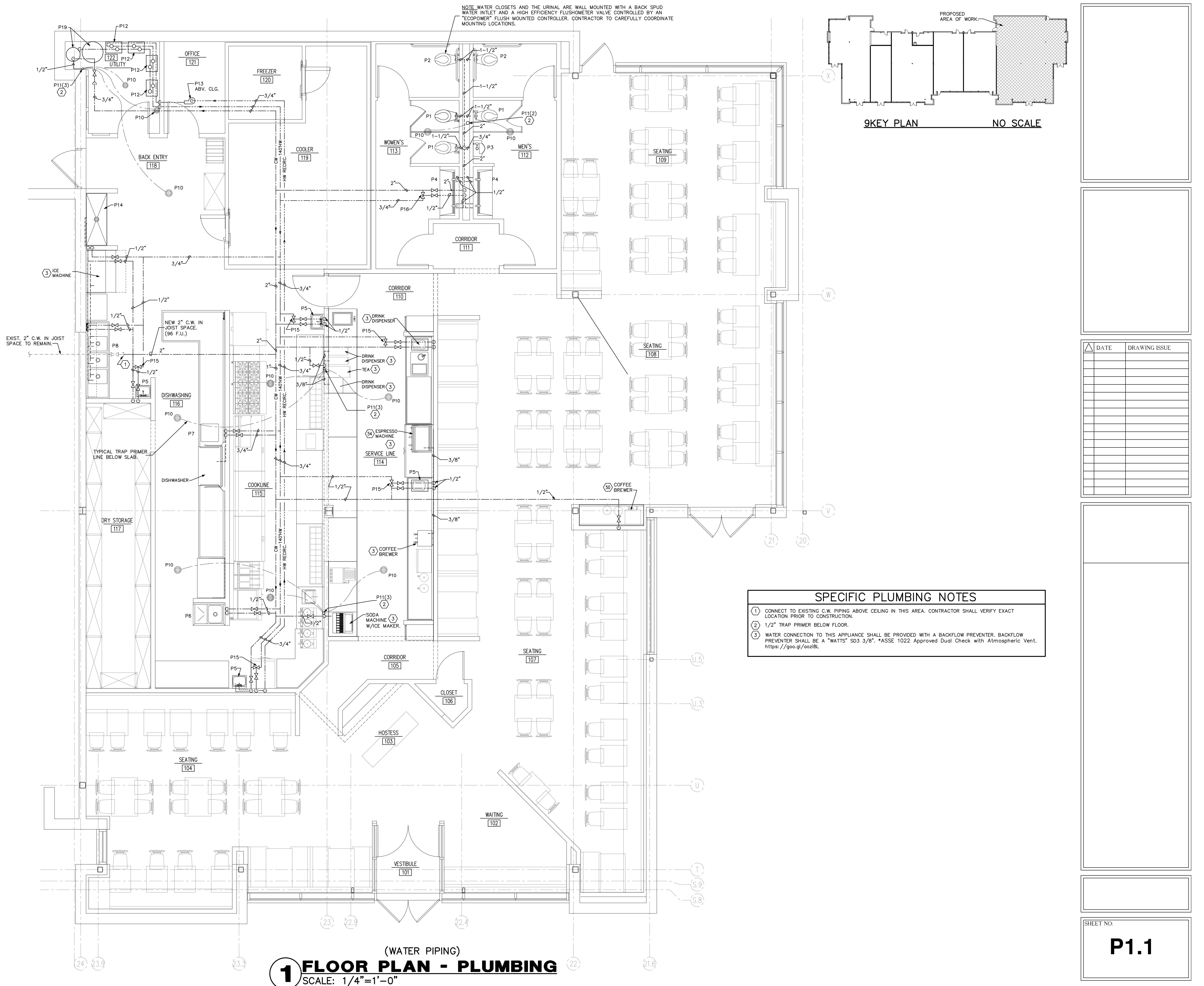
	FLOOR DRAIN
	HOSE BIBB
	CLEANOUT
	RELIEF VALVE
	AIR CHAMBER
	UNION
	SOIL OR WASTE LINE
	SANITARY VENT LINE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC WATER RECIRCULATION
	P&T
	CD
	RWL
	G
	SAFEWASTE LINE
	F
	SHUT OFF VALVE
	SP
	FIRE SPRINKLER HEAD
	PIPE TURN UP
	PIPE TURN DOWN
	P-TRAP

PLUMBING ABBREVIATION LEGEND

PLUMBING ABBREVIATION LEGEND					
DN.	DOWN	C.C.	CENTER TO CENTER	F.U.	Fixture Units
EXT.	EXTERIOR	N.T.S.	NOT TO SCALE	H.B.	HOSE BIBBS
F.D.	FLOOR DRAIN	MFGR.	MANUFACTURER	C.O.	CLEANOUT
F.F.	FINISH FLOOR	S.O.V.	SHUT OFF VALVE	E.W.H.	ELECTRIC WATER HEATER
A.F.F.	ABOVE FINISH FLOOR	W.C.	WATER CLOSET	JAN.SK.	JANITOR SINK
V.T.R.	VENT THRU ROOF	LAV.	LAVATORY	P & T	PRESSURE & TEMPERATURE
TYP.	TYPICAL	SK.	SINK	RWL.	RAIN WATER LEADER
R.D.	ROOF DRAIN	D.W.	DISH WASHER		
REV.	REVISION	E.D.F.	ELECTRIC DRINKING FOUNTAIN		
O.C.	ON CENTER	U.P.	URINAL		

SPECIFIC PLUMBING NOTES

- ① CONNECT TO EXISTING SANITARY PIPING BELOW FLOOR IN THIS AREA. CONTRACTOR SHALL VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION.
- ② CONNECT TO EXISTING GREASE WASTE PIPING BELOW FLOOR IN THIS AREA. CONTRACTOR SHALL VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION.
- ③ 3/4" COPPER CONDENSATE LINE. WRAP W/ HEAT TAPE & INSULATION.
- ④ 1" COPPER CONDENSATE LINE TO FLOOR SINK. CONNECT TO FLOOR SINK VIA A MIN. 6" AIR CAP CONNECTION.





MIXING VALVE DETAIL

3 NO SCALE

4 FLOOR SINK CONN. DETAIL

PLUMBING FIXTURE CONNECTION SIZES				
Fixture	C.W. Conn. Size	H.W. Connection Size	Sanitary Branch Size	F.U. Load Values
WATER CLOSET (P1,P2)	1"	—	3"	10.0
URINAL (P3)	3/4"	—	2"	5.0
LAVATORY (P4)	1/2"	1/2" (110°F)	1-1/4"	2.0
S.S. HAND SINK (P6)	1/2"	1/2" (110°F)	1-1/2"	2.0
S.S. PREP SINK (P7)	1/2"	1/2" (140°F)	1-1/2"	4.0
S.S. PRE-RINSE SINK (P8)	1/2"	1/2" (140°F)	1-1/2"	4.0
S.S. 3 COMP. SINK (P9)	1/2"	1/2" (140°F)	1-1/2"	4.0
CAN WASH (P14)	1/2"	1/2" (140°F)	3"	4.0

PLUMBING FIXTURE SCHEDULE

P-1 (WALL MOUNTED FLUSH VALVE WATER CLOSET)

SHALL BE A "TOTO" MODEL CT708EVG FLUSH VALVE TOILET MOUNTED AT 15" HIGH, 1.28 GPF, WITH HIGH EFFICIENCY FLUSHOMETER VALVE. FLUSH VALVE SHALL BE CONTROLLED BY A TET2LA32#SS ECOPowered FLUSH MOUNTED CONTROLLER. SEAT SHALL BE A MODEL SC534#01 ELONGATED OPEN FRONT SEAT WITHOUT COVER.

WATER CLOSET & VALVE: <https://goo.gl/ABwCDc>

P-2 (HANDICAPPED WALL MOUNTED FLUSH VALVE WATER CLOSET)

SHALL BE A "TOTO" MODEL CT708EVG FLUSH VALVE TOILET MOUNTED AT 17" HIGH, 1.28 GPF, WITH HIGH EFFICIENCY FLUSHOMETER VALVE. FLUSH VALVE SHALL BE CONTROLLED BY A TET2LA32#SS ECOPowered FLUSH MOUNTED CONTROLLER. SEAT SHALL BE A MODEL SC534#01 ELONGATED OPEN FRONT SEAT WITHOUT COVER.

