HOOD INFORMATION –

Job# 2153206

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM						MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG.	
					TOTAL EXH. CFM	RISER(S)									
						WIDTH	LENG.	DIA.	CFM	S.P.				END TO END	ROW
1		5424	13' 0.00"	600 Deg.	2925	10"	14"		1462	-0.728"	1775	693	430 SS	ALONE	ALONE
		ND-2-ACPSP-F				10"	14"		1462	-0.728"			Where Exposed		

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGHT
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 9 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	FIRE SYSTEM		ELECTRICAL	SWITCHES		
											TYPE	SIZE	MODEL #	QUANTITY		
1		Captrate Solo Filter	9	16"	16"	93% See Filter Spec.	9	L55 Series E26	NO	Right	Ansul R102	3.0/1.5	SC-311110FP	1 Light 1 Fan	YES	914 LBS

HOOD

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 18.00" High Front, Left, Right
		RIGHT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS
		LEFT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS
		INSULATION FOR BACK OF HOOD

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG.	DIA.	CFM	S.P.
1		Front	168"	22"	6"	MUA	10"	16"		443	0.165"
						MUA	10"	16"		443	0.165"
						MUA	10"	16"		443	0.165"
						MUA	10"	16"		443	0.165"
						AC			8"	99	0.032"
						AC			8"	99	0.032"
						AC			8"	99	0.032"
						AC			8"	99	0.032"
						AC			8"	99	0.032"
						AC			8"	99	0.032"
						AC			8"	99	0.032"

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

SPECIFICATION: CAPTRATE GREASE-STOP SOLO® FILTER

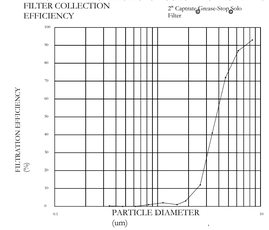
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

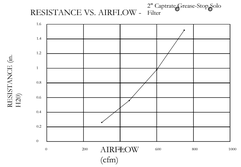
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

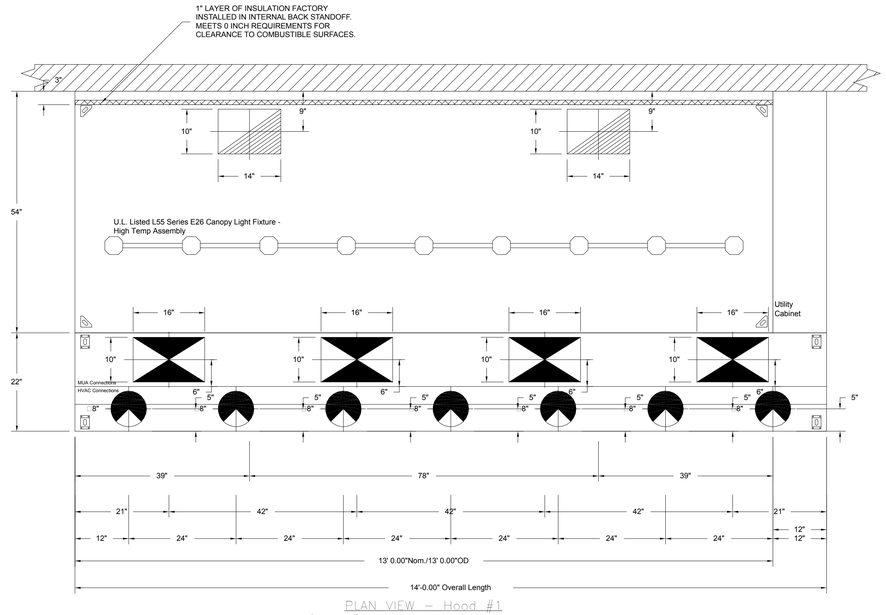
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 90% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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





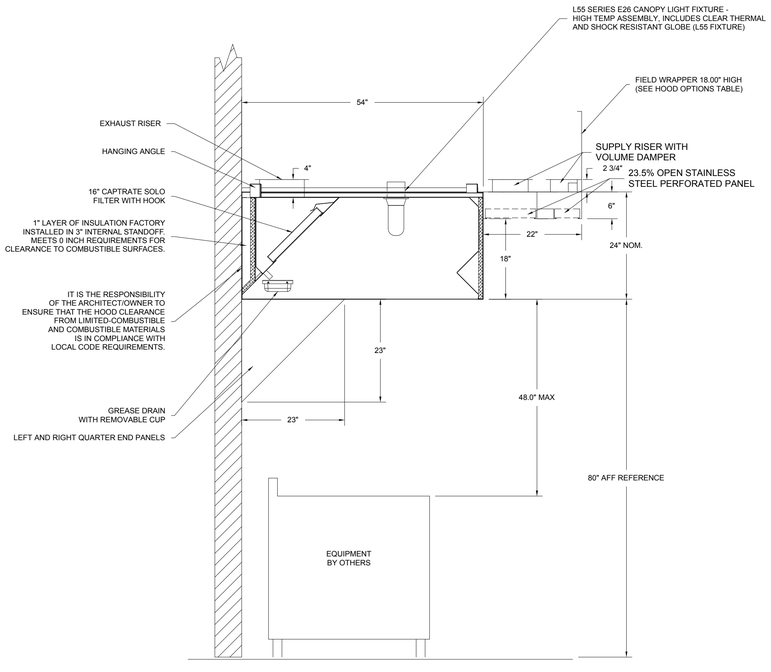
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:.
NFPA #96
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)



PLAN VIEW – Hood #1
13' 0.00" LONG 5424ND-2-ACPSP-F

NOTE: Additional hanging angles provided for hoods 12' and longer.

ACPSP ships loose for field installation



SECTION VIEW – MODEL 5424ND-2-ACPSP-F HOOD #1

CAPTIVE-AIRE
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CHIPOTLE MIRAMAR FL #2417
MIRAMAR, FL., 33027

10/14/2014

2153206

JMB-40

3/4" = 1'-0"

MASTER DRAWING

HD1

EXHAUST FAN INFORMATION – JMB-2153206

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	□	VOLT	FLA	WEIGHT (LBS.)	SONES
1	EF-1	NCA24HPFA	2925	1.200	826	2.000	3	208	6.2	243	12.7
2	EF-2	DR12HFA	150	0.600	1282	0.180	1	115	2.0	42	8

MUA FAN INFORMATION – JMB-2153206

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	CFM	ESP.	RPM	H.P.	□	VOLT	FLA	WEIGHT (LBS.)	SONES
3	MAU-1	A1-G10	G10	A1	1775	0.800	911	0.750	3	208	2.7	255	18.7

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1	EF-1	1 - Grease Box
		1 - Fan Base Ceramic Seal - For Grease Ducts
		1 - Miami Dade Certification.
2	EF-2	1 - I 12-BDD Damper
		1 - Miami Dade Certification.
3	MAU-1	1 - Motorized Backdraft Damper for Size 1 Housing
		1 - Miami Dade Certification.

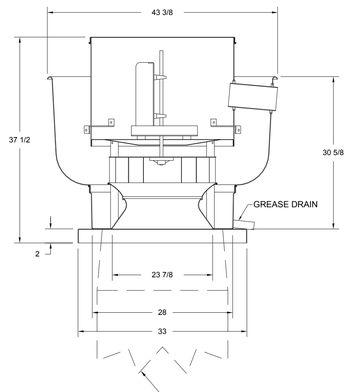
FAN ACCESSORIES

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

CURB ASSEMBLIES

NO.	FOR FAN	WEIGHT	ITEM	SIZE
1	# 1	90 LBS	Curb	31.500"W x 31.500"L x 26.000"H Vented 16 Gauge
2	# 2	51 LBS	Curb	17.500"W x 17.500"L x 26.000"H 16 Gauge
3	# 3	56 LBS	Curb	21.000"W x 21.000"L x 26.000"H 16 Gauge

FAN #1 NCA24HPFA - EXHAUST FAN (EF-1)



FEATURES:

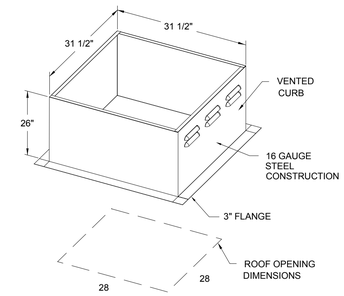
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- AMCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) 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 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

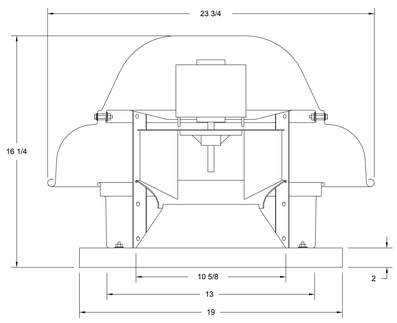
OPTIONS

GREASE BOX
FAN BASE CERAMIC SEAL - FOR GREASE DUCTS
MIAMI DADE CERTIFICATION.



FAN #1 NCA24HPFA - EXHAUST FAN (EF-1) AND MAU-1 (BY OTHERS)
1. UNTEMPERED SUPPLY UNIT WITH 10" BLOWER IN SIZE #1 HOUSING
2. INTAKE HOOD WITH EZ FILTERS
3.
DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER 16" X 18", STANDARD GALVANIZED CONSTRUCTION, 1 1/4" REAR FLANGE, WITH MS4104F MOTOR, WALL SUPPLY MOUNT, FOR SIZE 1 UNTEMPERED FAN HOUSING (5191)
5. MIAMI DADE IMPACT AND WIND LOAD
CERTIFICATION - MIAMI DADE COUNTY PRODUCT CONTROL APPROVED. FLORIDA BUILDING CODE APPROVAL. CURBS MUST BE 16 GAUGE ALUMINIZED.
MPU CURB CLIPS ORDERED SEPARATELY.

FAN #2 DR12HFA - EXHAUST FAN (EF-2)

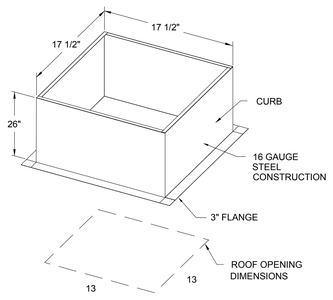


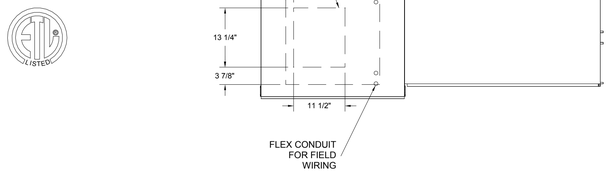
FEATURES:

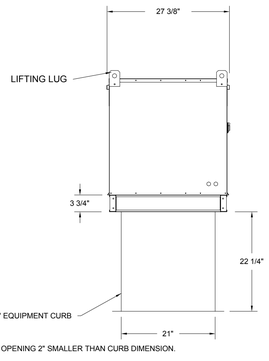
- ROOF MOUNTED FANS
- UL705
- SAFETY DISCONNECT
- STANDARD BIRD SCREEN
- SPEED CONTROL

OPTIONS

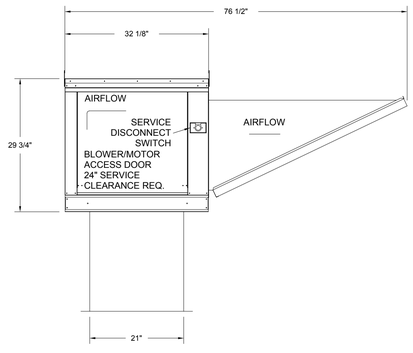
I 12-BDD DAMPER
MIAMI DADE CERTIFICATION.







ROOF OPENING 2" SMALLER THAN CURB DIMENSION.



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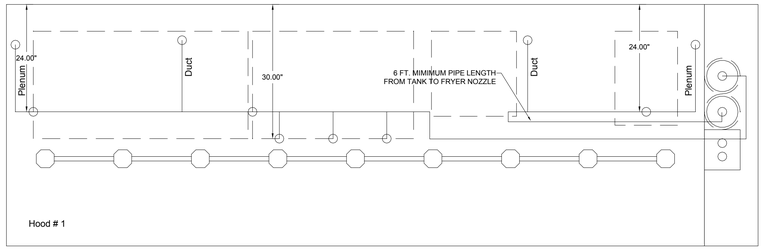
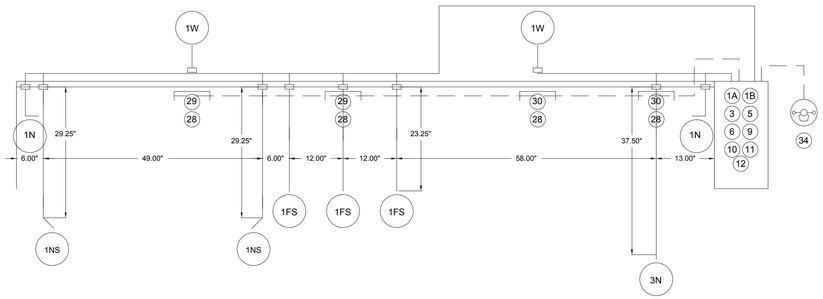
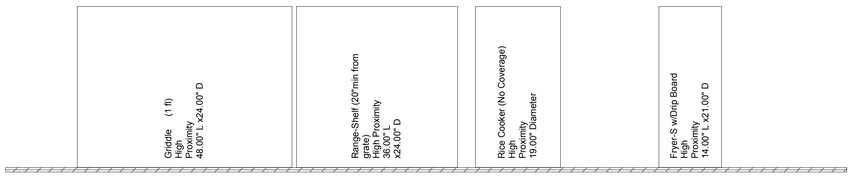
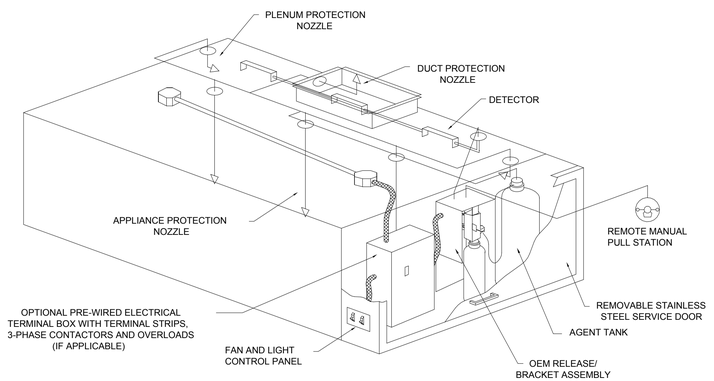
MASTER DRAWING

HD2









TYPICAL ANSUL R-102 SYSTEM LAYOUT

Job #: 2153206
Job Name: CHIPOTLE MIRAMAR #2417
Drawn By: CM
System Size: ANSUL-3.0/1.5 Total FP required: 12
Hood # 1 13' 0.00" Long x 54" Wide x 24" High
Riser # 1 Size: 10" x 14"
Riser # 2 Size: 10" x 14"

LEGEND – FIRE CABINET ANSUL SYSTEM

1A	1.5 GALLON TANK
1B	3 GALLON TANK
2	OEM AUTOMAN RELEASE
3	OEM REGULATED RELEASE
4	OEM REGULATED ACTUATOR
5	ANSULEX LIQUID AGENT (3 GAL.)
6	ANSULEX LIQUID AGENT (1.5 GAL.)
7	CARTRIDGE (101-20)
8	CARTRIDGE (101-10)
9	CARTRIDGE (101-30)
9A	CARTRIDGE (LT-A-101-30)
9B	DOUBLE TANK CARTRIDGE
10	TEST LINK
11	DOUBLE MICROSWITCH
12	HOSE ASSEMBLY
1100	DUCT NOZZLE (430913)
2W	DUCT NOZZLE (419337)
1W	NOZZLE ASSEMBLY (419336)
1F	NOZZLE ASSEMBLY (419333)
1N	NOZZLE ASSEMBLY (419335)
1/2N	NOZZLE ASSEMBLY (419334)
3N	NOZZLE ASSEMBLY (419338)
245	NOZZLE ASSEMBLY (419340)
230	NOZZLE ASSEMBLY (419339)
2120	NOZZLE ASSEMBLY (419343)
290	NOZZLE ASSEMBLY (419342)
260	NOZZLE ASSEMBLY (419341)
28	DETECTOR BRACKET
29	LOW TEMP FUSIBLE LINK
30	HIGH TEMP FUSIBLE LINK
MGV	MECHANICAL GAS VALVE
EGV	ELECTRICAL GAS VALVE
34	REMOTE MANUAL PULL STATION
S	SWIVEL ADAPTOR

Fire System Parts List

Kit 1

FIRE SYSTEM NO.	TAG	KEY NUMBER - PART DESCRIPTION	QTY. BY FACTORY	QTY. BY DIST.
1		0 - 0 - 43-15733 AIR CYLINDER ASSEMBLY - Air Cylinder and Tubing for Mechanical Gas Valves (Ansul)	1	0
1		0 - 0 - METALCAP-CB BLOWOFF CAP - Metal	10	0
1		1 - 1 - AT - 1.5 TANK(#1A) - 1.5 Gallon SS Tank (for use with Automan Release, Actuator, or SS Enclosure (UL/ULC))	1	0
1		1 - 1 - AT - 3.0 TANK(#1B) - 3.0 Gallon SS Tank (for use with Automan Release, Actuator, or SS Enclosure (UL/ULC))	1	0
1		3 - 3 - ANS-OEM REGULATED RELEASE - Ansul Regulated Mechanical Release/Bracket Assembly, OEM, R-102	1	0
1		5 - 5 - LIQ-3.0 AGENT - Ansulex Low PH Wet Chemical Agent, 3 Gallon (UL)	0	1
1		6 - 6 - LIQ-1.5 AGENT - Ansulex Low PH Wet Chemical Agent, 1.5 Gallon (UL)	0	1
1		9 - 9 - 101-30 CARTRIDGE - Carbon Dioxide, 101-30, Cartridge (R-102)	0	1
1		10 - 10 - TLINK LINK - Test Link (1 test link)	0	1
1		11 - 11 - MICRO-SDA MICROSWITCH - Single Dual Electric Switch, One Standard Switch, One Alarm Duty Switch 437155	1	0
1		12 - 12 - HOSE HOSE - Rubber Hose	1	0
1		14 - 14 - 419336 NOZZLE - 1W Nozzle, Duct/Appliance (Replaces ANSUL Part# 419347, CAS Part# 419336) A0001266	2	0
1		15 - 15 - 419333 NOZZLE - 1F Nozzle, Appliance (Replaces ANSUL Part # 419344, CAS# 419333) A0001263	3	0
1		16 - 16 - 419335 NOZZLE - 1N Nozzle, Plenum/Appliance (Replaces ANSUL Part# 419346, CAS Part# 419335) A0001265	4	0
1		19 - 19 - 419338 NOZZLE - 3N Nozzle, Appliance (Replaces ANSUL Part# 419349, CAS Part# 419338) A0001268	1	0
1		25 - 25 - 418569 NOZZLE ADAPTOR - Swivel Nozzle Adaptor (Replaces CAS Part # 418569) A0001274	5	0
1		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL)	10	0
1		27 - 27 - QPSA-1/2 PULLEY SEAL - 1/2" Hood Seal (UL)	1	0
1		28 - 28 - S-DET DETECTOR - Series (Scissor Linkage) NEW#435547/435548 (OLD#417369/434480)	4	0
1		29 - 29 - ANS-360FL FUSIBLE LINK - 360deg F, R-102 and PIRANHA	2	0
1		30 - 30 - ANS-500FL FUSIBLE LINK - 500deg F, R-102 and PIRANHA	2	0
1		34 - 34 - RPS-A REMOTE PULL STATION - Red composite (without wire rope) 434618	1	0
1		35 - 35 - PE-LT PULLEY ELBOW - Low Temp. Pulley Elbow, Set Screw Type	2	0
1		36 - 36 - PE-HT PULLEY ELBOW - High Temp Pulley Elbow, Compression Type	1	0
1		41 - 41 - SN-CHAR SINGLE NOZZLE EXTENDED DROP ASSY	1	0

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE, TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST; ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES), ONE MECHANICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2", PERMIT, AND SYSTEM TEST.
EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

NOTES
- FIELD PIPE DROPS AS SHOWN
  SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE.
- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

SPECIFICATIONS

THE RESTAURANT FIRE SUPPRESSION SYSTEM SHALL BE THE PRE-ENGINEERED TYPE WITH A FIXED NOZZLE AGENT DISTRIBUTION NETWORK. IT SHALL BE LISTED WITH UNDERWRITERS LABORATORIES, INC. (UL)

THE SYSTEM SHALL BE CAPABLE OF AUTOMATIC DETECTION AND ACTUATION WITH LOCAL OR REMOTE MANUAL ACTUATION. ACCESSORIES SHALL BE AVAILABLE FOR MECHANICAL OR ELECTRICAL GAS LINE SHUT-OFF APPLICATIONS.

THE EXTINGUISHING AGENT SHALL BE A POTASSIUM CARBONATE, POTASSIUM ACETATE-BASED FORMULATION DESIGNED FOR FLAME KNOCKDOWN AND SECUREMENT OF GREASE RELATED FIRES. IT SHALL BE AVAILABLE IN PLASTIC CONTAINERS WITH INSTRUCTIONS FOR LIQUID AGENT HANDLING AND USAGE.

THE REGULATED RELEASE MECHANISM SHALL BE COMPATIBLE WITH A FUSIBLE LINK DETECTION SYSTEM. THE FUSIBLE LINK SHALL BE SELECTED AND INSTALLED ACCORDING TO THE OPERATING TEMPERATURE IN THE VENTILATING SYSTEM. THE FUSIBLE LINK SHALL BE SUPPORTED BY A DETECTOR BRACKET/ LINKAGE ASSEMBLY.

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MIRAMAR, FL, 33027

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2153206

JMB-40

3/4" = 1'-0"

MASTER DRAWING

HD3

ELECTRICAL PACKAGES –
Job#2153206

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	□	H.P.	VOLT	FLA
1		SC-311110FP	Utility Cabinet Right	Utility Cabinet Right	1 Light	Smart Controls Thermostatic Control	Exhaust	3	2.000	208	6.2
				Hood # 1	1 Fan		Supply	3	0.750	208	2.7

Fire System Information –
Job#2153206

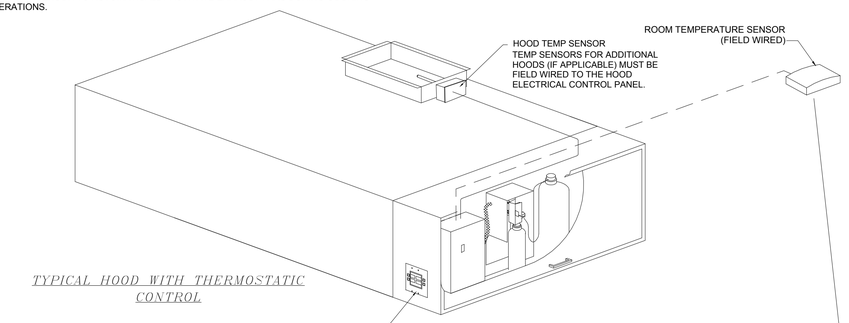
FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		Ansul R102	3.0/1.5	4	Fire Cabinet Right	Right

GAS VALVE(S)

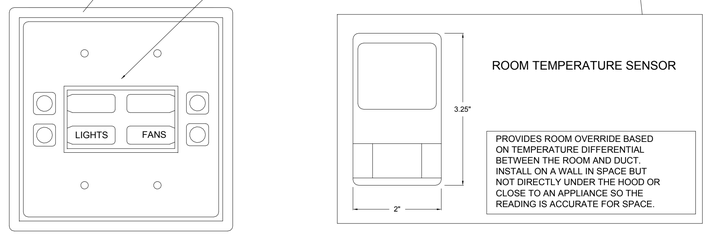
FIRE SYSTEM NO.	TAG	TYPE	SIZE	SUPPLIED BY
1		Mechanical	2.000	CaptiveAire Systems

TEMPERATURE SENSOR INTERLOCK

THE TEMPERATURE SENSOR INTERLOCK OPTION COMPLIES WITH IMC 507.2.1.1 AND NFPA 96 11.1.1 BY INTERLOCKING WITH COOKING APPLIANCES THROUGH MEANS OF A HEAT SENSOR TO AUTOMATICALLY ACTIVATE EXHAUST FANS DURING COOKING OPERATIONS.



TYPICAL HOOD WITH THERMOSTATIC CONTROL



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CHIPOTLE MIRAMAR FL #2417
MIRAMAR, FL, 33027

10/14/2014
2153206
JMB-40
3/4" = 1'-0"
MASTER DRAWING

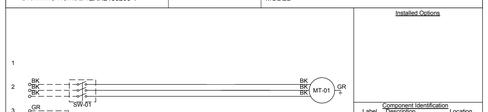
HD4

Exhaust Fan

Wiring

JOB 2153206 - CHIPOTLE MIRAMAR FL #2417

DRAWING NUMBER EXH2153206-1 | SHIP DATE 10/14/2014 | MODEL NCA24HPFA



Installed Options

Component Identification		
Label	Description	Location
MT-01	Fan Motor	[2]
SW-01	Main disconnect switch	[2]

MOTOR INFO

EXHAUST 2HP-208V-3P-3.2FLA

ELECTRICAL INFORMATION

MOTOR/CONTROL CIRCUIT: 24V
MOTOR/CONTROL MOP: 15A

NOTES:
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

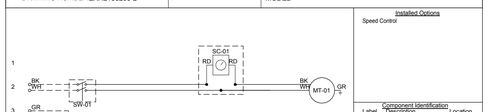
BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	

Exhaust Fan

Wiring

JOB 2153206 - CHIPOTLE MIRAMAR FL #2417

DRAWING NUMBER EXH2153206-2 | SHIP DATE 10/14/2014 | MODEL DR12HFA



Installed Options

Speed Control

Component Identification		
Label	Description	Location
MT-01	Fan Motor	[2]
QS-01	Quick Disconnect	[2]
SC-01	Speed Control	[2]
SW-01	Main disconnect switch	[2]

MOTOR INFO

EXHAUST 0.5HP-115V-1PH-5.0FLA

ELECTRICAL INFORMATION

MOTOR/CONTROL CIRCUIT: 24V
MOTOR/CONTROL MOP: 15A

NOTES:
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

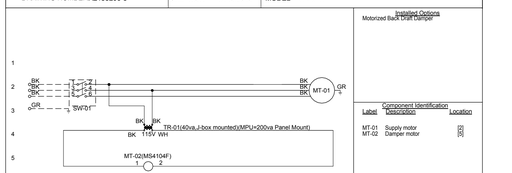
BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	

AirHandler

Wiring

JOB 2153206 - CHIPOTLE MIRAMAR FL #2417

DRAWING NUMBER A2153206-3 | SHIP DATE 10/14/2014 | MODEL A1 - G10



Installed Options

Motorized Back Draft Damper

Component Identification		
Label	Description	Location
MT-01	Supply motor	[2]
MT-02	Damper motor	[2]
SW-01	Main disconnect switch	[2]
TR-01	Power transformer(40va) MPU Requires 200va Panel Mounted Version Instead of 40va	[3]

MOTOR INFO

SUPPLY 0.75HP-208V-3P-2.7FLA

ELECTRICAL INFORMATION

MOTOR/CONTROL CIRCUIT: 24V
MOTOR/CONTROL CIRCUIT MOP: 15A

NOTES:
- - - DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	

JOB NO. 2153206

MODEL NUMBER SC-311110FP

JOB NAME CHIPOTLE MIRAMAR FL #2417

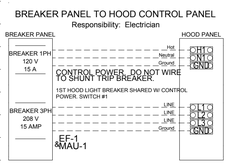
DRAWN BY | DATE 10/14/2014 | INSTALL ECP #1-1

DESCRIPTION OF OPERATION:

3 Phase w/ 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation.

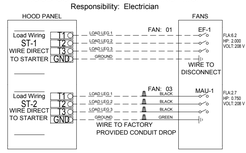
BREAKER PANEL TO HOOD CONTROL PANEL

Responsibility: Electrician



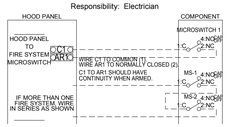
HOOD CONTROL PANEL TO FANS / MUA

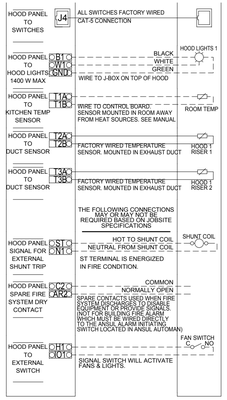
Responsibility: Electrician

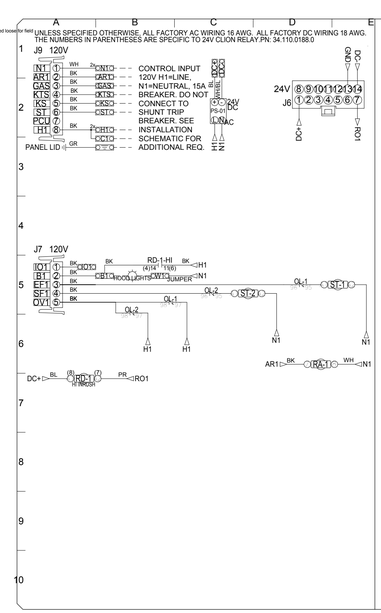


HOOD CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician







FACTORY WIRING SCHEMATIC
CIRCUIT BOARDS
ECPM03 Rev. 1.32
HMI Rev. 1.06

COMPONENT LIST

CB-1	Circuit Breaker Phases
OL-X	Overload Phases
C-X	Contactor Phases
PS-1	Power Sup. 24VDC 1.0 Amp
RA-x	120V Relay DPDT PRO610184-2
RD-x-HI	24VDC High Inrush PN:06.024High-In
TS-x	Duct Thermostat PRO-UP-TV-DPL

LEGEND

FIELD WIRING
FACTORY
BK- BLACK YW- YELLOW
BL- BLUE GR- GREEN
BR- BROWN PR- PURPLE
OR- ORANGE RD- RED
WH- WHITE
OR/BL- OR/BL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

CHIPOTLE MIRAMAR

SC-311110FP

3 Phase w/ 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation.

2153206 | JMB-40

FACTORY: 10/14/2014
ECP #1-2

CAPTIVE-AIRE
Highwoods Group
3100 SMOKETREE COURT, SUITE #1010, Raleigh, NC, 27604 PHONE: (919) 875-0420 FAX: (919) 875-0577 EMAIL: rep40@captiveaire.com

