SUPPLY DIFFUSER SCHEDULE

(A/100) DESIGNATES LABEL FOR DIFFUSER TYPE
DESIGNATES CFM QUANTITY FOR DIFFUSER

ALL DIFFUSERS ARE TO BE PROVIDED WITH OPPOSED BLADE DAMPERS UNLESS OTHERWISE SPECIFIED ON PLANS.

LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
A	TITUS TDC-AA	6"ø	0 – 125	12X12 LOUVERED FACE
B	TITUS TDC-AA	8"ø	130 – 200	24X24 LOUVERED FACE
C	TITUS TDC-AA	10"ø	205 – 325	24X24 LOUVERED FACE
D	TITUS PCS-AA	10"ø	205 – 325	PERFORATED FACE *
E	TITUS S300FS	14X6	130 – 250	DIRECT SPIRAL MOUNTED REGISTER

* SUPPLY DIFFUSERS SHALL BE PROVIDED WITH 4-WAY INTERNAL DEFLECTORS.

RETURN GRILLE SCHEDULE

(#/100) DESIGNATES LABEL FOR GRILLE TYPE
DESIGNATES CFM QUANTITY FOR GRILLE

FILTER SHALL BE PROVIDED AT UNIT.

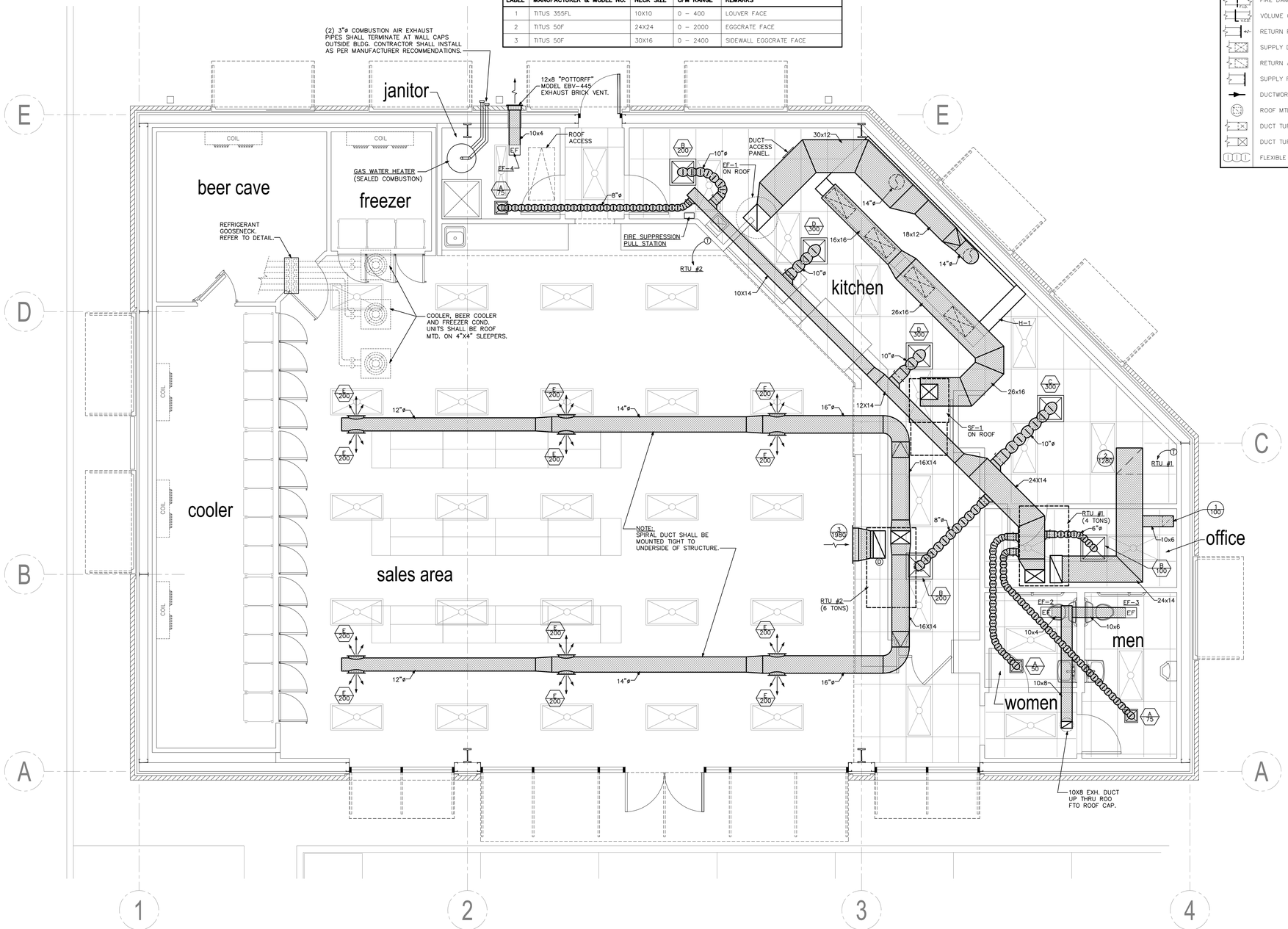
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
1	TITUS 355FL	10X10	0 – 400	LOUVER FACE
2	TITUS 50F	24X24	0 – 2000	EGGCRATE FACE
3	TITUS 50F	30X16	0 – 2400	SIDEWALL EGGCRATE FACE

H.V.A.C. ABBREVIATION LEGEND

A/C	AIR CONDITIONER	REV.	REVISION	A.H.U.	AIR HANDLING UNIT
DN.	DOWN	N.T.S.	NOT TO SCALE	D.G.	DOOR GRILLE
EXH.	EXHAUST	MFGR.	MANUFACTURER	F.I.D.	FIRE DAMPER
EXT.	EXTERIOR	R/A	RETURN AIR	DISP.	DISPOSABLE
E.F.	EXHAUST FAN	GR.	GRILLE	V.C.D.	VOLUME CONTROL DAMPER
A.F.F.	ABOVE FINISH FLOOR	C.D.	CEILING DIFFUSER	F/A	FRESH AIR
F.F.	FINISH FLOOR	REG.	REGISTER	S.P.	SAFE PAN
TYP.	TYPICAL	C.U.	CONDENSING UNIT	CD.	CONDENSATE DRAIN

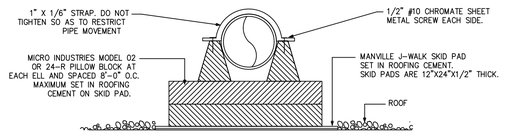
HVAC SYMBOLS LEGEND

(T)	THERMOSTAT, MTD +47" AFF
EF	EXHAUST FAN
A-A	SECTION "A"-"A"
(B)	REMOTE BULB SENSOR
(D)	DUCT SMOKE DETECTOR
	TRANSITION
	TURNING VANE
	45° BRANCH DUCT TAKE-OFF
F.I.D.	FIRE DAMPER
V.C.D.	VOLUME CONTROL DAMPER
	RETURN REGISTER
	SUPPLY DIFFUSER
	RETURN AIR GRILLE
	SUPPLY REGISTER
	DUCTWORK TRANSITION
RF	ROOF MTD. EXH. FAN
	DUCT TURN DOWN
	DUCT TURN UP
	FLEXIBLE DUCT