WATER CLOSET & VALVE: <https://goo.gl/ABwCDc>

P-3 (HANDICAPPED URINAL AND FLUSH VALVE)

SHALL BE A "TOTO" MODEL UT105UVG, 3/4" BACK MOUNTED SPUD. 0.125 GPF. PROVIDE HIGH EFFICIENCY FLUSHOMETER VALVE CONTROLLED BY A TETLA32#SS ECOPowered FLUSH MOUNTED CONTROLLER.

URINAL & VALVE: <https://goo.gl/kg9Esx>

P-4 (HANDICAPPED COUNTER TOP LAVATORY)

SHALL BE AN "SLOAN" MODEL AER-DEC AD 8X000. 2-STATION WALL MOUNTED SINK. COORDINATE COLORS WITH ARCHITECT/OWNER. PROVIDE TWO DECK MOUNTED HAND DRYER MODEL EHD-510, SLOAN AUTOMATED SENSOR FAUCET EFX SERIES AND SLOAN SENSOR OPERATED FOAM SOAP DISOENSER ESD-400. SINK DESIGN IS ADA COMPLAINT. PROVIDE A DEDICATED MIXING VALVE TO PROVIDE A MAX. OF 105 DEGREE WATER.

LAVATORY: [HTTPS://WWW.SLOAN.COM/SPEC-SHEET/15121162](https://www.sloan.com/spec-sheet/15121162)

P-5 (STAINLESS STEEL HAND SINK W/FAUCET)

COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.

P-6 (STAINLESS STEEL PREP SINK W/FAUCET)

COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.

P-7 (STAINLESS STEEL PRE-RINSE SINK W/FAUCET)

COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.

P-8 (STAINLESS STEEL 3 COMPARTMENT SINK W/FAUCET)

COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.

P-9 (FLOOR DRAIN)

SHALL BE A JOSAM 30003-A SERIES COATED CAST IRON FLOOR DRAIN. 3"Ø PIPE CONNECTION, 6"Ø DRAIN TOP, STRAINER TYPE 6A. TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEJLOC INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER.

DRAIN: <https://goo.gl/0G5Illy>

P-10 (FLOOR DRAIN WITH TRAP PRIMER)

SHALL BE A JOSAM 30003-A-50 SERIES COATED CAST IRON FLOOR DRAIN WITH 1/2" TRAP PRIMER. 3"Ø PIPE CONNECTION, 6"Ø DRAIN TOP, STRAINER TYPE 6A. TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEJLOC INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER.

DRAIN: <https://goo.gl/0G5Illy>

P-11 (AUTOMATIC TRAP PRIMER)

SHALL BE A IPS CORPORATION "SIOUX CHIEF" MODEL 695 TRAP PRIMER WITH VACUUM BREAKER. AUTOMATIC TRAP PRIMER VALVE SHALL ACTIVATE WITH A 10 PSIG PRESSURE DROP BETWEEN 30-150 PSIG.

DRAIN: <https://goo.gl/WqkVxK>

P-12 (TANKLESS GAS WATER HEATER)

SHALL BE A "NORITZ" MODEL CC199CDV (GQ-C3259WZ-FF US), 199,900 BTUH, 4.4 GPM @ 90° RISE, WATER HEATER TO DELIVER 140° H.W., 115V/1Ø.

WATER HEATER: <https://goo.gl/22jkjG>

P-13 (HOT WATER CIRCULATOR PUMP W/REMOTE TIMER)

SHALL BE A "BELL & GOSSETT" SERIES PR, MODEL #PR-AB, (ALL BRONZE), 1/6HP, 115V/1Ø, 1.9 AMP, 1725 RPM, 2 GPM @ 18' HEAD. PUMP SHALL BE PROVIDED WITH A "BELL & GOSSET" TC-1 AUTOMATIC TIMER KIT.

RECIRCULATING PUMP: <https://goo.gl/r4JQtS> TIMER: <https://goo.gl/MK4bwu>

P-14 (FLOOR MOUNTED INTERIOR CANWASH/MOP RECEPTOR)

CUSTOM BUILT MOP BASIN. COORDINATE FINAL CAN WASH BASIN CONSTRUCTION WITH ARCH./OWNER. PROVIDE MR-371 THREADED FAUCET WITH WALL BRACE, PAIL HOOK AND APPROVED VACUUM BREAKER, MR-370 HOSE & HOSE BRACKET, MR-372 MOP HANGER, MR-373 BUMBER GUARDS AND MR-377 STAINLESS STEEL WALL GUARD.

FAUCET/ACCESSORIES: <https://goo.gl/lwcWM7>

P-15 (1/2" MIXING VALVE)

1/2" MIXING VALVE SHALL BE A "WATTS" MODEL LF1170-PEX-M2 SET AT 110°. Lead Free* cast copper silicon alloy body construction

MIXING VALVE: <https://goo.gl/Gt08b7>

P-16 (3/4" MIXING VALVE)

3/4" MIXING VALVE SHALL BE A "WATTS" MODEL LF1170-PEX-M2 SET AT 110°. Lead Free* cast copper silicon alloy body construction

MIXING VALVE: <https://goo.gl/Gt08b7>

P-17 (2" STUDOR VENT - AIR ADMITTANCE VALVE)

SHALL BE A IPS CORPORATION "STUDOR MINI-VENT". 2" VENT.

STUDOR VENT: <https://goo.gl/fxH9PT>

P-18 (FLOOR SINK W/SEDIMENT BUCKET)

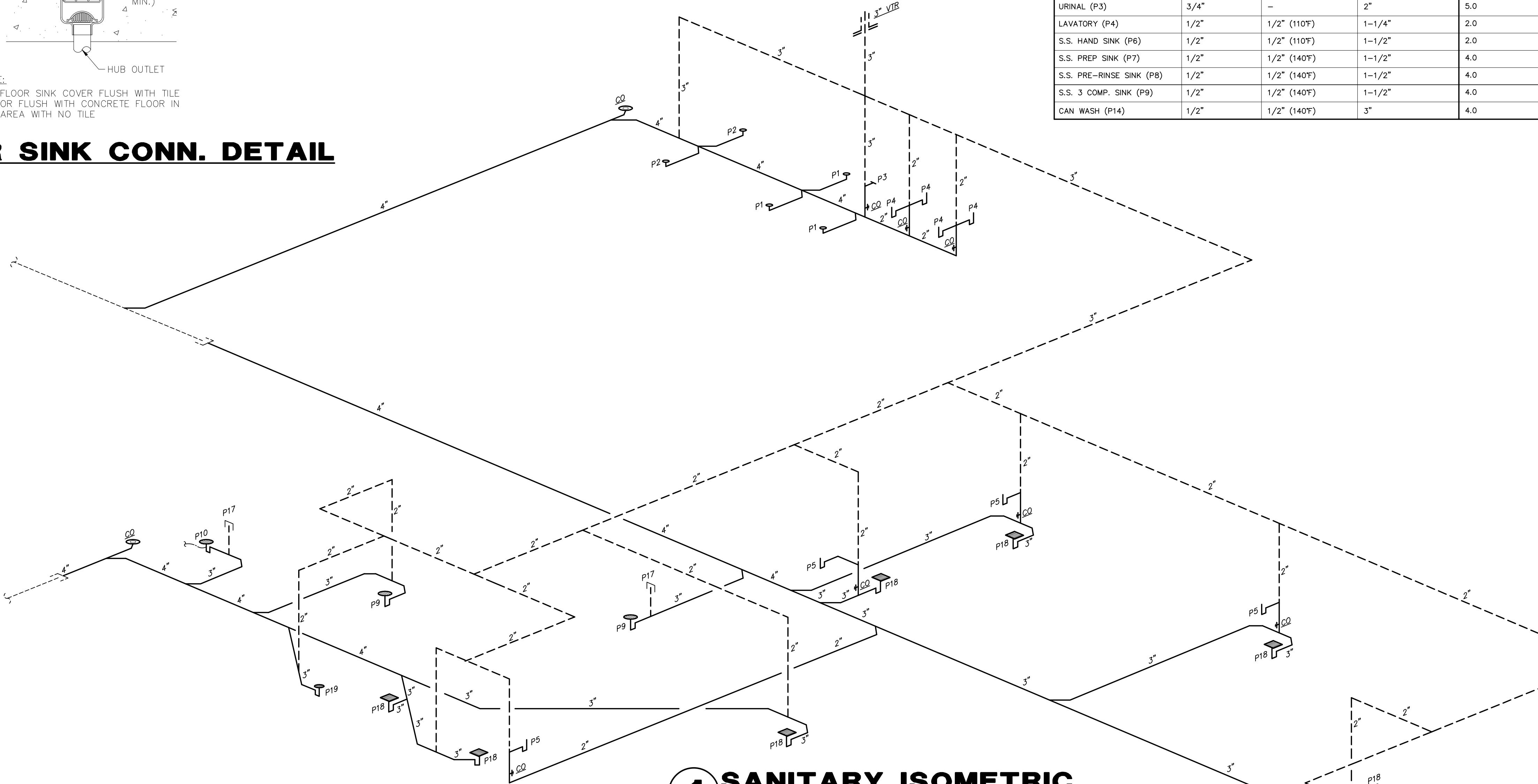
SHALL BE A JOSAM 49340A-3-31 SERIES SQUARE CAST IRON 8" DEEP SUPER-FLO-SEPTOR FLOOR SINK WITH PORC-COATED INTERIOR, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER, AND CAST IRON, NON-TRAFFIC, PORC-COATED, ANTI-ТИLTING GRATE. WITH HALF GRATE AND ALUMINUM SEDIMENT BUCKET.