CHIPOTLE MIRAMAR FL #2417

MIRAMAR, FL, 33027

10/14/2014

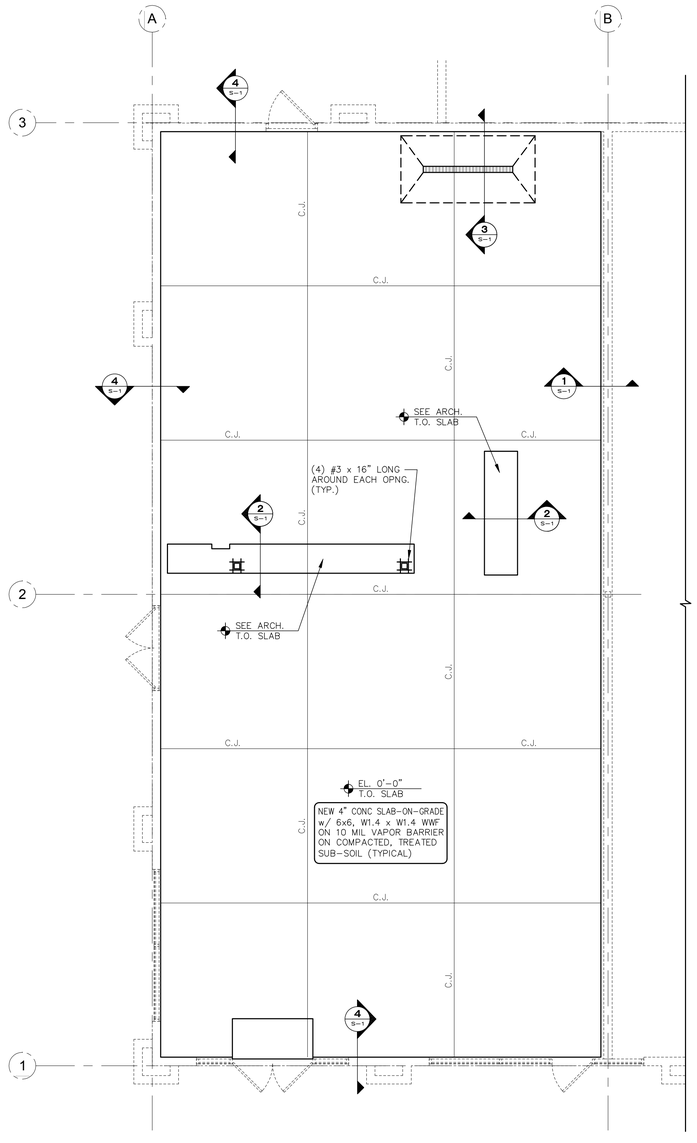
2153206

JMB-40

3/4" = 1'-0"

MASTER DRAWING

HD5



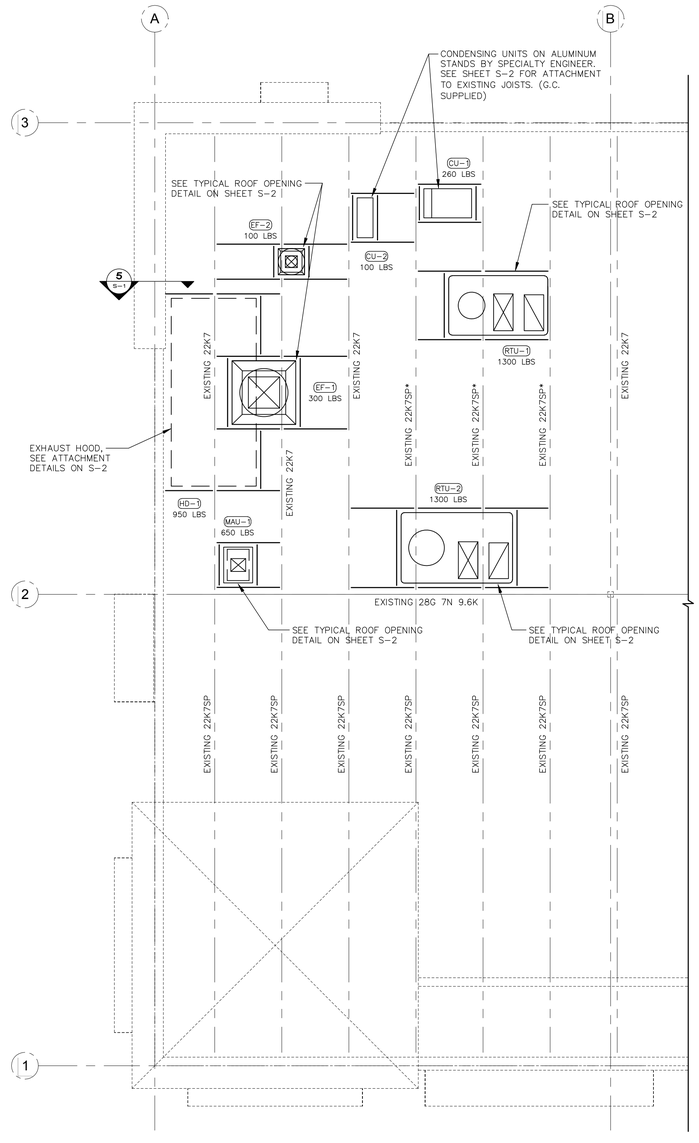
FOUNDATION PLAN

SCALE: 3/16"=1'-0"

FOUNDATION NOTES:

1. RECOMPACT EXISTING SUBGRADE TO 95% COMPACTION AND TESTED BY GEOTECHNICAL ENGINEER.
2. C.J.– INDICATES SAW CUT CONTROL JOINTS AT 12'–0" o.c. E.W. MAX. TYP.

IF REQUIRED BY AUTHORITY HAVING JURISDICTION, AN INDEPENDENT THIRD PARTY INSPECTOR MUST INSPECT AND PRESENT REPORTS TO THE BUILDING DEPT. FOR WELDING, STRUCTURAL ERECTION AND ASSEMBLY OF STRUCTURES WITH HIGH STRENGTH BOLTS. THE G.C. SHALL NOT CONCEAL ANY STRUCTURAL STEEL UNTIL THE INSPECTION HAS BEEN DONE AND AN APPROVED REPORT IS FILED WITH THE COUNTY.



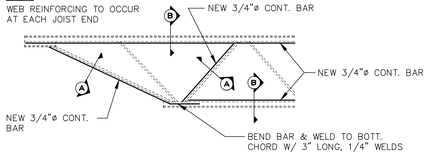
ROOF FRAMING PLAN

SCALE: 3/16"=1'-0"

ROOF FRAMING PLAN NOTES:

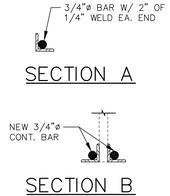
1. REFER TO ARCH'L. FOR LOCATION OF ALL MECH. UNITS.
2. G.C. TO VERIFY ALL EXISTING JOIST CONDITIONS MATCH DRAWINGS.
3. ALL EXISTING ANGLE BRACING TO REMAIN.
4. JOISTS SUPPORTING RTU'S TO HAVE BEEN DESIGNED FOR WEIGHT OF RTU'S IN SHELL PERMIT, G.C. VERIFY.
5. (*) INDICATES EXISTING ROOF JOIST TO BE REINFORCED.

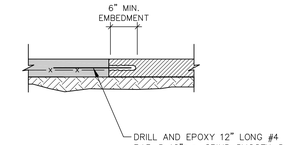
NOTE:
WEB REINFORCING TO OCCUR AT EACH JOIST END



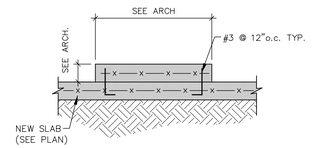
JOIST REINFORCING DETAIL (SEE NOTE 5)

(SEE PLAN FOR JOISTS WITH *) N.T.S.

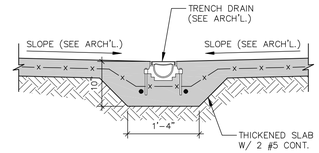




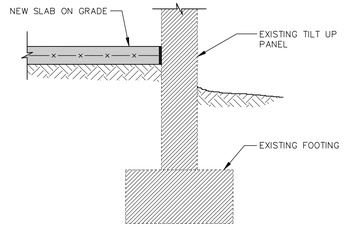
SECTION 1 S-1
3/4"=1'-0"



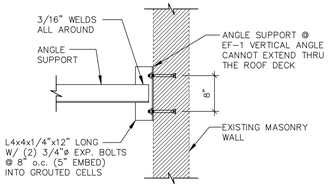
SECTION 2 S-1
3/4"=1'-0"



SECTION 3 S-1
3/4"=1'-0"



SECTION 4 S-1
3/4"=1'-0"



SECTION 5 S-1
3/4"=1'-0"

PERMIT SET
10/16/14

O'Donnell, Naccarato, Mignogna Jackson
STRUCTURAL ENGINEERS
321 15TH STREET, SUITE 200
WEST PALM BEACH, FLORIDA 33401
(561) 835 - 9994 FAX (561) 835 - 8255
LIC. #0004386
JOB # 671.104

Consultant:

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Hollywood, FL 33020
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INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 2417
MIRAMAR
3231 SW 160 AVENUE #101
MIRAMAR, FL 33027

Issue Record:

Revisions:

Drawn: CB
Checked: PJR

Project No.

Contents:
FOUNDATION PLAN & ROOF FRAMING PLAN

S-1

Date: -

CONTRACTOR NOTE:

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. O'DONNELL, NACCARATO, MIGNOGNA & JACKSON, INC. IS NOT RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION OR FOR RELATED SAFETY PRECAUTIONS AND PROGRAMS.

CODES AND STANDARDS

1. WIND LOADS AS PER:
   A. FLORIDA BUILDING CODE 2010 EDITION, FOR AN ULTIMATE WIND SPEED OF 170 MPH, RISK CATEGORY II, EXPOSURE C, ±0.18 INTERNAL PRESSURE COEFFICIENT.
2. THE PROJECT WAS DESIGNED IN ACCORDANCE WITH THE:
   A. FLORIDA BUILDING CODE 2010 EDITION.
3. ARCHITECTURAL AND MECHANICAL DRAWINGS:
   A. THE STRUCTURAL DRAWINGS ARE PART OF THE CONTRACT DOCUMENTS AND DO NOT BY THEMSELVES PROVIDE ALL THE INFORMATION REQUIRED TO PROPERLY COMPLETE THE PROJECT STRUCTURE. THE GENERAL CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE THE INFORMATION CONTAINED IN THESE DRAWINGS WITH THE STRUCTURAL DRAWINGS TO PROPERLY CONSTRUCT THE PROJECT.
   B. REFER TO ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, DEPRESSIONS, FINISHES, INSERTS, BOLTS SETTINGS, DRAINS, REGLETS, ETC.
   C. BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS TO PROPERLY SIZE OR FIT THE WORK. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED BY THE OWNER RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT.
   D. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY WORK.
   E. ALL STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LOADS LISTED ONLY AS COMPLETED STRUCTURES. THE GENERAL CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT WORK IN PROGRESS UNTIL THE STRUCTURES ARE COMPLETED. THE GENERAL CONTRACTOR SHALL ALSO INSURE THAT ITS OPERATIONS AND PROCEDURES PROVIDE NO LOADING GREATER THAN THE DESIGN LOADS LISTED ON ANY MEMBER.
4. SECTIONS AND DETAILS:
   ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.

SPECIALTY ENGINEERED PRODUCTS

1. THE GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE THE PROPER SUBMISSION OF SPECIALTY ENGINEERED SHOP DRAWINGS WHICH SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THE SPECIALTY ENGINEERED SHOP DRAWINGS ARE SUBMITTED IN A TIMELY MANNER SO AS TO ALLOW REVIEWS AND RESUBMISSIONS AS REQUIRED. ALL SPECIALTY ENGINEERED PRODUCTS SHALL BE DESIGNED FOR THE APPROPRIATE GRAVITY LOADS AND WIND LOADS INCLUDING UPLIFT AND LATERAL LOADS. INTERIOR SPECIALTY PRODUCTS SHALL BE DESIGNED FOR LATERAL LOADS TO ASSURE STABILITY. SPECIALTY ENGINEERED PRODUCTS SHALL BE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   A. LIGHT GAUGE METAL, INCLUDING BUT NOT LIMITED TO, SOFFITS, CLADDING, CEILINGS, ETC.
   B. MISCELLANEOUS METALS INCLUDING STEEL STAIRS, MECHANICAL EQUIPMENT SUPPORTS, FRAMES THAT SUPPORT MACHINES, PIPES OR OTHER STRUCTURAL METAL USED FOR SUPPORT OF MECHANICAL SYSTEMS.
   C. MISCELLANEOUS HANGERS, CHANDELIERS, CABINETS, METAL FRAMES, LADDERS, RIGGING, HANGING WALLS, RAILINGS, GLAZING FRAMES, CLADDING SUCH AS STONE, PRECAST, ALUMINUM, METAL PANELS, CABLE BARRIER SYSTEMS, ETC. OR ANY OTHER MISCELLANEOUS PRODUCT REQUIRED BY ANY OF THE CONSTRUCTION DOCUMENTS.
   D. IN ADDITION TO THE LOADS SHOWN IN THE DESIGN LOAD SCHEDULE, THE SPECIALTY ENGINEER SHALL DESIGN FOR THE WEIGHT OF ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND FIXTURES, AS WELL AS CHANDELIER FIXTURES, BAR CABINETS, AND ART WORK / MOBILES.

GENERAL CONTRACTOR TO INCLUDE IN THEIR BID THE COST OF THE ABOVE NOTED SPECIALTY ENGINEERING.

ADDITIONS/RENOVATIONS

1. ALL EXISTING CONDITIONS, DIMENSIONS, LOCATIONS AND ELEVATIONS OF EXISTING STRUCTURES SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR IN THE FIELD AND COORDINATED WITH THE NEW CONSTRUCTION PRIOR TO PREPARATION OF WORKING OR SHOP DRAWINGS OR FABRICATION AND COMMENCEMENT OF ANY WORK. IF DISCREPANCIES ARE DISCOVERED BETWEEN EXISTING CONDITIONS AND CONTRACT WORK, THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER PRIOR TO PERFORMANCE OF ANY WORK.
2. PRIOR TO SHOP DRAWING PREPARATION, THE GENERAL CONTRACTOR IS TO INVESTIGATE AND VERIFY ACTUAL FIELD CONDITIONS, EXPOSED OR CONCEALED AND TAKE INTO ACCOUNT ANY POSSIBLE CONSTRUCTION INTERFERENCES AND RELOCATIONS OF, BUT NOT LIMITED TO STRUCTURES, EQUIPMENT, UTILITIES, CABLES, DUCT LINES, PIPING, DRAIN LINES, ETC.
3. ANY PORTION OF EXISTING STRUCTURE ADJACENT TO THE CONSTRUCTION WHICH MAY BY DISTURBED OR DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION AS GOOD AS BEFORE THE COMMENCEMENT OF THE WORK AT NO ADDITIONAL COSTS TO THE OWNER.
4. EXISTING STRUCTURE SHALL BE PROTECTED, MAINTAINED AND SUPPORTED DURING THE CONSTRUCTION WORK.

FOUNDATION

1. SOILS SUPPORTING ALL FOOTINGS MUST BE INSPECTED AND APPROVED BY A REGISTERED SOILS ENGINEER BEFORE COMMENCING WORK. APPROVAL IN WRITING MUST INDICATE THE SOIL IS ADEQUATE TO SAFELY SUSTAIN SPECIFIED SOIL BEARING PRESSURE.
2. EXCAVATION & BACKFILL:
   A. ALL EXCAVATION SHALL BE KEPT DRY. EXCAVATE TO DEPTHS AND DIMENSIONS INDICATED. TAKE EVERY PRECAUTION TO GUARD AGAINST ANY MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES, UTILITIES, PIPING, ETC.
   B. PROVIDE ANY BRACING OR SHORING NECESSARY TO AVOID SETTLEMENT OR DISPLACEMENT OF EXISTING FOUNDATION OR STRUCTURES.
3. DIMENSIONS: ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE VERIFIED AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS BY THE CONTRACTOR BEFORE PROCEEDING WITH THE CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER IN WRITING BEFORE PROCEEDING WITH ANY WORK.

CONCRETE

1. CONCRETE ELEMENTS TO HAVE THE FOLLOWING STRENGTHS:
   A. SLAB-ON-GRADE 3000 PSI
2. ALL CONCRETE SHALL BE READY MIX AND MEET THE FOLLOWING REQUIREMENTS:
   A. A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.
   B. SLUMPS SHALL BE 4" MINIMUM AND 6" MAXIMUM.
   C. CONCRETE SHALL HAVE 3 ± 1 PERCENT AIR ENTRAINMENT.
   D. ALL CONCRETE TO HAVE MAXIMUM WATER/CEMENT RATIO OF 0.55.
   E. JOBSITE WATER SHALL NOT BE ADDED.
3. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE ACI BUILDING CODE (ACI 318/ LATEST EDITION), THE ACI DETAILING MANUAL (ACI 315/ LATEST EDITION), AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301/ LATEST EDITION).
4. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A 185, UNLESS OTHERWISE SPECIFIED. PLACE FABRIC 2" CLEAR FROM TOP OF THE SLAB IN SLAB ON GRADE AND SUPPORT ON SLAB BOLSTERS SPACED AT 3'-0" O.C.
5. REQUIREMENTS: WWF SHALL COMPLY WITH ASTM A 185.

STEEL

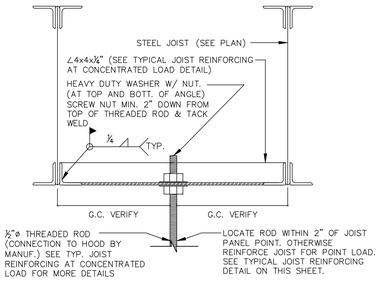
1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE. STRUCTURAL STEEL SHALL CONFORM TO:
   A. ASTM SPECIFICATION A 36 FOR MISCELLANEOUS STEEL SHAPES (ANGLES, PLATES, ETC.);NEW STEEL COLUMNS TO BE A500 GRADE B (f_y = 46 KSI).
   B. ALL STEEL TO HAVE A SHOP COAT OF RUST INHIBITIVE PAINT.
   C. DELETE PAINT ON ALL STEEL TO RECEIVE SPRAYED ON FIREPROOFING OR CONCRETE ENCASEMENT.

STEEL CONTINUED

2. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" (AWS D1.1), TO PERFORM THE TYPE OF WORK REQUIRED.
3. ALL ALUMINUM AND STEEL MEMBERS TO BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.
4. ALL STEEL WELDING RODS SHALL BE E70XX ELECTRODES.
5. EQUIPMENT SUPPORTS:
   PROVIDE ALL SUPPORTING STEEL NOT INDICATED ON PLAN AS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT AND MATERIALS, INCLUDING ANGLES, CHANNELS, BEAMS, HANGERS, ETC. DO NOT SUPPORT EQUIPMENT OR PIPING FROM METAL DECKING.

SHOP DRAWINGS

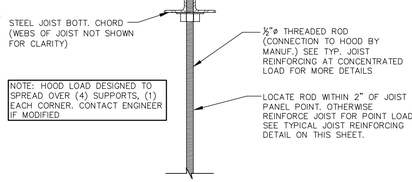
1. THE SHOP DRAWINGS SHALL BE SUBMITTED IN COMPLETE PACKAGES FOR THE FOLLOWING:
   A. CONCRETE MIX DESIGNS
   B. CONCRETE REINFORCING STEEL AND WELDED WIRE FABRIC
2. PRE-ENGINEERED ITEMS SHALL BE SUBMITTED SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE STATE OF FLORIDA.



SUPPORT LOCATED BETWEEN STEEL JOIST

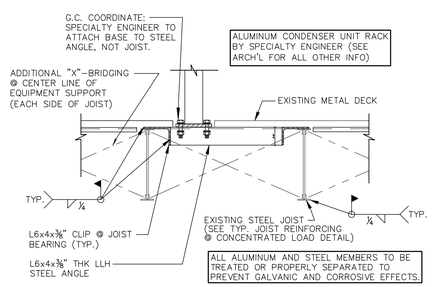
TYPICAL HANGING HOOD DETAILS

N.T.S.



NOTE: HOOD LOAD DESIGNED TO SPREAD OVER (4) SUPPORTS, (1) EACH CORNER. CONTACT ENGINEER IF MODIFIED

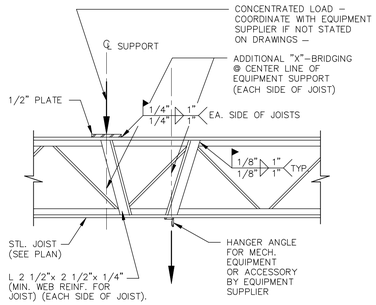
SUPPORT LOCATED AT STEEL JOIST



TYPICAL ALUMINUM C.U. RACK ATTACHMENT DETAIL

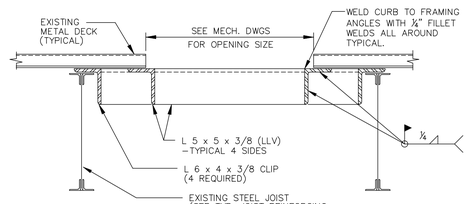
N.T.S.

CRITERIA FOR C.U. RACK:
-110 psf WIND PRESSURE
-DIMENSIONS AND WEIGHT: VERIFY WITH MEP AND ARCH'L.



TYPICAL JOIST REINFORCING AT CONCENTRATED LOAD

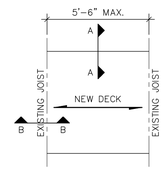
N.T.S.



1. PROVIDE AT PERIMETER OF ALL ROOFTOP MECHANICAL UNITS AND OPENINGS AS REQUIRED.
2. SEE MECH. DWGS FOR OPENING SIZE & LOCATION.
3. PROVIDE L 3 x 3 x 5/16 AT ROOF SUMPS

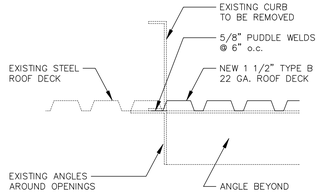
TYPICAL ROOF OPENING DETAIL • JOISTS

N.T.S.



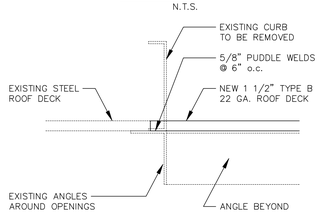
INFILL OF EXISTING OPENING IN ROOF DETAIL

(IF REQUIRED) N.T.S.



DETAIL A

N.T.S.



DETAIL B

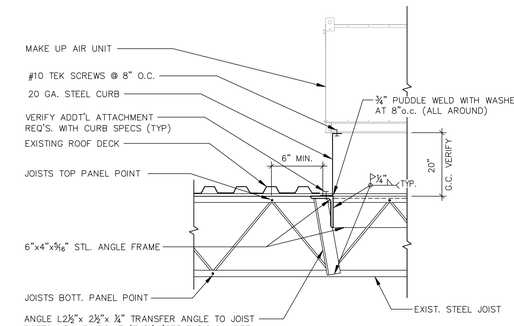
N.T.S.

ULTIMATE					
COMPONENT & CLADDING WIND DESIGN PRESSURES					
PRESSURES BASED ON V_{ult}	ROOF WIND LOADS (10 SQ. FT.)			WALL WIND LOADS (SEE NOTE 1)	
	ROOF AREA			WALL AREA	
Kd IS INCLUDED	1	2	3	4	5
PRESSURE (PSF)	+31.4	+70.5	+70.5	+70.5	+70.5
SUCTION (PSF)	-77.0	-129.2	-129.2	-76.4	-94.0

1. EXTERIOR GLAZED OPENINGS IN BUILDINGS SHALL COMPLY WITH 2010 FLORIDA BUILDING CODE BY EITHER BEING DESIGNED FOR IMPACT RESISTANCE OR BEING PROTECTED BY IMPACT PROTECTIVE SYSTEMS.
2. WIND DESIGN PRESSURES NOTED MAY BE MULTIPLIED BY (.6) FOR COMPARISON TO ALLOWABLE (NOMINAL) WIND PRESSURES OF TESTED ASSEMBLIES. PER SECTION 1609.1.5 OF 2010 FBC.
3. REFER TO STRUCTURAL NOTES FOR ALL WIND LOAD PARAMETERS.
4. CORNER DISTANCE, A = 8 FEET

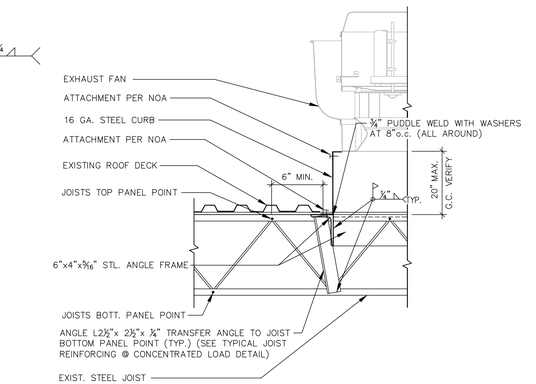
ALLOWABLE					
COMPONENT & CLADDING WIND DESIGN PRESSURES					
PRESSURES BASED ON V_{asd}	ROOF WIND LOADS (10 SQ. FT.)			WALL WIND LOADS (SEE NOTE 1)	
	ROOF AREA			WALL AREA	
Kd IS INCLUDED	1	2	3	4	5
PRESSURE (PSF)	+18.8	+42.3	+42.3	+42.3	+42.3
SUCTION (PSF)	-46.2	-77.5	-77.5	-45.8	-56.4

1. EXTERIOR GLAZED OPENINGS IN BUILDINGS SHALL COMPLY WITH 2010 FLORIDA BUILDING CODE BY EITHER BEING DESIGNED FOR IMPACT RESISTANCE OR BEING PROTECTED BY IMPACT PROTECTIVE SYSTEMS.
2. REFER TO STRUCTURAL NOTES FOR ALL WIND LOAD PARAMETERS.
3. CORNER DISTANCE, A = 8 FEET



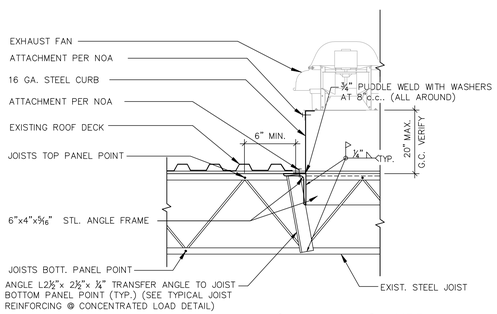
TYPICAL MAKE UP AIR (MAU-1) CURB ATTACHMENT DETAIL

N.T.S.



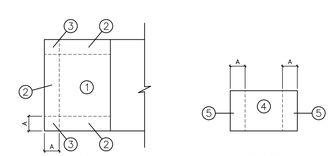
TYPICAL EXHAUST FAN (EF-1) CURB ATTACHMENT DETAIL

N.T.S.

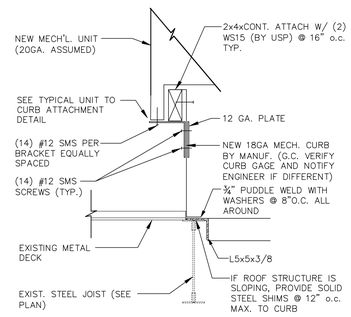


TYPICAL EXHAUST FAN (EF-2, EF-3) CURB ATTACHMENT DETAIL

N.T.S.



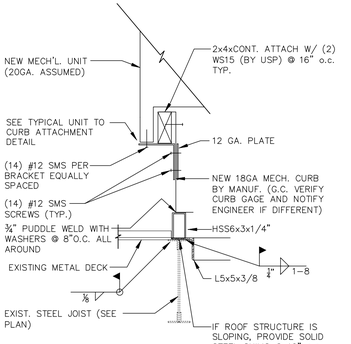
PLAN ELEVATION



MECHANICAL UNIT ROOF ATTACHMENT

N.T.S.

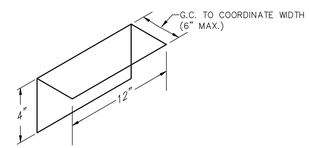
RTU CURB TO MAINTAIN 8" CURB HEIGHT ABOVE FINISHED ROOF. SEE ARCH DWG FOR MORE INFORMATION.



ALTERNATIVE MECHANICAL UNIT ROOF ATTACHMENT

N.T.S.

EXTENSION OF RTU CURB TO MAINTAIN 8" CURB HEIGHT ABOVE FINISHED ROOF.



NOTE:
GENERAL CONTRACTOR SHALL CONSTRUCT BRACKET OF 3/8" GALVANIZED STEEL. INSTALL BRACKETS @ LONG SIDE @ EACH UNIT CORNER TYP. (4 TOTAL).

FIELD VERIFY CURB CONFIGURATION AND BRACKET DIMENSIONS PRIOR TO FABRICATING

TYPICAL UNIT TO CURB ATTACHMENT DETAIL

N.T.S.

PERMIT SET
10/16/14

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Project No.