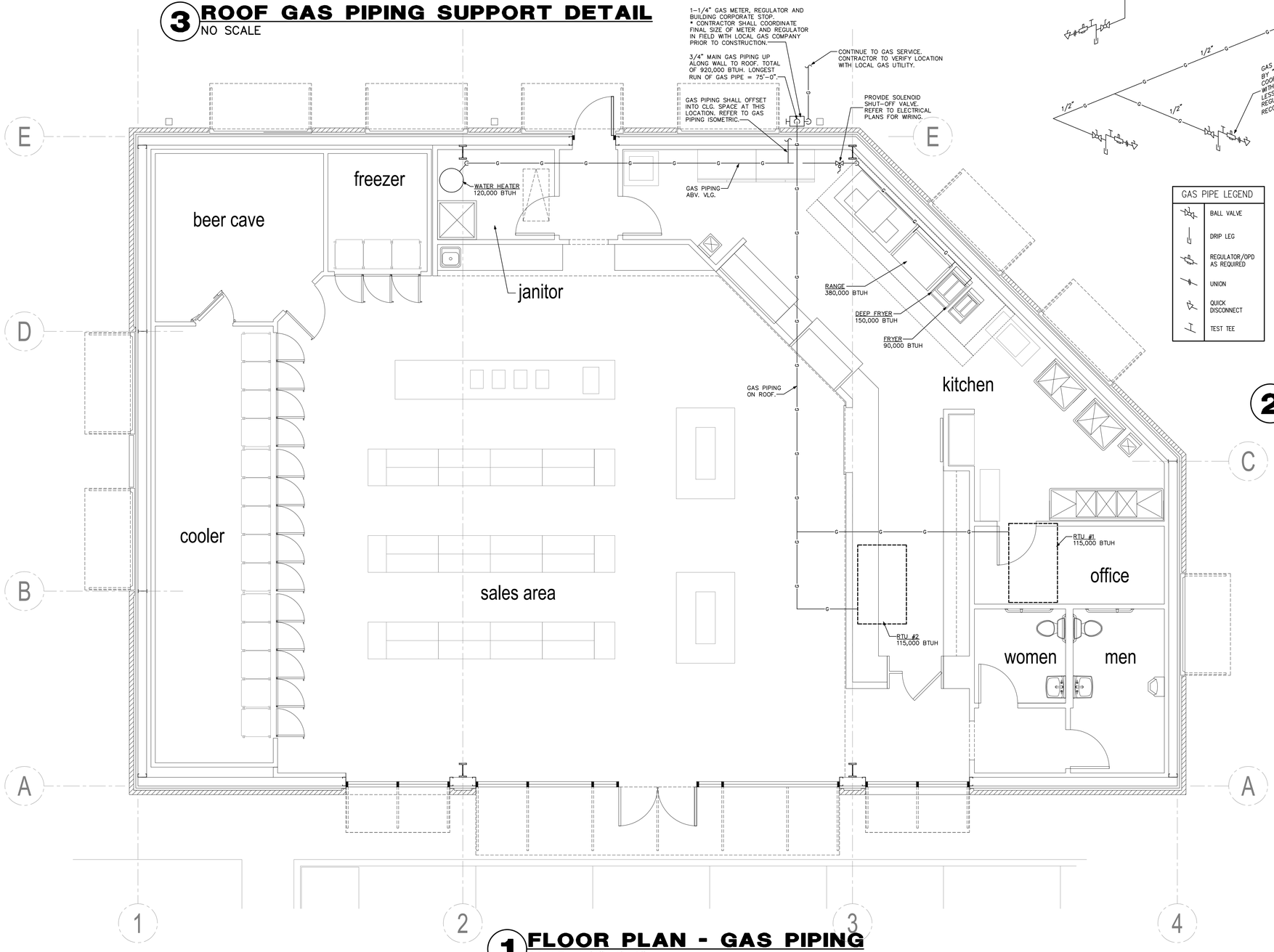


1 FLOOR PLAN - MECHANICAL

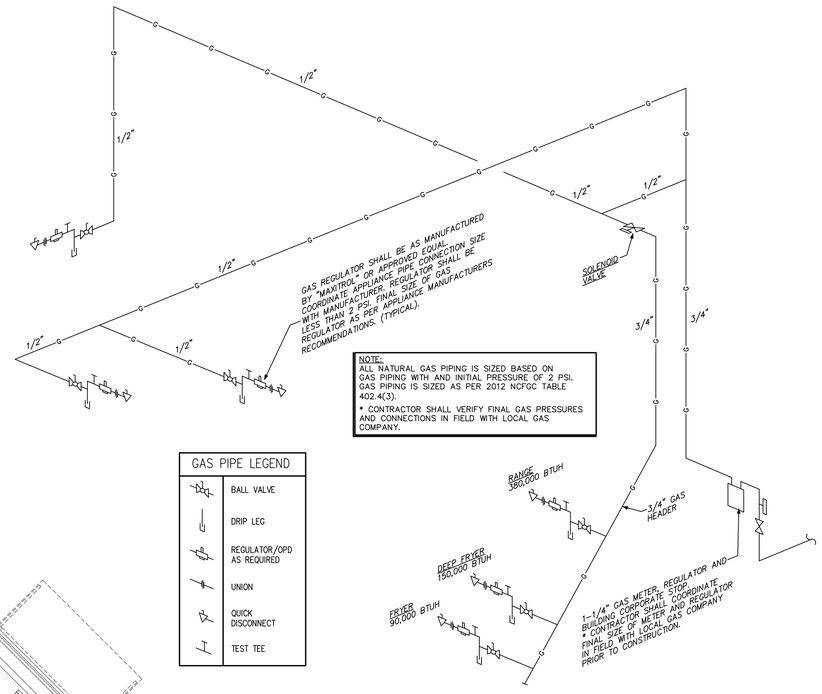
SCALE: 1/4"=1'-0"



3 ROOF GAS PIPING SUPPORT DETAIL
NO SCALE



1 FLOOR PLAN - GAS PIPING
SCALE: 1/4"=1'-0"

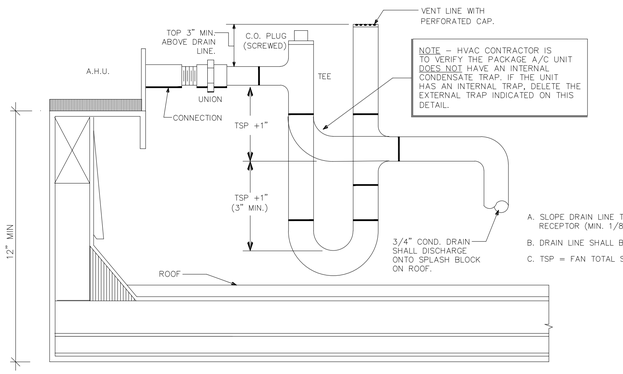


2 GAS PIPING ISOMETRIC
NO SCALE

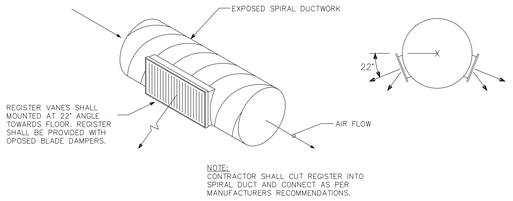
GAS PIPE LEGEND	
	BALL VALVE
	DRIP LEG
	REGULATOR/OPD AS REQUIRED
	UNION
	QUICK DISCONNECT
	TEST TEE

GENERAL GAS PIPING NOTES

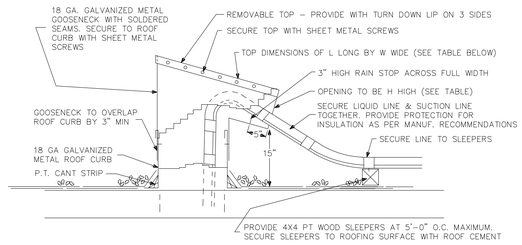
1. GAS PIPING AND FITTINGS SHALL BE SEAMLESS BLACK STEEL WITH MALLEABLE IRON FITTINGS. DIELECTRIC COUPLINGS OR UNIONS SHALL BE UTILIZED WHEN PIPING OF DISSIMILAR METAL IS CONNECTED. EXTERIOR GAS PIPING ON ROOF SHALL BE PAINTED WITH YELLOW "RUSTOLEUM" PAINT. EXPOSED GAS PIPING ON BACK WALL SHALL BE "RUSTOLEUM", PAINTED TO MATCH BUILDING. GAS PIPING CONNECTIONS SHALL BE THREADED UNLESS OTHERWISE REQUIRED BY CODE.
2. GAS PIPING SYSTEM SHALL BE INSTALLED TO THE REQUIREMENTS OF THE AGA PAMPHLET "INSTALLATION OF GAS APPLIANCES AND GAS PIPING" AND THE NFPA STANDARD #54. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL FEES WITH THE "LOCAL" GAS COMPANY FOR THE INSTALLATION OF THE GAS METER, GAS SERVICE, AND ITS ACCESSORIES NECESSARY FOR A COMPLETE SYSTEM.
3. GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN NFPA #54, AND ANY OTHER TESTS REQUIRED BY THE LOCAL BUILDING DEPARTMENT AND/OR THE LOCAL GAS UTILITY COMPANY.
4. THE INSTALLING SUBCONTRACTOR SHALL BE LICENSED BY THE STATE FOR THE INSTALLATION OF GAS PIPING.
5. RUNOUT PIPING, FROM THE MAIN PIPING TO APPLIANCES, SHALL BE WITH AN INVERTED TRAP CONNECTION AT THE MAIN.
6. A 12" DIRT LEG, AND A GAS COCK, SHALL BE PROVIDED AT ALL GAS APPLIANCES.
7. ALL EXPOSED GAS PIPING SHALL BE IDENTIFIED BY A YELLOW LABEL MARKED "GAS" IN BLACK LETTERS. THE MARKERS SHALL BE AT INTERVALS NOT EXCEEDING 5'.
8. ALL GAS BURNING EQUIPMENT SHALL BE INSTALLED PER NFPA #58, NFPA #54 (L.P.G.) OR NFPA #96 (COMMERCIAL COOKING EQUIPMENT).
9. GAS PIPE SIZES 2-1/2" AND GREATER SHALL BE WELDED, IF REQUIRED BY CODE.
10. GAS CONNECTIONS PER ANSI ZZ1.69