DRAIN: <https://goo.gl/TCUVCG>

NOTES:

1.) ALL PLUMBING FIXTURES SHALL BE AS SPECIFIED OR APPROVED EQUAL.

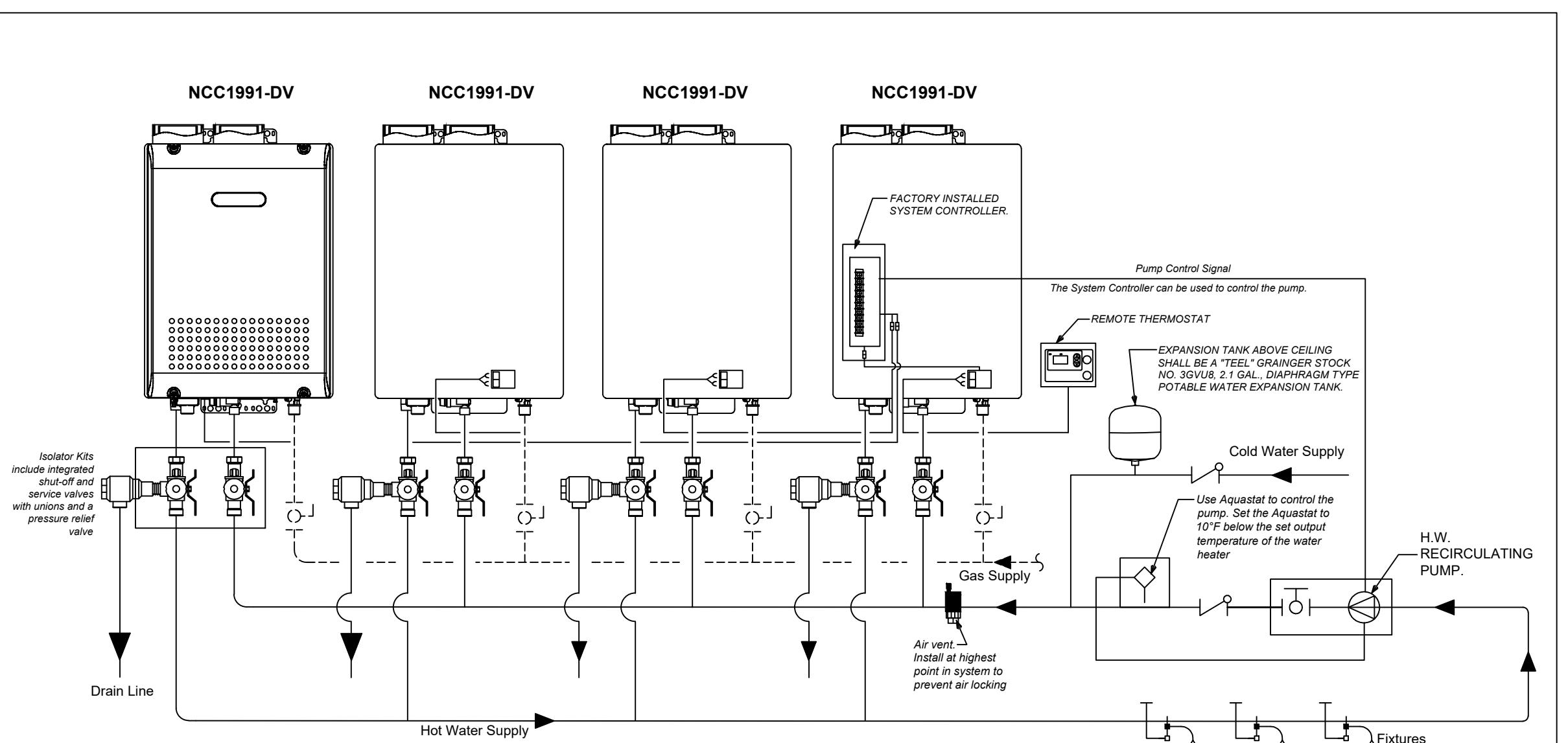
2.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.