Contents:
SCHEDULES, DETAILS & STRUCTURAL NOTES

S-2

Date: -

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JOB # 671.104

MECHANICAL SPECIFICATIONS

SECTION 15080 - MECHANICAL INSULATION
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
B. Quality Assurance: Labeled with maximum flame-spread rating of 25 and maximum smoke developed rating of 50 according to ASTM E 84.
PART 2 - PRODUCTS
2.1 PIPE INSULATION
A. Preformed Glass Fiber Pipe Insulation: ASTM C 547, Class 1, with factory applied, all purpose, vapor retarder jacket.
B. Polyolefin Pipe Insulation: Unicellular polyethylene, preformed pipe insulation. Comply with ASTM C 534, Type I, except for density.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install vapor barriers on insulated pipes with surface operating temperatures below 60 deg F.
B. Insulate fittings, valves, and specialties.
C. Seal vapor barrier penetrations for hangers, supports, anchors, and other projections.
D. Coat glass fiber pipe insulation ends with vapor barrier coating.
E. Roof Penetrations: Apply insulation for interior applications to a point even with the top of the roof flashing.
F. Exterior Wall Penetrations: For penetrations of below grade exterior walls, terminate insulation flush with mechanical sleeve seal.
G. Interior Walls and Partitions Penetrations: Apply insulation continuously through walls and partitions, except fire rated walls and partitions.
H. Fire Rated Walls and Partitions Penetrations: Terminate insulation at penetrations through fire rated walls and partitions. Seal around penetration with through penetration firestop systems.
I. Floor Penetrations: Terminate insulation at the underside of the floor assembly and at the floor support at top of floor. Seal around penetration with through penetration firestop systems.
J. Glass Fiber Insulation Installation: Bond insulation to pipe with adhesive. Seal seams and joints with vapor barrier compound.
K. Interior Piping System Applications: Insulate the following piping systems:
1. Domestic hot and cold water.
2. Exposed sanitary drains of fixtures for the disabled.
3. Refrigerant piping.
L. Do not apply insulation to the following systems, materials, and equipment:
1. Flexible connectors.
2. Fire protection piping systems.
3. Sanitary drainage and vent piping.
4. Chrome plated pipes and fittings, except for plumbing fixtures for the disabled.
5. Piping specialties, including air chambers, unions, strainers, check valves, plug valves, and flow regulators.
M. Pipe Insulation Thickness Application Schedule: Insulate piping with the following materials and thicknesses:
1. Domestic Hot and Cold Water: 1/2-inch preformed glass fiber pipe insulation.
2. Sanitary Drains: 1/2-inch polyolefin pipe insulation.
END OF SECTION 15080

SECTION 15554 - FLUES AND VENTS
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
PART 2 - PRODUCTS
2.1 GAS VENTS
A. Vent/air intake for high efficiency domestic water heater. Size per manufacturer's recommendation.
B. Accessories: Tees, elbows, increasers, draft hood connectors, metal cap with bird barrier, adjustable roof flashing, storm collar, support assembly, thimbles, firestopping spacers, and fasteners; fabricated of similar materials and designs as vent-pipe straight sections.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install vents according to stipulated minimum clearances from combustibles.
B. Seal between sections of positive pressure vents using only sealants recommended by manufacturer.
C. Support vents at intervals to support the weight of the vent and all accessories, without exceeding loading of appliances.
END OF SECTION 15554

SECTION 15732 - PACKAGED ROOFTOP AIR-CONDITIONING UNITS
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: Product Data and Shop Drawings.
B. Comply with ASHRAE 15.
C. EER: Equal to or greater than prescribed by ASHRAE 90.1, "Energy Efficient Design of New Building, except Low Rise Residential Buildings."
D. Warranties: Submit a written warranty, signed by the manufacturer, agreeing to the repair or replacement of components that fail within 5 years of Substantial Completion.
PART 2 - PRODUCTS
2.1 PACKAGED UNITS, 5 TO 20 TONS
A. Factory assembled and tested, consisting of compressors, condensers, evaporator coils, condenser and evaporator fans, refrigeration and temperature controls, filters, and dampers.
1. Refer to Rooftop Heating/Cooling Unit Schedule on drawing M200 for capacities, and manufacturers.
2. Evaporator Fans: Belt driven, forward curved centrifugal.
3. Exhaust/Relief Fans: Direct drive, forward curved centrifugal or propeller.
4. Condenser Fans: Direct drive propeller.
5. Refrigerant Coils: Aluminum fins and copper coil.
6. Compressors: Serviceable hermetic or fully hermetic, with safety controls, hot gas bypass, and timed off controls.
7. Heat Exchangers: Gas fired, with gas controls, electronic ignition, high limit cutout, and forced draft proving switch.
8. Economizer controls (Comparative Enthalpy, 100% capacity).
9. Low ambient controls.
10. Smoke Detectors: Photoelectric.
11. Operating Controls: Two stage heating and two stage cooling on units 8-1/2 tons and over.
12. Roof curb.
13. Control Wiring from T-stat to rooftop unit: Shall be 18ga / 7 conductor, rated for plenum applications.
14. Control Wiring from T-stat to remote sensor: Shall be a separate 18ga / 2 conductor shielded, rated for plenum applications.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install units level and plumb and firmly anchored.
B. Connect gas piping to burner with pipe same size as gas train inlet, and provide union with sufficient clearance for burner removal and service.
C. Connect to supply and return hydronic piping with shutoff valve and union or flange at each connection.
D. Install ducts to termination in roof mounting frames. Terminate return air duct through roof structure.
E. Connect units to wiring systems and to ground.
END OF SECTION 15732

SECTION 15810 - DUCTS AND ACCESSORIES
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: Product Data for fire and smoke dampers.
B. Comply with NFPA 90A for systems serving spaces more than 25,000 cu. ft. in volume or building Types II, IV, and V construction more than 3 stories in height.
C. Comply with NFPA 90B for systems serving spaces in 1 or 2 family dwellings or serving spaces less than 25,000 cu. ft..
D. Comply with NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations," Chapter 3, "Duct System," for range hood ducts, except single family residential usage, unless otherwise indicated.
E. Comply with UL 181 and UL 181A for ducts and closures.
F. Testing, Adjusting, and Balancing Agency Qualifications: AABC certified.
PART 2 - PRODUCTS
2.1 DUCTS
A. Spiral Duct: Spiral Lock Seam, without insulation, G90 galvanized finish, ASTM A-653/924
1. Basis of Design Manufacturers: Lindab SPIROsafe, alternates to the basis of design must be submitted for review.
2. Fittings: Factory produced standing seam construction with internal sealing. Fittings with a major axis of 36" or smaller shall be 20 gauge. Fittings with a major axis of 37"-48" shall be 18 gauge.
B. Galvanized Steel Sheet: Forming steel, ASTM A 653/653M, G90 coating designation.
C. Duct Liner: ASTM C 1071, Type II, with an airstream surface coated with a temperature resistant coating. Thickness: 1-1/2 inch, R-value : 6.3.
1. Adhesive: ASTM C 916, Type I.
2. Mechanical Fasteners: Galvanized steel pin, length as required to penetrate liner plus a 1/8 inch projection maximum into the airstream.
D. Joint and Seam Tape: Comply with UL 181A.
E. Joint and Seam Sealant: Comply with UL 181A.
F. Rectangular Metal Duct Fabrication: Comply with SMACNA's "HVAC Duct Construction Standard" for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.
2.2 ACCESSORIES
A. Volume-Control Dampers: Factory fabricated volume control dampers, complete with required hardware and accessories. Single blade and multiple opposed blade, standard leakage rating, and suitable for horizontal or vertical applications.
B. Fire Dampers: Factory-fabricated fire dampers, complete with required hardware and accessories. UL labeled according to UL 555, "Fire Dampers".
C. Flexible Connectors: Flame retardant or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1.
D. Flexible Ducts: Factory fabricated, insulated, round duct, with an outer jacket enclosing 2 inch thick, glass fiber insulation, R-value: 6.0, around a continuous inner liner.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Duct System Pressure Class: Construct and install each duct system with 2 inch positive and negative duct pressure classifications.
B. Conceal ducts from view in finished and occupied spaces. Except where noted as exposed.
C. Avoid passing through electrical equipment spaces and enclosures.
D. Support and connect metal ducts according to SMACNA's "HVAC Duct Construction Standard".
E. Install duct accessories according to applicable portions of details of construction as shown in SMACNA standards.
F. Install liner on all supply and return duct.
G. Install volume control dampers in lined duct with methods to avoid damage to liner and to avoid erosion of duct liner.
H. Install fire and smoke dampers according to manufacturer's UL approved written instructions.
I. Install fusible links in fire dampers.
J. Provide saddle taps at tees for exposed ductwork.
3.2 TESTING, ADJUSTING, AND BALANCING
A. The owner will supply an independent balance agent to to balance and adjust the HVAC installation. The balance agent will be responsible for any pulley or belt changes required.
B. The general contactor is to have trained staffed available during the balancing to correct issues noted by the balance agent.
C. The balance agent is to balance airflow within distribution systems, including submains, branches, and terminals to indicated quantities +/- 10%. The hood exhaust system shall be balanced to a tolerance of -0+10% and the make-up air system to a tolerance of -10+0%.
D. The balance agent is to supply a copy of the balance report to the owner, engineer and general contractor for review.
END OF SECTION 15810

SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
PART 2 - PRODUCTS
2.1 OUTLETS AND INLETS
A. Diffusers:
1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
3. Material: As scheduled.
4. Finish: As scheduled.
5. Mounting: As scheduled.
B. Wall and Ceiling Registers:
1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
3. Material: As scheduled.
4. Finish: As Scheduled.
5. Mounting: Countersunk screw.
C. Wall and Ceiling Grilles:
6. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
7. Manufacturer: As scheduled (NO SUBSTITUTIONS)
8. Material: As scheduled.
9. Finish: As Scheduled.
10. Mounting: Countersunk screw or lay in depending location.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Coordinate location and installation with duct installation and installation of other ceiling and wall mounted items.
B. Locate ceiling diffusers, registers, and grilles, as indicated on general construction "reflected ceiling plans." Unless otherwise indicated, locate units in center of acoustical ceiling panels.
END OF SECTION 15855

SECTION 15900 - HVAC INSTRUMENTATION AND CONTROLS
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Summary: Electric/electronic control sequences for HVAC systems and equipment.
B. Submittals: Shop Drawings detailing operating control sequences of each item of HVAC equipment and system and Product Data for controllers, sensors, operators, control panels, thermostats, humidistats, actuators, control valves and dampers.
C. System Description: Control systems consists of sensors, indicators, actuators, final control elements, interface equipment, and other apparatus, accessories, required to operate mechanical systems according to sequences of operation indicated and specified.
D. Operation Sequence:
1. Unoccupied Cycle: During unoccupied hours as set by a programmable thermostat the outside air and return dampers for the HVAC unit close, and the thermostat set point resets to 65° F (user adjustable). Upon a call for heating, the HVAC unit energizes.
2. Occupied Cycle: During occupied hours, as set by a programmable thermostat the outside air and return dampers open to a minimum set point. The furnace and exhaust fans run continuously. Upon a call for heating, the furnace heating energizes. Upon a call for cooling, the condensing unit energizes.
PART 2 - PRODUCTS (Not Applicable)
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install control wiring concealed, except in mechanical rooms, and according to requirements specified in Division 16 Sections.
END OF SECTION 15900

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Project No.: 1401051

Contents:

Mechanical Specifications

M010

Date of Last Print:

1-30-15

PLAN NOTES

1. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
2. PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS BLACK. TYPICAL.
3. REFER TO ARCHITECTURAL SHEETS FOR SUPPLY REGISTER ELEVATIONS AND LOCATIONS.
4. 18/16 DUCT UP FOR TRANSITION TO RTU-1 RETURN CONNECTION IN ROOF CURB. RTU-1 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-1 OPERATION.
5. 20/16 DUCT UP FOR TRANSITION TO RTU-2 RETURN CONNECTION IN ROOF CURB. RTU-2 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-2 OPERATION. ROUTE DUCT TIGHT TO DECK OR THROUGH JOIST GIRDER IF POSSIBLE.
6. 18/16 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-1 SUPPLY CONNECTION IN ROOF CURB.
7. 20/18 DUCT UP FROM BUILDING SUPPLY TO RTU-2 SUPPLY CONNECTION. TRANSITION IN ROOF CURB.
8. 16/16 DUCT UP THROUGH ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION IN ROOF CURB.
9. 10/14 DUCTS UP FROM HOOD TO 20/14 DUCT THROUGH ROOF TO EF-1. PROVIDE RADIUSED ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT.
10. 8/6 DUCT UP THROUGH ROOF TO EF-2.
11. 16/10 DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 4.
12. 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS.
13. PROVIDE REMOTE TEMPERATURE SENSOR FOR RTU-1 AT THIS LOCATION @ 5'-0" AFF. COORDINATE LOCATION WITH EQUIPMENT.
14. PROVIDE REMOTE TEMPERATURE AND HUMIDITY SENSORS FOR RTU-2 AT THIS LOCATION @ 5'-0" AFF. COORDINATE LOCATION WITH EQUIPMENT AND WALL MOUNTED ARTWORK.
15. INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION @ 5'-0" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.
16. INSTALL CHIPOTLE-FURNISHED "LIGHTSTAT" THERMOSTATS FOR RTU-1 AND RTU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA AND EXTEND WIRING TO REMOTE TEMPERATURE SENSORS AND ROOFTOP UNITS. LABEL EACH THERMOSTAT ACCORDINGLY. COORDINATE THERMOSTAT LOCATION WITH WALL-MOUNTED EQUIPMENT SO THAT THERMOSTATS ARE NOT BLOCKED BY SHELVING, COAT RACKS, OR DOORS.
17. INSTALL CHIPOTLE-FURNISHED KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 4, AND 5/M300. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM. HOOD IS DESIGNED TO COMPLY WITH FBC MECHANICAL 507.2.1.1
18. INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER ON ROOF. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH COOLER ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.
19. INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MAKER IS EXPOSED TO PUBLIC VIEW CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
20. INSTALL ROOFTOP EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
21. PROVIDE WATER HEATER COMBUSTION AIR AND FLUE VENTS THROUGH THE ROOF PER DETAIL 1/P300. MAINTAIN 10' MINIMUM SEPARATION BETWEEN FLUE VENT AND VENTILATION AIR INTAKES. TERMINATE PER THE WATER HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
22. INSTALL EXHAUST FAN EF-1 PER DETAIL 6/M300. INSTALL GREASE VIROGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN, EF-1.
23. PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 1/M300. TYPICAL.
24. PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 72" AFF AT THIS LOCATION. GC SHALL COORDINATE FINAL LOCATION WITH INSPECTOR.
25. INSTALL RETURN GRILL IN TOP OF JOIST SHELF, FACING THE DECK SO CONCEALED FROM VIEW FROM THE DINING ROOM.
26. PROVIDE EXHAUST REGISTER CONCEALED IN RESTROOM COVE AS SHOWN IN SECTION 2/M100.
27. SUPPORT EXPOSED ROUND DUCTWORK PER DETAIL 7/M300. CONSTRUCT EXPOSED SPIRAL DUCT USING FITINGS MANUFACTURED BY SPIRAL DUCT MANUFACTURER. USE COMBINATION OF FITTINGS AVAILABLE TO MATCH DUCT LAYOUT ON PLAN. REFER TO ARCH FOR LOCATION.

HVAC GENERAL NOTES

A. GENERAL NOTES APPLY TO HVAC SHEETS.

B. WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE SHEET A000 FOR THE PREVAILING CODES.

C. CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.

D. COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.

E. DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

F. DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.

G. PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.

H. COORDINATE ROOF WORK WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.

I. UNLESS NOTED OTHERWISE RECTANGULAR DUCT ELBOWS GREATER THAN 45° SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES AND RECTANGULAR DUCT ELBOWS 45° OR LESS SHALL BE RADIUSED ELBOWS WITH AN INSIDE RADIUS OF AT LEAST 1/2 THE WIDTH OF THE DUCT.

J. REPLACE AIR FILTERS WITH NEW, CLEAN MERV 7 AIR FILTERS AT TURNOVER.

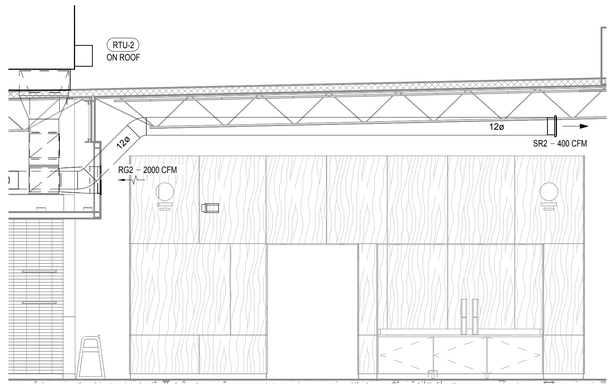
K. THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

L. SUPPLY ALL MECHANICAL EQUIPMENT WITH MOTORIZED DAMPERS IF REQUIRED BY CODE.

1

HVAC SYMBOLS

- CEILING DIFFUSER
- CEILING-MOUNTED RETURN OR EXHAUST REGISTER
- SUPPLY REGISTER
- RETURN GRILLE
- FLEXIBLE DUCT
- MITERED CORNER WITH TURNING VANES
- W/H — DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH/HEIGHT)
- RECTANGULAR TO ROUND DUCT TRANSITION
- S — DUCT-MOUNTED SMOKE DETECTOR
- M — MOTOR-OPERATED DAMPER
- MANUAL VOLUME DAMPER
- GREASE DUCT CLEANOUT
- MITERED CORNER WITHOUT TURNING VANES
- T — THERMOSTAT
- S — REMOTE TEMPERATURE SENSOR
- # — PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- XX-# — EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M200 FOR EQUIPMENT INFORMATION
- A/V — AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET

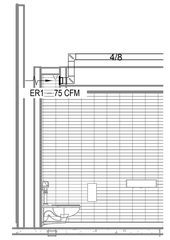


3/M100 **HVAC BOX SECTION**
1/4" = 1'-0"

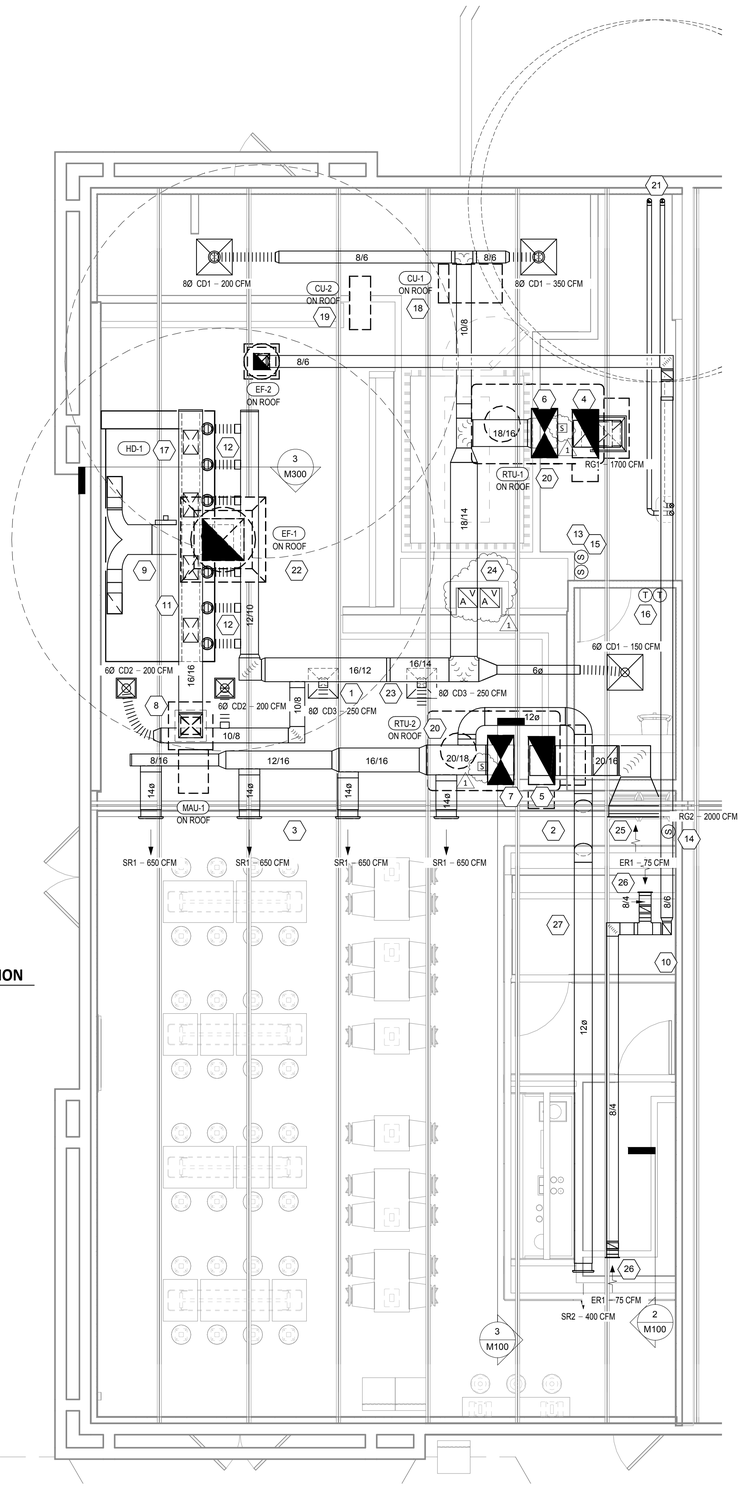
MATERIAL SCHEDULE		
CATEGORY	APPLICATION	ALLOWABLE MATERIAL
DUCT	EXPOSED SUPPLY	RECT. LINED OR ROUND AS SHOWN, PAINTED TO MATCH ROOF DECK
	EXPOSED RETURN	RECTANGULAR, PAINTED TO MATCH ROOF DECK
	EXPOSED GEN. EXHAUST	RECTANGULAR, PAINTED TO MATCH ROOF DECK
	CONCEALED, SUPPLY	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, RETURN	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, GEN. EXHAUST	RECT. OR ROUND AS SHOWN
	CONCEALED, TYPE I HOOD EXHAUST	RECTANGULAR 16 GA. BLACK IRON W/ WRAP OR UL 1978 FACTORY-MANUFACTURED DUCT W/ WRAP (SUBMIT SHOP DRAWINGS FOR FACTORY-MANUFACTURED DUCT PRIOR TO ORDERING FOR APPROVAL)

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
EF	EXHAUST FAN
ER	EXHAUST REGISTER
EXT'G	EXISTING
HD	HOOD
MUA	MAKEUP AIR UNIT
OBD	BLADE DAMPER
RG	RETURN GRILLE
RTU	ROOFTOP UNIT
SR	SUPPLY REGISTER
VSC	VARIABLE SPEED CONTROL
GC	GENERAL CONTRACTOR
HES	TENANT'S HVAC EQUIPMENT SUPPLIER
TAB	TENANT'S TEST AND BALANCE VENDOR
TCC	TENANT'S CABLING CONTRACTOR
TES	TENANT'S KITCHEN EQUIPEMNT SUPPLIER
THS	TENANT'S HOOD SUPPLIER
TLS	TENANT'S LIGHT/LAMP SUPPLIER
TMB	TENANT'S MENU BOARD SUPPLIER
TMS	TENANT'S MILLWORK SUPPLIER
TP	TENANT'S PHONE SUPPLIER
TRS	TENANT'S RAILING SUPPLIER
TSV	TENANT'S SIGN VENDOR
WCS	TENANT'S WALK-IN COOLER SUPPLIER



2/M100 **RESTROOM HVAC SOFFIT SECTION**
1/4" = 1'-0"



1/M100 **HVAC FLOOR PLAN**
1/4" = 1'-0"

GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE										
Tag	Furnished By	Installed By	Manufacturer	Model	Description	Size	Material	Finish	Mounting	Notes
CD1	GC	GC	Nailor	4320A Type L	Perforated Ceiling Diffuser	Face: 24" x 24" Neck: Varies	Aluminum	White	Lay-in Ceilings	Provide integral OBD
CD2	GC	GC	Nailor	4320A Type S	Perforated Ceiling Diffuser	Face: 12" x 12" Neck: 6"Ø	Aluminum	White	Ceiling	Provide integral OBD, Remove 4-way deflector
CD3	GC	GC	Nailor	4320A Type S	Perforated Ceiling Diffuser	Face: 20" x 20" Neck: Varies	Aluminum	White	Ceiling	Provide integral OBD
ER1	GC	GC	Nailor	51FH	0° Fixed Blade Return Grill	Neck: 8" x 4"	Aluminum	White	Wall	Provide integral OBD
RG1	GC	GC	Nailor	4330R Type S	Perforated Ceiling Return	Face: 24" x 24" Neck 22" x 22"	Aluminum	White	Lay-in Ceilings	
RG2	GC	GC	Nailor	51FH	0° Fixed Blade Return Grill	Neck: 36" x 18"	Aluminum	White	Wall	Provide integral OBD
SR1	GC	GC	Seiho	NT14	Adjustable Turbo Nozzle	Neck: 14"Ø	Aluminum	White	Wall	Provide with face-accessible OBD
SR2	GC	GC	Seiho	NTX 10R	Adjustable Turbo Nozzle	Neck: 12"Ø	Aluminum	Paint to match duct	Duct	Provide with face-accessible OBD

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M100

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Captive-Aire Drawings

M110

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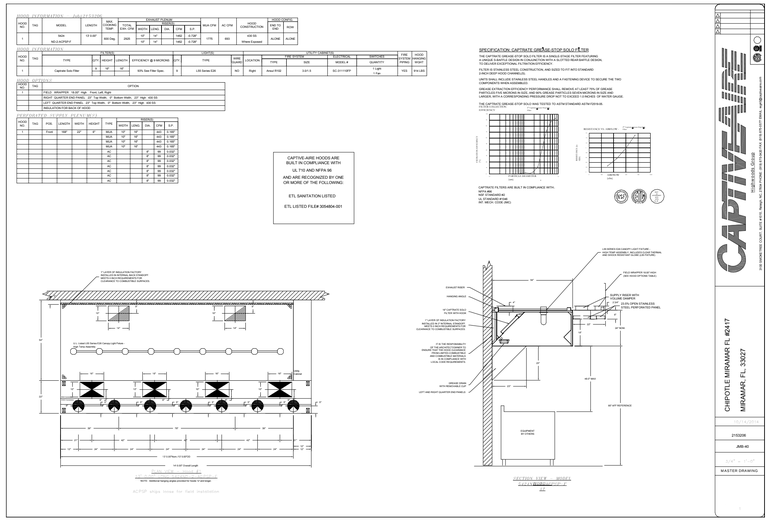

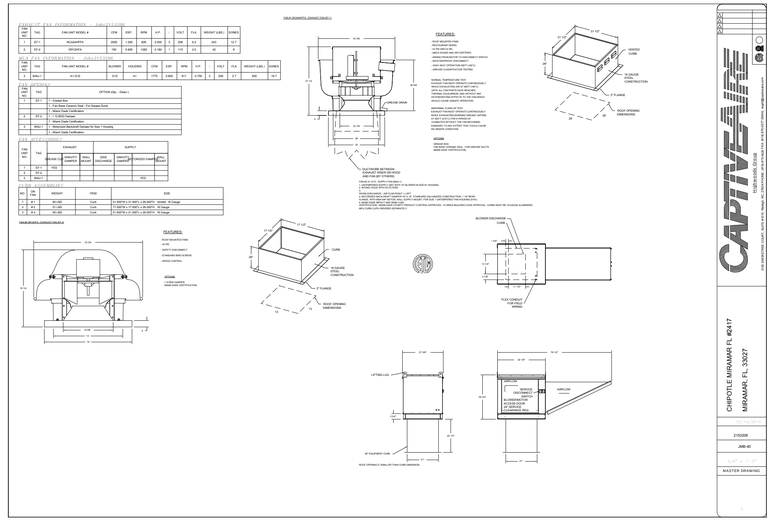

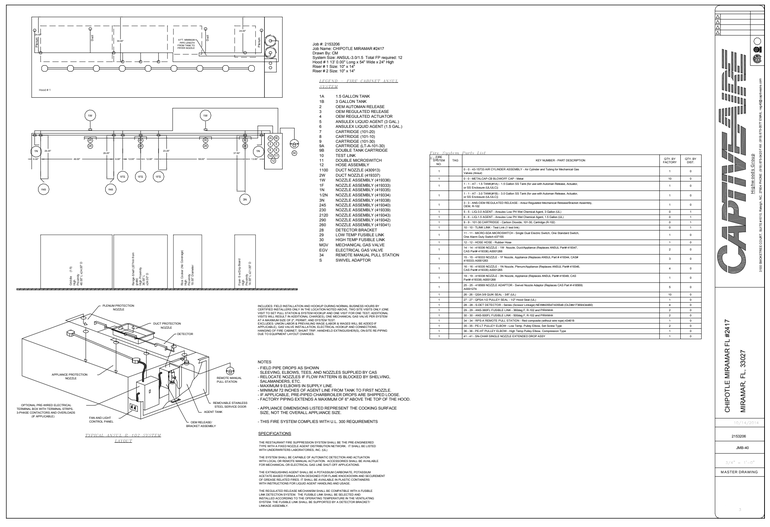

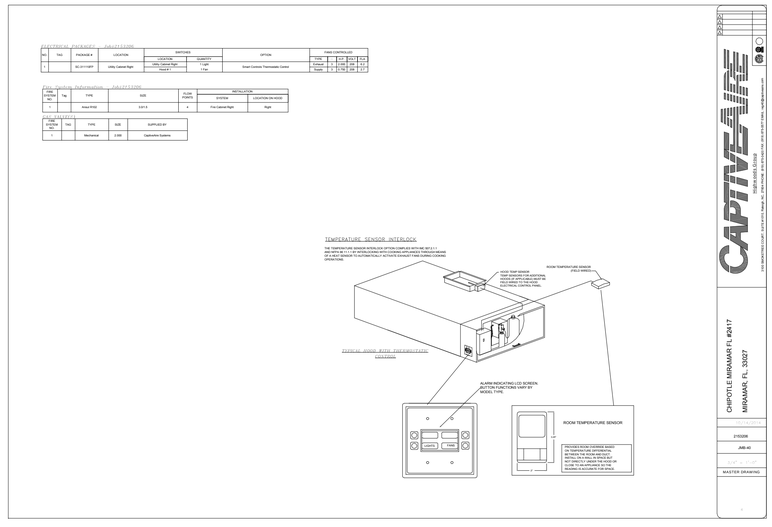

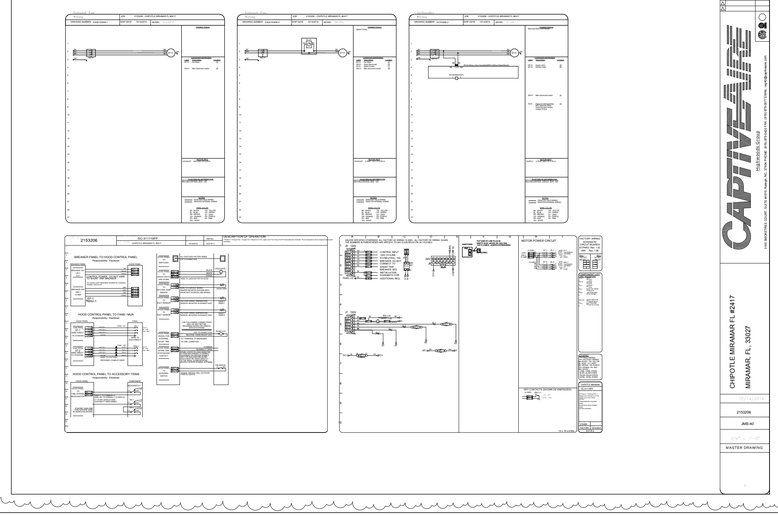

1 M110 **CAPTIVE-AIRE DRAWINGS**
N.T.S.

** FOR REFERENCE ONLY **

FAN SCHEDULE

Tag	Drive Type	Exhaust Flow	E.S.P.	Weight	Electrical		Furnished By	Installed By	Basis for Design		Remarks
					Motor Power	V/P/H			Manufacturer	Model	
EF-1	Belt	2925 CFM	1.20 in-wg	300	2 HP	208/3/60	THS	GC	Captive-Aire	NCA24HPFA	WITH DISCONNECT AND VENTED ROOF CURB
EF-2	Direct	150 CFM	0.60 in-wg	100	0.18 HP	120/1/60	THS	GC	Captive-Aire	DR12HFA	WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER AND ROOF CURB