1 CONDENSATE P-TRAP DETAIL
NOT TO SCALE

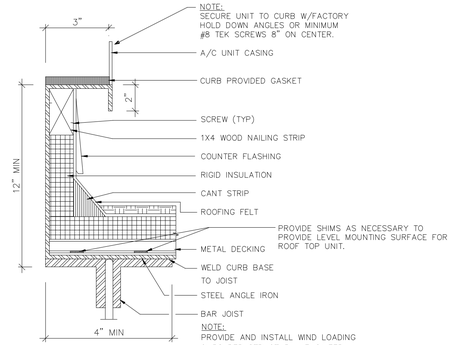


2 SPIRAL DUCT / REGISTER CONNECTION DETAIL
NO SCALE

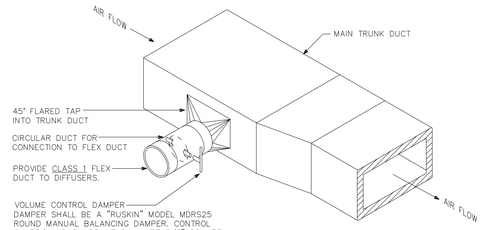


# OF R-22 LINES	L	W	H
1-4	18	12	8
5-10	18	14	10
11-15	22	18	12
16-22	24	24	14

3 REFRIG. GOOSENECK DETAIL
NO SCALE



4 ROOF CURB DETAIL
NO SCALE



5 BRANCH DUCT DETAIL
NO SCALE

GENERAL MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS; SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1 ALL DUCTWORK SHALL BE FABRICATED, INSTALLED AND SUPPORTED AS PER SMACNA STANDARDS.
2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES. TO INSURE AN ORDERLY PROGRESS OF THIS WORK.
4. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE SET OF "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT. CONTRACTOR SHALL ALSO LEAVE FOR ONE AT LEAST ONE SET OF THE MANUFACTURER'S INSTALLATION AND OPERATIONS MANUALS FOR ALL EQUIPMENT PROVIDED ON THE PROJECT.
5. ALL PROVIDED MATERIALS SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.
6. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE [5] COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT. IT IS STRONGLY PREFERRED THAT THE SUBMITTALS BE MADE IN THE FORM OF AN ELECTRONIC SUBMITTAL IN A PDF TYPE FORMAT.
7. ALL NEW SUPPLY AND RETURN AIR DUCTWORK SHALL BE GALVANIZED SHEET STEEL EXTERNALLY WRAPPED WITH WITH A MIN. OF R5 INSULATION OR R8 IF DUCTWORK IS LOCATED EXTERIOR TO BLDG INSULATION ENVELOPE. ALL FLEX DUCT SHALL BE "THERMOFLEX" WITH A MINIMUM 4.2 R VALUE. OR APPROVED EQUAL AND SHALL HAVE EQUIVALENT INSULATION. * ALL EXPOSED ROUND DUCTWORK SHALL BE "SPIROSAFE" NON-INSULATED SINGLE WALL SPIRAL DUCTS AS MANUFACTURED BY LINDAB, INC. http://www.lindabusa.com OR APPROVED EQUAL.
8. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.
9. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.
10. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE TITUS, METALAIRE, AIRGUIDE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.
11. THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE THERMOSTAT. * CONTRACTOR SHALL FULLY INSTRUCT OWNER ON HOW TO PROPERLY PROGRAM INSTALLED THERMOSTATS. * PROGRAMMABLE THERMOSTAT SHALL BE BY MANUFACTURER OF INSTALLED AIR HANDLING UNIT. IT IS RECOMMENDED THAT DURING OCCUPIED HOURS, THE FANS BE SET TO "ON" IN LIEU OF "AUTO". * THERMOSTATS SHALL BE MOUNTED A MAX. OF 48" A.F.F.
12. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER-JOINT TYPE FITTINGS, USE 95/5 SOLDER. REFRIGERANT LINES SHALL SIZED AS PER MANUFACTURER RECOMMENDATIONS.
13. SPLIT SYSTEMS (IF APPLICABLE) SHALL HAVE A MINIMUM OF 1-1/2" ARMAFLEX INSULATION (OR APPROVED EQUAL) USED FOR SUCTION LINES. INSTALLATION SHALL BE AS PER MANUFACTURERS INSTRUCTIONS. PRE-INSULATED LINES SETS ARE ACCEPTABLE.
14. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/MANUAL VOLUME DAMPERS AND TAPS AS PER PLANS REQUIREMENTS.
15. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.
16. PROVIDE SMOKE DETECTORS WITH ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON DESIGN SUPPLY OR RETURN PLENUM OF ABOVE 2000 CFM. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER. COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.
17. HVAC CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS, AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLS, RETURN GRILLS, AND EXHAUST GRILLS, AND THE LEAVING AND ENTERING AIR TEMPERATURE (T) FROM SUPPLY GRILLS AND EVAPORATORS.
18. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER BEFORE INSTALLATION.
19. ALL INSULATION SHALL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
20. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
21. CONTRACTOR SHALL INSTALL ALL OUTDOOR EQUIPMENT TO WITHSTAND WIND LOADING FORCES AS REQUIRED BY LOCAL CODES. REFER TO STRUCTURAL PLANS BY OTHERS FOR STRUCTURAL DETAILS.
22. PROVIDE ALL NECESSARY CONTACTORS, RELAYS, ETC., FOR A COMPLETE OPERATING SYSTEM.
23. THROUGHOUT THE COURSE OF THE WORK, MINOR CHANGES AND ADJUSTMENTS TO THE PLANS AND SPECIFICATIONS MAY BE REQUESTED BY THE TENANT. THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITHOUT ADDITIONAL COST TO THE TENANT, WHERE SUCH ADJUSTMENTS ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE SYSTEMS, AND WITHIN THE INTENT OF THE CONTRACT DOCUMENTS.
24. NOTWITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR BEARS ULTIMATE RESPONSIBILITY FOR COMPLIANCE OF THE INSTALLATION WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
25. IF ANY ERRORS, DISCREPANCIES OR OMISSIONS APPEAR IN THE DRAWINGS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF SUCH ERROR OR OMISSION. IN THE EVENT OF THE CONTRACTOR FAILING TO GIVE SUCH NOTICE BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK, HE WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS, DISCREPANCIES OR OMISSIONS AND THE COST OF RECTIFYING SAME.

APPENDIX B BUILDING CODE SUMMARY (MECHANICAL SUMMARY)
MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE:
Prescriptive [X] Energy Cost Budget [ ]
Thermal Zone Zone 3A

Exterior Design Conditions
winter dry bulb 20° F
summer dry bulb 97° F

Interior Design Conditions
winter dry bulb 68° F
summer dry bulb 74° F
relative humidity 52.9%

Building Heating Load 186,000 BTU
Building Cooling Load 122,160 BTU

Mechanical Spacing Conditioning System
Unitary
Description of unit REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heating efficiency REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling efficiency REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heat output of unit REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling output of unit REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.

Boiler N/A
total boiler output. If oversized, state reason.
Chiller N/A
total chiller capacity. If oversized, state reason.

List equipment efficiencies

Equipment schedules with motors (mechanical systems)
REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
motor horsepower REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
number of phases REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
minimum efficiency REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
motor type REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
# of poles REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.

DESIGNER STATEMENT:
To the best of my knoledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina Energy Code 2012.
SIGNED:
NAME: TODD W. CAREY
TITLE: N.C. PROFESSIONAL ENGINEER #9079

NOTE:
COMPLIANCE TO NC ENERGY SECTION 506 IS MADE BY LIGHTING LEVEL REDUCTION.