1 SANITARY ISOMETRIC

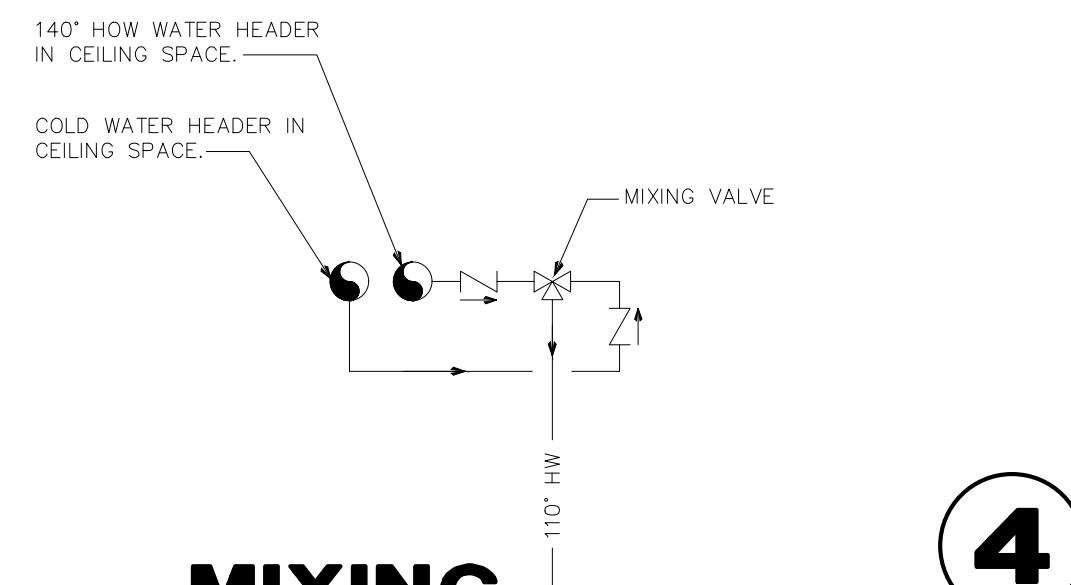
GENERAL PLUMBING NOTES

- 1.) DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, EQUIPMENT, ETC.. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND ACCEPTABLE WORKING INSTALLATION. CONTRACTOR IS RESPONSIBLE TO INSTALL ALL FIXTURES AND EQUIPMENT IN STRICT COMPLIANCE WITH THE MANUFACTURES INSTALLATION INSTRUCTIONS. THIS REQUIREMENT IS TO SUPERSEDE ANY DETAILS OR INFORMATION CONTAINED ON THESE DRAWINGS.
- 2.) ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL, STATE, AND ALL LOCAL CODES AND ORDINANCES HAVING JURISDICTION.
- 3.) THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. ALL EXECUTION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
- 4.) ALL MATERIAL SHALL BE NEW.
- 5.) ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- 6.) ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- 7.) THE PLUMBING CONTRACTOR SHALL SECURE AND PAY ALL PERMIT FEES, INSPECTIONS, AND TESTS.
- 8.) ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- 9.) THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) ONE YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- 10.) VERIFY LOCATION, SIZE AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- 11.) ALL FIXTURES SHALL BE PROVIDED WITH READILY ACCESSIBLE STOPS.
- 12.) ALL BELOW FLOOR SLAB WATER PIPING SHALL BE FLEXIBLE "TEMPrITE PEX (CROSS-LINKED POLYETHYLENE)" INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS FOUND HERE: WWW.LUBRIZOL.COM. ALL ABOVE SLAB WATER PIPING SHALL BE "FLOWGUARD GOLD CPVC" INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS FOUND HERE: WWW.FLOWGUARDGOLD.COM. ALL WATER PIPING AS SPECIFIED OR APPROVED EQUAL. ALL 2" WATER PIPING SHALL BE TYPE "L" COPPER AND TYPE "K" COPPER FOR 2 1/2" AND LARGER. (OR APPROVED EQUAL)
- 13.) SOIL, WASTES AND VENT PIPING SHALL BE PVC #40 DMV. WASTE AND VENT PIPING ABOVE SLAB SHALL BE PVC, IF APPROVED BY LOCAL AUTHORITIES HAVING JURISDICTION, OTHERWISE CAST IRON. PVC SHALL NOT BE INSTALLED IN A/C RETURN AIR PLENUM OR PENETRATE FIRE RATED WALLS OR FLOORS.
- 14.) FURNISH AND INSTALL APPROVED WATER HAMMER ARRESTORS AT EACH GROUP OF FIXTURES. INSTALLATION OF WATER HAMMER ARRESTORS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE AND INSTALL AN APPROVED WATER HAMMER ARRESTOR AT EACH FIXTURE OR DEVICE THAT HAS A SOLENOID WATER CONTROL VALVE.
- 15.) PROVIDE CHROME PLATED COMBINATION COVERED PLATE AND CLEANOUT PLUG FOR ALL WALL CLEANOUTS, JOSAM 58890.
- 16.) INSULATE LINES AS FOLLOWS:
 - A.) 1-1/2" THICK ARMAFLEX PREFORMED INSULATION SHALL BE PROVIDED ON BOTH C.W. & H.W. WHEN PIPING IS LOCATED OUTSIDE OF THE INSULATED BUILDING ENVELOPE.
 - B.) 1-1/2" THICK ARMAFLEX PREFORMED INSULATION SHALL BE PROVIDED ON HW PIPING & H.W. RECIRC. PIPING, ONLY WHEN THERE IS A H.W. RECIRCULATING PIPING SYSTEM.



 NORITZ 11160 Grace Avenue Fountain Valley, California 92708 866-7noritz (866-766-7489) www.noritz.com	MODEL NCC1991 SERIES	EQUIPMENT LIST		
	APPLICATION COMMERCIAL RECIRCULATION MULTI-UNIT SYSTEM CONTROLLER	ITEM	PART #	QTY
	CHECK VALVE	FIELD SUPPLIED	2	
	EXPANSION TANK	FIELD SUPPLIED	1	
	RECIRCULATION PUMP	FIELD SUPPLIED	1	
	AQUASTAT	FIELD SUPPLIED	1	
	GLOBE VALVE	FIELD SUPPLIED	1	
	NORITZ HEATER	NCC1991	1-24	
	REMOTE CONTROLLER	RC-9018M	1	
	REMOTE CONTROLLER CORD	RC-CORD10	1	
	ISOLATOR KIT	IK-WV-200	1-24	
	SYSTEM CONTROLLER	REFER MANUAL	N/A	
		FIELD SUPPLIED		