MAKEUP AIR UNIT SCHEDULE

Tag	Description	Airflow		Heating Capacity				Approximate Weight [LBS]	Electrical		Furnished By	Installed By	Basis for Design		Remarks
		Supply Flow [CFM]	E.S.P. [IN. W.C.]	Input [MBH]	Output [MBH]	Maximum Turndown	EAT		Motor Power	V/P/H			Manufacturer	Model	
MAU-1	Untempered Makeup Air Unit	1575	0.80					350	1 HP	208/3/60	THS	GC	Captive-Aire	A1-G10	FURNISHED WITH DISCONNECT, ROOF CURB, SCREEN INTAKE, AND WASHABLE ALUMINUM FILTERS

CONDENSING UNIT SCHEDULE

Tag	Description	Nominal Capacity [Tons]	No. of Compressors	No. of Circuits	Refrigerant Type	Refrigerant Charge	Weight	Electrical			Furnished By	Installed By	Basis for Design		Remarks
								MOCP	FLA	V/P/H			Manufacturer	Model	
CU-1	Walk-in Cooler Remote Condensing Unit	--	1	1	R-410A	10.7 lbs	260	20 A	16.2 A	208/3/60	WCS	GC	Norlake	NASD150RL3	FURNISHED WITH WALK-IN COOLER
CU-2	Ice Maker - Remote Condenser	--	0	1	R-404A	4.0 lbs	100			120/1/60	TES	KES	Hoshizaki	URC-14F	FURNISHED WITH ICE MAKER

KITCHEN HOOD SCHEDULE

Tag	Description	Max Cooking Temp.	Exhaust Plenum							Perforated Supply Plenums										No. of Light Fixtures	Approximate Weight [lbs]	Furnished By	Installed By	Basis for Design		Remarks
			Airflow [CFM]	SP [in. w.c]	Duct Collars			Filter Face Vel.	Length	Width	SP [in. w.c.]	Supply Plenum Length	Supply Plenum Width	MAU Plenum				AC Plenum									
					No.	Width	Length							Airflow [CFM]	Duct Collars			Airflow [CFM]	Duct Collars						Manufacturer	Model	
															No.	Width	Length		No.	Diameter						
HD-1	Type I Canopy Hood with Perforated MAU and AC Supply Plenums	450°F	2925	0.77	2	10"	14"	--	13' - 0"	4' - 3"	0.1	14' - 0"	22"	1775	4	10"	16"	600	7	8"	9	950	THS	GC	Captive-Aire	5424 ND-2-ACPSP-F	MAT'L: 18 GA. TYPE 430 SS. PROVIDE WITH (1) 16"X16" AND (7) 20" X 16" HE SS FILTERS, INTEGRAL UTILITY CABINET, ANSUL SYSTEM, DUCT COLLAR TEMPERATURE SENSOR & PREWIRE PACKAGE. HOOD IS DESIGNED TO COMPLY WITH FBC MECHANICAL 507.2.1.1

ROOFTOP UNIT SCHEDULE

Tag	Description	Nominal Capacity [Tons]	EER	Airflow			Cooling Capacity					Heating Capacity			Number of Compressors	Number of Circuits	Refrigerant Type	Refrigerant Charge	Approximate Weight [LBs]	Electrical			Furnished By	Installed By	Basis for Design		Remarks
				Total [CFM]	OA [CFM]	ESP [in. w.c.]	Total [MBH]	Sensible [MBH]	EAT [Deg. F]		Cond. EAT [Deg. F]	Input [MBH]	Output [MBH]	EAT [Deg. F]						MOCP	FLA	V/P/H			Manufacturer	Model	
									DB	WB																	
RTU-1	Kitchen Rooftop Unit	6	12.6	2200	500	1.0	70	42	80	70	96	80	64	65	1	1	R-410A	14.3 LBS	1300	50 A	32.3 A	208/3/60	HES	GC	Trane	YHC072	FURNISHED FOR PROPANE OPERATION WITH COMPARATIVE ENTHALPY ECONOMIZER W/ BAROMETRIC RELIEF, HINGED PANELS, MERV 8 FILTERS, HAIL GUARD, CIRCUIT BREAKER,UNPOWERED CONVENIENCE RECEPTACLE, SUPPLY AIR SMOKE DETECTOR, LIGHTSTAT WITH REMOTE SENSOR, AND ROOF CURB
RTU-2	Dining Rooftop Unit	8-1/2	13	3000	1000	1.0	96	60	81	70	96	120	96	62	2	2	R-410A	25 LBS	1300	50 A	42.0 A	208/3/60	HES	GC	Trane	YHC102	FURNISHED FOR PROPANE OPERATION WITH COMPARATIVE ENTHALPY ECONOMIZER W/ BAROMETRIC RELIEF, HINGED PANELS, MERV 8 FILTERS, HAIL GUARD, CIRCUIT BREAKER,UNPOWERED CONVENIENCE RECEPTACLE, SUPPLY AIR SMOKE DETECTOR, LIGHTSTAT WITH REMOTE SENSOR, AND ROOF CURB. FURNISH WITH BAYSENS 119AA SITH REMOTE COMBINATION TEMPERATURE/HUMIDITY SENSOR.

CONTROL FUNCTIONS

A. THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.

B. THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENTLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.

C. THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS USING A BUILT-IN LIGHT SENSOR, SUCH THAT WHEN THE AMBIENT LIGHT IS ABOVE AN ADJUSTABLE SETPOINT THE SYSTEM SHALL BE IN OCCUPIED MODE AND WHEN THE AMBIENT LIGHT IS BELOW AN ADJUSTABLE SETPOINT THE SYSTEM SHALL BE IN UNOCCUPIED MODE.

OA VENTILATION CFM

ZONE	REQUIRED OA CFM	ACTUAL OA CFM
KITCHEN	607	2925
OFFICE	5	34
DINING	636	1000
RESTROOMS	100	150

***CALCULATIONS OF THESE VALUES WERE CONDUCTED USING TABLE 403 IN THE MECHANICAL PORTION OF THE 2010 FLORIDA BUILDING CODE.

1

AIR BALANCE SCHEDULE

TAG	OUTSIDE AIR CFM	EXHAUST CFM	NET CFM
EF-1		2925	-2925
EF-2		150	-150
MAU-1	1575		1575
RTU-1	500		500
RTU-2	1000		1000
TOTAL			0

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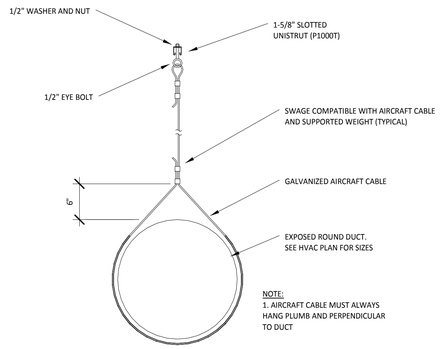
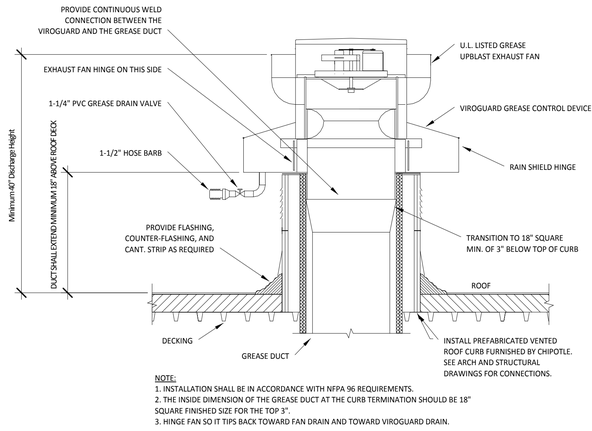


7/M300 EXPOSED DUCT SUPPORT
N.T.S.



6/M300 GREASE EXHAUST FAN
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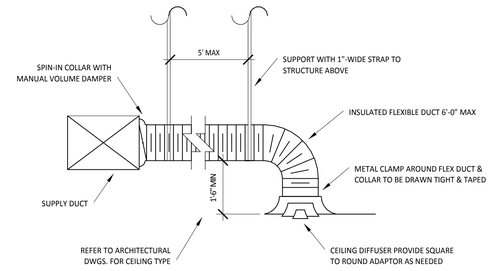

1/M300 DIFFUSER CONNECTION
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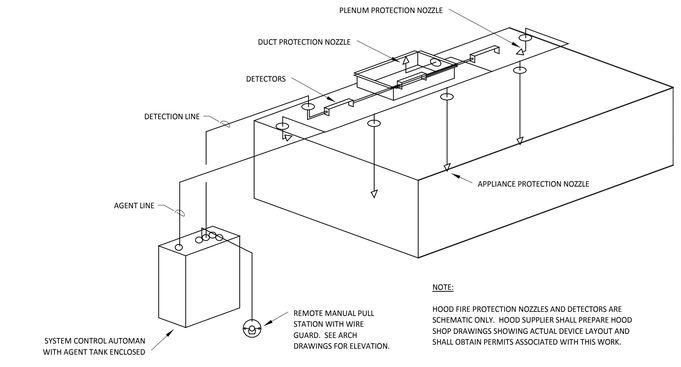
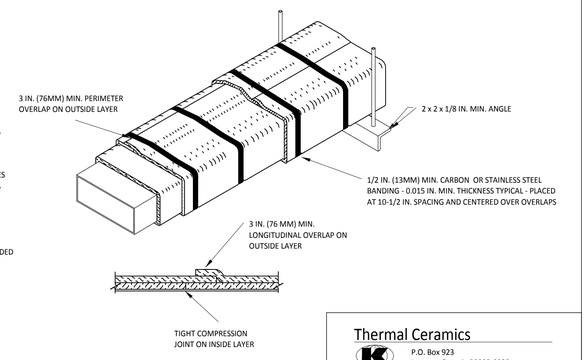


5/M300 FIRE SUPPRESSION SYSTEM SCHEMATIC
N.T.S.

FIRE RATED ENCLOSURE - GREASE DUCTS

1. THERMAL CERAMICS FIREMASTER FASTWRAP XL OR PYROSCAT XL HAS BEEN TESTED IN ACCORDANCE WITH ASTM E2336 TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLES AND MEETS THE REQUIREMENTS FOR ONE OR TWO HOUR ENCLOSURES. THROUGH PENETRATIONS FIRESTOP SYSTEMS ARE TESTED IN ACCORDANCE WITH EITHER ASTM E 814 OR UL 1479. ICC-ES APPROVAL PER REPORT ESR 2213 OR ESR 2832. UNDERWRITER'S LABORATORIES (UL) LISTINGS SHOW COMPLIANCE TO UL 1479 FOR THROUGH PENETRATION FIRESTOP SYSTEMS.
2. INSULATION APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINT ON INSIDE LAYER AND 3 INCH MINIMUM OVERLAPS ON BOTH PERIMETER AND LONGITUDINAL OVERLAPS ON OUTSIDE LAYER.
3. GREASE EXHAUST DUCT RUNS FROM THE HOOD EXHAUST CONNECTION UP TO THE EXHAUST FAN ON THE ROOF WITH MINIMAL TURNS OR BENDS AND MAINTAINING MINIMUM 1/4 UNIT VERTICAL RISE PER 12 UNITS HORIZONTAL RUN.
4. INSTALL UL LISTED AND WATER TIGHT ACCESS DOORS AT ALL CHANGES IN DIRECTION AND AT MINIMUM EVERY 20 FT ON HORIZONTAL RUNS. SEE DETAIL 3/THIS SHEET FOR ACCESS DOOR SPECIFICATION.
5. ROOF MOUNTED EXHAUST FAN IS MOUNTED ON A HINGED BASE WHICH ALLOWS ACCESS TO THE DUCT FROM THE ROOF.
6. SUPPORT HANGER SYSTEMS DO NOT NEED TO BE WRAPPED PROVIDED THE HANGER RODS ARE AT LEAST A MINIMUM OF 3/8 IN. DIAMETER. USE MINIMUM 2 X 2 X 1/8 IN. STEEL ANGLE OR SMACNA EQUIVALENT SUPPORT SYSTEM.
7. THERMAL CERAMICS DUCT ENCLOSURE SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
8. THERMAL CERAMICS DUCT WRAP SHALL BE INSTALLED ON THE DUCT FROM THE HOOD CONNECTION TO THE CONNECTION TO THE FAN.



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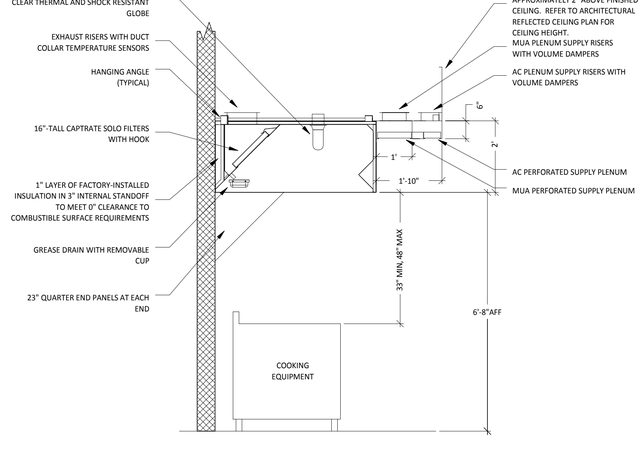
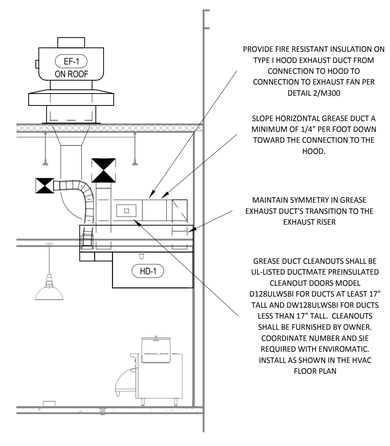
2/M300 FIREMASTER DUCT WRAP - UL HNKT-G18
N.T.S.



4/M300 HOOD SECTION VIEW
N.T.S.



3/M300 DUCT SECTION AT HOOD
1/4" = 1'-0"

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M300

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PLUMBING SPECIFICATIONS

SECTION 15055 - COMMON PIPING REQUIREMENTS
PART 1 - GENERAL
A. SECTION REQUIREMENTS
1. Comply with the requirements of the Building Code and the local authority having jurisdiction.
PART 2 - PRODUCTS
2.1 SUPPORTING DEVICES
A. Hanger and Pipe Attachments: Factory fabricated with galvanized coatings; nonmetallic coated for hangers in direct contact with copper tubing.
B. Building Attachments: Powder actuated type, drive pin attachments with pullout and shear capacities appropriate for supported loads and building materials; UL listing and FM approval for fire protection systems.
C. Mechanical Anchor Fasteners: Insert-type attachments with pullout and shear capacities appropriate for supported loads and building materials; UL listing and FM approval for fire protection systems.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install piping free of sags and bends.
B. Install fittings for changes in direction and branch connections.
C. Install sleeves for pipes passing through concrete and masonry walls, gypsum board partitions, and concrete floor and roof slabs.
D. Exterior Wall, Pipe Penetrations: Mechanical sleeve seals installed in steel or cast iron pipes for wall sleeves.
E. Fire Barrier Penetrations: Seal pipe penetrations with through-penetration firestop systems.
F. Install unions adjacent to each valve and at final connection to each piece of equipment.
G. Install dielectric unions and flanges to connect piping materials of dissimilar metals in gas piping.
H. Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals in water piping.
I. Provide full ring escutcheons at plumbing penetrations through walls or ceilings. Tightly seal escutcheons to the adjacent surface.
3.2 HANGERS AND SUPPORTS
A. Install building attachments within concrete or to structural steel. Install additional attachments at concentrated loads, including valves, flanges, guides, strainers, expansion joints, and at changes in direction of piping.
B. Install powder actuated drive pin fasteners in concrete after concrete is cured. Do not use in lightweight concrete or in slabs less than 4 inches thick.
C. Install mechanical anchor fasteners in concrete after concrete is cured. Do not use in lightweight concrete or in slabs less than 4 inches thick.
D. Support fire protection system piping independent of other piping.
E. Load Distribution: Install hangers and supports so piping live and dead loading and stresses from movement will not be transmitted to connected equipment.
END OF SECTION 15055

SECTION 15080 - MECHANICAL INSULATION
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
B. Quality Assurance: Labeled with maximum flame-spread rating of 25 and maximum smoke developed rating of 50 according to ASTM E 84.
PART 2 - PRODUCTS
2.1 PIPE INSULATION
A. Preformed Glass Fiber Pipe Insulation: ASTM C 547, Class 1, with factory applied, all purpose, vapor retarder jacket.
B. Polyolefin Pipe Insulation: Unicellular polyethylene, preformed pipe insulation. Comply with ASTM C 534, Type I, except for density.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install vapor barriers on insulated pipes with surface operating temperatures below 60 deg F.
B. Insulate fittings, valves, and specialties.
C. Seal vapor barrier penetrations for hangers, supports, anchors, and other projections.
D. Coat glass fiber pipe insulation ends with vapor barrier coating.
E. Roof Penetrations: Apply insulation for interior applications to a point even with the top of the roof flashing.
F. Exterior Wall Penetrations: For penetrations of below grade exterior walls, terminate insulation flush with mechanical sleeve seal.
G. Interior Walls and Partitions Penetrations: Apply insulation continuously through walls and partitions, except fire rated walls and partitions.
H. Fire Rated Walls and Partitions Penetrations: Terminate insulation at penetrations through fire rated walls and partitions. Seal around penetration with through penetration firestop systems.
I. Floor Penetrations: Terminate insulation at the underside of the floor assembly and at the floor support at top of floor. Seal around penetration with through penetration firestop systems.
J. Glass Fiber Insulation Installation: Bond insulation to pipe with adhesive. Seal seams and joints with vapor barrier compound.
K. Interior Piping System Applications: Insulate the following piping systems:
1. Domestic hot and cold water.
2. Exposed sanitary drains of fixtures for the disabled.
3. Refrigerant piping.
L. Do not apply insulation to the following systems, materials, and equipment:
1. Flexible connectors.
2. Fire protection piping systems.
3. Sanitary drainage and vent piping.
4. Chrome plated pipes and fittings, except for plumbing fixtures for the disabled.
5. Piping specialties, including air chambers, unions, strainers, check valves, plug valves, and flow regulators.
M. Pipe Insulation Thickness Application Schedule: Insulate piping with the following materials and thicknesses:
1. Domestic Hot and Cold Water: 1/2-inch preformed glass fiber pipe insulation.
2. Sanitary Drains: 1/2-inch polyolefin pipe insulation.
END OF SECTION 15080

SECTION 15110 - VALVES
PART 1 - GENERAL (Not Applicable)
PART 2 - PRODUCTS
2.1 GENERAL DUTY VALVES
A. End Connections: Threads shall comply with ANSI B1.20.1. Flanges shall comply with ANSI B16.1 for cast iron valves and ANSI B16.24 for bronze valves. Solder-joint connections shall comply with ANSI B16.18.
B. Ball Valves: Rated for 150 psig saturated steam pressure, 400 psig WOG pressure; 2 piece construction; with bronze body, standard (or regular) port, chrome plated brass ball, replaceable "Teflon" or "TFE" seats and seals, blowout proof stem, and vinyl covered steel handle.
C. Plug Valves: Rated at 150 psig WOG; bronze body, with straightaway pattern, square head, and threaded ends.
D. Swing Check Valves: Class 125, cast bronze body and cap; with horizontal swing, Y-pattern, and bronze disc.
E. Valves for Copper Tube: Solder ends, except provide threaded ends for heating hot water and low pressure steam service.
F. Valves for Steel Pipe: Threaded ends.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Use gate and ball valves for shutoff duty and ball for throttling duty.
B. Locate valves for easy access and provide separate support where necessary.
C. Install valves for each fixture and item of equipment.
D. Install valves in horizontal piping with stem at or above center of pipe.
E. Install valves in a position to allow full stem movement.
F. Install check valves for proper direction of flow in horizontal position with hinge pin level.
END OF SECTION 15110

SECTION 15140 - DOMESTIC WATER PIPING
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Performance Requirements: Unless otherwise indicated minimum pressure requirements for water piping are as follows:
1. Service Entrance Piping: 100 psig.
2. Domestic Water Piping: 80 psig.
B. Comply with NSF 14 "Plastic Piping Components and Materials."
C. Comply with NSF 61 "Drinking Water System Components -- Health Effects."
PART 2 - PRODUCTS
2.1 PIPES AND TUBES
A. Hard Copper Tube: ASTM B 88, Types L and M, water tube, drawn temper.
B. PVC Plastic, Water Pipe: ASTM D 1785, Schedule 80, plain ends.
2.2 FITTINGS
A. Wrought Copper, Solder Joint Pressure Fittings: ASME B 16.22.
B. Cast Copper Alloy, Solder Joint Pressure Fittings: ASME B 16.18.
C. Bronze Flanges: ASME B 16.24, Classes 150 and 300.
D. Copper Unions: ASME B 16.18, cast copper alloy body, hexagonal stock, with ball and socket joint, metal to metal seating surfaces, and solder joint, threaded, or solder joint and threaded ends. Threads complying with ASME B 1.20.1.
E. PVC Plastic, Schedule 80, Socket Type Pipe Fittings: ASTM D 2467.
2.3 JOINING MATERIALS
A. Solder Filler Metal: ASTM B 32, lead free.
B. Brazing Filler Metals: AWS A5.8, alloys to suit system requirements.
C. Solvent Cements: As recommended by manufacturer.
D. Plastic Pipe Seals: ASTM F 477, elastomeric gasket.
PART 3 - EXECUTION
3.1 VALVE APPLICATIONS
A. Install gate valves close to main on each branch and riser serving two or more plumbing fixtures or equipment connections and where indicated.
B. Install gate or ball valves on inlet to each plumbing equipment item, on each supply to each plumbing fixture not having stops on supplies, and elsewhere as indicated.
C. Install drain valve at base of each riser, at low points of horizontal runs, and where required to drain water distribution piping system.
D. Install swing check valve on discharge side of each pump and elsewhere as indicated.
E. Install ball valves in each hot water circulating loop and discharge side of each pump.
3.2 PIPING INSTALLATIONS
A. Install hangers and supports at intervals indicated in the applicable plumbing code and as recommended by pipe manufacturer.
B. Support vertical piping at each floor.
3.3 INSPECTING AND CLEANING
A. Inspect and test piping systems following procedures of authorities having jurisdiction.
B. Clean and disinfect water distribution piping following procedures of authorities having jurisdiction.
END OF SECTION 15140

SECTION 15150 - SANITARY WASTE AND VENT PIPING
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Minimum Pressure Requirement for Soil, Waste and Vent: 10 feet head.
B. Comply with NSF 14 "Plastic Piping Components and Related Materials".
PART 2 - PRODUCTS
2.1 PIPES AND TUBES
A. PVC Plastic, DWV Pipe: ASTM D 2665, Schedule 40, plain ends.
2.2 FITTINGS
A. PVC Plastic, DWV Pipe Fittings: ASTM D 2665, made to ASTM D 3311; socket type; drain, waste, and vent pipe patterns.
PART 3 - EXECUTION
3.1 PIPING INSTALLATION
A. Install cleanout and extension to grade at connection of building sanitary drain and building sanitary sewer.
B. Locate drainage piping runouts as close as possible to bottom of floor slab supporting fixtures or drains.
3.2 INSPECTION
A. Inspect and test piping systems following procedures of authorities having jurisdiction.
END OF SECTION 15150

SECTION 15198 - PROPANE GAS PIPING
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Quality Assurance: Comply with NFPA 54 and the Plumbing Code.
PART 2 - PRODUCTS
2.1 PIPE, TUBE, AND SPECIALTIES
A. Steel Pipe: ASTM A 53, Type S (Seamless), Grade B, Schedule 40, plain ends.
B. Malleable Iron Threaded Fittings: ASME B16.3, Class 150.
C. Manual Valves: Comply with standards listed or, if appropriate, to ANSI Z21.15.
D. Gas Stops: AGA certified, bronze-body, plug type with bronze plug, for 2-psig
E. or less natural gas. Include AGA stamp, flat or square head or lever handle, and threaded ends complying with ASME B1.20.1.
F. Gas Valves: 150-psig WOG, cast-iron or bronze body, bronze plug, straightaway pattern, square head, tapered-plug type.
G. Gas Pressure Regulators: ANSI Z21.18, single stage, steel jacketed, corrosion resistant pressure regulators. Include atmospheric vent, elevation compensator. Regulator pressure ratings, inlet and outlet pressures, and flow volume in cubic feet per hour of natural gas at specific gravity are as indicated.
1. Line Gas Pressure Regulators: Inlet pressure rating not less than system pressure.
H. Flexible Connectors: ANSI Z21.24, copper alloy.
I. Strainers: Bronze body, Y-pattern, full size of connecting piping. Include stainless-steel screens with 3/64 inch perforations and a pressure rating of 125-psig- minimum, WOG working pressure.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Close equipment shutoff valves before turning off gas to premises or section of piping. Perform leakage test as specified to determine that all equipment is turned off in affected piping section.
B. Install shutoff valve, downstream from gas meter, outside building at gas service entrance.
C. Install gas stops for shutoff to appliances with NPS 2" or smaller low pressure gas supply.
D. Drips and Sediment Traps: Install drips at points where condensate may collect. Include outlets of gas meters. Locate where readily accessible to permit cleaning and emptying. Do not install where condensate would be subject to freezing.
E. Install gas piping at uniform slope of 0.1 percent upward toward risers.
F. Use eccentric reducer fittings to make reductions in pipe sizes. Install fittings with level side down.
G. Connect branch piping from top or side of horizontal piping.
H. Install strainers on supply side of each control valve, gas pressure regulator, solenoid valve, and elsewhere as indicated.
I. Install valves in accessible locations, protected from damage. Tag valves with metal tag indicating piping supplied. Attach tag to valve with metal chain.
J. Install gas valve upstream from each gas pressure regulator. Where two gas-pressure regulators are installed in series, valve is not required at second regulator.
K. Connect gas piping to equipment and appliances with shutoff valves and unions. nstall gas valve upstream from and within 72 inches of each appliance using gas. Install union or flanged connection downstream from valve.
L. Inspect, test, and purge piping according to NFPA 54, Part 4, "Gas Piping Inspection, Testing, and Purging", and requirements of authorities having jurisdiction.
END OF SECTION 15198

SECTION 15410 - PLUMBING FIXTURES
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
B. Comply with requirements of Public Law 102-486, "Energy Policy Act", regarding water flow rate and water consumption of plumbing fixtures.
C. Comply with applicable standards below:
1. Enameled, Cast Iron Fixtures: ASME A112.19.1M.
2. National Sanitation Foundation Construction: NFS2.
3. Porcelain Enameled Fixtures: ASME A112.19.4M.
4. Slip Resistant Bathing Surfaces: ASTM F 462.
5. Stainless Steel Fixtures: ASME A112.19.3M.
6. Vitreous China Fixtures: ASME A112.19.2M.
PART 2 - PRODUCTS
2.1 Refer to the fixture schedule on drawing P200
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install fitting insulation kits on fixtures for the disabled.
B. Install fixtures with flanges and gasket seals.
C. Install flushometer valves for accessible water closets and urinals with handle mounted on wide side of compartment. Install other actuators in locations that are easy for the disabled to reach.
D. Fasten wall hanging plumbing fixtures securely to supports attached to building substrate when supports are specified, and to building wall construction where no support is indicated.
E. Fasten floor mounted fixtures to substrate. With fixtures having holes for securing fixture to wall construction, fasten to reinforcement built into walls.
F. Fasten wall mounted fittings to reinforcement built into walls.
G. Fasten counter mounted plumbing fixtures to casework.
H. Secure supplies to supports or substrate within pipe space behind fixture.
I. Set shower receptors and mop basins in leveling bed of cement grout.
J. Install individual supply inlets, supply stops, supply risers, and tubular brass traps with cleanouts at fixture.
K. Install water supply stop valves in accessible locations.
L. Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes, unless otherwise indicated.
M. Install escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep pattern escutcheons where required to conceal protruding pipe fittings.
N. Seal joints between fixtures and walls, floors, and counters using sanitary type, one part, mildew resistant, silicone sealant. Match sealant color to fixture color.
O. Install piping connections between plumbing fixtures and piping systems and plumbing equipment. Install insulation on supplies and drains of fixtures for the disabled.
P. Ground equipment. Tighten electrical connectors and terminals according to UL 486A and UL 486B.
END OF SECTION 15410

SECTION 15425 - PLUMBING SPECIALTIES
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Minimum Working Pressure Rating for Products:
1. Water Distribution Piping: 80 psig.
B. Submittals: Product Data.
PART 2 - PRODUCTS
2.1 Refer to fixture schedule on drawing P200.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install backflow preventers at each water-supply connection to mechanical equipment and where required by authorities having jurisdiction.
B. Install hose bibbs with integral or field-installed vacuum breaker.
C. Install floor drains at low points of surface areas and where indicated. Set tops of drains flush with finished floor.
1. Trap drains connected to sanitary building drain.
2. Install drain flashing collar or flange so no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes.
END OF SECTION 15425

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PLAN NOTES

1. CONNECT TO THE EXISTING 1-1/2" DOMESTIC WATER SERVICE WITH UPSTREAM METER AND REDUCED PRESSURE BACKFLOW PREVENTER. GC TO VERIFY LOCATION.
2. PROVIDE 1/2" FILTERED WATER TO THE BAG-IN-BOX SODA CARBONATOR AT 102" AFF. SODA CARBONATOR SHALL HAVE AN INTEGRAL ASSE 1022-RATED CARBONATED BEVERAGE BACKFLOW PREVENTION DEVICE.
3. PROVIDE WATER HEATER DWH-1 PER DETAIL 1/P300.
4. PROVIDE WATER FILTERS MOUNTED TO WALL PER DETAIL 11/P300. PROVIDE 1/2" SUPPLY PIPES FROM FILTERS TO ICE MAKER AND SODA CARBONATOR AS SHOWN.
5. PROVIDE 1/2" FILTERED WATER TO THE ICE MAKER AT 56" AFF.
6. PROVIDE DOMESTIC WATER ROUGH-INS FOR THE MOP BASIN FAUCET AT 36" AFF. PROVIDE DOMESTIC WATER ROUGH-INS FOR THE CHEMICAL DISPENSER FAUCET (HB-1) AT 64" AFF DIRECTLY ABOVE THE MOP BASIN FAUCET. SEE ARCHITECTURAL ELEVATION FOR DETAIL.
7. CONNECT TO THE EXISTING 1" PROPANE GAS LINE.
8. PROVIDE GAS CONNECTIONS TO THE COOKING EQUIPMENT PER DETAIL 2/P300.
9. SUPPORT THE GAS PIPE ON THE ROOF PER DETAIL 5/P300. WOOD BLOCKING IS NOT AN ACCEPTABLE METHOD OF SUPPORTING THE GAS PIPE.
10. PROVIDE ACCESSIBLE LINE-SIZED GAS VALVE, DIRT LEG, AND UNION AT GAS CONNECTION TO THE EQUIPMENT.
11. PAINT INTERIOR AND EXTERIOR EXPOSED GAS PIPING WITH ZINC CHROMATE PRIMER AND ONE FINAL COAT OF EXTERIOR ENAMEL. FINAL COLOR SHALL MATCH SURROUNDING FINISHES
12. PROVIDE DOMESTIC WATER ROUGH-INS FOR THE CHEMICAL DISPENSER FAUCET (HB-1) AT 52" AFF. SEE ARCHITECTURAL ELEVATION FOR DETAIL.
13. PROVIDE DOMESTIC WATER ROUGH-INS FOR THE VICTORY WASH DISPENSER FAUCET (HB-2) AT 52" AFF. SEE ARCHITECTURAL ELEVATION FOR DETAIL.
14. PROVIDE KITCHEN EQUIPMENT GAS SHUTOFF 6" BELOW THE CEILING PER DETAIL 10/P300.
15. CONNECT CHEMICAL DISPENSER TO HB-1. CHEMICAL DISPENSER HAS AN INTEGRAL AIR GAP AS IS SHOWN IN DETAIL 4/THIS SHEET.
16. PROVIDE ASSE 1016/1070 POINT-OF-USE THERMOSTATIC MIXING VALVE, WATTS USG-B, ON WATER SUPPLY TO KITCHEN HAND SINKS. PROVIDE ANGLE STOP BELOW SINK, FASTEN MIXING VALVE TO WALL, AND MAKE FINAL CONNECTION FROM ANGLE STOPS TO MIXING VALVE AND FROM MIXING VALVE TO FAUCET USING BRAIDED STAINLESS STEEL HOSE. ADJUST MIXING VALVE FOR A DISCHARGE TEMPERATURE OF APPROXIMATELY 110° F.
17. PROVIDE ACCESSIBLE VALVE IN WATER SUPPLY TO FIXTURE AS SHOWN.
18. PROVIDE WATER HAMMER ARRESTOR ON WATER SUPPLY PIPE TO WATER CLOSET.
19. CONCEAL RESTROOM DOMESTIC WATER PIPES IN THE DEMISING WALL.
20. PROVIDE DOMESTIC WATER PIPES ABOVE THE RESTROOMS BELOW THE TOP OF THE PLYWOOD BOX ELEMENT UNLESS NOTED OTHERWISE.
21. PROVIDE AN ACCESSIBLE MAIN DOMESTIC WATER SHUTOFF VALVE ABOVE LAY-IN CEILING AS SHOWN. VALVE SHALL BE 12" ABOVE THE TOP OF THE LAY-IN CEILING. PERMANENTLY INSTALL THE "WATER SHUTOFF" SIGN TO THE CEILING GRID BELOW THE VALVE.
22. PROVIDE CIRCUIT-SETTER BALANCE VALVE WITH STRAINER IN PIPE TO FLUSH VALVES UPSTREAM FROM ET-2. ADJUST THIS VALVE SO THAT THE EXPANSION TANK REFILLS IN 30-45 SECONDS FOLLOWING A SINGLE FULL WATER CLOSET FLUSH.
23. PROVIDE WATER SOFTENER AS SHOWN IN DETAIL 5/THIS SHEET.
24. PROVIDE GAS CONNECTION TO THE RICE COOKER PER DETAIL 9/P300.