FAN SCHEDULE

LABEL	TYPE OF UNIT – AREA SERVED	MANUFACTURER & MODEL NO.	CFM	SP	MOUNTING ARRANGEMENT	MOTOR H.P.	ENCLOSURE TYPE	RPM	VOLTAGE	NOTES
EF-1	REFER TO HOOD SPECIFICATIONS AND DETAILS ON SHEET M-4.	–	–	–	–	–	–	–	–	–
EF-2,4	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z6	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1ø	1
EF-3	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z7	190	.125"	CEILING MOUNTED	68 WATTS	OPEN DRIP PROOF	1640	115V/1ø	1

NOTES: 1.) REFER TO ELECTRICAL PLANS FOR CONTROL.

OUTSIDE AIR CALCULATIONS

THE FOLLOWING IS BASED ON 2012 NCMC CODE TABLE 403.3 MINIMUM VENTILATION RATES FOR OUTSIDE AIR REQUIREMENTS (EQUATION 4-1)

UNIT LABEL	OCCUPANCY CATAGORY	AREA	ESTIMATED MAX. OCCUPANCY		OUTSIDE AIR REQUIRED (CFM)		ZONE AIR DIST. EFF.	TOTAL	EXHAUST AIRFLOW RATE CFM/SQ. FT. 0.7 CFM/SQ. FT.	
		A_Z	P_Z	R_P	$P_Z \times R_P$	$A_Z \times R_A$	E_Z			
RTU #1	KITCHEN	0,175	N/A	N/A	(N/A) + (N/A) = 0 (PEOPLE, AREA, TOTAL)		N/A	N/A	640 X 0.7 = 448	EXH. HOOD (3,800 CFM)
RTU #2	RETAIL	1,750	15 PEOPLE PER 1,000 S.F.	7.5 CFM PER PERSON	(27 x 7.5) + (1,750 x .12) = 413 (PEOPLE, AREA, TOTAL)		1.0	413/1.0 = 413	N/A	

A_Z — ZONE FLOOR AREA
P_Z — ZONE POPULITION
R_P — PEOPLE OUTDOOR RATE
R_A — AREA OUTDOOR RATE
E_Z — ZONE AIR DISTRIBUTION EFFECTIVENESS

AIR BALANCE SCHEDULE

OUTSIDE	OUTSIDE AIR	RETURN AIR	SUPPLY AIR	EXHAUST AIR	RESULTING PRESSURES
RTU #1	320 (20%)	1280	1600		+320
RTU #2	500 (20%)	1900	2400		+500
EF-1 (HOOD 1)				3440	−3440
EF-2 (TLT. RM.)				90	−90
EF-3 (TLT. RM.)				190	−190
EF-4 (TLT. RM.)				90	−90
SF-1 (HOOD 1)	2752				+2752
TOTAL	3572	3180	4000	3810	−238

ROOFTOP PACKAGE UNIT W/GAS HEAT SCHEDULE

SYS. LABEL	MANUFACTURER	MODEL NO.	TOTAL CAPACITY	SENSIBLE CAPACITY	TOTAL CFM	O/A CFM	E.S.P.	FAN SPEED	COMP. RLA	OUTDOOR FAN FLA	INDOOR FAN HP	HEATER BTU OUTPUT	VOLTAGE	MOCP	EER/SEER	NOTES	HEATER BTU INPUT
RTU #1	CARRIER	48TCEA05A2A5-0A0A0	46,950	32,920	1,600	320	.6"	979	13.7	1.5	1.0	93,000	208V/3ø	30	13.0	1,2,3 THRU 12	115,000
RTU #2	CARRIER	48TCEA07A2A5-0A0A0	75,210	58,110	2,400	500	.7"	1490	19.6	1.5	2.0	93,000	208V/3ø	50	11.2	1,3 THRU 11,13	115,000

GENERAL NOTES:
* ALL RATINGS ARE AT ARI ENTERING CONDITIONS UNLESS OTHERWISE NOTED.
* EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COIL OR FILTER PRESSURE DROP.
* APPROVED EQUALS SHALL BE TRANE, LENNOX AND YORK. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ANY CLEARANCE REQUIREMENTS ARE MET FOR ANY SUBSTITUTIONS.

ABBREVIATION LEGEND:
O/A – OUTSIDE AIR
HP – HORSE POWER
RLA – RUNNING LOAD AMPS
FLA – FULL LOAD AMPS
MOCP – MAX. OVERCURRENT PROTECTION (DUAL ELEMENT TYPE FUSE)
E.S.P. – EXTERNAL STATIC PRESSURE
EER – ENERGY EFFICIENCY RATIO
SEER – SEASONAL ENERGY EFF. RATIO

SPECIFIC NOTES:
1) FACTORY ROOF CURB WITH THRU THE CURB SERVICE CONNECTION.
2) OUTDOOR AIR MANUAL 0% TO 30% DAMPER.
3) ELECTRONIC PROGRAMMABLE THERMOSTAT.
4) COMPRESSOR TIME DELAY.
5) HEAD PRESSURE CONTROL.
6) FILTER DOOR ACCESS PANEL KIT.
8) PROVIDE (1) YEAR WARRANTY ON ALL PARTS AND LABOR AND (5) YEAR WARRANTY ON COMPRESSOR.
9) PROVIDE 1" FARR 30/30 THROWAWAY FILTERS. (1) SET DURING CONSTRUCTION AND (1) SET AFTER FINAL INSPECTION.
10) INSULATE CONDENSATE DRAIN LINE WITH 1/2" ARMAFLEX.
11) PROVIDE ALL NECESSARY CONTACTORS, RELAYS, MOTOR STARTERS, ETC. FOR A COMPLETE OPERATING UNIT.
12) OUTSIDE AIR OPENING OF RTU SHALL BE PROVIDED WITH A MOTORIZED O/A DAMPER. OUTSIDE AIR DAMPER SHALL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. VENTILATION OUTSIDE AIR DAMPERS SHALL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF DURING PREOCCUPANCY BUILDING WARMUP, COOLDOWN, AND SETBACK.
13) UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED ECONOMIZER. MOTORIZED OUTSIDE AIR DAMPER SHALL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. VENTILATION OUTSIDE AIR DAMPERS SHALL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF DURING PREOCCUPANCY BUILDING WARMUP, COOLDOWN, AND SETBACK.

HOOD INFORMATION – Job#2819472

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM RISER(S) TOTAL EXH. CFM	WIDTH	LENG.	HEIGHT	DIA.	CFM	S.P.	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG. END TO END	ROW
1	H–1	5424 ND–2–PSP–F	16' 0.00"	450 Deg.	3440			4"	14"	1720	–0.848"	2752	430 SS Where Exposed	ALONE	ALONE
								4"	14"	1720	–0.848"				

PATENT NUMBERS

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

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S) TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 9 MICRONS	LIGHT(S) QTY.	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WGHT
1	H–1	Captrate Solo Filter	12	16"	16"	93% See Filter Spec.	8	L55 Series E26	NO	Right	12"x54"x24"	Ansul R102	3.0/1.5	SC–311110FP–VFDE	1 Light 1 Fan	YES	1113 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1	H–1	FIELD WRAPPER 18.00" High Front, Left, Right
		BACKSPLASH 122.00" High x 240.00" Long 430 SS Vertical
		RIGHT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS
		LEFT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG.	DIA.	CFM	S.P.
1	H–1	Front	204"	14"	6"	MUA	12"	28"		688	0.179"
						MUA	12"	28"		688	0.179"
						MUA	12"	28"		688	0.179"
						MUA	12"	28"		688	0.179"

EXHAUST FAN INFORMATION – Job#2819472

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	WEIGHT (LBS.)	SONES
1	EF–1	DU200HFA	3440	1.500	1204	3.000	1.9320	3	208	9.5	127	21

MUA FAN INFORMATION – Job#2819472

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	WEIGHT (LBS.)	SONES
2	SF–1	A2–G12	G12	A2	2752	0.450	649	0.750	0.5630	3	208	2.5	318	15.1

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. – Descr.)
1	EF–1	1 – Grease Box