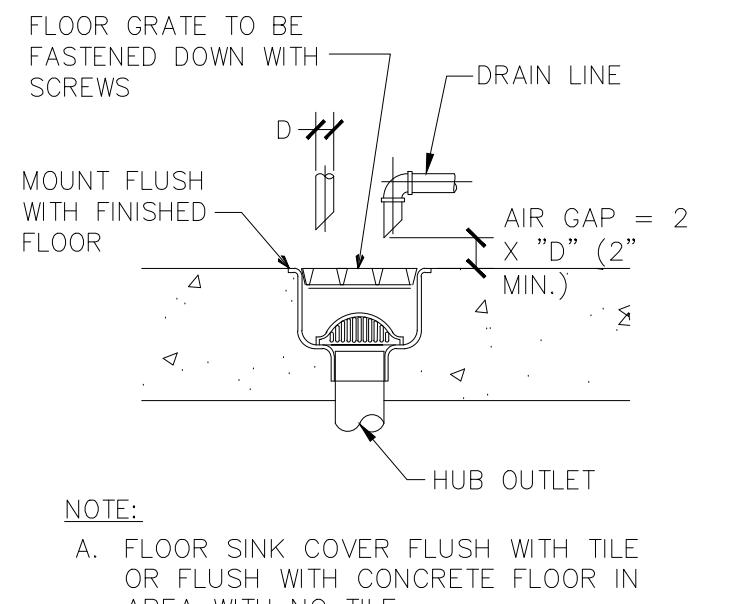
2 TANKLESS WATER HEATER PIPING DIAGRAM



MIXING VALVE DETAIL

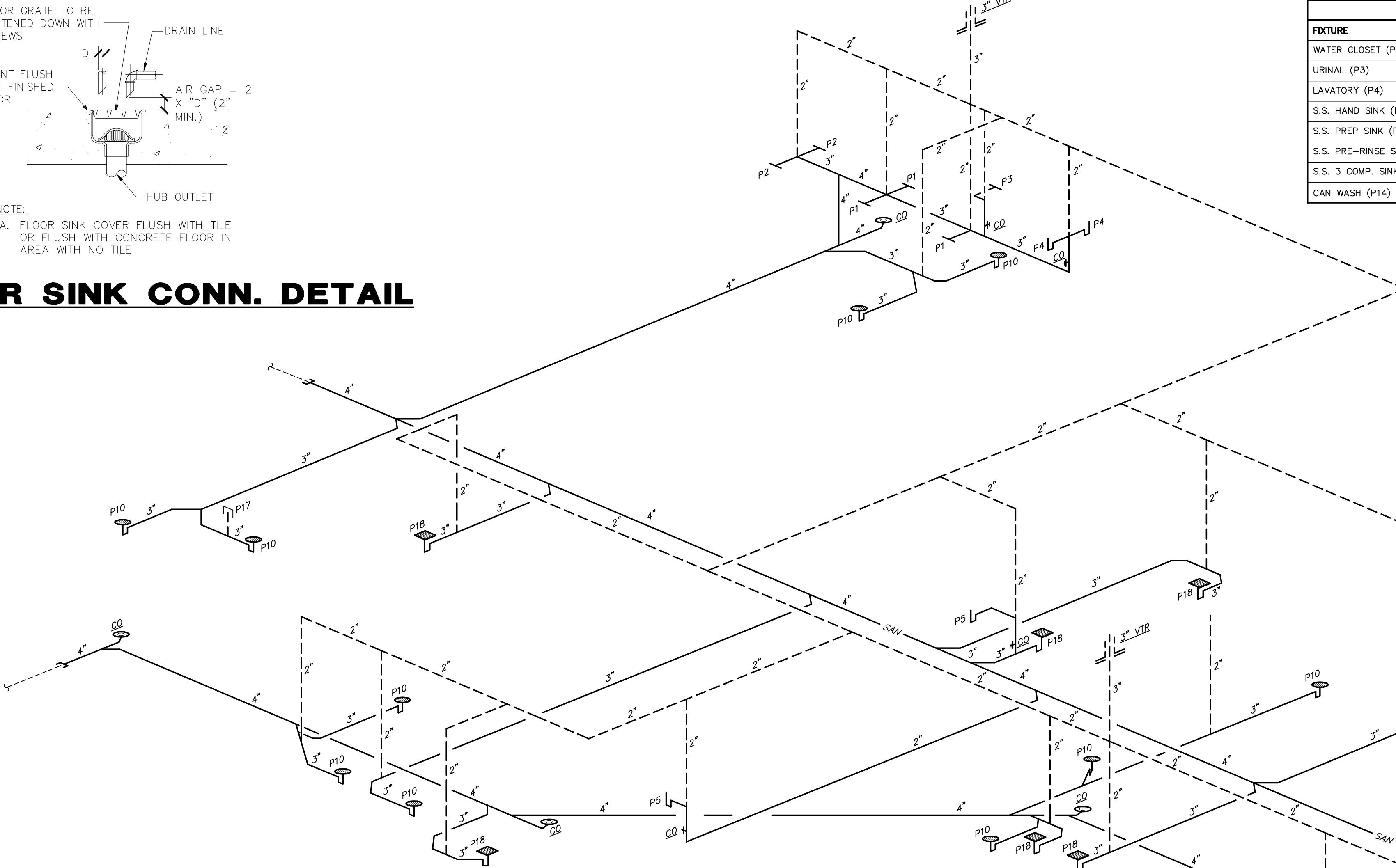
NO SCALE

PLUMBING FIXTURE SCHEDULE	
P-1 (WALL MOUNTED FLUSH VALVE WATER CLOSET)	SHALL BE A "TOTO" MODEL CT708EVG FLUSH VALVE TOILET MOUNTED AT 15" HIGH, 1.28 GPF, WITH HIGH EFFICIENCY FLUSHOMETER VALVE. FLUSH VALVE SHALL BE CONTROLLED BY A TET2LA32/SS ECOPOWERED FLUSH MOUNTED CONTROLLER. SEAT SHALL BE A MODEL SC534#01 ELONGATED OPEN FRONT SEAT WITHOUT COVER. WATER CLOSET VALVE: https://goo.gl/ABwCDC
P-2 (HANDICAPPED WALL MOUNTED FLUSH VALVE WATER CLOSET)	SHALL BE A "TOTO" MODEL CT708EVG FLUSH VALVE TOILET MOUNTED AT 17" HIGH, 1.28 GPF, WITH HIGH EFFICIENCY FLUSHOMETER VALVE. FLUSH VALVE SHALL BE CONTROLLED BY A TET2LA32/SS ECOPOWERED FLUSH MOUNTED CONTROLLER. SEAT SHALL BE A MODEL SC534#01 ELONGATED OPEN FRONT SEAT WITHOUT COVER. WATER CLOSET VALVE: https://goo.gl/ABwCDC
P-3 (HANDICAPPED URINAL AND FLUSH VALVE)	SHALL BE A "TOTO" MODEL UT708UHG, 3/4" BACK MOUNTED SPUD, 0.125 GPF, PROVIDE HIGH EFFICIENCY FLUSHOMETER VALVE CONTROLLED BY A TETLA32/SS ECOPOWERED FLUSH MOUNTED CONTROLLER. URINAL & VALVE: https://goo.gl/kGSEs
P-4 (HANDICAPPED COUNTER TOP LAVATORY)	SHALL BE AN "SLOAN" MODEL AER-DEC AD 8X000, 2-STATION WALL MOUNTED SINK. COORDINATE COLORS WITH ARCHITECT/OWNER. PROVIDE TWO DECK MOUNTED HAND DRYER MODEL EHD-510, SLOAN AUTOMATIC FAUCET, ECHO SERIES AND SLOAN SENSOR OPERATED FOAM SOAP DISPENSER MODEL 400. SINK DESIGN ADA COMPLIANT. PROVIDE A DEDICATED MIXING VALVE TO PROVIDE A MAX. OF 105 DEGREE WATER. LAVATORY: https://www.sloan.com/spec-sheet/15121162
P-5 (STAINLESS STEEL HAND SINK W/FAUCET)	COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.
P-6 (STAINLESS STEEL PREP SINK W/FAUCET)	COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.
P-7 (STAINLESS STEEL PRE-RINSE SINK W/FAUCET)	COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.
P-8 (STAINLESS STEEL 3 COMPARTMENT SINK W/FAUCET)	COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.
P-9 (FLOOR DRAIN)	SHALL BE A JOSAM 30003-A SERIES COATED CAST IRON FLOOR DRAIN, 3" PIPE CONNECTION, 6" DRAIN TOP, STRAINER TYPE SA, TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WELD-IN INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER. DRAIN: https://goo.gl/0G5ly
P-10 (FLOOR DRAIN WITH TRAP PRIMER)	SHALL BE A JOSAM 30003-A-50 SERIES COATED CAST IRON FLOOR DRAIN WITH 1/2" TRAP PRIMER, 3" PIPE CONNECTION, 6" DRAIN TOP, STRAINER TYPE SA, TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WELD-IN INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER. DRAIN: https://goo.gl/0G5ly
P-11 (AUTOMATIC TRAP PRIMER)	SHALL BE A IPS CORPORATION "SIOUX CHIEF" MODEL 695 TRAP PRIMER WITH VACUUM BREAKER. AUTOMATIC TRAP PRIMER VALVE SHALL ACTIVATE WITH A 10 PSIG PRESSURE DROP BETWEEN 30-150 PSIG. DRAIN: https://goo.gl/WqkVxk
P-12 (TANKLESS GAS WATER HEATER)	SHALL BE A "NORITZ" MODEL CC199CDV (GO-C3259WZ-FF US), 199,900 BTUH, 4.4 GPM @ 90° RISE, WATER HEATER TO DELIVER 140° H.W., 115V/10. WATER HEATER: https://goo.gl/22JKj0
P-13 (HOT WATER CIRCULATOR PUMP W/REMOTE TIMER)	SHALL BE A "BELL & GOSSETT" SERIES PR, MODEL PR-AB, (ALL BRONZE), 1/6HP, 115V/16, 1.9 AMP, 1725 RPM, 2 GPM @ 18' HEAD. PUMP SHALL BE PROVIDED WITH A "BELL & GOSSETT" TC-1 AUTOMATIC TIMER KIT. RECIRCULATING PUMP: https://goo.gl/r4JQts TIMER: https://goo.gl/MK4bwu
P-14 (FLOOR MOUNTED INTERIOR CANWASH/MOP RECEPTOR)	CUSTOM BUILT MOP BASIN. COORDINATE FINAL DESIGN. BASIN CONSTRUCTION WITH A HIGH DENSITY MR-372 MOP BRACE, MR-372 HOSE & HOSE BRACKET, MR-372 MOP HANGER, MR-373 BUMPER GUARDS AND MR-377 STAINLESS STEEL WALL GUARD. FAUCET/ACCESSORIES: https://goo.gl/lwcW7t
P-15 (1/2" MIXING VALVE)	1/2" MIXING VALVE SHALL BE A "WATTS" MODEL LF1170-PEX-M2 SET AT 110°. Lead Free* cast copper silicon alloy body construction. MIXING VALVE: https://goo.gl/Gt08b7
P-16 (3/4" MIXING VALVE)	3/4" MIXING VALVE SHALL BE A "WATTS" MODEL LF1170-PEX-M2 SET AT 110°. Lead Free* cast copper silicon alloy body construction. MIXING VALVE: https://goo.gl/Gt08b7
P-17 (2" STUDOR VENT - AIR ADMITTANCE VALVE)	SHALL BE A IPS CORPORATION STUDOR MINI-VENT, 2" VENT. STUDOR VENT: https://goo.gl/fxH9PT
P-18 (FLOOR SINK W/SEDIMENT BUCKET)	SHALL BE A JOSAM 49340A-31 SERIES SQUARE CAST IRON 8" DEEP SUPER-FLO-SEPTIC FLOOR SINK WITH PORC-COATED INTERIOR, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER, AND CAST IRON, NON-TRAFFIC, PORC-COATED, ANTI-ТИLING GRATE, WITH HOLE GRATE AND ALUMINUM SEDIMENT BUCKET. DRAIN: https://goo.gl/tCUVCG
NOTES:	1.) ALL PLUMBING FIXTURES SHALL BE AS SPECIFIED OR APPROVED EQUAL. 2.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.