PLUMBING GENERAL NOTES

A. GENERAL NOTES APPLY TO PLUMBING SHEETS.

B. PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE PLUMBING CODE, LOCAL HEALTH DEPARTMENT STANDARDS, AND THE AUTHORITY HAVING JURISDICTION. SEE SHEET A000 FOR THE PREVAILING CODES.

C. PIPING LAYOUTS ON DRAWINGS ARE SCHEMATIC. EXACT LOCATIONS ARE TO BE COORDINATED WITH THE EXISTING CONDITIONS AND THE WORK OF OTHER TRADES.

D. CONCEAL PIPING UNLESS NOTED OTHERWISE. WATER SUPPLY PIPES SHALL BE INSTALLED LEVEL.

E. PROVIDE SHUT-OFF VALVES FOR ISOLATION OF FIXTURE GROUPS AS SHOWN ON DRAWINGS IN ADDITION TO STOP VALVES AT EACH FIXTURE.

F. PROVIDE STOP VALVES AT FIXTURES.

G. PROVIDE TRAP PRIMERS FOR FLOOR DRAINS.

H. WHERE THE WATER OR GAS SUPPLY LINE SIZE SHOWN IN THE PLUMBING DIAGRAMS DIFFERS FROM THE FIXTURE OR EQUIPMENT CONNECTION SIZE, PROVIDE LINE SIZE PIPE TO WITHIN 6" OF THE FIXTURE OR EQUIPMENT BEFORE TRANSITIONING TO THE CONNECTION SIZE.

I. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED BETWEEN THE INSULATION AND THE INTERIOR WALL FINISHING MATERIAL.

J. INSULATE THE HOT AND COLD WATER, CONDENSATE DRAINAGE, AND STORM PIPING PER THE SPECIFICATIONS AND DETAIL 6/P300.

K. PROVIDE GAS SHUT-OFF VALVES AT EACH PIECE OF EQUIPMENT. PROVIDE ACCESSIBLE DIRT LEG AT THE BOTTOM OF VERTICAL SECTIONS OF GAS PIPE AND AT THE CONNECTION TO EACH PIECE OF EQUIPMENT.

L. PLUMBING FIXTURES, ACCESSORIES, AND MATERIALS PROVIDED FOR DOMESTIC WATER SHALL BE LEAD FREE.

M. PRIOR TO TURNOVER PERFORM A VIDEO INSPECTION OF THE SANITARY AND GREASE LINES FROM THE MAIN LINES WITHIN THE TENANT SPACE TO THE MAIN SEWER TO VERIFY THAT THE SANITARY WASTE SYSTEM IS CONNECTED, CLEAN, AND FREE OF SAGS, BELLIES, BREAKS, AND DEBRIS. DELIVER A REPORT AND COPY OF THE VIDEO TO THE TENANT'S CONSTRUCTION MANAGER PRIOR TO TURNOVER.

N. THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

O. PRIOR TO CONNECTION TO ANY EXISTING SEWER SYSTEM PERFORM A DIE TEST TO VERIFY THE TYPE OF SYSTEM AND THE DIRECTION OF FLOW. REPORT ANY DEVIATION FROM THE CONSTRUCTION DOCUMENTS TO THE TENANT'S CONSTRUCTION MANAGER.

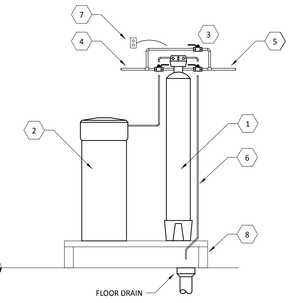
P. ALL GAS FIRED EQUIPMENT WILL OPERATE ON PROPANE. PROVIDE NECESSARY FITTINGS FOR PROPANE USAGE.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
CD	CEILING DIFFUSER
EXT'G	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
GCO	GRADE CLEANOUT
GC	GENERAL CONTRACTOR
HES	TENANT'S HVAC EQUIPMENT SUPPLIER
TAB	TENANT'S TEST AND BALANCE VENDOR
TCC	TENANT'S CABLING CONTRACTOR
TES	TENANT'S KITCHEN EQUIPEMNT SUPPLIER
THS	TENANT'S HOOD SUPPLIER
TLS	TENANT'S LIGHT/LAMP SUPPLIER
TMB	TENANT'S MENU BOARD SUPPLIER
TMS	TENANT'S MILLWORK SUPPLIER
TP	TENANT'S PHONE SUPPLIER
TRS	TENANT'S RAILING SUPPLIER
TSV	TENANT'S SIGN VENDOR
WCS	TENANT'S WALK-IN COOLER SUPPLIER

PLUMBING SYMBOLS

- ELBOW UP
- ELBOW DOWN
- DOMESTIC COLD WATER
- DOMESTIC FILTERED COLD WATER
- DOMESTIC SOFTENED COLD WATER
- DOMESTIC HOT WATER (110 DEGREES)
- DOMESTIC HOT WATER RECIRC.
- GAS
- GAS (ON ROOF)
- X — PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER
- WM — WATER METER
- GM — GAS METER
- XX-# — EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET P200 FOR EQUIPMENT INFORMATION
- VALVE
- SOLENOID-OPERATED VALVE
- WALL HYDRANT/ROOF HYDRANT
- N — CHECK VALVE
- CIRCUIT-SETTER BALANCE VALVE RATED FOR POTABLE WATER



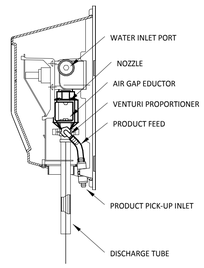
5/P100 **WATER SOFTENER DETAIL** N.T.S.

SOFTENER INSTALLATION NOTES

A. DETAIL IS BASED ON CUNO MODEL CFSM1254E.
B. CONNECT SOFT WATER FEED TO WATER HEATER PRIOR TO RECIRCULATION SYSTEM CHECK VALVE.
C. SEE WATER HEATER DETAIL FOR CONTINUATION

SOFTENER DETAIL NOTES

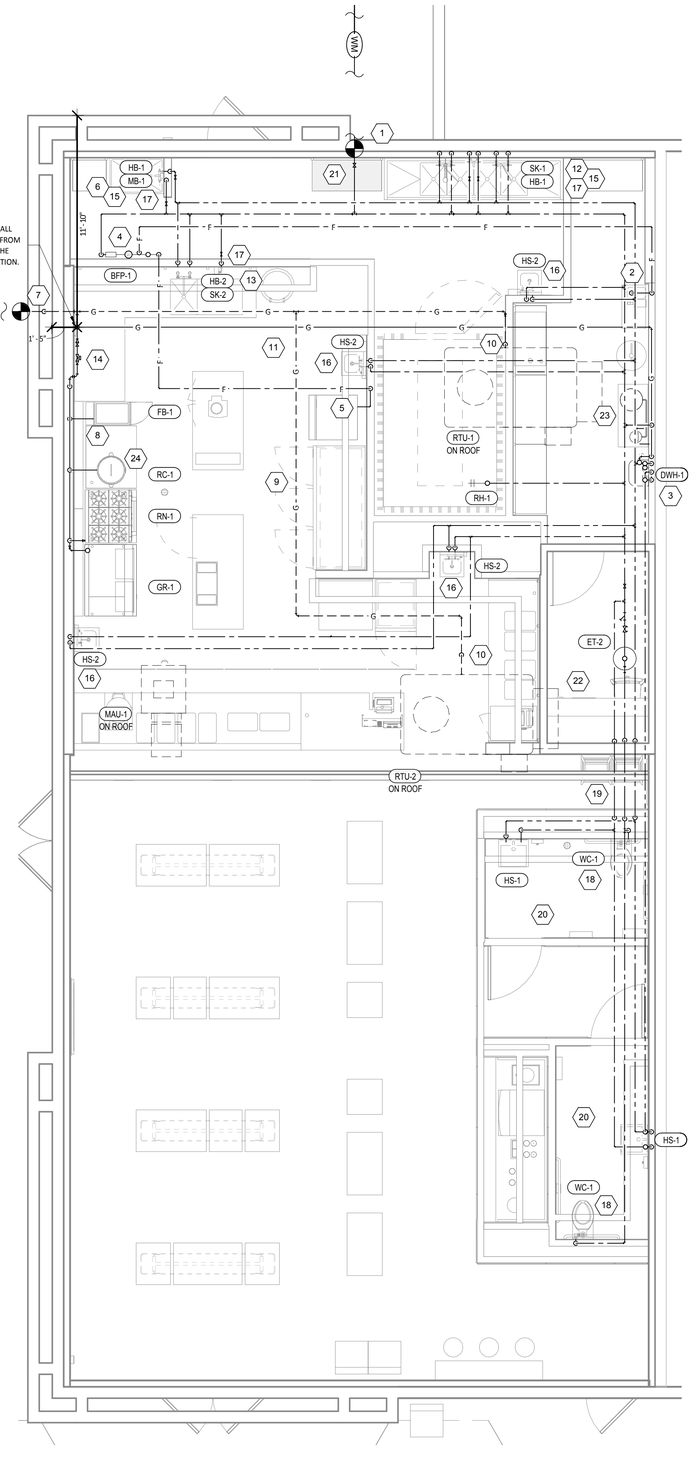
1. RESIN TANK.
2. BRINE TANK.
3. 1" BALL VALVE.
4. 1" DOMESTIC COLD WATER. (74" AFF)
5. 1" SOFT WATER FEED TO WATER HEATER. (74" AFF)
6. 3/4" SCH 80 PVC.
7. PLUG UNIT INTO GFCI PROTECTED OUTLET
8. DUNNAGE RACK



4/P100 **CHEMICAL DISPENSER DETAIL** N.T.S.

MATERIAL SCHEDULE		
CATEGORY	APPLICATION	ALLOWABLE MATERIAL
WATER SUPPLY PIPE	ABOVE GRADE	TYPE L COPPER TUBE
PROPANE GAS PIPE	CONCEALED	SCH. 40 STEEL PIPE, MALLEABLE IRON THREADED FITTINGS
	EXPOSED	SCH. 40 STEEL PIPE, MALLEABLE IRON THREADED FITTINGS, PAINTED

GAS SERVICE SHALL ENTER THE SPACE FROM THE ROOF AT THE FOLLOWING LOCATION.



1/P100 **PLUMBING SUPPLY PLAN** 1/4" = 1'-0"

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Plumbing Plan Water & Gas

P100

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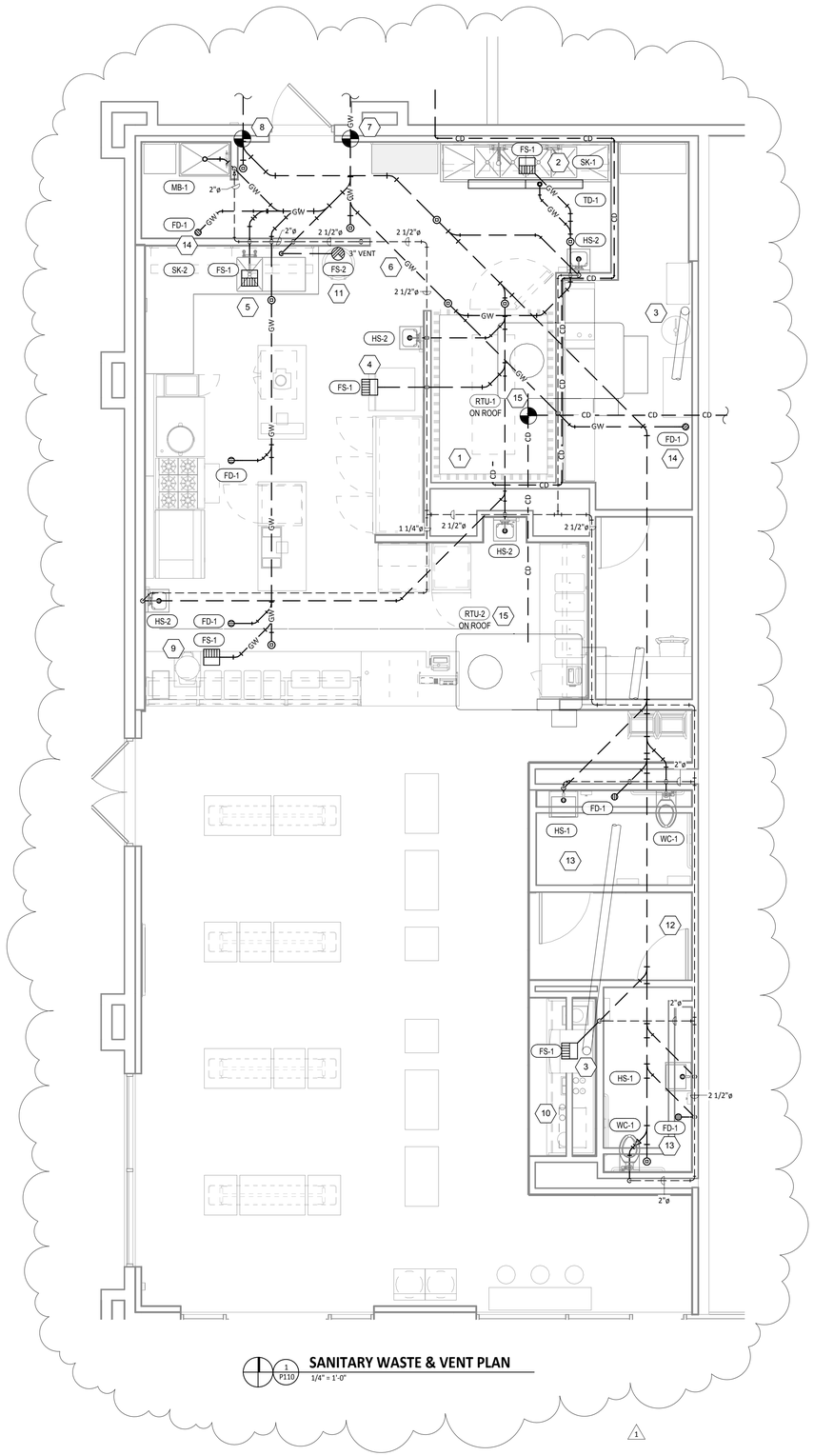
PLUMBING SYMBOLS

- ELBOW UP
- ELBOW DOWN
- SANITARY WASTE
- GW — GREASE WASTE
- SANITARY VENT
- CD — CONDENSATE DRAIN
- (#) PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- FLOOR DRAIN
- FLOOR SINK
- CLEANOUT
- (XX-#) EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET P200 FOR EQUIPMENT INFORMATION

MATERIAL SCHEDULE		
CATEGORY	APPLICATION	ALLOWABLE MATERIAL
SANITARY WASTE & VENT PIPE	ABOVE GROUND, CONCEALED	PVC PLASTIC DWV PIPE AND FITTINGS
	ABOVE GROUND PREP SINK AND WARE WASHING SINK DRAINS	PVC PLASTIC DWV PIPE AND FITTINGS
	ABOVE GROUND HAND SINK DRAINS	BRASS WITH CHROME FINISH
	BELOW GROUND	PVC PLASTIC DWV PIPE AND FITTINGS

(#) PLAN NOTES

1. PROVIDE 3/4" CONDENSATE DRAIN FROM THE WALK-IN COOLER EVAPORATOR TO RAIN WATER LEADER AT THE REAR OF THE SPACE AS SHOWN. SLOPE CONDENSATE DRAIN A MINIMUM OF 1" PER FOOT. HOLD EXPOSED CONDENSATE DRAIN IN WALK-IN COOLER AS HIGH AS POSSIBLE. CONCEAL DRAIN PIPING WITHIN FRAMED WALLS AS SHOWN. DISCHARGE THROUGH AN AIR GAP.
2. PROVIDE DRAIN CONNECTIONS TO THE FOUR COMPARTMENT SINK PER DETAIL 4/P300.
3. PROVIDE A 6" SCHEDULE 40 PVC CONDUIT SODA LINE SLEEVE UNDER THE SLAB FROM THE BAG-IN-BOX RACK TO THE SODA FOUNTAIN PER DETAIL 7/P300. SEE THE ARCHITECTURAL FLOOR PLAN FOR THE LOCATIONS OF THESE STUBS.
4. PROVIDE DRAINAGE PIPES FROM THE ICE MACHINE TO THE FLOOR SINK PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE A CODE-APPROVED AIR GAP AT THE DISCHARGE TO THE FLOOR SINK.
5. PROVIDE DRAIN LINES FROM THE FOOD PREP SINK TO THE FLOOR SINK. PROVIDE AN AIR GAP AT THE DISCHARGE TO THE FLOOR SINK.
6. PROVIDE A 3" VENT THROUGH THE ROOF PER DETAIL 8/P300. CONNECT TO EXISTING VENT IF POSSIBLE.
7. CONNECT TO EXISTING 4" GREASE WASTE LINE LEADING TO EXISTING 1250 GALLON INTERCEPTOR.
8. CONNECT TO EXISTING 4" SANITARY SEWER.
9. PROVIDE 3/4" VALVED DRAIN FROM HOT FOOD TABLE TO THE FLOOR SINK. DRAIN THROUGH AN AIR GAP.
10. PROVIDE INSULATED COPPER DRAIN LINES FROM THE TEA TRAY DRAIN AND THE SODA MACHINE DRAIN TO THE FLOOR SINK. DRAIN THROUGH AN AIR GAP.
11. PROVIDE EXPOSED INDIRECT DRAIN FROM THE SALAD SPINNER DRAIN CONNECTION TO THE FLOOR SINK BELOW. DRAIN THROUGH AN AIR GAP.
12. HOLD HORIZONTAL VENT PIPES ABOVE THE RESTROOM BELOW THE TOP OF THE PLYWOOD BOX ELEMENT. PAINT EXPOSED VERTICAL VENT PIPES TO MATCH THE ROOF DECK.
13. DO NOT PROVIDE WALL CLEANOUTS OFF TILE AND PLYWOOD SURFACES. IF A WALL CLEANOUT IS REQUIRED IN A TILE SURFACE COORDINATE THE EXACT LOCATION WITH CHIPOTLE'S CONSTRUCTION MANAGER.
14. PROVIDE INDIRECT WASTE AND CONDENSATE DRAINS FROM FIXTURES OTHER THAN KITCHEN SINKS CONCEALED IN THE WALL AS SHOWN IN DETAIL 12/P300.
15. PROVIDE 3/4" PVC CONDENSATE DRAIN LINE FROM ROOFTOP UNIT TO EXISTING CONDENSATE DRAIN LINE ON ROOF AS SHOWN. DRAIN LINE SHALL HAVE A MINIMUM SLOPE OF 1/8" PER FOOT AND BE SUPPORTED ON ROOF PER DETAIL 5/P300.



SANITARY WASTE & VENT PLAN
1/4" = 1'-0"

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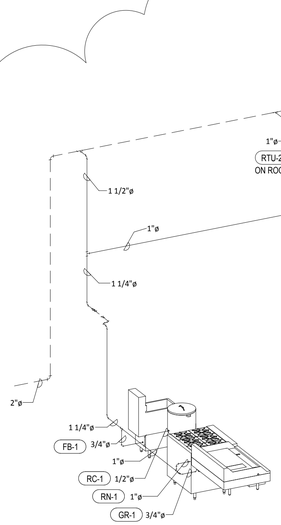
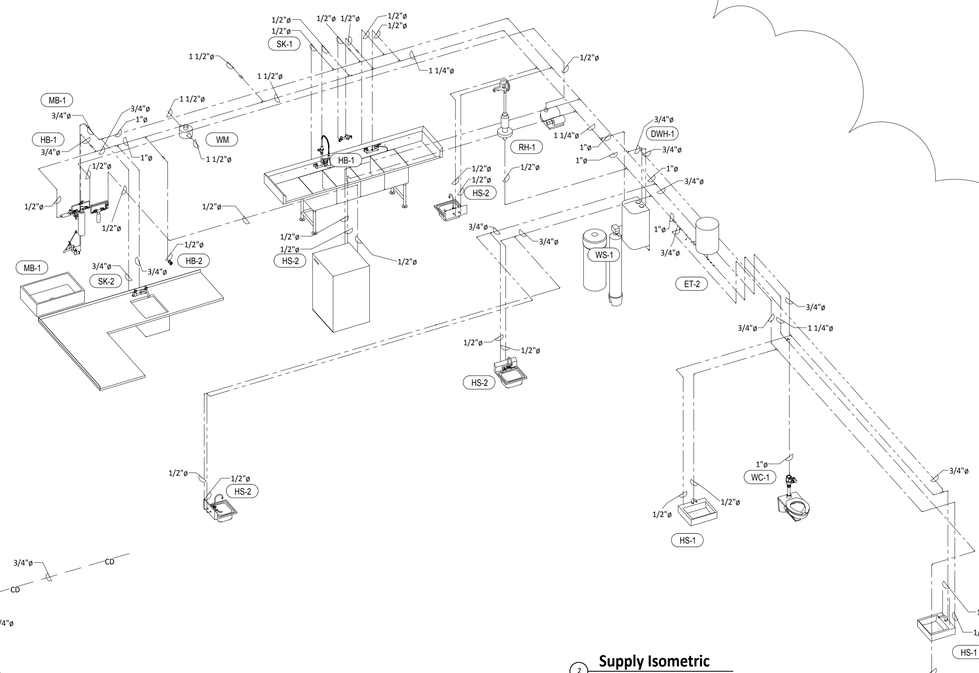


CONNECTED GAS LOAD			
FIXTURE	TAG	MBH	EQUIVALENT LENGTH FROM REGULATOR [FT[
WATER HEATER	DWH-1	199	84
FRYER	FB-1	95	47
GRIDDLE	GR-1	107	54
RICE COOKER	RC-1	35	50
RANGE	RN-1	192	54
ROOFTOP UNIT	RTU-1	80	53
ROOFTOP UNIT	RTU-2	120	72
Grand total		828	MAX: 110

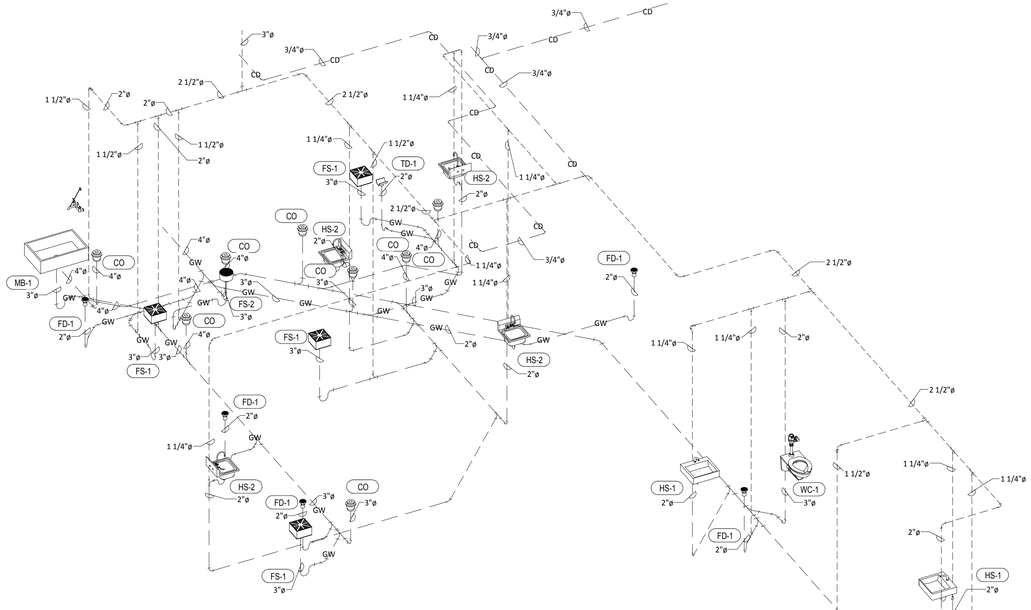
NOTES:

1. DISTRIBUTION PRESSURE AFTER REGULATOR: 2 PSI.
2. DISTANCES ARE APPROXIMATE
3. EQUIPMENT SHALL BE EQUIPPED FOR OPERATION WITH PROPANE GAS.
4. GAS LINE SIZING COMPLIES WITH TABLE 402.4(34) IN THE 2010 FLORIDA BUILDING CODE