FAN ACCESSORIES

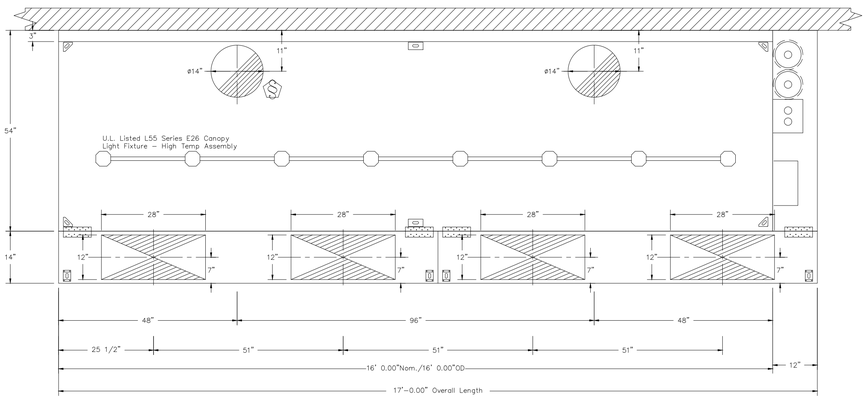
FAN UNIT NO.	TAG	EXHAUST GREASE CUP	EXHAUST GRAVITY DAMPER	EXHAUST WALL MOUNT	SUPPLY SIDE DISCHARGE	SUPPLY GRAVITY DAMPER	SUPPLY MOTORIZED DAMPER	SUPPLY WALL MOUNT
1	EF–1	YES						

CURB ASSEMBLIES

NO.	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	34 LBS	Curb	26.500"W x 26.500"L x 26.000"H Vented Hinged
2	# 2	42 LBS	Curb	31.000"W x 31.000"L x 15.000"H

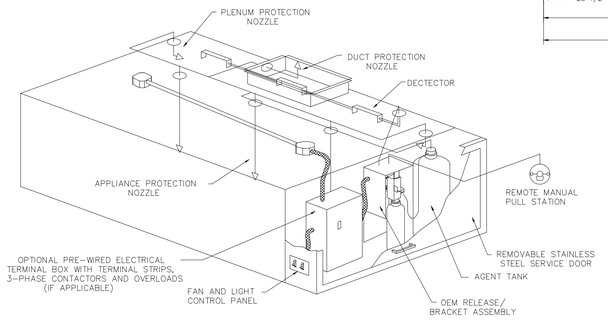
FOR QUESTIONS, CALL THE
CHARLOTTE, NORTH CAROLINA
AVERY GRANT
PHONE: 704–844–9088, FAX: 704–844–0599
EMAIL: reg30@captiveair.com

CAPTIVE-AIRE

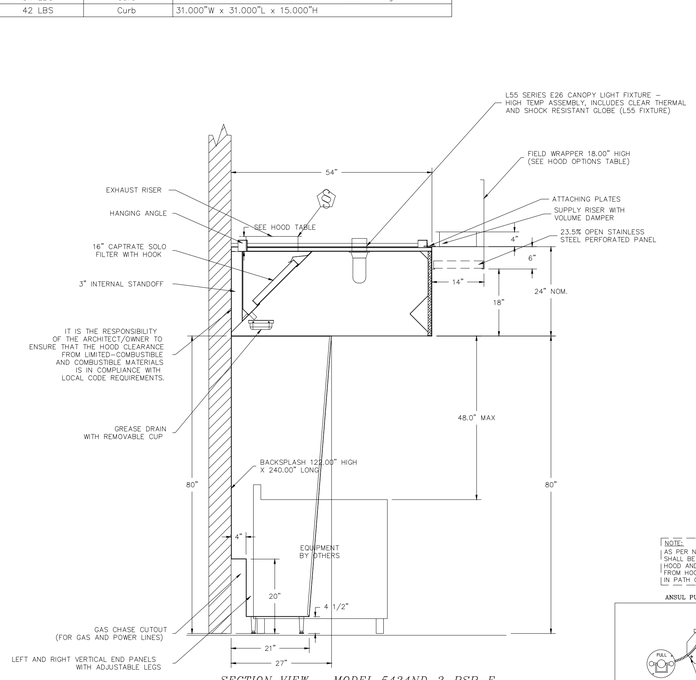


PLAN VIEW – Hood #1
16' 0.00" LONG 5424ND–2–PSP–F

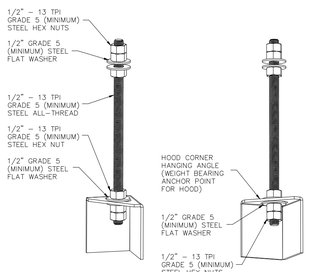
NOTE: Additional hanging angles provided for hoods 12' and longer.



TYPICAL UL300 LIQUID FIRE SYSTEM LAYOUT



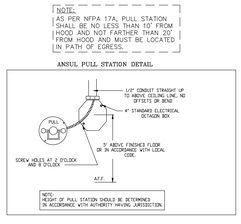
SECTION VIEW – MODEL 5424ND–2–PSP–F HOOD – #1



ASSEMBLY INSTRUCTIONS

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

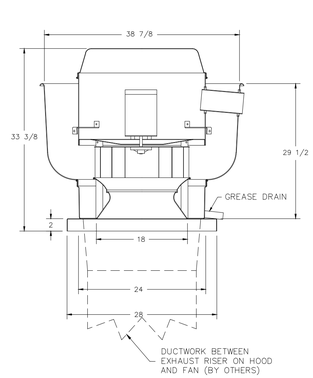
HOOD CORNER HANGING ANGLE



EXPOSED REMOTE FIRE PROTECTION PULL STATION DETAIL

CAPTIVE–AIRE HOODS ARE BUILT IN COMPLIANCE WITH

NFPA #96
NSF
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804–001



FEATURES:

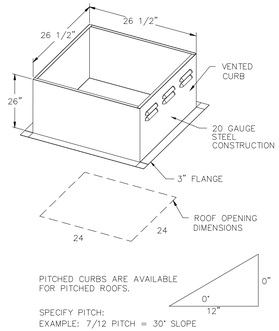
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

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



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

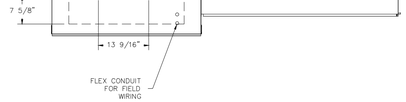
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

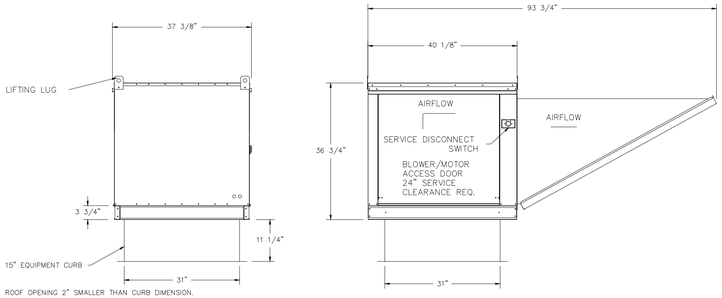
FAN #1 DU200HFA – EXHAUST FAN

1. UNTEMPERED SUPPLY UNIT WITH 12" BLOWER IN SIZE #2 HOUSING
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE – AIR FLOW RIGHT –> LEFT

PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE





ROOF OPENING 2" SMALLER THAN CURB DIMENSION.

FAN #2 A2–G12 – SUPPLY FAN

M4

ELECTRICAL PACKAGES – Job#2819472

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	ϕ	H.P.	VOLT	FLA
1		SC–311110FP–VFDE	Utility Cabinet Right	Utility Cabinet Right	1 Light	Smart Controls Thermostatic Control	Exhaust	3	3.000	208	9.5
				Hood # 1	1 Fan		Supply	3	0.750	208	2.5

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).

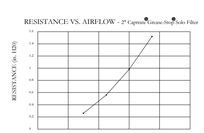
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

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.