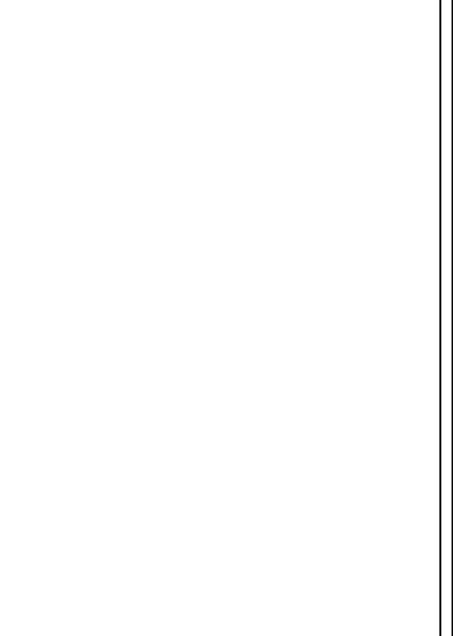


4 FLOOR SINK CONN. DETAIL

NO SCALE



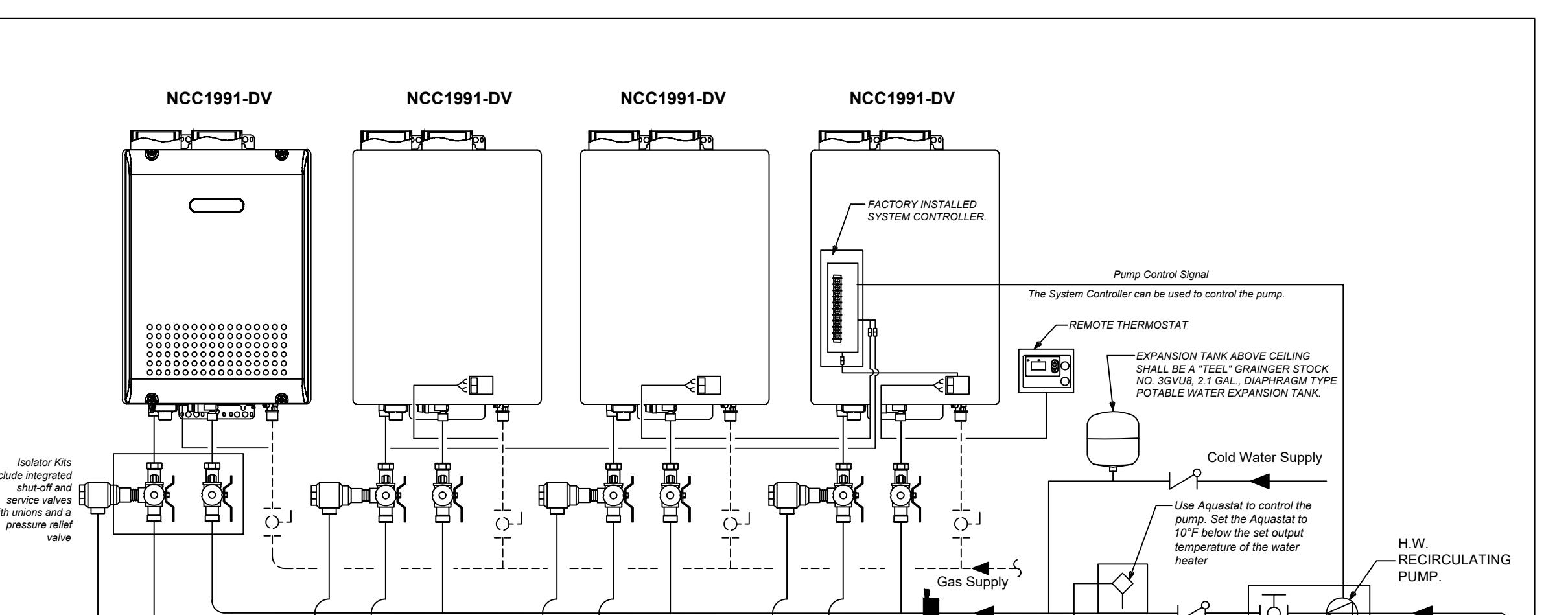
PLUMBING FIXTURE CONNECTION SIZES				
Fixture	C.W. Conn. Size	H.W. Connection Size	Sanitary Branch Size	F.U. Load Values
WATER CLOSET (P1,P2)	1"	—	3"	10.0
URINAL (P3)	3/4"	—	2"	5.0
LAVATORY (P4)	1/2"	1/2" (110°F)	1-1/4"	2.0
S.S. HAND SINK (P6)	1/2"	1/2" (110°F)	1-1/2"	2.0
S.S. PREP SINK (P7)	1/2"	1/2" (140°F)	1-1/2"	4.0
S.S. PRE-RINSE SINK (P8)	1/2"	1/2" (140°F)	1-1/2"	4.0
S.S. 3 COMP. SINK (P9)	1/2"	1/2" (140°F)	1-1/2"	4.0
CAN WASH (P14)	1/2"	1/2" (140°F)	3"	4.0



DATE	DRAWING ISSUE

1 SANITARY ISOMETRIC

NO SCALE

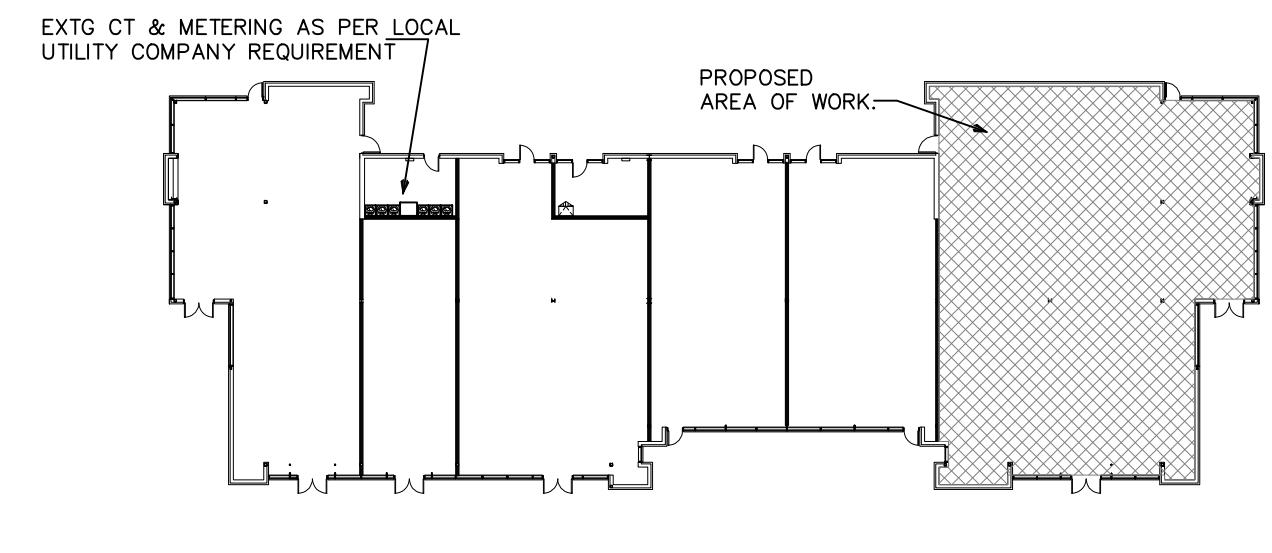


MODEL	ITEM	PART #	QTY	
NCC1991 SERIES	CHECK VALVE	FIELD SUPPLIED	2	
APPLICATION	EXPANSION TANK	FIELD SUPPLIED	1	Shut-off Ball Valve
COMMERCIAL RECIRCULATION	RECIRCULATION PUMP	FIELD SUPPLIED	1	Check Valve
MULTI-UNIT SYSTEM CONTROLLER	AQUASTAT	FIELD SUPPLIED	1	Pump
	REMOTE CONTROLLER	NCC1991	1/24	Union
	REMOTE CONTROLLER CORD	RC-CORD10	1	Mixing Valve
	ISOLATOR KIT	IKWV-200	1/24	Pressure Relief Valve (Watts 174A, Zurn P3000BR, Cash Acme F-82)
	SYSTEM CONTROLLER	REFER MANUAL	N/A	Thermal Expansion Tank
	AIR VENT	FIELD SUPPLIED	1	

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Fountain Valley, California 92708
866-7noritz
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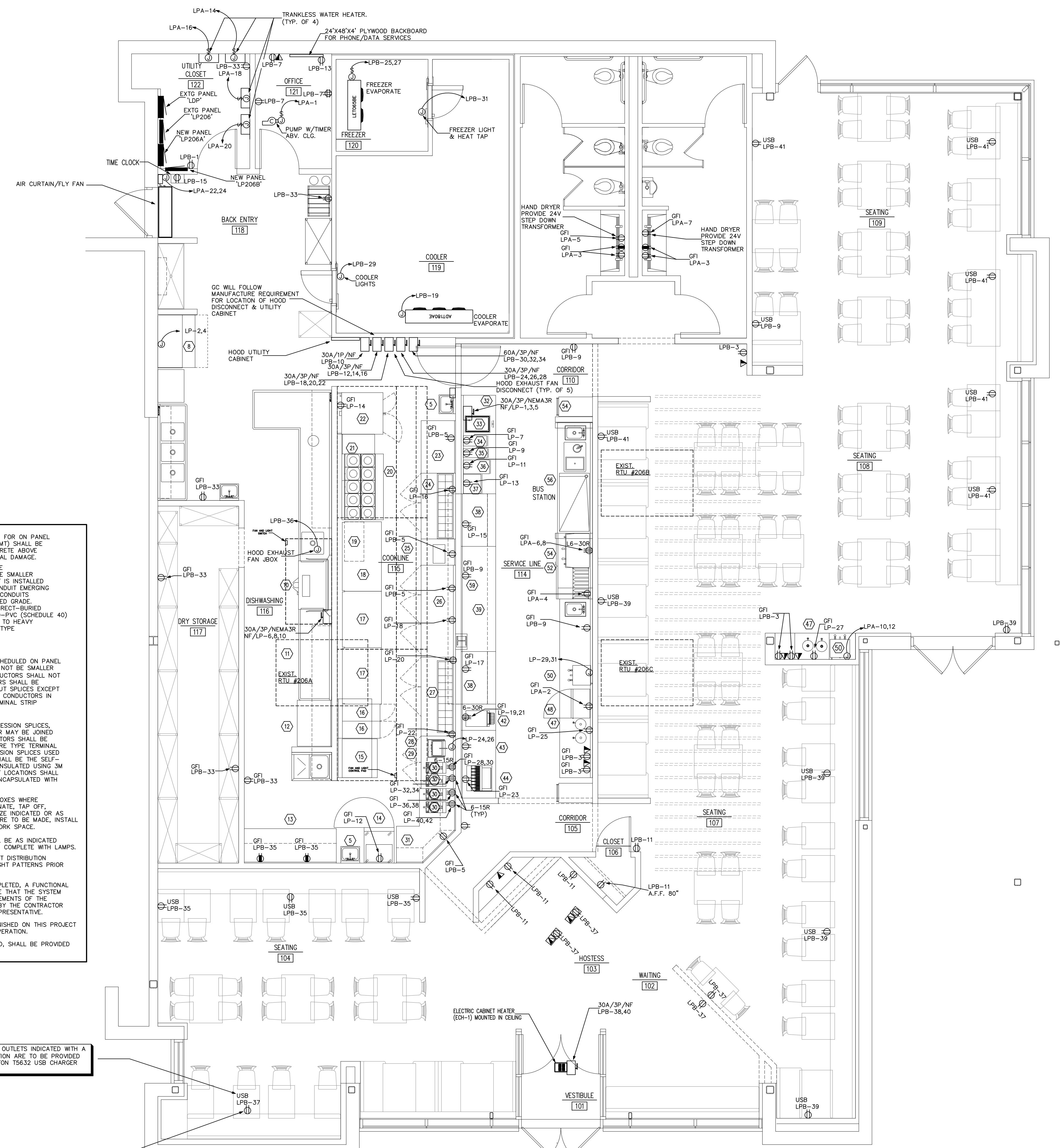
KEY PLAN NO SCALE