1 P120 **Gas Isometric**
N.T.S.



2 **Supply Isometric**



3 **Sanitary Isometric**

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Plumbing Isometrics

P120

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PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL	DESCRIPTION	QUANTITY	CONNECTION SIZES			SUBTOTAL FIXTURE UNITS			
								HW	CW	WASTE	HW	CW	Total	SAN
BFP-1	RPZ BACKFLOW PREVENTER	GC	GC	CONBRACO	4ALF-203-T2F	LEAD FREE REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH AUTOMATIC DIFFERENTIAL RELIEF VALVE	1		1/2"		0	1	0	0
ET-1	EXPANSION TANK	GC	GC	AMTROL	ST-5	2 GALLON CAPACITY	1		3/4"		0	0	0	0
ET-2	EXPANSION TANK	GC	GC	AMTROL	WX-200	14.0 GALLON PRE-CHARGED EXPANSION TANK WITH 4.1 GALLON ACCEPTANCE FROM 60 TO 40 PSI.	1		3/4"		0	0	0	0
FD-1	FLOOR DRAIN	GC	GC	SIOUX CHIEF	842-2-PNR	ADJUSTABLE FLOOR DRAIN, ROUND POLISHED METAL RING AND STRAINER	6			2"	0	0	0	12
FS-1	FLOOR SINK	GC	GC	SIOUX CHIEF	861-3PU2	HEAVY DUTY PVC FLOOR SINK WITH ALUMINUM DOME BOTTOM STRAINER AND OPEN HALF PVC GRATE	5			3"	0	0	0	25
FS-2	FLOOR SINK	GC	GC	SIOUX CHIEF	860-3P_3	HIGH CAPACITY PVC FLOOR DRAIN WITH PVC OPEN-QUARTER STRAINER AND ALUMINUM DOME BOTTOM STRAINER	1			3"	0	0	0	5
HB-1	HOSE BIBB	TES	GC	T&S	B-2345-01-XX	COMMERCIAL QUALITY HOT & COLD MIXING WALL HYDRANT. SUPPLY ARMS SHALL HAVE INTEGRAL SHUT-OFF STOP AND CHECK VALVE.	2	1/2"	1/2"		3	3	4	0
HB-2	HOSE BIBB	TES	GC	T&S	B-0730	SILL FAUCET WITH 1/2" NPT FEMALE INLET AND 3/4" GARDEN HOSE THREADED OUTLET.	1		1/2"		0	1.5	1.5	0
HS-1	RESTROOM HAND SINK	GC/TES	GC	KOHLER	K-2084	ADA-ACCESSIBLE, WALL-MOUNTED, PORCELAIN LAVATORY. INSTALL PLUG-IN AUTOMATIC FAUCET WITH 0.5 GPM AERATOR AND THERMOSTATIC MIXING VALVE FURNISHED BY KES. PROVIDE ZURN Z1231 (Z1231-D FOR BACK-TO-BACK APPLICATIONS) CONCEALED ARM CARRIER IN WALL.	2	1/2"	1/2"	1 3/4"	3	3	4	2
HS-2	KITCHEN HAND SINK	TES	GC	FURNISHED BY TES	--	STAINLESS STEEL SINK WITH WALL MOUNTING BRACKET AND BACKSPLASH MOUNTED FAUCET WITH SWIVEL GOOSENECK	4	1/2"	1/2"	2"	6	6	8	4
MB-1	MOP BASIN	GC/TES	GC	CREATIVE INDUSTRIES TERRAZZO PRODUCTS	MC3624-10	PROVIDE TERRAZZO 36"x24"x10" HIGH MOP BASIN (COLOR: ICE) WITH STAINLESS STEEL CAPS. CONTACT TERI GRENATO OR CAROLYN DEVIVO WITH CREATIVE INDUSTRIES TERRAZZO PRODUCTS AT (773) 235-9088 TO ORDER. INSTALL SERVICE SINK FAUCET WITH BUILT IN STOPS, LEVER HANDLES, AND WALL BRACE FURNISHED BY TES.	1	1/2"	1/2"	3"	2.25	2.25	3	3
RH-1	FREEZE PROOF ROOF HYDRANT	GC	GC	HOEPTNER	2131R	AUTOMATIC DRAINING, FREEZLESS WALL HYDRANT WITH ANTI-SIPHON VACUUM BREAKER HOEPTNER PRODUCTS (408) 847-7615	1		3/4"		0	1	0	0
SK-1	FOUR COMPARTMENT SINK	TES	GC	FURNISHED BY TES	--	FOUR-COMPARTMENT WARE-WASHING SINK FURNISHED WITH (1) PRE-RINSE UNIT WITH ADD-ON FAUCET AND (1) MIXING FAUCET WITH 12" SWING NOZZLE	1	1/2"	1/2"		1.5	1.5	2	0
SK-2	PREP SINK	TES	GC	FURNISHED BY TES	--	STAINLESS STEEL PREP TABLE WITH INTEGRAL PREP SINK. FURNISHED WITH "BIG FLO" FAUCET	1				3	3	4	0
TD-1	TRENCH DRAIN	GC	GC	ZURN	(2)Z883	(2) 6" X 40" HDPE TRENCH DRAINS (80" OVERALL LENGTH) WITH (2) CLOSED END CAPS, (1) 2" NO-HUB BOTTOM OUTLET, AND CLASS-A HEEL-PROOF POLYETHYLENE GRATE	1			2"	0	0	0	2
WC-1	WATER CLOSET	GC	GC	AMERICAN STANDARD	WC: 2257.001, SEAT: 5901.100	ADA-COMPLIANT AFWALL ELONGATED WALL-MOUNT 1.28 GPF FLUSH VALVE TOILET. INSTALL WITH SEAT HEIGHT SET AT 17" AFF. PROVIDE WITH SLOAN ECOS 8111-1.6/1.1 BATTERY-POWERED AUTOMATIC DUAL-FLUSH FLUSH VALVE AND ZURN ZN1203-N4 (ZURN ZN1203-ND4 FOR BACK-TO-BACK APPLICATIONS) SERIES WATER CLOSET CARRIER. 1	2		1"	3"	0	10	10	12
WS-1	WATER SOFTENER	GC	GC	CUNO	CFSM1245E	POINT OF ENTRY HIGH CAPACITY WATER TREATMENT SYSTEM	1		1"		0	0	0	0
Grand total											18.75	32.25	36.4	65

WATER HEATER SCHEDULE - INSTANTANEOUS

MARK	DESCRIPTION	FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL	INPUT MBH	DELIVERY	NOTES
DWH-1	DIRECT VENT GAS-FIRED INSTANTANEOUS WATER HEATER	GC	GC	NAVIEN	NPE-240A	199	354 GPH @ 65° RISE	PROVIDE WITH REMOTE CONTROLLER AND LEAD FREE "PLUMB EASY VALVE SET". WATER HEATER IS TO BE PROPANE-FIRED.

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P200

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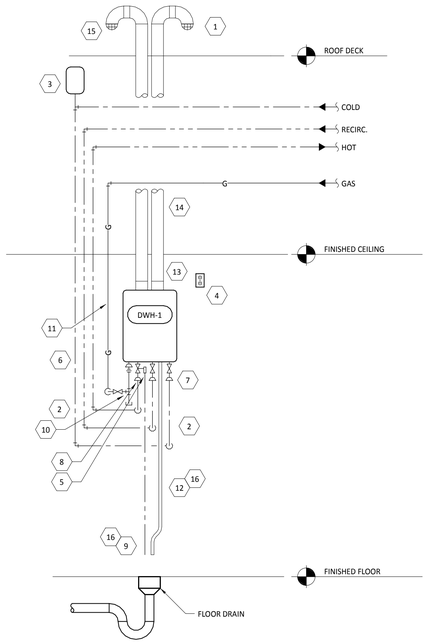
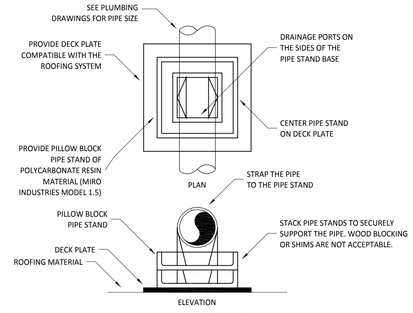


WATER HEATER INSTALLATION NOTES

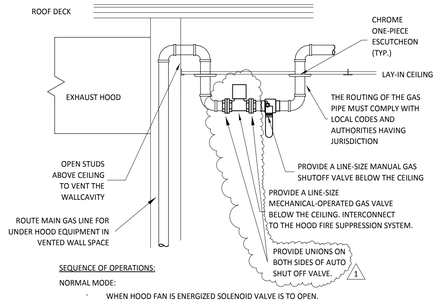
A. CLEAN INLET STRAINERS AFTER CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO TURNOVER OF THE BUILDING TO THE OWNER.
B. INSTALL PIPING WITH AS FEW ELBOWS AS POSSIBLE.
C. MAINTAIN REQUIRED CLEARANCES TO COMBUSTIBLE MATERIALS.
D. SEE ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHT.
E. ADJUST WATER HEATER TO A SETPOINT OF 120° F.

1 P300 WATER HEATER DETAIL
N.T.S.



PROVIDE PIPE STANDS AS SHOWN FOR STEEL PIPE FROM 1/2" TO 1-1/2" DIAMETER. SUPPORT SPACING FOR PIPE SIZE: 1/2"=6'; 3/4"-1"=8'; 1 1/4" AND LARGER=10'; PROVIDE DECK PLATES ON ROOFING AND SET PIPE STAND FREE ON DECK PLATES. STACK PIPE STAND WHERE REQUIRED TO ELEVATE PIPING. INSTALL GAS PIPE TO ALLOW FOR EXPANSION AND CONTRACTION. PRIMER COAT AND PAINT EXTERIOR GAS PIPE. GAS PIPE ON THE ROOF SHALL BE PAINTED YELLOW AND GAS PIPE INSTALLED EXPOSED ON EXTERIOR WALLS SHOULD BE PAINTED TO MATCH THE WALL FINISH.

5 P300 ROOFTOP PIPING SUPPORT
N.T.S.



SEQUENCE OF OPERATIONS:

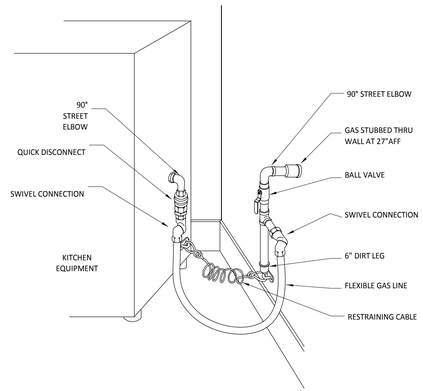
NORMAL MODE:
- WHEN HOOD FAN IS ENERGIZED SOLENOID VALVE IS TO OPEN.
- ON A LOSS OF POWER OR IF THE FAN IS DE-ENERGIZED THE VALVE IS TO CLOSE.

EMERGENCY MODE:
- UPON ACTUATION OF THE FIRE SUPPRESSION SYSTEM OR A SIGNAL FROM THE FIRE ALARM, THE SOLENOID VALVE IS TO CLOSE

10 P306 KITCHEN GAS SHUTOFF DETAIL
N.T.S.

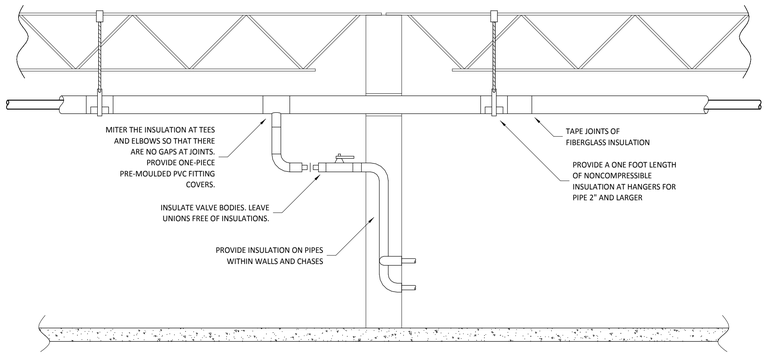
WATER HEATER DETAIL NOTES

1. PROVIDE TWO 90° ELBOWS AND A SCREEN FOR THE FLUE TERMINATION THROUGH ROOF.
2. ROUGH IN COLD, HOT, AND RECIRC WATER PIPES AT 64" AND PROPANE GAS PIPE AT 67-1/2" BELOW THE FINISHED CEILING.
3. PROVIDE EXPANSION TANK ET-1 AS SHOWN. SUPPORT TANK FROM WALL OR STRUCTURE ABOVE.
4. PROVIDE WATER HEATER RECEPTACLE WITHIN 12" OF THE FINISHED CEILING. FASTEN CORD TIGHT TO THE WALL .
5. PROVIDE PRESSURE RELIEF VALVE. PIPE PRESSURE RELIEF VALVE TO FLOOR DRAIN OR MOP BASIN.
6. CONCEAL WATER PIPING WITHIN THE WALL AS SHOWN. INSULATE EXPOSED AND CONCEALED WATER PIPING TO WITHIN 3" OF THE WATER HEATER.
7. INSTALL "PLUMB EASY VALVE SET" EXPOSED AT THE COLD AND HOT WATER CONNECTIONS TO THE WATER HEATER AS SHOWN.
8. IF THE PIPE SIZES AS SHOWN ON THE PLUMBING PLANS IS LARGER THAN THE WATER HEATER CONNECTION SIZES, PROVIDE REDUCERS WITHIN 6" OF THE WATER HEATER.
9. PIPE PRESSURE RELIEF VALVE DISCHARGE AND FLUE CONDENSATE DRAIN TO THE FLOOR DRAIN OR MOP BASIN. DRAIN THROUGH AN AIR GAP.
10. PROVIDE AN EXPOSED DRIP LEG AND LINE-SIZE GAS VALVE ON THE PROPANE GAS SERVICE TO THE WATER HEATER.
11. CONCEAL PROPANE GAS PIPING IN THE WALL AS SHOWN.
12. PROVIDE 1/2" CLEAR PLASTIC TUBE FROM THE FLUE CONDENSATE CONNECTION TO THE FLOOR DRAIN OR MOP BASIN. FASTEN THE TUBE SECURELY TO THE WALL.
13. INSTALL THE TANKLESS WATER HEATER WITH THE TOP OF THE WATER HEATER WITHIN 12" OF THE FINISHED CEILING.
14. PROVIDE A 3"Ø PVC PIPE FROM THE TANKLESS WATER HEATER TO THE POINT OF DISCHARGE. SLOPE HORIZONTAL SECTION OF THE FLUE 1/4" PER FOOT TOWARDS THE DRAIN TEE.
15. PROVIDE A SCREENED AIR INTAKE WITH TWO 90° ELBOWS ABOVE THE ROOF PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
16. CONCEAL DRAIN LINES IN WALL PER DETAIL 13/THIS SHEET.
17. PROVIDE APPROPRIATE EQUIPMENT/FITTINGS FOR PROPANE USAGE.



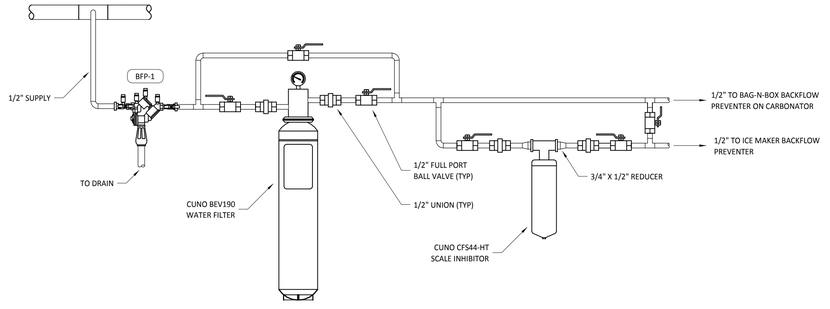
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT ACTUAL CONDITIONS. MAKE FINAL CONNECTION TO EQUIPMENT AS RECOMMENDED BY MANUFACTURER. PROVIDE WELDED FITTINGS/JOINTS IN ANY CONCEALED, UNSLEEVED LOCATION.

2 P300 KITCHEN GAS EQUIPMENT DETAIL
N.T.S.

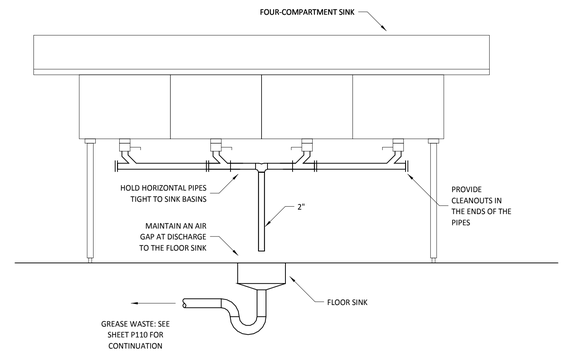


PROVIDE INSULATION ON INTERIOR COLD AND HOT WATER PIPING, CONDENSATE DRAIN PIPE, AND STORM PIPE. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING INSULATION. INSTALL ITEMS PER SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS. MAINTAIN VAPOR BARRIER ON COLD WATER AND CONDENSATE PIPING BY MEANS OF SEALANT AND TAPE. FLAME SPREAD AND SMOKE-DEVELOPED INDEXES SHALL NOT EXCEED 25/50. SEAL EXPOSED ENDS OF FIBERGLASS INSULATION WITH ADHESIVE MASTIC. PROVIDE PREFORMED GLASS FIBER PIPE INSULATION WITH PRE-MOLDED PVC JACKETS, SLEEVES, AND FITTING COVERS ON EXPOSED WATER PIPE SO THAT EXPOSED WATER PIPE IS COVERED ENTIRELY WITH PVC INSULATION COVERS.

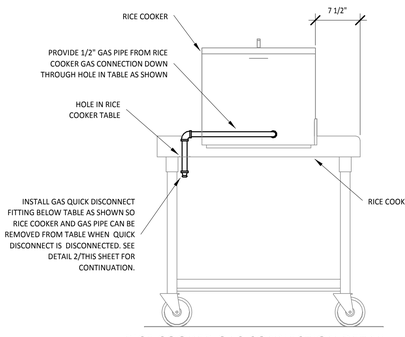
6 P300 PIPE INSULATION DETAIL
N.T.S.



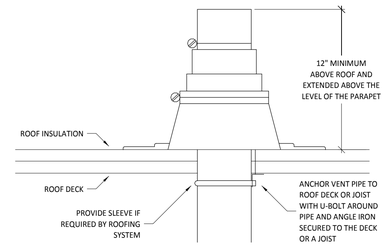
11 P300 WATER FILTRATION DETAIL
N.T.S.



4 P300 WARE-WASHING SINK DETAIL
N.T.S.

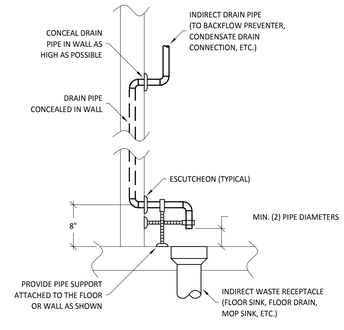


9 P300 RICE COOKER GAS CONNECTION DETAIL
N.T.S.

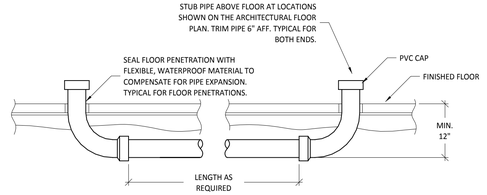


REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR MINIMUM TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, AND ONE FOOT FROM ANY VERTICAL SURFACE. PROVIDE 1" FIBERGLASS INSULATION WITH ALL-SERVICE JACKET ON VENT PIPE INSIDE BUILDING WITHIN SIX FEET OF VENT THRU ROOF LOCATION. FLASHING AND COUNTER FLASHING ARE TO BE COMPATIBLE WITH THE ROOFING SYSTEM.

8 P300 VENT THROUGH ROOF
N.T.S.



12 P300 INDIRECT WASTE PIPING DETAIL
N.T.S.



PROVIDE SIX INCH SCHEDULE 40 PVC ELECTRICAL CONDUIT AND FITTINGS WITH SOLVENT-WELDED JOINTS. USE MINIMUM QUANTITY OF FITTINGS. PROVIDE LONG SWEEP ELBOWS AT BOTH ENDS, WITH MINIMUM 16 INCH RADIUS. AVOID ELBOWS IN HORIZONTAL RUN. SEAL ENDS OF CONDUIT WITH FOAM AFTER SYRUP LINE IS INSTALLED IN CONDUIT. INSTALL PVC CAP WITH HOLE FOR SODA LINES ON EACH END OF THE CONDUIT. SEAL HOLE IN PVC CAP AROUND SODA BUNDLE.

7 P300 SODA CONDUIT DETAIL
N.T.S.

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1	12-17-14	Permit Review Comments

Drawn: AMD
Checked: MPC

Project No.
1401051

Contents:
Plumbing Details

P300

Date of Last Print:
1-30-15

ELECTRICAL SPECIFICATIONS

SECTION 16011 TEMPORARY & PERMANENT ELECTRICAL SERVICE
PART 1 GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
A. This section includes temporary lighting and power with luminaries, panelboards, circuit breakers. and enclosures.
B. Related sections include the following:
1. Division 16 Section "Grounding",
2. Division 16 Section "Wiring Devices"
3. Division 16 Section "Circuit Breakers"
4. Division 16 Section "Panel boards"
1.3 DEFINITIONS
A. GFCI: Ground fault current interrupter.
B. RMS: Root Mean Square
C. SPDT: Single Pole, Double Throw
1.4 USE CHARGES
A. General: Cost or use charges for temporary facilities are not chargeable to Owner, Architect, or Engineer and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
1. Owner's construction forces.
2. Occupants of Project.
3. Architect.
4. Engineer.
5. Testing agencies.
6. Personnel of authorities having jurisdiction.
B. Permanent Service: Coordinate with building owner and utility company to establish permanent service upon completion of the project. Contractor shall pay for all permits, aid-to-construction charges, and related fees associated with the new service.
1.5 NOTIFICATION
A. Coordinate with owner to provide 72 hour written notification to other tenants of any power interruptions. Notification shall state the estimated time and duration of the electrical outage.
1.6 QUALITY ASSURANCE
A. Standards: Comply with ANSI A10.6, NECA's 'Temporary Electrical Facilities," and NFPA 241.
1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
2. Electric Service: Comply with NECA, NEMA and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
3. Comply with OSHA standards and regulations.
PART 2 PRODUCTS
2.1 MATERIALS
A. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.
B. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 12S-V ac, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.
C. Main panelboard with disconnect.
D. Temporary lighting.
E. 120 volt receptacles with overcurrent protection.
F. Enclosures. NEMA AB 1 and NEMA KS 1 to meet environmental conditions of installed location.
1. Outdoor Locations: NEMA 250, Type 3R.
PART 3 EXECUTION
3.1 INSTALLATION
A. Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, and overload-protected disconnecting means.
1. Install power distribution wiring overhead and rise vertically where least exposed to damage.
B. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.
1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
2. Provide metal conduit, tubing, or metallic cable for wiring exposed to possible damage. Provide rigid steel conduits for wiring exposed on grades, floors, decks, or other traffic areas.
3. Provide metal conduit enclosures or boxes for wiring devices.
4. Provide 4-gang outlets, spaced so 1 DO-foot (30-m) extension cord can reach each area for power hand tools and task lighting. Provide a separate 125-V ac, 20-A circuit for each outlet.
C. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.
1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
2. Provide one 100-W incandescent lamp every 50 feet (15 m) in traffic areas.
3. Install exterior-yard site lighting that will provide adequate illumination for construction operations, parking and traffic conditions, and signage visibility when the Work is being performed.
4. Install lighting for Project identification sign.
END OF SECTION 16011

SECTION 16060 - GROUNDING AND BONDING
PART 1 - GENERAL
1.1 SUMMARY
A. This Section includes grounding of electrical systems and equipment. Grounding requirements specified in this Section may be supplemented by special requirements of systems described in other Sections.
1.2 QUALITY ASSURANCE
A. Testing Agency Qualifications: Testing agency as defined by OSHA in 29 CFR 1910.7 or a member company of the International Electrical Testing Association and that is acceptable to authorities having jurisdiction.
1. Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association to supervise on-site testing specified in Part 3.
B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
1. Comply with UL 467.
PART 2 - PRODUCTS
2.1 GROUNDING CONDUCTORS
A. For insulated conductors, comply with Division 16 Section "Wiring Methods."
B. Material: Copper.
C. Equipment Grounding Conductors: Insulated with green-colored insulation.
D. Grounding Electrode Conductors: Stranded cable.
E. Bare Copper Conductors: Comply with the following:
1. Solid Conductors: ASTM B 3.
2. Assembly of Stranded Conductors: ASTM B 8.
2.2 CONNECTOR PRODUCTS
A. Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items.
PART 3 - EXECUTION
3.1 APPLICATION
A. Use only copper conductors.
B. In raceways, use insulated equipment grounding conductors.
C. Equipment Grounding Conductor Terminations: Use bolted pressure clamps.
D. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment, and elsewhere as indicated.
1. Use insulated spacer; space 1 inch from wall and support from wall 6 inches above finished floor, unless otherwise indicated.
2. At doors, route the bus up to the top of the door frame, across the top of the doorway, and down to the specified height above the floor.
3.2 EQUIPMENT GROUNDING CONDUCTORS
A. Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.
3.3 INSTALLATION
A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
3.4 CONNECTIONS
A. General: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
B. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.
C. Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
D. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.
END OF SECTION 16060

SECTION 16100 - WIRING METHODS
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Summary: Building wire and cable and associated splices, connectors, and terminations for wiring systems rated 600 V and less, and twisted-pair cable; and raceways and boxes.
PART 2 - PRODUCTS
2.1 WIRES AND CABLES
A. Connectors and Splices: Wiring connectors of size, ampacity rating, material, and type and class for application and for service indicated.
2.2 RACEWAYS
A. Wireways: Screwed cover type, with manufacturers standard finish.
B. Outlet and Device Boxes: Sheet metal boxes, except use cast-metal boxes at exterior, interior exposed, and interior damp locations.
C. Pull and Junction Boxes: Sheet metal boxes, except use nonmetallic boxes with gasketed covers at exterior and interior damp locations.
2.3 ENCLOSURES
A. Hinged-Cover Enclosures: NEMA 250, steel enclosure with continuous hinge cover and flush latch. Finish inside and out with manufacturer's standard enamel.
B. Cabinets: NEMA 250, Type 1, unless otherwise indicated.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install wires and cables according to the NECA's "Standard of Installation.
B. Wiring at Outlets: Install with at least 12 inches of slack conductor at each outlet.
C. Conceal wiring, unless otherwise indicated, within finished walls, ceilings, and floors.
D. Boxes and Enclosures: In damp or wet locations use NEMA 250, Type 4, stainless steel.
E. Use raceway fittings compatible with raceway and suitable for use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings, unless otherwise indicated.
F. Raceways Embedded in Slabs: Install in middle third of the slab thickness where practical, and leave at least 1 -inch concrete cover.
G. Install exposed raceways parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical.
H. Join raceways with fittings designed and approved for the purpose and make joints tight. Use bonding bushings or wedges at connections subject to vibration. Use bonding jumpers where joints cannot be made tight. Use insulating bushings to protect conductors.
I. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line having not less than 200-lb tensile strength. Leave not less than 18 inches of slack at each end of the pull wire.
J. Install raceway sealing fittings where required by the NEC and at wiring entrances to refrigerated spaces. Locate at suitable, approved, accessible locations and fill them with UL-listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces.
K. Stub-up Connections for Equipment: Extend conductors to equipment with intermediate metal conduit; flexible metal conduit may be used 6 inches above the floor.
L. Install a separate green ground conductor in surface metal raceway from the junction box supplying the raceway to receptacle and fixture ground terminals.
3.2 IDENTIFICATION MATERIALS AND DEVICES
A. Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
B. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated in the Contract Documents or required by codes and standards. Use consistent designations throughout Project.
C. Identify raceways and cables with color banding as follows:
1. Bands: Pretensioned, snap-around, colored plastic sleeves or colored encircling conduit, and place adjacent bands of two-color markings in contact, side by side.
2. Band Locations: At changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
3. Colors: As follows:
a. Telecommunication System: Green and yellow.
D. Color-code System secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:

		120/208V	277/480V
1.	Phase A:	Black	Brown
2.	Phase B:	Red	Orange
3.	Phase C:	Blue	Yellow
4.	Neutral:	White	Gray
5.	Ground:	Green	Green

END OF SECTION 16100

SECTION 16140 - WIRING DEVICES
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
B. Comply with NEMA WD 1.
C. Comply with NFPA 70.
PART 2 - PRODUCTS
2.1 DEVICES
A. General: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.
B. Color: Per Material Schedule on sheet E100.
C. Receptacles: Heavy- Duty grade, NEMA WD6, Configuration 5-20R unless otherwise indicated.
D. Ground-Fault Circuit Interrupter Receptacles: integral duplex receptacle; for installation in box without an adapter. Feed-through type, with a 2-3/4-inch- deep outlet
E. Isolated-Ground Receptacles: to the green grounding screw isolation from mounting strap. Equipment grounding contacts connected only terminal of the device with inherent electrical
F. Snap Switches: Heavy-duty, quiet type.
G. Wall Plate: Per Material Schedule on sheet E100.
H. Floor Service Fittings: Modular, above-floor, dual-service units suitable for wiring method used.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install devices and assemblies plumb and secure.
B. Mount devices flush, with long dimension vertical, of receptacles on top unless otherwise indicated. under single, multigang wall plates.
C. Protect devices and assemblies during painting.
D. Install wall plates when painting is complete.
END OF SECTION 16140

SECTION 16410 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS
PART 1 GENERAL (Not Applicable)
PART 2 PRODUCTS
2.1 SWITCHES
A. Enclosed, Nonfusible Switch: NEMA KS 1, Type HD, with lockable handle.
2.2 CIRCUIT BREAKERS
B. Enclosed, Molded-Case Circuit Breaker: NEMA AB 1, with thermal-magnetic trip unless otherwise indicated.
1. Characteristics: Frame size, trip rating, number of poles, and auxiliary devices as indicated.
2. Interrupting Rating: PER DRAWINGS
3. Thermal-Magnetic Circuit Breakers, 225 A and Larger: Trip units fixed
4. Current-Limiting Trips: Let-through ratings less than NEMA FU 1, Class RK-5.
5. Enclosure: NEMA AB 1, Type 1, unless otherwise specified or required to meet environmental conditions of installed location.
PART 3 - EXECUTION
3.1 TESTING
C. Perform visual and mechanical inspections and electrical tests stated in NETA ATS.
END OF SECTION 16410

SECTION 16442 - PANELBOARDS
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: None.
B. Comply with NFPA 70.
C. Comply with NEMA PB 1.
PART 2 - PRODUCTS
2.1 PANELBOARDS AND LOAD CENTERS
A. A. Manufacturers: Subject to compliance with requirement, provide products by one of the following:
1. Panelboards, Overcurrent Protective Devices, Controllers, Contactors, and Accessories:
a. Square D Co.
b. Eaton Corp.; Cutler-Hammer Products.
c. General Electric Co.; Electrical Distribution & Control Div.
d. Siemens Energy & Automation.
B. Recessed, NEMA PB 1, Type 1.
1. Load Center Capacity: as shown on drawings.
2. Front: Secured to box with concealed trim clamps.
3. Doors: With concealed hinges, flush catches, and tumbler locks, all keyed alike.
4. Bus: Hard drawn copper of 98 percent conductivity.
C. Molded-Case Circuit Breakers: NEMA AB 1, plug-in type, Single-handle for multipole circuit breakers. Appropriate for application, including Type SWD for repetitive switching lighting loads and Type HACR for heating, air-conditioning, and refrigerating equipment.
D. Contactors: NEMA ICS 2, Class A combination contactors.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install panelboards and accessory items according to NEMA PB 1.1. Indicate installed circuit loads in English and Spanish on a typed circuit directory after balancing panelboard loads.
B. Mounting Heights: Top of trim 74 inches above finished floor, unless otherwise indicated.
C. Future Circuit Provisions at Flush Panel boards: Stub four empty 3/4-inch conduits from panelboard into accessible or designated ceiling space.
D. Wiring in Panelboard Gutters: Arrange conductors into groups, bundle and wrap with wire ties according to NEC guidelines.
E. Tighten electrical connectors and terminals, including grounding connections, according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A.
F. Perform visual and mechanical inspections and electrical tests stated In NETA ATS.
END OF SECTION 16442

SECTION 16500 - LIGHTING
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: Product Data for each luminaire, including lamps.
B. Fixtures, Emergency Lighting Units, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.
C. Coordinate ceiling-mounted luminaires with ceiling construction, mechanical work, and security and fire-prevention features mounted In ceiling space and on ceiling.
PART 2 - PRODUCTS
2.1 FIXTURES AND FIXTURE COMPONENTS, GENERAL
A. Metal Parts: Free from burrs, sharp corners, and edges. Steel, unless otherwise indicated. Form and support to prevent warping and sagging.
B. Doors, Frames, and Other Internal Access: Smooth operating, free from light leakage under operating conditions, and arranged to permit re-lamping without use of tools. Arrange doors, frames, lenses, diffusers, and other pieces to prevent accidental falling during re-lamping and when secured in operating position.
C. Lenses, Diffusers, Covers, and Globes: 100 percent virgin acrylic plastic or annealed crystal glass, unless otherwise indicated.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Set units level, plumb, and square with ceiling and walls, and secure.
B. Support for Recessed and Semirecessed Grid-Type Fluorescent Fixtures: Install ceiling support system rods or wires at a minimum of 4 rods or wires for each fixture, located not more than 6 inches from fixture corners.
C. Support for Suspended Fixtures: Support according to manufacturers' recommendations.
D. Lamping: Where specific lamp designations are not indicated, lamp units according to manufacturer's written instructions.
END OF SECTION 16500

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Contents:
Electrical Specifications

E010

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MATERIAL SCHEDULE

CATEGORY	APPLICATION	ALLOWABLE MATERIAL
CONDUCTORS	#10 AWG AND SMALLER	SOLID CU, TYPE THHN/THWN OR XHHW
	#8 AWG AND LARGER	STRANDED CU, TYPE THHN/THWN OR XHHW
CONDUITS	OUTDOOR, EXPOSED OR CONCEALED	INTERMEDIATE METAL CONDUIT
	OUTDOOR OR INDOOR DAMP LOCATIONS, CONNECTION TO VIBRATING EQUIPMENT	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
	INDOOR, EXPOSED	ELECTRICAL METALLIC TUBING U.N.O.
	INDOOR, WITHIN 1-1/2" OF ROOF DECK	INTERMEDIATE METAL CONDUIT
	INDOOR, CONCEALED	ELECTRICAL METALLIC TUBING, FLEXIBLE METAL CONDUIT, OR METAL CLAD CABLE
	INDOOR DRY LOCATIONS, CONNECTION TO VIBRATING EQUIPMENT	FLEXIBLE METAL CONDUIT
	LOW VOLTAGE, INDOOR, ABOVE GRADE	ELECTRICAL METALLIC TUBING
	LOW VOLTAGE, BELOW GRADE	RIGID NONMETALLIC CONDUIT (SCHEDULE 40 PVC)
WIRING DEVICES	IN KITCHEN, OFFICE, OR NON-PUBLIC SPACES	GRAY DEVICE WITH STAINLESS STEEL COVER PLATE
	IG OR IG/GFI RECEPTACLES	ORANGE DEVICE WITH STAINLESS STEEL COVER PLATE
	ON DRYWALL IN DINING ROOM	WHITE DEVICE WITH WHITE COVER PLATE
	ON PLYWOOD,HOT ROLLED STEEL, OR RICHLITE	BLACK DEVICE WITH BLACK COVER PLATE
	IN RESTROOMS	WHITE DEVICE WITH WHITE COVER PLATE

ELECTRICAL GENERAL NOTES

A GENERAL NOTES APPLY TO ELECTRICAL SHEETS.

B ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE ELECTRICAL CODE AND IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. SEE SHEET A000 FOR THE PREVAILING CODES.

C WIRING SHALL BE (2)#12, #12 G IN 3/4" C UNLESS NOTED OTHERWISE.

D INDIVIDUAL CONDUIT HOME RUNS SHOWN SHALL NOT BE CONSOLIDATED.

E CIRCUIT EMERGENCY EGRESS LIGHTS, ILLUMINATED EXIT SIGNS, AND NIGHT LIGHTS AHEAD OF LOCAL SWITCHING.

F INSTALL WALL SWITCHES AT 48" AFF TO CENTER OF SWITCH AND RECEPTACLES AT 18" AFF TO CENTER OF RECEPTACLE UNLESS NOTED OTHERWISE.

G INSTALL CONDUIT CONCEALED ABOVE THE CEILING, IN WALLS, OR IN RACEWAYS.

H PROVIDE 1" CONDUIT WITH PULL STRING FROM EACH J-BOX FOR TELEPHONE OR DATA JACKS TO ABOVE OFFICE CEILING. SEE MATERIAL SCHEDULE FOR ALLOWABLE CONDUIT MATERIALS. PROVIDE CONDUITS WITH MINIMAL ELBOWS AND TERMINATE CONDUITS ABOVE OFFICE CEILING WITH CONDUIT BUSHING.

I THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

J ELECTRICAL DESIGN COMPLIES WITH THE NEC 2008 CODE.

ELECTRICAL SYMBOLS

- CONDUIT CONCEALED ABOVE THE CEILING, IN A WALL, OR IN A RACEWAY
- CONDUIT CONCEALED BELOW THE SLAB
- A-6 → HOME-RUN TO PANELBOARD AND CIRCUIT NUMBER SHOWN
- # PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- X/Y/Z DISCONNECT SWITCH: X = SWITCH RATING, Y = FUSE SIZE (NF = NON-FUSED), Z = NUMBER OF POLES
- J JUNCTION BOX
- ELECTRIC PANELBOARD
- S GENERAL PURPOSE 1-POLE SWITCH
- S M MANUAL STARTER WITH PILOT LIGHT
- S OC OCCUPANCY SENSOR ACTIVATED WALL SWITCH (HUBBELL LHMTS1W - LIGHTHAWK PIR & US SINGLE CIRCUIT,WHITE)
- NEMA 5-20R DUPLEX RECEPTACLE

PLAN NOTES

1 STORE LIGHTING SWITCH BANK. PROVIDE ONE SWITCH PER LIGHTING CIRCUIT. LABEL SWITCHES WITH AREA SERVED.

2 CONNECT LIGHTING CIRCUIT TO CIRCUIT SHOWN THROUGH THE STORE LIGHTING SWITCH BANK. PROVIDE ONE UNSWITCHED CONDUCTOR FOR CONNECTION TO LOCALLY-SWITCHED FIXTURES, FIXTURES DESIGNATED AS NIGHT LIGHTS, EXIT SIGNS, AND EMERGENCY FIXTURES.

3 WALL MOUNT THE EMERGENCY LIGHT FIXTURE AT 6" BELOW THE CEILING UNLESS NOTED OTHERWISE

4 VERIFY MOUNTING HEIGHT OF EXIT SIGN PRIOR TO ROUGH IN. EXIT SIGN MUST BE VISIBLE FROM AREA SERVED AFTER BUILDING SYSTEMS HAVE BEEN INSTALLED.

5 PROVIDE DOUBLE-POLE SINGLE-THROW LIGHT SWITCH IN OFFICE FOR CONTROL OF OFFICE LIGHT AND RESTROOM EXHAUST FAN.

6 INSTALL LIGHT FIXTURES FURNISHED WITH THE WALK-IN COOLER

7 INSTALL DUAL-LITE LG2S EMERGENCY LIGHTING MINI INVERTERS, EM1 AND EM2, FURNISHED BY OWNER ON WALL. CONNECT TO CIRCUIT SHOWN. INVERTER SHALL BE CAPABLE OF POWERING UP TO 250W OF FLUORESCENT LIGHT FIXTURES AT 100% LIGHT OUTPUT FOR 90 MINUTES.

8 CONNECT LIGHTS TO EMERGENCY LIGHTING INVERTER SHOWN. CONNECT LIGHTS SO THAT THEY OPERATE 24 HOURS PER DAY AS NIGHT LIGHTS AND ALSO STAY ILLUMINATED DURING A LOSS OF POWER AS EMERGENCY LIGHTS.

9 PROVIDE GFCI RECEPTACLES FOR UNDERSHELF LIGHTING AS SHOWN IN DETAIL 5/E110. CONNECT TO SWITCHED LEG OF THE KITCHEN LIGHTING CIRCUIT AS SHOWN. SEE ARCHITECTURAL ELEVATIONS FOR RECEPTACLE LOCATIONS AND HEIGHTS. RECEPTACLES SHALL BE INSTALLED INA HORIZONTAL ORIENTATION.

10 INSTALL HANGING LIGHT FIXTURES WITH LOOSE CORD SO THAT CORD HAS 6"-12" OF SLACK. DO NOT SECURE CORD TO HANGING ROD. TYPICAL.

11 PROVIDE UNISTRUT AS SHOWN ON THE ARCHITECTURAL RCP PER THE ARCHITECTURAL UNISTRUT DETAIL. TYPICAL.

12 CONCEAL EMERGENCY LIGHT FIXTURE ABOVE THE RESTROOM AND BELOW THE TOP OF THE PLYWOOD BOX TO POWER REMOTE EMERGENCY FIXTURE. LIGHT FIXTURE SHALL NOT BE VISIBLE FROM THE DINING ROOM AND RESTROOMS.

13 PROVIDE QUAD RECEPTACLE CONCEALED ABOVE BOX. CONNECT TO A SWITCHED LEG OF THE LIGHTING CIRCUIT AS SHOWN.

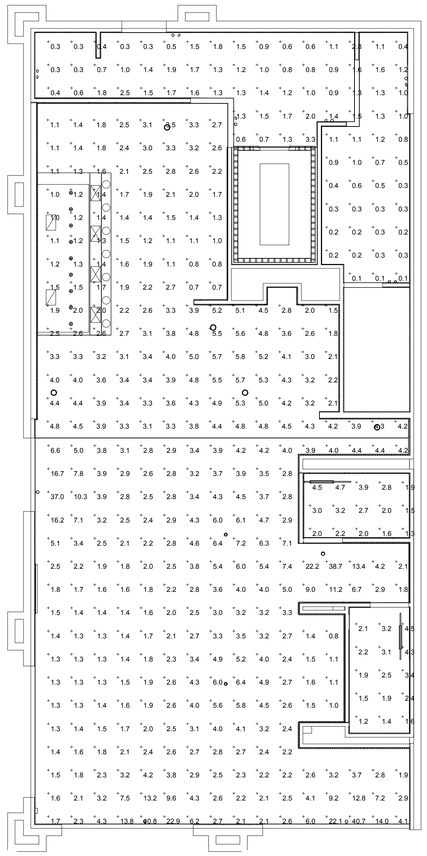
14 PROVIDE (2) GFCI RECEPTACLES FOR UNDERSHELF LIGHTING AS SHOWN. CONNECT TO SWITCHED LEG OF THE KITCHEN LIGHTING CIRCUIT AS SHOWN. SEE ARCHITECTURAL ELEVATIONS FOR RECEPTACLE LOCATIONS AND HEIGHTS.

15 CONNECT EXTERIOR LIGHTING CIRCUIT TO CIRCUIT SHOWN THROUGH THE EXTERIOR LIGHTING CONTACTOR PANEL PER DETAIL 2/E200.

16 INSTALL WALL-MOUNTED OCCUPANCY SENSOR FURNISHED BY LIGHTING SUPPLIER. ADJUST SETTINGS SWITCHES SO THAT SWITCHES 1, 2, 3, 7, AND 8 ARE UP AND SWITCHES 4, 5, AND 6 ARE DOWN.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	CONDUIT
G	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPT
IG	ISOLATED GROUND
JB	JUNCTION BOX
NL	NIGHT LIGHT
S	SURFACE MOUNTED
WP	WEATHERPROOF
GC	GENERAL CONTRACTOR
HES	TENANT'S HVAC EQUIPMENT SUPPLIER
TAB	TENANT'S TEST AND BALANCE VENDOR
TCC	TENANT'S CABLING CONTRACTOR
TES	TENANT'S KITCHEN EQUIPEMNT SUPPLIER
THS	TENANT'S HOOD SUPPLIER
TLS	TENANT'S LIGHT/LAMP SUPPLIER
TMB	TENANT'S MENU BOARD SUPPLIER
TMS	TENANT'S MILLWORK SUPPLIER
TP	TENANT'S PHONE SUPPLIER
TRS	TENANT'S RAILING SUPPLIER
TSV	TENANT'S SIGN VENDOR
WCS	TENANT'S WALK-IN COOLER SUPPLIER

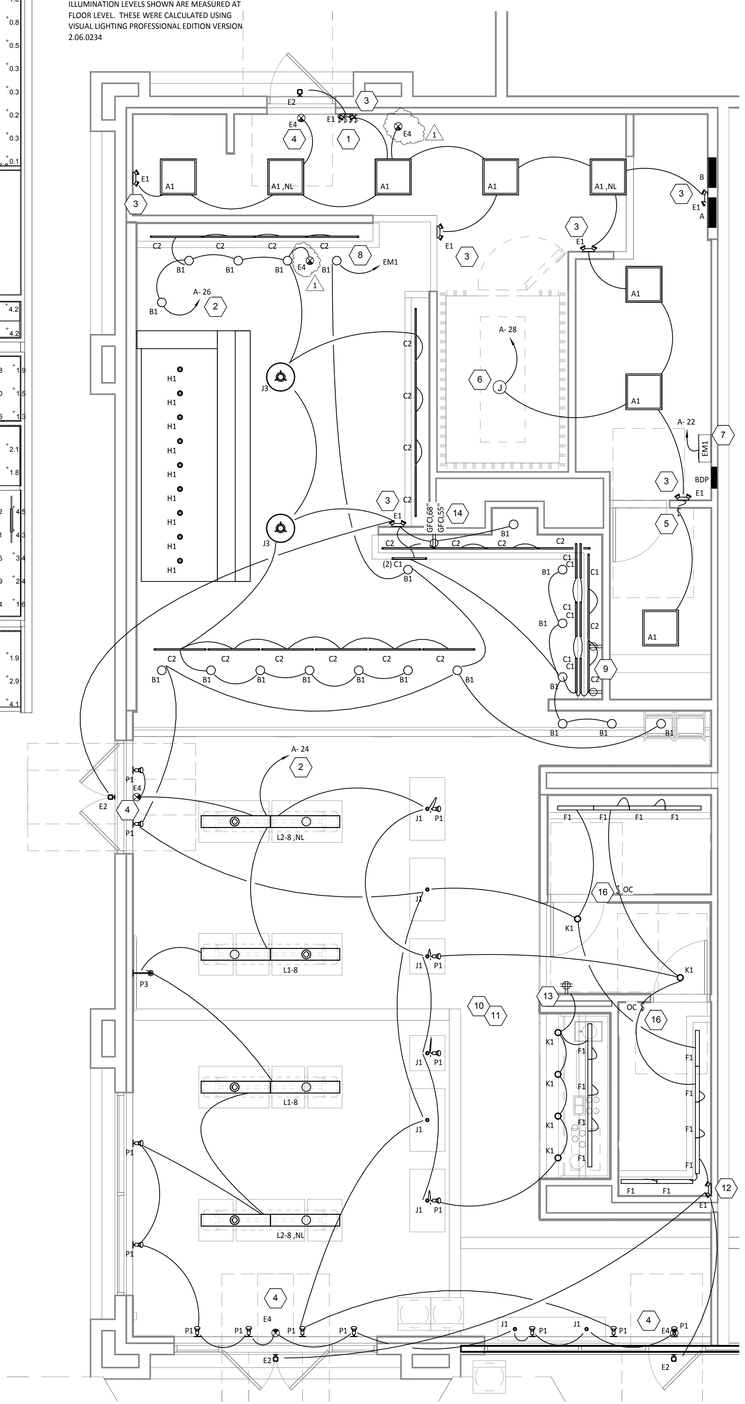


2 / E100 **EMERGENCY LIGHTING PHOTOMETRIC PLAN**
1/4" = 1'-0"

PHOTOMETRIC STATISTICS

AREA	MAX	MIN	AVG
MEN'S RR	4.7 FC	1.3 FC	2.6 FC
WOMEN'S RR	4.5 FC	1.2 FC	2.5 FC
DINING	40.8 FC	0.8 FC	4.5 FC
BACK OF HOUSE	3.3 FC	0.1 FC	1.0 FC
KITCHEN	5.8 FC	0.7 FC	2.9 FC

ILLUMINATION LEVELS SHOWN ARE MEASURED AT FLOOR LEVEL. THESE WERE CALCULATED USING VISUAL LIGHTING PROFESSIONAL EDITION VERSION 2.06.0234



1 / E100 **LIGHTING FLOOR PLAN**
1/4" = 1'-0"

LIGHTING FIXTURE SCHEDULE

TAG	TYPE	MOUNT	FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL	LAMP(S)	VOLTS	WATTS	SPECIAL REQUIREMENTS
A1	2x2 LENSED TROFFER	LAY-IN	TLS	GC	CRESCENT	22GP417FSA1BL4YK3	(4)FO17/830/ECO	120	68	
B1	RECESSED 6IN CAN LIGHT	CEILING	TLS	GC	NORA LIGHTING	NHIC-8G24ATFL with NTM-57W/M1 Trim	(1) 12W CREE PAR38 LED (20°-2700K) W/ GU 24 BASE	120	12	
C1	LOW PROFILE FLUORESCENT 2FT	SURFACE	TLS	GC	HERA	ES22WW/BC	(1) FP14/830/ECO (INCLUDED)	120	14	FURNISHED WITH COVERS, (1) HARDWIRE BOX, AND CONNECTORS, OR CORD & PLUG
C2	LOW PROFILE FLUORESCENT 3FT	SURFACE	TLS	GC	HERA	ES34WW/BC	(1) FP21/830/ECO (INCLUDED)	120	21	FURNISHED WITH COVERS, (1) HARDWIRE BOX, AND CONNECTORS, OR CORD & PLUG
E1	EMERGENCY LIGHT - DUAL HEAD	VARIOUS	TLS	GC	EXITRONIX	LED-90 WHITE	(2) SPECIAL LED	120	2	90 MINUTE BATTERY BACKUP
E2	EMERGENCY LIGHT - SINGLE HEAD	VARIOUS	TLS	GC	EXITRONIX	HLED-BL-WP with PMC-B-1 Mounting Plate	(1) SPECIAL LED	120	1	EXTERIOR REMOTE EMERGENCY HEAD
E4	WHITE EXIT LIGHT - STANDARD RED LETTERS	VARIOUS	TLS	GC	EXITRONIX	VEX-BP-WB-WH	(1) SPECIAL LED	120	4	90 MINUTE BATTERY BACKUP, FURNISHED WITH WALL MOUNT
F1	2' T8 FLUORESCENT FIXTURE	SURFACE	TLS	GC	CRESCENT	C117BK1Y	(1)FO17/830/ECO	120	17	
H1	HOOD LIGHT	SURFACE	THS/TLS	GC	VAPOR PROOF LIGHT FIXTURE FURNISHED WITH HOOD	FURNISHED WITH HOOD	(1) CF23EL/MINI/827	120	23	INSTALL LAMP FURNISHED SEPARATELY BY LIGHTING SUPPLIER
J1	PENDANT LIGHT - ADJUSTABLE HEIGHT - PAR 20	CEILING	TLS	GC	KAMMETAL	C-LP1-01	(1) 7W ECOSTORY PAR20 LED (50°-2750K) W/ GU 10 BASE	120	7	SEE ARCHITECTURAL RCP FOR STEM LENGTH
J3	PENDANT DOME LIGHT - ADJUSTABLE HEIGHT - PAR20	CEILING	TLS	GC	HI-LITE MFG. CO.	H-CW1600-2	(1) 32W CFL (2700K) W/ GU 24 BASE	120	32	WITH JELLY JAR. SEE ARCHITECTURAL RCP FOR STEM LENGTH
K1	KEYLESS DOWN LIGHT	CONCEALED	TLS	GC	SATCO	90-2467	(1) 12W ECOSTORY PAR30 LED (30°-2750K) W/ GU 24 BASE	120	12	
L1-8	LONG LIGHT - 8 TOP - PAR 20	SUSPENDED	TMS/TLS	GC	KAMMETAL	C-LL1-08	(0) FP21/830/ECO, (4) FP28/830/ECO (4) 7W ECOSTORY PAR20 LED (50°-2750K) W/ GU 10 BASE	120	140	WITH DUAL CIRCUIT SWITCHING, 223-T5-XX COLORED FLUOR. SLEEVES
L2-8	LONG LIGHT - 8 TOP - PAR 20 - W/ EM BALLAST	SUSPENDED	TMS/TLS	GC	KAMMETAL	C-LL2-08-EM	(0) FP21/830/ECO, (4) FP28/830/ECO (4) 7W ECOSTORY PAR20 LED (50°-2750K) W/ GU 10 BASE	120	140	WITH DUAL CIRCUIT SWITCHING, EM BALLASTS, 223-T5-XX COLORED FLUOR. SLEEVES
P1	ACCENT LIGHT - SWIVEL SPOT LIGHT - SINGLE HEAD	CEILING	TLS	GC	LUMOS	MS-4020-B-2010035-F1 w/ (1) MS-4042-A	(1) 12W ECOSTORY PAR30 LED (30°-2750K) W/ GU 24 BASE	120	12	
P3	ACCENT LIGHT - ARTWORK LIGHT FIXTURE	WALL	TLS	GC	KAMMETAL	C-LC2-01A	(1) 12W ECOSTORY PAR30 LED (30°-2750K) W/ GU 24 BASE	120	12	

LIGHTING FIXTURE SCHEDULE NOTES

A. FLUORESCENT LAMPS NOT INCLUDED WITH THE FIXTURE ARE TO BE MANUFACTURED BY SYLVANIA UNLESS OTHERWISE NOTED. PHILIPS FLUORESCENT LAMPS WILL BE AN ACCEPTABLE ALTERNATE.
B. SEE THE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LIGHT LOCATIONS.
C. SEE THE ARCHITECTURAL LIGHTING DETAILS FOR FIXTURE CONSTRUCTION DETAILS.

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Contents: Electrical Lighting Plan

E100

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PLAN NOTES

1 SHOW ROOM WINDOW RECEPTACLE. COORDINATE EXACT RECEPTACLE MOUNTING HEIGHT IN THE FIELD. LOCATION SHALL BE IN THE DRYWALL IMMEDIATELY ABOVE THE MAIN STORE-FRONT WINDOW.

2 ICE MACHINE ELECTRICAL TIE-IN. COORDINATE EXACT LOCATION WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN. PROVIDE TWO PHASE CONDUCTORS, ONE NEUTRAL CONDUCTOR, AND ONE GROUND CONDUCTOR TO THE L14-20R RECEPTACLE. PROVIDE L5-20P FLANGED INLET WIRED TO THE REMOTE CONDENSER. PROVIDE 48" CORDS, ONE WITH L14-20P END AND ONE WITH L5-20R END, FROM ICE MAKER TO RECEPTACLE AND FLANGED INLET.

3 PROVIDE RECEPTACLES FOR TELEPHONE BACKBOARDS AND T1 ROUTER AND TWO EMPTY DUAL-GANG J-BOX WITH 1" CONDUITS ROUTED TO ABOVE OFFICE CEILING.

4 PROVIDE SHUNT TRIP CIRCUIT BREAKER FOR CIRCUITS SERVING EQUIPMENT BELOW THE KITCHEN HOOD. CONNECT SHUNT TRIP CIRCUIT BREAKER TO HOOD FIRE PROTECTION SYSTEM SO THAT RECEPTACLE IS DE-ENERGIZED UPON ACTIVATION OF HOOD FIRE PROTECTION SYSTEM.

5 JUNCTION BOX FOR EXTERIOR SIGN LIGHTING. COORDINATE EXACT LOCATION WITH CHIPOTLE'S CONSTRUCTION MANAGER AND THE SIGN INSTALLER PRIOR TO ROUGH-IN. CONNECT TO CIRCUIT SHOWN THROUGH THE EXTERIOR LIGHTING CONTACTOR PANEL AS SHOWN IN DETAIL 2/E200.

6 PROVIDE 4" OCTAGONAL JUNCTION BOX WITH SCREW THREADS SET AT THE 2 & 8 O'CLOCK POSITIONS FOR THE ANSUL PULL STATION. PROVIDE A 1/2" CONDUIT FROM THE J-BOX TO 6" ABOVE THE CEILING AND TERMINATE WITH A CONDUIT BUSHING. COORDINATE EXACT LOCATION WITH THE ANSUL SYSTEM INSTALLER AND THE FIRE MARSHALL PRIOR TO ROUGH-IN.

7 HOOD CONTROL PANEL AND ANSUL CABINET SHALL BE LOCATED WITHIN THE INTEGRAL HOOD UTILITY CABINET. PROVIDE FINAL ELECTRICAL CONNECTIONS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.

8 INSTALL WIRING HARNESS FURNISHED WITH WALK-IN COOLER FROM CONDENSING UNIT ON ROOF TO THE CAPSULE-PAK REFRIGERATION MODULE ON THE WALK-IN COOLER.

9 PROVIDE AN EMPTY SINGLE GANG J-BOX FOR VOLUME CONTROLS. INSTALL THE 22/2 VOLUME CONTROL WIRE FURNISHED BY THE OWNER FROM THE J-BOX TO THE AMPLIFIER IN THE OFFICE WITH 3 FEET OF SLACK AT EACH END.

10 COORDINATE DATA/POWER RECEPTACLE MOUNTING REQUIREMENTS WITH THE CASE WORK INSTALLER PRIOR TO ROUGH-IN. SEE ARCHITECTURAL ELEVATION FOR THE POS ELEVATION.

11 CONNECT WALK-IN COOLER LIGHTS TO CIRCUIT SHOWN.

12 PROVIDE (3) 2" X 1'-6" X 3/4" PLYWOOD BACKBOARDS ABOVE THE OFFICE DOOR FOR THE TELEPHONE, SECURITY, AND T1 SYSTEMS. LOCATE ONE ABOVE AND TWO BELOW THE DROP-TILE CEILING. SEE ARCHITECTURAL ELEVATION FOR DETAILS.

13 PROVIDE AN EMPTY 3/4" CONDUIT WITH PULL STRING FROM THE BASE BUILDING'S TELEPHONE SERVICE ENTRANCE LOCATION TO THE SPACE ABOVE THE OFFICE CEILING.

15 SEE ARCHITECTURAL SHEETS FOR EXACT LOCATION AND MOUNTING HEIGHT FOR FAX LINE, OFFICE, AND POS RECEPTACLES. LABEL FAX LINE, OFFICE, AND POS RECEPTACLES PER ARCHITECTURAL ELEVATIONS. AFTER THE FAX LINE, POS, AND OFFICE EQUIPMENT IS INSTALLED PROVIDE CHILDPROOF RECEPTACLE COVERS ON UNUSED IG RECEPTACLES AT THE FAX LINE, POS, AND OFFICE.

16 PROVIDE ONE PHASE, ONE NEUTRAL, AND ONE GROUND CONDUCTOR FROM THE ICE MAKER TO THE REMOTE CONDENSER CU-2.

17 UNIT SHALL HAVE AN INTEGRAL NON-FUSED DISCONNECT SWITCH.

18 PROVIDE DOOR CHIME AND BUZZER AT 96" AFF SEE ARCHITECTURAL DOOR EQUIPMENT FOR EQUIPMENT INFORMATION.

19 INSTALL THE BYPASS DISTRIBUTION PANEL (BDP) FURNISHED BY THE OWNER. INSTALL PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DETAIL 3/E200.

20 ROUGH-INS TO SERVE LINE AND POS EQUIPMENT IS UNDERGROUND. COORDINATE ROUGH-IN REQUIREMENTS AND LOCATIONS WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN.

21 ROOFTOP UNIT SHALL HAVE AN INTEGRAL UNIT-MOUNTED GFCI RECEPTACLE.

22 ICE MAKER RECEPTACLES SHALL BE CONCEALED BEHIND THE ICE MAKER. COORDINATE LOCATION WITH ACTUAL WIDTH OF ICE MAKER.

23 PROVIDE SINGLE GANG VERTICAL METAL DIE CAST WEATHERPROOF WHILE IN USE OUTLET COVER ON RECEPTACLES AT COOK LINE AND UNDER FOUR-COMPARTMENT SINK. COVER SHALL BE INTERMATIC WP1010MXD FOR SINGLE GANG BOXES AND WP1030MXD FOR DOUBLE GANG BOXES. NO SUBSTITUTIONS SHALL BE ACCEPTED.

24 LABEL BATTERY-PROTECTED RECEPTACLES "BATTERY-PROTECTED: DISCONNECT AT PANEL BDP".

25 LABEL MAIN DISCONNECT SWITCH AND PANEL A "WARNING: BATTERY-PROTECTED RECEPTACLES IN USE. DISCONNECT AT PANEL BDP."

26 PROVIDE A NEMA 5-15P FLANGED INLET (LEVITON MODEL #5239) AND A SINGLE NEMA 5-20R RECEPTACLE IN OFFICE FOR CONNECTION TO A CENTRAL UPS SYSTEM. CONNECT THE FLANGED INLET AND THE SINGLE RECEPTACLE TO THE TERMINAL BLOCK IN THE BDP PER THE MANUFACTURER'S INSTRUCTIONS. PROVIDE FINAL CONNECTION FROM FLANGED INLET TO THE OUTPUT OF THE UPS USING A 2'-LONG 20A EXTENSION CORD. PLUG THE UPS INTO THE SINGLE RECEPTACLE.

27 CONNECT EXHAUST FAN TO CIRCUIT SHOWN THROUGH THE DOUBLE-POLE SINGLE-THROW LIGHT SWITCH IN THE OFFICE.

28 INSTALL 16/2 SPEAKER WIRE FURNISHED BY OWNER FROM THE SPEAKER LOCATION TO THE AMPLIFIER IN THE OFFICE WITH 3 FEET OF SLACK AT EACH END. SEE ARCHITECTURAL PLANS FOR SPEAKER LOCATIONS.

29 PROVIDE POWER CONNECTIONS UNDER PREP TABLE INSTALLED IN A METALLIC PEDESTAL MOUNTED ON TOP OF A CURB PER DETAIL 6/E110. PROVIDE GFCI DUPLEX RECEPTACLES IN THREE J-BOXES INTEGRAL TO PREP TABLES (FOR UNDERCOUNTER REFRIGERATOR, HOT HOLDING CABINET, AND GENERAL RECEPTACLE). PROVIDE FINAL CONNECTION FROM PEDESTALS TO RECEPTACLES AND CARVING STATION USING LIQUIDTIGHT CONDUIT HELD TIGHT TO PREP TABLES.