FILTER COLLECTION EFFICIENCY 2" Captrate Grease-Stop Solo Filter

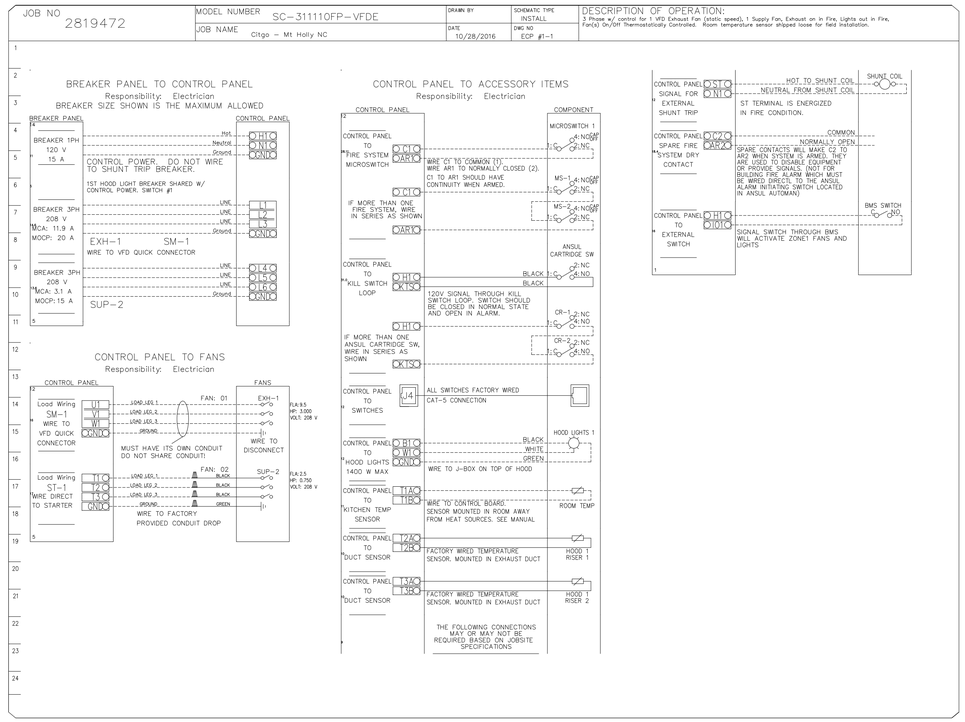
RESISTANCE VS. AIRFLOW - 2" Captrate Grease-Stop Solo Filter

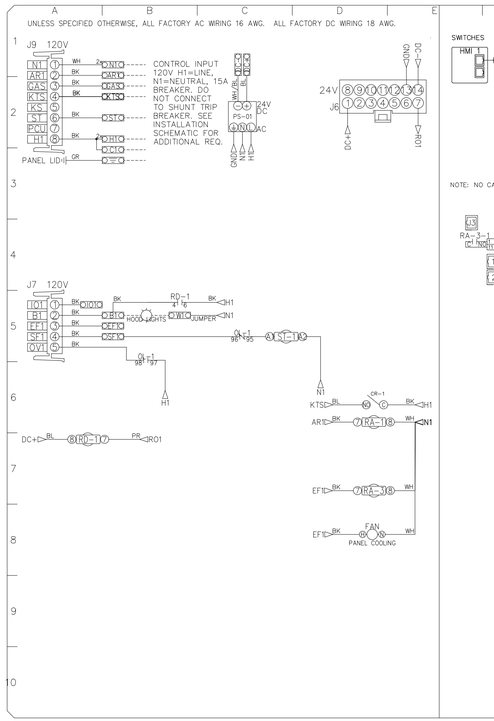


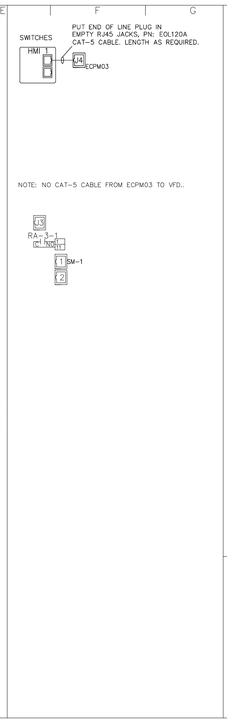
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:.
NFPA #96
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)
ULC–S649

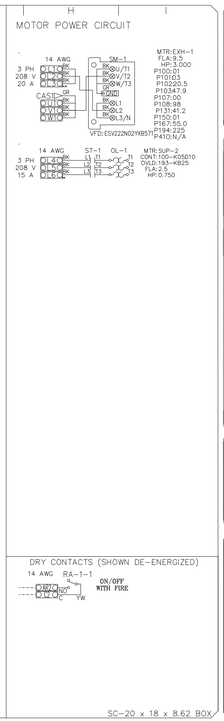
EXHAUST HOOD NOTES

1. EXHAUST HOODS SHALL BE CONSTRUCTED OF 18 GAUGE 430 STAINLESS STEEL FOR ALL SURFACES EXPOSED TO THE AIRSTREAM AND 18 GAUGE GALVANIZED STEEL FOR OTHER SURFACES. ALL SEAMS AND JOINTS SHALL HAVE A LIQUID TIGHT U.L. APPROVED CONTINUOUS EXTERNAL WELD.
2. ENTIRE SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH NATIONAL SANITATION FOUNDATION STANDARDS, NFPA–96, NFPA–17–A, AND ALL GOVERNING CODES.
3. EXHAUST HOODS SHALL BE PROVIDED WITH A ANSUL R–102 AUTOMATIC FIRE EXTINGUISHING SYSTEM FOR PROTECTION OF THE EXHAUST HOOD, PLENUM, GREASE FILTERS, EXHAUST DUCT AND COOKING EQUIPMENT. THE SYSTEM SHALL EMPLOY A LIQUID CHEMICAL EXTINGUISHMENT. THE SYSTEM SHALL BE ARRANGED TO SHUT OFF THE SOURCE OF COOKING HEAT AUTOMATICALLY UPON SYSTEMS OPERATION. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA–96, NFPA–17–A AND ACCORDING TO MANUFACTURERS PRINTED INSTALLATION PROCEDURES. EACH HOOD SHALL HAVE A SEPARATE FIRE EXTINGUISHING SYSTEM WHICH WILL OPERATE EFFECTIVELY WITH OR WITHOUT FANS OPERATING.
4. THE INSTALLER OF THE EXHAUST HOOD AUTOMATIC FIRE EXTINGUISHING SYSTEM SHALL BRIEF OWNER IN ITS OPERATION.
5. EXHAUST AND SUPPLY FANS OF EACH HOOD SHALL BE INTERLOCKED. PROVIDE ONE LIGHT SWITCH AND ONE FAN SWITCH ON THE FACE OF EACH GREASE HOOD.
6. GREASE FILTERS TO BE THE GREASE ELIMINATOR SELF BALANCING TYPE U.L. APPROVED.
7. EXHAUST HOOD DUCTWORK OFFSETS TO GREASE EXHAUST FANS FROM HOOD LOCATION SHALL BE MADE WITH (2) – 45° ELBOWS. TRANSITION TO FULL SIZE OF FAN CONNECTION AT CURB.
8. U.L. RANGE HOOD: MATERIAL: 18 GAUGE STAINLESS STEEL CONSTRUCTION ON EXPOSED SURFACES 18 GA. GALV. ON EXH. PLENUM ALL CONTINUOUS EXTERNAL LIQUID TIGHT WELDS, POLISHED. FILTERS UL CLASSIFIED BAFFLE TYPE. SET IN HOOD @ 45 DEGREE ANGLE. INCANDESCENT LIGHT FIXTURES UL LISTED FOR USE IN COMMERCIAL COOKING HOODS. GREASE TRAY BELOW FILTERS WITH REMOVE– ABLE GREASE CONTAINER, LIQUID VOLUME LESS THAN 1 QUART. ALL IN COMPLIANCE WITH NFPA #96 AND LOCAL BUILDING CODES.
9. RANGE HOOD EXHAUST DUCTS MATERIAL: 16 GAUGE GALVANIZED STEEL. CONSTRUCTION, ALL CONTINUOUS LIQUID TIGHT EXTERNAL WELDS. DUCTS TO SLOPE TOWARD HOOD. CLEANING ACCESS AT CHANGE IN DIRECTION OF DUCT RUN EXCEPT AT HOOD COLLAR.
10. RANGE HOOD SUPPLY DUCTS MATERIAL: 22 GAUGE GALVANIZED SHEET METAL. GAUGES, HANGING AND REINFORCING PER SMACNA STANDARDS.