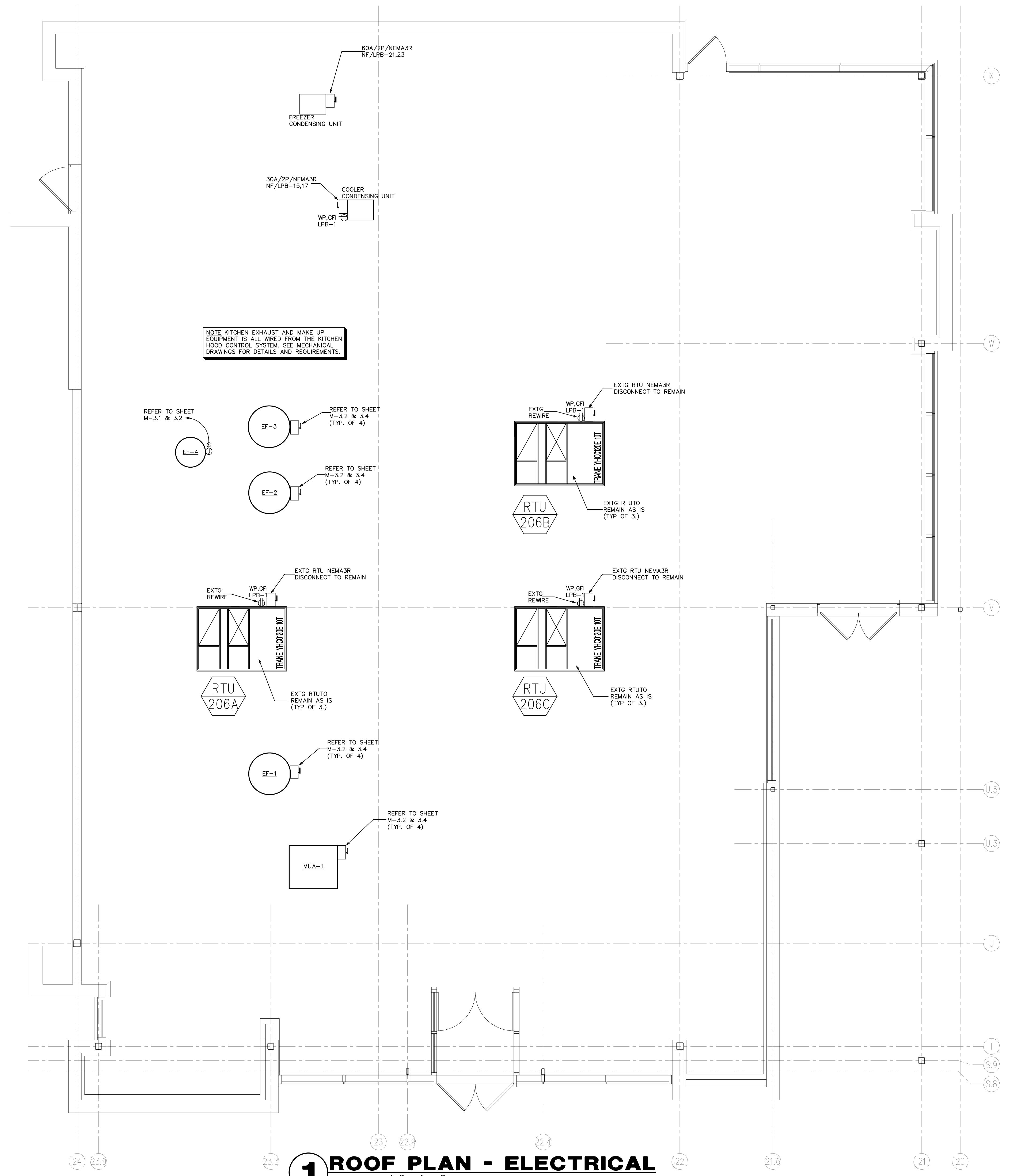
ELECTRICAL NOTES:

- GENERAL: ALL WORK SHALL CONFORM TO THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL LOCAL JURISDICTIONAL CODES.
- THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND ANY APPLICABLE SPECIFICATIONS. IF THERE IS A CONFLICT IN THE DRAWINGS AND THESE REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM, AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL THE OWNER HAS DIRECTED THE CORRECTIVE ACTION TO BE TAKEN.
- THE CONTRACTOR SHALL COORDINATE THE PROPOSED LOCATIONS OF ELECTRICAL MATERIALS AND EQUIPMENT WITH THE OWNER AND HIS REPRESENTATIVE AND OTHER TRADES INVOLVED BEFORE STARTING INSTALLATION OF THOSE ITEMS.
- COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DUCES, JOINTS AND TIES TO ENSURE THAT THEY ARE CAST-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS, ALL SPEC'S ARE NOT INTENDED TO BE PROPRIETARY. SUBSTITUTIONS WILL BE ACCEPTABLE FOR EQUAL RATED AND LISTED ITEMS.
- SCOPE: EXCEPT WHERE OTHERWISE SPECIFICALLY INDICATED ON THE DRAWINGS BY "FUTURE", "BY OTHERS", OR BY A SIMILAR NOTATION, IT IS THE INTENT THAT THE CONTRACTOR FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TOOLS NECESSARY TO PROVIDE ALL SYSTEMS IN COMPLETE AND OPERATING CONDITION.
- EXCAVATE AS NECESSARY FOR THE INSTALLATION OF ELECTRICAL MATERIALS AND EQUIPMENT. VERIFY THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES OR STRUCTURES BEFORE EXCAVATING AND EXERCISE CARE TO AVOID DAMAGE TO SUCH ITEMS DURING EXCAVATION.
- BACKFILL WITH EARTH FREE OF LARGE CLAY, LARGE STONES AND FOREIGN DEBRIS, DEPOSITED IN 6" LAYERS AND COMPAKTED TO A DENSITY OF NOT LESS THAN THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- MATERIALS: THE MATERIALS AND EQUIPMENT FURNISHED SHALL BE AS INDICATED ON THE DRAWINGS. SUBSTITUTIONS SHALL NOT BE MADE EXCEPT WHERE EXPRESSLY APPROVED BY THE OWNER OR HIS REPRESENTATIVE. PRIOR TO SHIPMENT, THE CONTRACTOR FURNISHED ELECTRICAL MATERIALS AND EQUIPMENT FURNISHED SHALL BE LISTED OR LABELED BY UNDERWRITERS LABORATORIES OR OTHER RECOGNIZED TESTING ORGANIZATION, AND SHALL BE ACCEPTABLE TO THE LOCAL BUILDING AUTHORITY.
- GROUNDING: GROUNDING SHALL BE IN ACCORDANCE WITH ARTICLE 250, NEC.
- SHARED NEUTRAL CONDUCTORS SHALL NOT BE ALLOWED UNLESS INSTALLED IN ACCORDANCE WITH NEC-210.4

NOTE: - ALL OUTLETS INDICATED WITH A "USB" NOTATION ARE TO BE PROVIDED WITH A LEVITON T5632 USB CHARGER OUTLET.