31 PROVIDE RECEPTACLES SHOWN AT 55" BELOW THE SHELVING IN A HORIZONTAL ORIENTATION.

36 PROVIDE PASS & SEYMOUR 2095GRY (GRAY) SPEC GRADE 20A DUPLEX GFCI RECEPTACLE FOR SALAD SPINNER.

37 PROVIDE 1" CONDUITS FROM LOW-VOLTAGE J-BOXES AT POS COUNTER CONCEALED WITHIN THE SERVE LINE WIRING CHASE TO THE WALL, THEN CONCEALED WITHIN THE WALL AND ABOVE THE CEILING TO ABOVE THE OFFICE CEILING.

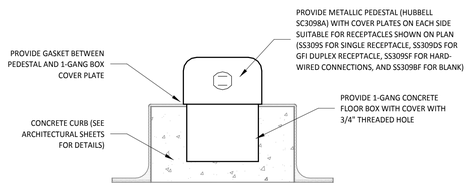
38 PROVIDE J-BOX IN CEILING AS SHOWN. PROVIDE 1" CONDUIT FROM J-BOX TO ABOVE THE OFFICE CEILING. SEE ARCHITECTURAL RCP FOR EXACT LOCATION.

39 INSTALL LAUNCHPORT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH THE WALLSTATION AT 62" AFF AND THE WALL PLATE DIRECTLY ABOVE THE WALLSTATION AT 90" AFF. SEE ARCHITECTURAL DRAWINGS FOR HORIZONTAL LOCATION OF WALL PLATE AND WALLSTATION. PROVIDE SINGLE-GANG J-BOX AT 90" AFF FOR THE WALL PLATE INSTALLATION, A 4" X 2-1/8" DEEP OCTAGON J-BOX AT 62" AFF FOR THE WALLSTATION INSTALLATION, AND A 3/4" CONDUIT BETWEEN THE TWO J-BOXES. INSTALL THE CONNECTING CORD THROUGH THE CONDUIT BETWEEN THE WALLSTATION AND THE WALL PLATE J-BOXES. PROVIDE RECEPTACLE AT 90" AFF NEXT TO THE WALL PLATE J-BOX AS SHOWN. THE RECEPTACLE AND WALL PLATE AT 90" AFF SHALL BE CONCEALED FROM PUBLIC VIEW BY THE HOOD.

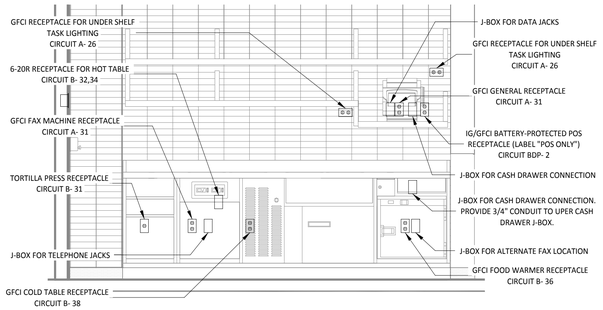
40 ALL KITCHEN RECEPTACLES RATED AT 15A OR 20A AT 120V MUST BE A GFCI RECEPTACLE.

ELECTRICAL SYMBOLS

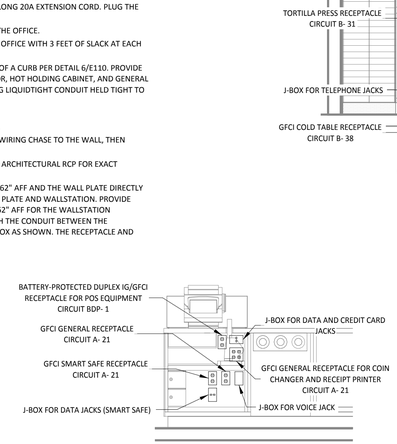
- CONDUIT CONCEALED ABOVE THE CEILING, IN A WALL, OR IN A RACEWAY
- CONDUIT CONCEALED BELOW THE SLAB
- A-6 — HOME-RUN TO PANELBOARD AND CIRCUIT NUMBER SHOWN
- # — PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- X/Y/Z — DISCONNECT SWITCH: X = SWITCH RATING; Y = FUSE SIZE (NF = NON-FUSED); Z = NUMBER OF POLES
- J — JUNCTION BOX
- ELECTRIC PANELBOARD
- S — GENERAL PURPOSE 1-POLE SWITCH
- S M — MANUAL STARTER WITH PILOT LIGHT
- S WP — WEATHER-PROOF SWITCH
- S OC — OCCUPANCY SENSOR ACTIVATED WALL SWITCH (HUBBELL LHMTS1W - LIGHTHAWK PIR & US SINGLE CIRCUIT,WHITE)
- NEMA 5-20R 1-PLEX RECEPTACLE
- NEMA 5-20R DUPLEX RECEPTACLE
- NEMA 5-20R DOUBLE-DUPLEX RECEPTACLES
- IG/GFI — NEMA 5-20R DUPLEX COMBINATION ISOLATED GROUND/GFI RECEPTACLE PASS & SEYMOUR MODEL#2095IGTRO
- OTHER RECEPTACLE - SEE PLAN FOR RATING AND TYPE
- JUNCTION BOX FOR RJ-45 DATA OUTLETS. PROVIDE 1" CONDUIT WITH PULL STRING FROM J-BOX TO ABOVE OFFICE CEILING. TERMINATE CONDUIT WITH CONDUIT BUSHING.
- DOUBLE GANG JUNCTION BOX FOR RJ-45 DATA OUTLETS. PROVIDE 1" CONDUIT WITH PULL STRING FROM J-BOX TO ABOVE OFFICE CEILING. TERMINATE CONDUIT WITH CONDUIT BUSHING.
- JUNCTION BOX FOR RJ-11 TELEPHONE OUTLETS. PROVIDE 1" CONDUIT WITH PULL STRING FROM J-BOX TO ABOVE OFFICE CEILING. TERMINATE CONDUIT WITH CONDUIT BUSHING.
- KP — SECURITY SYSTEM KEYPAD: PROVIDE A RECESSED JB WITH A 1/2" CONDUIT TO ABOVE THE DROP TILE CEILING IN THE OFFICE AREA AND TERMINATE WITH A CONDUIT BUSHING



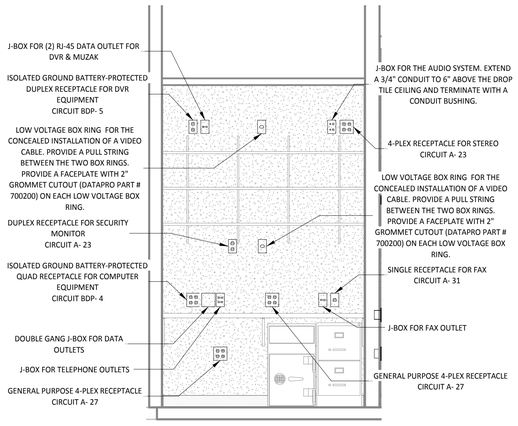
6 E110 **PEDESTAL OUTLET DETAIL**
N.T.S.



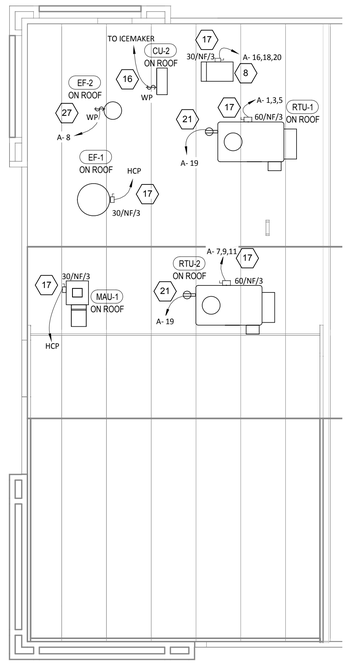
5 E110 **FAX LINE ELECTRICAL ELEVATION**
1/2" = 1'-0"



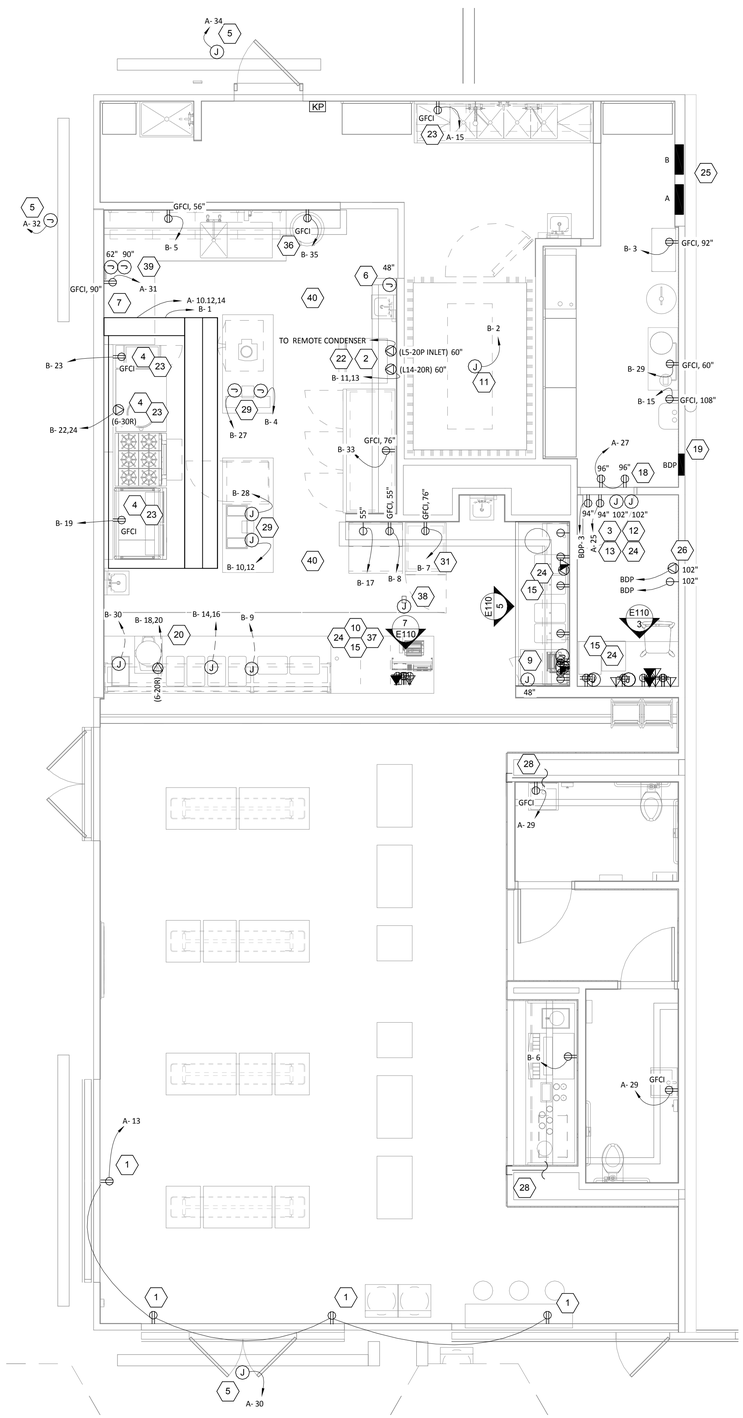
7 E110 **POS COUNTER ELECTRICAL ELEVATION**
1/2" = 1'-0"



3 E110 **OFFICE DESK ELECTRICAL ELEVATION**
1/2" = 1'-0"



2 E110 **POWER ROOF PLAN**
1/8" = 1'-0"



1 E110 **POWER FLOOR PLAN**
1/4" = 1'-0"

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Contents:

Electrical Power Plan

E110

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ELECTRICAL SYMBOLS

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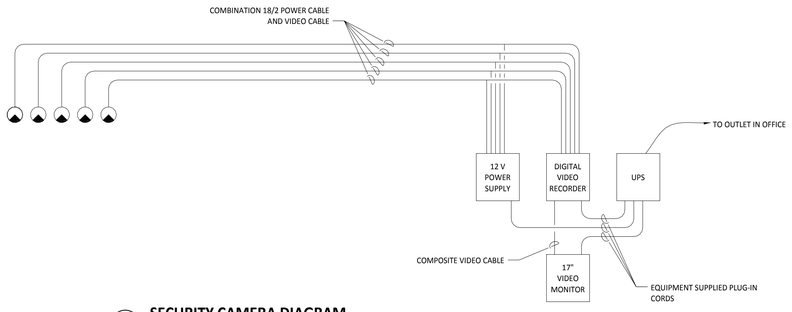
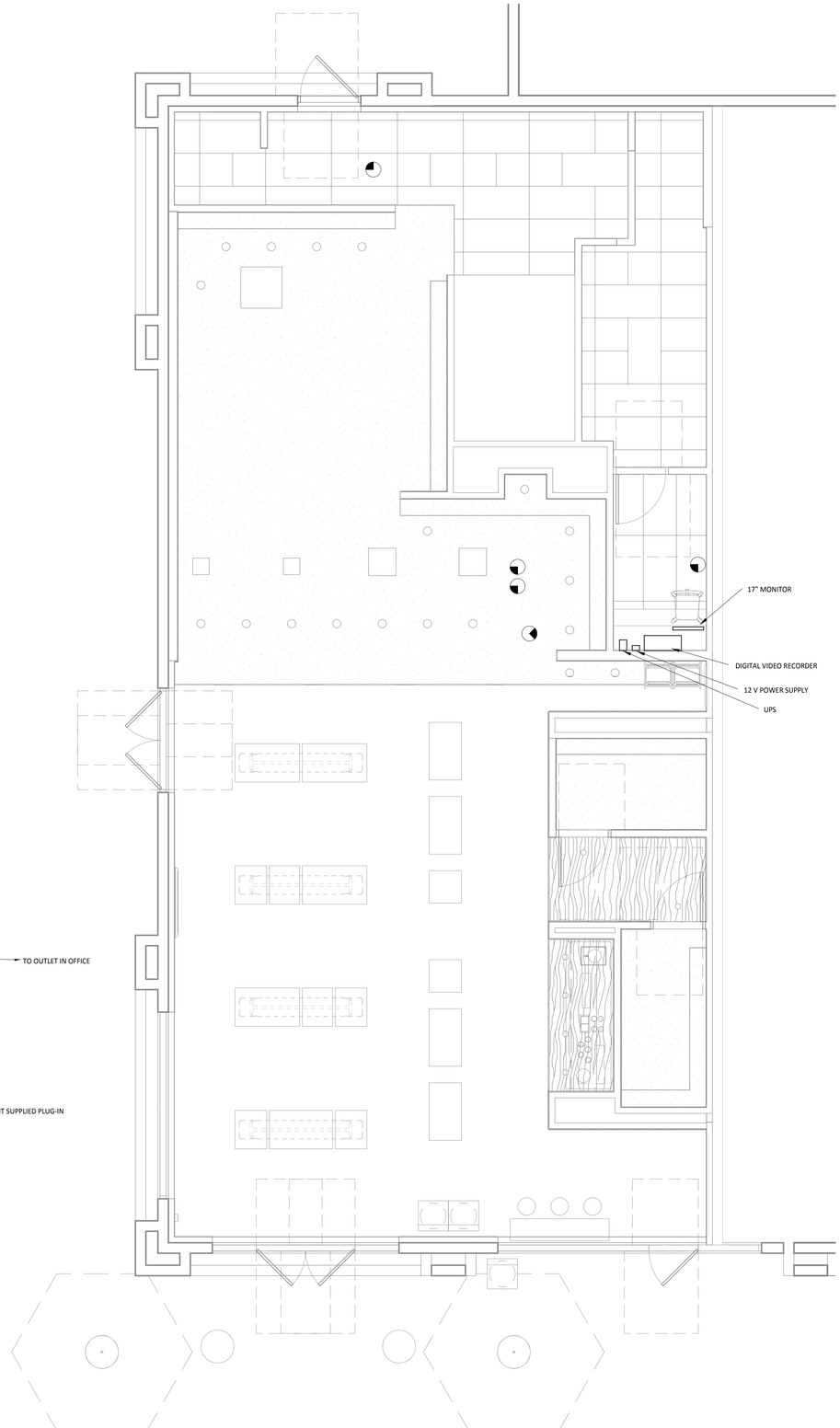
	CONDUIT CONCEALED BELOW THE SLAB
A-6	HOME-RUN TO PANELBOARD AND CIRCUIT NUMBER SHOWN
#	PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
X/Y/Z	DISCONNECT SWITCH: X = SWITCH RATING Y = FUSE SIZE (NF = NON-FUSED) Z = NUMBER OF POLES
J	JUNCTION BOX
	ELECTRIC PANELBOARD
	GENERAL PURPOSE 1-POLE SWITCH
M	MANUAL STARTER WITH PILOT LIGHT
OC	OCCUPANCY SENSOR ACTIVATED WALL SWITCH (MANUFACTURER: WATTSTOPPER)
	NEMA 5-20R DUPLEX RECEPTACLE
	SECURITY CAMERA

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	CONDUIT
G	GROUND
GFI	GROUND FAULT CIRCUIT INTERRUPT
IG	ISOLATED GROUND
JB	JUNCTION BOX
NL	NIGHT LIGHT
S	SURFACE MOUNTED
WP	WEATHERPROOF



2 E120 **SECURITY CAMERA DIAGRAM**
N.T.S.



1 E120 **SECURITY CAMERA FLOOR PLAN**
1/4" = 1'-0"

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Security Camera Plan

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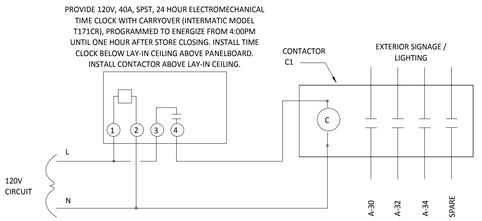
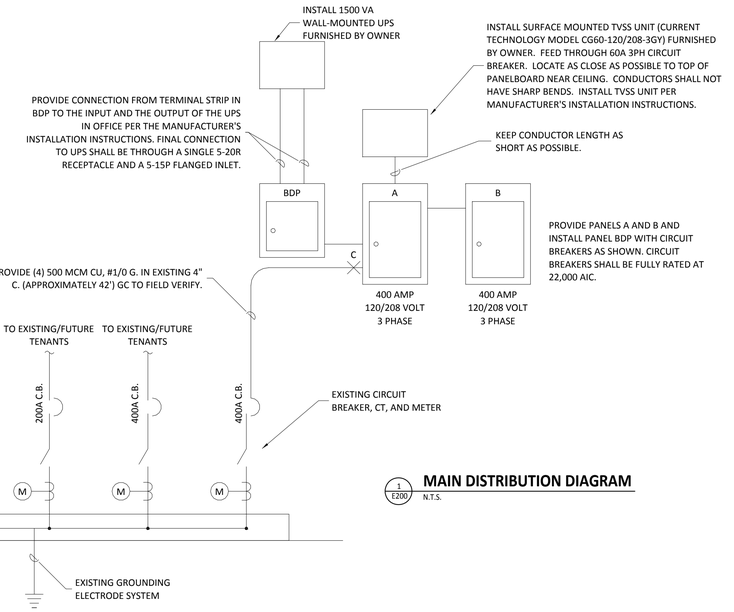
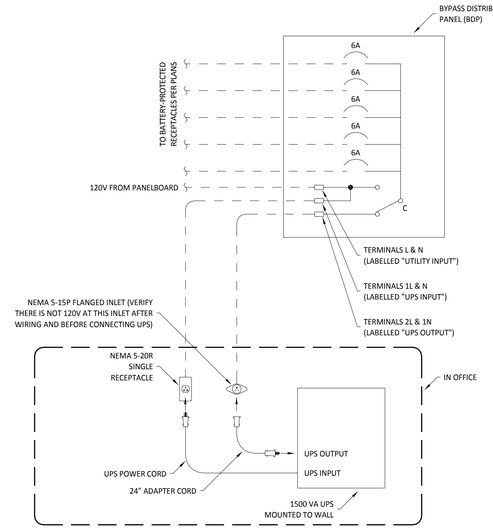


2 E200 **EXTERIOR SIGN LIGHTING CONTROL**
N.T.S.

AVAILABLE FAULT CURRENT CALCULATIONS										
POINT	VOLTAGE	PHASES	CONDUCTOR					f VALUE	M VALUE	AVAILABLE FAULT CURRENT
			LENGTH	# SETS	SIZE	CONDUIT TYPE	C VALUE			
A	208 V	3								31,259 A
B	208 V	3	100 FT	3	400 MCM CU	PVC	24,297	0.357	0.737	23,038 A
C	208 V	3	42 FT	1	500 MCM CU	PVC	26,706	0.302	0.768	17,693 A



1 E200 **MAIN DISTRIBUTION DIAGRAM**
N.T.S.



3 E200 **BYPASS DISTRIBUTION PANEL WIRING DIAGRAM**
N.T.S.

Panel Name: BDP **Volts:** 120
Phases: 1 **Mains:** LUGS
Mounting: Recessed **Amperage:** 30 A
Enclosure: Type 1
Wires: 3

CKT	Circuit Description	Trip	Poles	Load
1	POS	6 A	1	0.2 kVA
2	Fax Line	6 A	1	0.2 kVA
3	Office - Network Gear	6 A	1	0.2 kVA
4	Office - Computer	6 A	1	0.4 kVA
5	Office - DVR	6 A	1	0.2 kVA
			Total Load:	0.5 kVA
			Total Amps:	5 A

Volts: 208/120V Wye **Panel:** A
Phases: 3 **Mains:** LUGS
Wires: 4 **Amperage:** 400 A
Mounting: Recessed **MCB Rating:**
Enclosure: Type 1

CKT	Circuit Description	Rating	Poles	Type Notes	CKT AMPS	Load Type	A		B		C		Load Type	CKT AMPS	Type Notes	Poles	Rating	Circuit Description	CKT
1	RTU-1 (3-#8, #10 G. in 3/4" C.)	50 A	3	HACR	32.3	C	3.9 kVA	0.0 kVA					-	0.0		3	60 A	TVSS	2
3	--	--	--	--	--	--			3.9 kVA	0.0 kVA			--	--	--	--	--	--	4
5	--	--	--	--	--	--					3.9 kVA	0.0 kVA	--	--	--	--	--	--	6
7	RTU-2 (3-#8, #10 G. in 3/4" C.)	50 A	3	HACR	42.0	C	5.0 kVA	0.5 kVA					E	4.4		1	15 A	EF-2	8
9	--	--	--	--	--	--			5.0 kVA	1.4 kVA			E	11.7		3	30 A	EF-1/MAU-1 (3-#10, #10 G. IN 3/4" C)	10
11	--	--	--	--	--	--					5.0 kVA	1.4 kVA	--	--	--	--	--	--	12
13	RECEPTACLES - STOREFRONT Receptaculo	20 A	1		6.0	G	0.7 kVA	1.4 kVA					--	--	--	--	--	--	14
15	WARE-WASH FLOOR DRYER Secador del Piso	20 A	1		9.8	F			1.2 kVA	2.0 kVA			F	16.2		3	20 A	CU-1 (WIC)	16
17	Panel BDP	20 A	1		9.0	G					0.5 kVA	2.0 kVA	--	--	--	--	--	--	18
19	RECEPTACLES - ROOFTOP Receptaculo	20 A	1		3.0	G	0.4 kVA	2.0 kVA					--	--	--	--	--	--	20
21	RECEPTACLES - POS GENERAL Receptaculo	20 A	1		6.0	G			0.7 kVA	0.3 kVA			A	2.8		1	20 A	LIGHTING - EM/NL Luces	22
23	SECURITY/AUDIO Sistema de la Seguridad	20 A	1		4.5	G					0.5 kVA	1.4 kVA	A	11.7		1	20 A	LIGHTING - DINING ROOM Luces	24
25	TELEPHONE BACKBOARD Receptaculo	20 A	1		1.5	G	0.2 kVA	1.5 kVA					A	12.5		1	20 A	LIGHTING - FRONT KITCHEN Luces	26
27	RECEPTACLES - OFFICE Recaptaculo	20 A	1		9.0	G			1.1 kVA	0.8 kVA			A	6.4		1	20 A	LIGHTING - BACK KITCHEN Luces	28
29	RECEPTACLES - RESTROOMS Recaptaculo	20 A	1		3.0	G					0.4 kVA	0.9 kVA	B	7.5		1	20 A	SIGN LIGHTING Luces	30
31	RECEPTACLES - FAX & LAUNCHPORT Receptaculo	20 A	1		6.0	G	0.7 kVA	0.9 kVA					B	7.5		1	20 A	SIGN LIGHTING Luces	32
33	Spare	0 A	1		--	--			0.0 kVA	0.9 kVA			B	7.5		1	20 A	SIGN LIGHTING Luces	34
35	Spare	0 A	1		--	--					0.0 kVA	0.0 kVA	--	--		1	0 A	Spare	36
37	Spare	0 A	1		--	--	0.0 kVA	0.0 kVA					--	--		1	0 A	Spare	38
39	Spare	0 A	1		--	--			0.0 kVA	0.0 kVA			--	--		1	0 A	Spare	40
41	Spare	0 A	1		--	--					0.0 kVA	0.0 kVA	--	--		1	0 A	Spare	42
						kVA	29.1 kVA		29.2 kVA		26.9 kVA								
						AMPS	246 A		247 A		224 A								

Type	Description	Connected Load	Demand Factor		Estimated Demand
A	Interior Lighting	4 kVA	125.00%		5 kVA
B	Exterior Lighting	3 kVA	125.00%		3 kVA
C	Comfort Cooling	27 kVA	100.00%	+ 25% Largest Motor	27 kVA
D	Comfort Heating	0 kVA	0.00%		0 kVA
E	Miscellaneous Motor	3 kVA	100.00%		3 kVA
F	Kitchen Equipment	41 kVA	65.00%		27 kVA
G	Receptacles	6 kVA	100.00%		6 kVA

Panel Totals (Includes Panel B)

Total Connected kVA: 85 kVA
Total Connected Amps: 237 A
Total Estimated kVA: 70 kVA
Total Estimated Amps: 195 A

Volts: 208/120V Wye **Panel:** B
Phases: 3 **Mains:** LUGS
Wires: 4 **Amperage:** 400 A
Mounting: Recessed **MCB Rating:**
Enclosure: Type 1

CKT	Circuit Description	Rating	Poles	Type Notes	CKT AMPS	Load Type	A		B		C		Load Type	CKT AMPS	Type Notes	Poles	Rating	Circuit Description	CKT
1	HD-1 (CONTROL & LIGHTS)	20 A	1		1.5	E	0.2 kVA	0.2 kVA					F	1.7		1	20 A	WALK-IN COOLER	2
3	SODA CARBONATOR Maquina de la Soda	20 A	1		9.4	F			1.1 kVA	1.4 kVA			F	11.3	GFCI	1	20 A	FOOD PREP TABLE (ISLAND) Receptaculo	4
5	FOOD PREP TABLE Receptaculo	20 A	1	GFCI	11.3	F					1.4 kVA	1.1 kVA	F	9.4	GFCI	1	20 A	SODA SYSTEM DISPENSER Systema de Sodas	6
7	REACH-IN REFRIGERATOR Refrigerador	20 A	1	GFCI	13.8	F	1.7 kVA	0.8 kVA					F	6.3		1	20 A	BLENDER Mezclador	8
9	COLD TOP (SERVE LINE) Refrigerador	20 A	1		12.0	F			1.4 kVA	1.0 kVA			F	10.0		2	20 A	CARVING STATION	10
11	ICE MAKER Maquina del Hielo	20 A	2		10.7	F					1.1 kVA	1.0 kVA	--	--	--	--	--	--	12
13	--	--	--	--	--	--	1.1 kVA	2.1 kVA					F	20.0		2	30 A	HOT FOOD SERVER (SERVE) Servidor Caliente del Alimento (2-#10, #10 G. in 3/4" C.)	14
15	GAS WATER HEATER Calientador de Aqua del Gas	20 A	1		5.0	F			0.6 kVA	2.1 kVA			--	--	--	--	--	--	16
17	TORTILLA PRESS (BACK BAR) Parilla del Emparedado	20 A	1	GFCI	13.8	F					1.7 kVA	1.4 kVA	F	13.0		2	20 A	TORTILLA PRESS (SERVE LINE) Parilla del Emparedado (2-#10, #10 G. in 3/4" C.)	18
19	GAS GRIDDLE	20 A	1	SHNT TRIP	1.5	F	0.2 kVA	1.4 kVA					--	--	--	--	--	--	20
21	SHUNT	--	--	--	--	--			0.0 kVA	0.5 kVA			F	4.8	SHNT TRIP	2	30 A	ELECTRIC RICE COOKER (2-#10, #10 G. in 3/4" C.)	22
23	GAS FRYER	20 A	1	SHNT TRIP	0.6	F					0.1 kVA	0.5 kVA	--	--	--	--	--	--	24
25	SHUNT	--	--	--	--	--	0.0 kVA	0.0 kVA					--	--	--	--	--	SHUNT	26
27	FOOD WARMER (RICE TABLE) Warmer de Alimento	20 A	1		1.5	F			0.2 kVA	1.2 kVA			F	9.8		1	20 A	REFRIGERATOR (COOK LINE) Refrigerador	28
29	WATER SOFTENER Suavizador de Agua	20 A	1		1.5	F					0.2 kVA	0.8 kVA	F	7.0		1	20 A	FUTURE EQUIPMENT	30
31	TORTILLA PRESS (FAX LINE) Parrilla del Emparedado	20 A	1	GFCI	13.8	F	1.7 kVA	1.0 kVA					F	10.0		2	20 A	HOT FOOD SERVER (FAX LINE) Servidor Caliente del Alimento (2-#10, #10 G. in 3/4" C.)	32
33	UPRIGHT REFRIGERATOR Refrigerador	20 A	1		12.0	F			1.4 kVA	1.0 kVA			--	--	--	--	--	--	34
35	SALAD SPINNER	20 A	1		2.1	F					0.3 kVA	1.4 kVA	F	11.7		1	20 A	FOODWARMER (FAX LINE) Warmer de Alimento	36
37	Spare	0 A	1		--	--	0.0 kVA	1.2 kVA					F	10.0	GFCI	1	20 A	COLD TOP (FAX LINE) Refrigerador	38
39	Spare	0 A	1		--	--			0.0 kVA	0.0 kVA			--	--		1	0 A	Spare	40
41	Spare	0 A	1		--	--					0.0 kVA	0.0 kVA	--	--		1	0 A	Spare	42
						kVA	11.4 kVA		12.0 kVA		10.9 kVA								
						AMPS	96 A		101 A		91 A								

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