FACTORY WIRING SCHEMATIC
CIRCUIT BOARDS
ECPM03 Rev. 1.36
HMI Rev. 1.06

RA–x 120 VAC RELAY
RD–x 24 VDC RELAY

COMPONENT LIST

LABEL	DESCRIPTION
ST–x	Starter PN:varies
OL–X	Overload PN:varies
C–X	Contactor PN:varies
PS–1	Power Sup. 24VDC PN:MDP50–244–10
RA–x	120V Relay DPDT PN:34.10.0.0240
RD–x	24VDC Light Relay PN:34.10.0.1080
TD–x	Duct Thermostat PN:A/DP–PO–14–ERL
CR–X	CARTRIDGE SWITCH PN:423878

LEGEND
FIELD WIRING
FACTORY WIRING
BK– BLACK YW– YELLOW
BL– BLUE GY– GREY
BR– BROWN PR– PURPLE
OR– ORANGE RD– RED
WH– WHITE
OR/BL– OR/BL STRIPE
BL/RD– BL/RD STRIPE
RD/WH– RD/WH STRIPE
WH/BL– WH/BL STRIPE

JOB NAME Citgo – Mt Holly...
DRAWING TITLE SC–311110FP–VFDE
DESCRIPTION OF OPERATION
3 Phase w/ control for 1 VFD Exhaust Fan (static speed), 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.
JOB NO 2819472
DRAWN BY
TYPE FACTORY
DATE 10/28/2016
DWG NO ECP #1–2

PLUMBING ABBREVIATION LEGEND

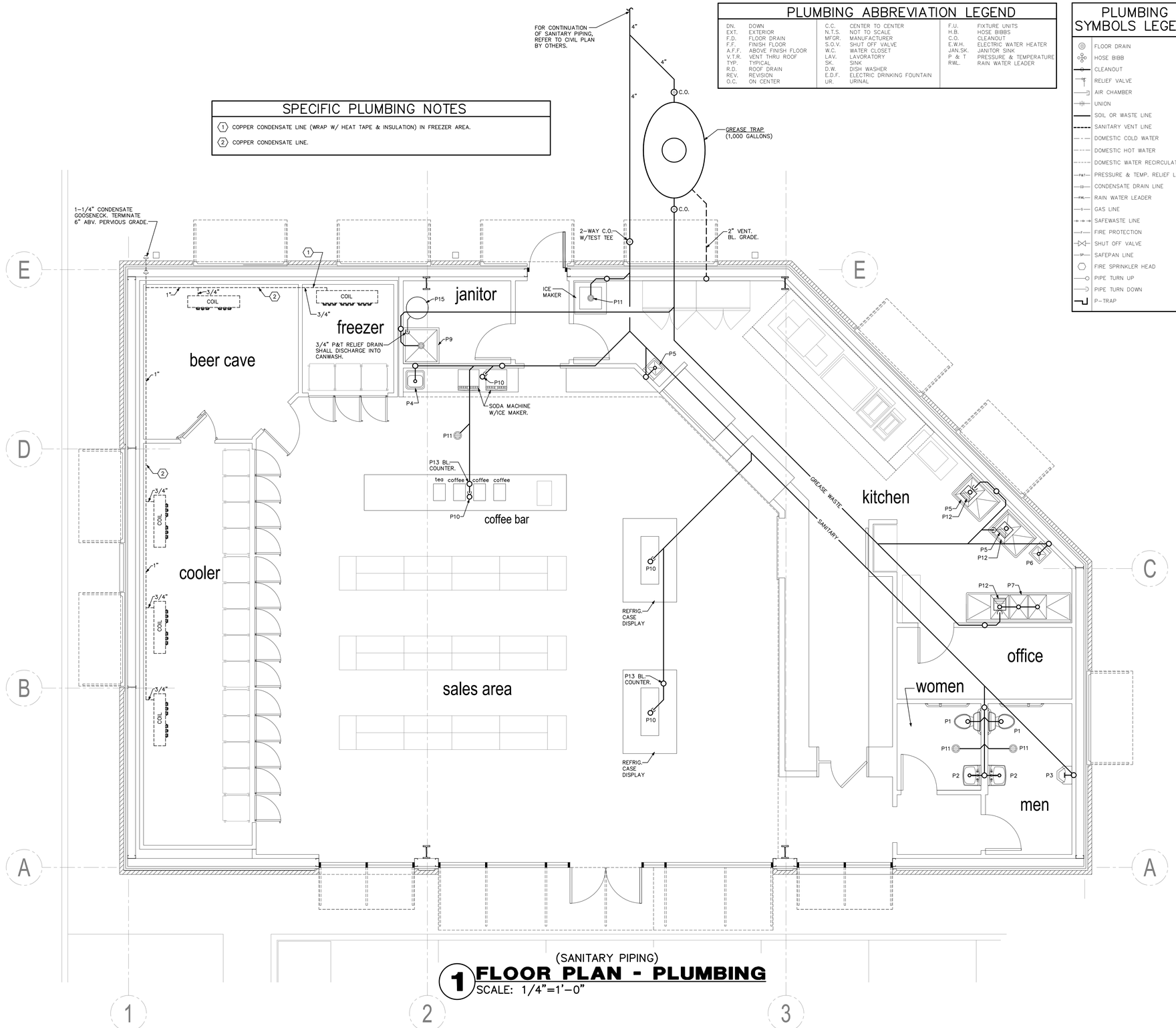
DN.	DOWN	C.C.	CENTER TO CENTER	F.U.	FIXTURE UNITS
EXT.	EXTERIOR	N.T.S.	NOT TO SCALE	H.B.	HOSE BIBBS
F.D.	FLOOR DRAIN	MFGR.	MANUFACTURER	C.O.	CLEANOUT
F.F.	FINISH FLOOR	S.O.V.	SHUT OFF VALVE	E.W.H.	ELECTRIC WATER HEATER
A.F.F.	ABOVE FINISH FLOOR	W.C.	WATER CLOSET	JAN.SK.	JANITOR SINK
V.T.R.	VENT THRU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

PLUMBING SYMBOLS LEGEND

- FLOOR DRAIN
- HOSE BIBB
- CLEANOUT
- RELIEF VALVE
- AIR CHAMBER
- UNION
- SOIL OR WASTE LINE
- SANITARY VENT LINE
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC WATER RECIRCULATION
- PRESSURE & TEMP. RELIEF LINE
- CONDENSATE DRAIN LINE
- RAIN WATER LEADER
- GAS LINE
- SAFEWASTE LINE
- FIRE PROTECTION
- SHUT OFF VALVE
- SAFEPAN LINE
- FIRE SPRINKLER HEAD
- PIPE TURN UP
- PIPE TURN DOWN
- P-TRAP

SPECIFIC PLUMBING NOTES

1. COPPER CONDENSATE LINE (WRAP W/ HEAT TAPE & INSULATION) IN FREEZER AREA.
2. COPPER CONDENSATE LINE.



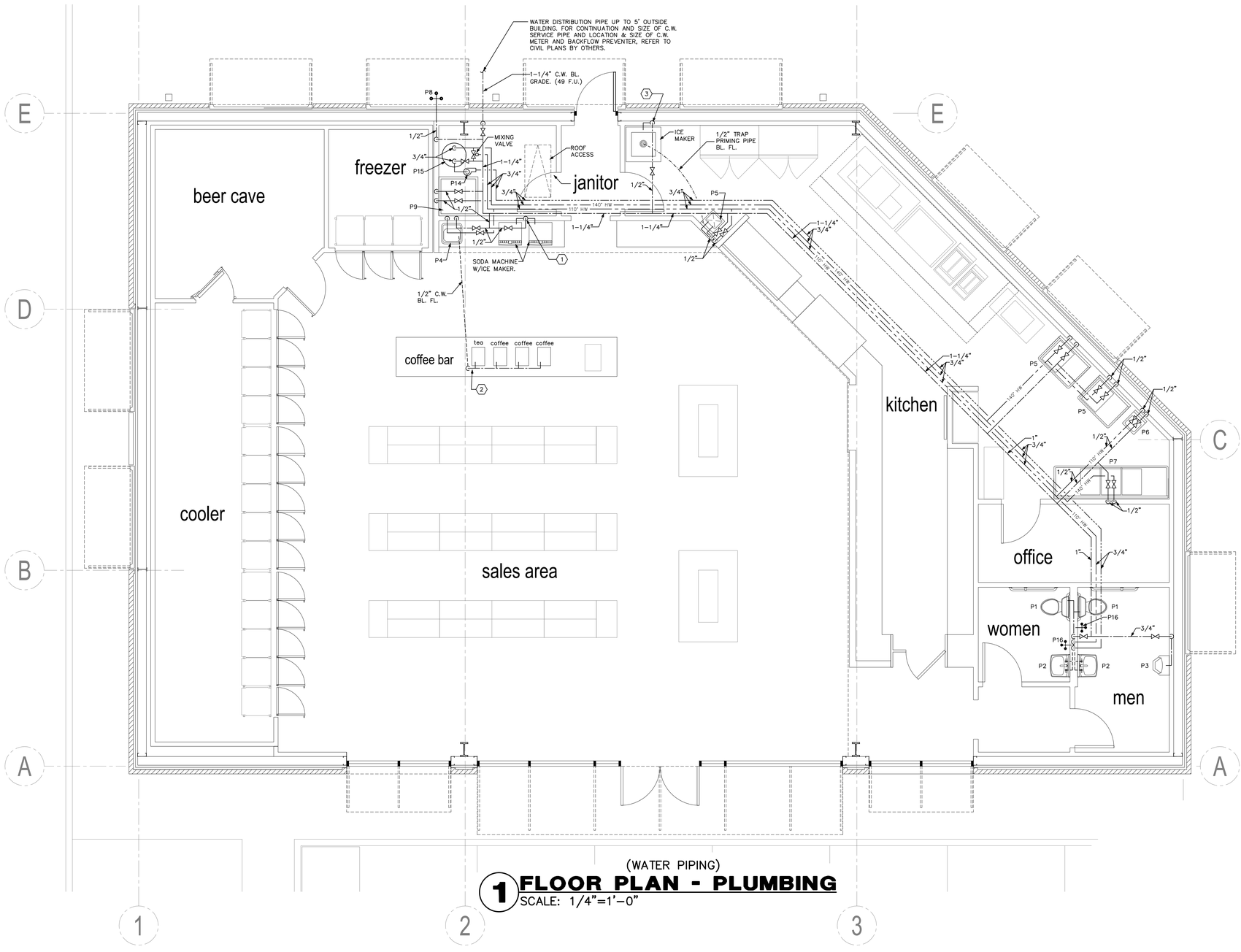
(SANITARY PIPING)