NOTE: RECEPTACLE UNDER SEAT IN BOOTH BASE 120V & USB (1yp.)



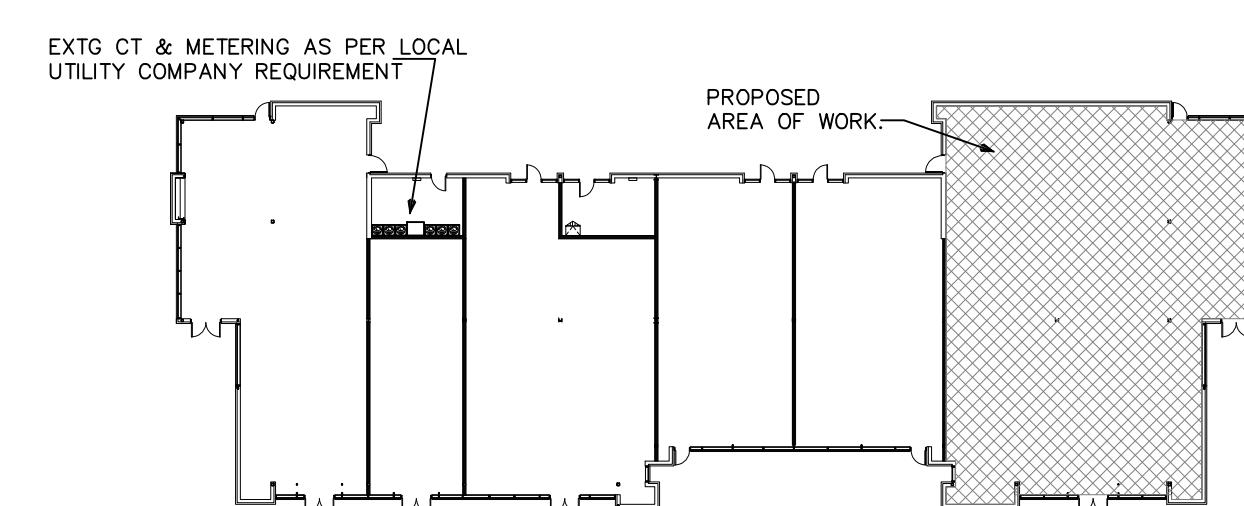


1 ROOF PLAN - ELECTRICAL

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

SHEET NO:

E1.2



KEY PLAN NO SCALE

PANEL EXTG LDP DIVERSIFICATION CALCULATIONS

RECEPTACLES (53) - 9540 VA TOTAL
FIRST 10 KVA AT 100% - 9540
LIGHTING - 5645 X 125% - 7056
HVAC LOADS AT 100% - 45252
MOTOR LOADS AT 100% - 35372
PLUS 25% OF THE LARGEST MOTOR - 3771
MISC NON-CONTINUOUS LOADS AT 100% - 10866
KITCHEN EQUIPMENT (3) - 58814 X 0.65 - 38229
TOTAL DIVERSIFIED PANEL LOAD - 1501.06
LOAD AT 120/208V/3-PHASE/4-WIRE - 417.0A

PANEL SCHEDULE EXTG LDP206																
##	BKR.	WIRE AND CONDUIT			LOAD DESCRIPTION			NEUT.	LINE A	LINE B	LINE C	WIRE AND CONDUIT			BKR. ##	
		COND.	NEUTRAL	GND	C.	KEYS	C.					GND	NEUTRAL	COND.		
1						SPACE		6812	20324	0	0				2	
3						SPACE		6420	17823	0	0				4	
5						SPACE		7374	0	0	0				6	
7						SPACE		5028	0	0	0				8	
9						SPACE		0	0	0	0				10	
11						SPACE		0	0	0	0				12	
13						SPACE		0	0	0	0				14	
15						SPACE		0	0	0	0				16	
17						SPACE		0	0	0	0				18	
19						SPACE		0	0	0	0				20	
21						SPACE		0	0	0	0				22	
23						SPACE		0	0	0	0				24	
25						SPACE		6099	14822	0	0				26	
27						SPACE		6655	20890	0	0				28	
29						SPACE		6199	0	0	0				30	
31						SPACE		17915	0	0	0				32	
33						SPACE		0	0	0	0				34	
35						SPACE		0	0	0	0				36	
37						SPACE		0	0	0	0				38	
39						SPACE		0	0	0	0				40	
41						SPACE		0	0	0	0				42	
WIRE/CONDUIT KEY			WIRING TYPE			INSULATION			CONDUT TYPE			TEMP RATING			PEAK PHASE (C) UNBALANCED NEUTRAL LOAD AMPS = 113.1 AMPS NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 443.6 AMPS	
1234			C-CU WIRE			H-THWN			A-EMT			L-78-86 Deg. F.			159,707	
PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001 REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA																

PANEL SCHEDULE EXTG LP206																
##	BKR.	WIRE AND CONDUIT			LOAD DESCRIPTION			NEUT.	LINE A	LINE B	LINE C	WIRE AND CONDUIT			BKR. ##	
		COND.	NEUTRAL	GND	C.	KEYS	C.					GND	NEUTRAL	COND.		
1						PANEL BOARD 'LP206'	CHAL	2	#6	#4	#3/0	200/3	4	2		
3	15/3	#12	---	#12	1/2	CHAL	CHAL	0	1068	1227	0	0	0	2		
5						ICE MAKER G/F	CHAL	1/2	#12	---	#12	15/2	4			
7	15/1	#12	#12	#12	1/2	CHAL	CHAL	1800	1800	1188	0	0	0	6		
9	15/1	#12	#12	#12	1/2	CHAL	CHAL	1800	1800	1188	0	0	0	10		
11	15/1	#12	#12	#12	1/2	CHAL	CHAL	1650	840	0	0	0	12	15/1		
13	15/1	#12	#12	#12	1/2	CHAL	CHAL	660	960	0	0	0	14	15/1		
15	15/1	#12	#12	#12	1/2	CHAL	CHAL	1060	1060	0	0	0	16	15/1		
17	15/1	#12	#12	#12	1/2	CHAL	CHAL	780	780	0	0	0	18	15/1		
19						REFEGERATED WORK TOP	CHAL	1/2	#12	#12	#12	1615	0	20		
21						PREPARATION REFEGERATOR	CHAL	1/2	#12	#12	#12	1615	0	22		
23	15/1	#12	#12	#12	1/2	CHAL	CHAL	1440	1440	0	0	0	24	15/2		
25	15/1	#12	#12	#12	1/2	CHAL	CHAL	100	100	0	0	0	26	15/2		
27	15/1	#12	#12	#12	1/2	CHAL	CHAL	3150	3150	0	0	0	28	30		
29	35/2	#8	---	#10	3/4	CHAL	CHAL	832	832	0	0	0	32	34		
31						WAFFLE MAKER	CHAL	1/2	#12	---	#12	1658	0	36		
33						WAFFLE MAKER	CHAL	1/2	#12	---	#12	832	0	38		
35						WAFFLE MAKER	CHAL	1/2	#12	---	#12	2212	0	40		
37						WAFFLE MAKER	CHAL	1/2	#12	---	#12	4462	0	42		
39	100/3	#3	#8	#8	1-1/4	PANELBOARD 'LP206A'	CHAL	1658	5463	0	0	0	1658	0		
41						WAFFLE MAKER	CHAL	1/2	#12	---	#12	7713	0	42		
WIRE/CONDUIT KEY			WIRING TYPE			INSULATION			CONDUT TYPE			TEMP RATING			PEAK PHASE (C) UNBALANCED NEUTRAL LOAD AMPS = 61.5 AMPS NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 169. AMPS	
1234			C-CU WIRE			H-THWN			A-EMT			L-78-86 Deg. F.			20324 17823 22681 60,828	
PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001 REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA																

PANEL EXTG LP2 DIVERSIFICATION CALCULATIONS

RECEPTACLES (4) - 720 VA TOTAL
FIRST 10 KVA AT 100% - 720
MOTOR LOADS AT 100% - 1550
MISC NON-CONTINUOUS LOADS AT 100% - 6066
KITCHEN EQUIPMENT (2)
52472 X 0.65 - 34107
TOTAL DIVERSIFIED PANEL LOAD - 42469
LOAD AT 120/208V/3-PHASE/4-WIRE - 118.0A

PANEL SCHEDULE LP20											