1 FLOOR PLAN - PLUMBING

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

SPECIFIC PLUMBING NOTES

1. WATER CONNECTION TO SODA MACHINE AND ICE MACHINE SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR EACH MACHINE SHALL BE A "WATTS" SD3 3/8". http://media.wattswater.com/es-sd3.pdf
   *ASSE 1022 Approved Dual Check with Atmospheric Vent.
2. WATER CONNECTION TO TEA BREWER AND COFFEE BREWER SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR EACH MACHINE SHALL BE A "WATTS" SD3 3/8". http://media.wattswater.com/es-sd3.pdf
   *ASSE 1022 Approved Dual Check with Atmospheric Vent.
3. WATER CONNECTION TO ICE MACHINE SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR EACH MACHINE SHALL BE A "WATTS" SD3 3/8". http://media.wattswater.com/es-sd3.pdf
   *ASSE 1022 Approved Dual Check with Atmospheric Vent.



(WATER PIPING)

1 FLOOR PLAN - PLUMBING

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

Storage Tank Water Heater Sizing Calculator

Developed by the Plan Review Unit of the Environmental Health Services Section
NC Division of Environmental Health

Facility Name:	CITGO
Address:	Mount Holly, North Carolina 28120

EQUIPMENT						GPH CALCULATED
Enter the description, and number and size of compartments for each sink below	Description	Number of compartments	(inches) Length	Width	Depth	Gallons Per Hour (GPH)
Largest Sink #1	3 Comp. Sink	3	24	24	14	79
Sink #2						0
Sink #3						0
Bar sink						0
Sinks are calculated at 75% capacity					**Total**	79

Enter type of prep sink and number of sink compartments for each sink below	Type of prep sink (vegetable, meat, seafood)	Number of compartments	Gallons Per Hour (GPH)
Prep sink #1	Vegi Prep Sink	1	5
Prep sink #2	Meat Prep Sink	1	5
Prep sink#3			0
Prep sinks are calculated at 5 gallons per compartment		**Total**	10

Enter the quantity of equipment below	Quantity	Gallons Per Hour (GPH)
Hand sinks	3	15
Can wash	1	10
Mop sink		0
Hose reel		0
Clothes washer		0

Enter a description and estimated gallon per hour (GPH) usage for other equipment below	Description	Estimated gallons per hour (GPH) usage	
Other Equipment	(2) Lavatory	6	6
Other Equipment			0
Other Equipment			0
Other Equipment			0
Hand sinks and mop sinks are calculated at 5 GPH each, can washes at 10 GPH each. Hose reels are calculated at 5 GPH, clothes washers at 15 GPH, other equipment at the usage entered		**Total**	31

Enter the make, model and Final Rinse Usage in gallons per hour (GPH) for dishmachines	Make	Model	Final Rinse Usage (GPH) Found in "Dishmachine Specs" sheet below or on manufacturer's spec sheet	Gallons Per Hour (GPH)
Dishmachine #1				0
Dishmachine #2				0

Enter the quantity of pre-rinse units	Quantity	Gallons Per Hour (GPH)
		0
Dishmachines are calculated at 70% of the final rinse usage specified by the manufacturer. Pre-rinses are calculated at 45 GPH	**Total**	0

Recovery Rate Needed (GPH):	**120**

Water Heater Input (BTU or kW) Needed:

Gas Water Heater	Electric Water Heater
105 ,000 BTU at 80°F rise	23 kW at 80°F rise
118 ,000 BTU at 90°F rise	26 kW at 90°F rise
131 ,000 BTU at 100°F rise	29 kW at 100°F rise

PLUMBING FIXTURE SCHEDULE

P-1 (HANDICAPPED FLOOR MOUNTED FLUSH TANK WATER CLOSET)
SHALL BE AN AMERICAN STANDARD MODEL 270AA.001 CADET 3 RIGHT HEIGHT ELONGATED 1.6 GPF TOILET, VITREOUS CHINA, CADET FLUSHING SYSTEM, TANK TYPE, FLOOR MOUNTED, FLOOR OUTLET, WITH AMERICAN STANDARD OPEN FRONT SEAT WITH COVER MODEL 5325.024.
* http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_6117.pdf

P-2 (HANDICAPPED URINAL AND FLUSH VALVE)
SHALL BE AN AMERICAN STANDARD WASHBROOK MODEL 6501.511 3/4" TOP SPUD. 1.0 GPF. URINAL INCLUDES AMERICAN STANDARD MANUAL FLUSH VALVE MODEL 6045.102 FOR 3/4" TOP SPUD URINAL.
* http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_4875.pdf
* http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_4085.pdf

P-3 (HANDICAPPED WALL HUNG LAVATORY)
SHALL BE AN AMERICAN STANDARD REGALYN LAVATORY MODEL 4869.001 (CENTER HOLE ONLY), VITREOUS CHINA, WALL MOUNT WITH CONCEALED ARMS SUPPORT. FAUCET SHALL BE A "CHICAGO" MODEL 3300-ABCP METERING FAUCET WITH 4" CENTERS AND BUILT-IN THERMOSTATIC MIXING VALVE TO DELIVER TEMPERED WATER AT A TEMPERATURE NOT TO EXCEED 105 DEGREES. UNIT IS ADA COMPLIANT, 0.5 GPM WITH AN ADJUSTABLE 2-15 SECOND OPERATING CYCLE PRODUCING UNDER .25 GALLONS PER CYCLE. WATER PIPING AND P-TRAP SHALL BE COVERED WITH AN UNDER-SINK PROTECTIVE PIPE COVER KIT BY TRUEBRO (HTTP://WWW.TRUEBRO.COM) OR APPROVED EQUAL.
* http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_1476.pdf
* http://www.chicagofaucets.com/catalog/catalog.php?part_number=3300-ABCP

P-4 (SINGLE BOWL STAINLESS STEEL SINK W/GOOSENECK FAUCET)
SHALL BE A "JUST" MODEL SBL-1812-A-GR, 18"X12"X6", SINGLE BOWL, SEAMLESS DIE-DRAWN CONSTRUCTION OF TYPE 304, 18-8 STAINLESS STEEL. INTERIOR AND TOP SURFACES POLISHED TO A NONPOROUS HAND-BLENDED JUST FINISH WITH HIGHLIGHTED BOWL RIM. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND REDUCES CONDENSATION. STRAIGHT-SIDED COMPARTMENT WITH RADIUS CORNERS PROVIDES GREATER CAPACITY. SELF- RIMMING TOP MOUNT GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS. CONFORMS TO ASME/ANSI A112.19.3M. CERTIFIED CONFORMANCE WITH ASME A112.19.3/CSA B45.4. FAUCET SHALL BE A "JUST" MODEL JGN-4-W4 WITH 4" WRIST BLADE HANDLES.
* http://www.justmfg.com/PDF/SBL1812A.pdf
* http://www.justmfg.com/PDF/JGN4.pdf

P-5 (STAINLESS STEEL HAND SINK W/FAUCET)
COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.)

P-6 (STAINLESS STEEL PREP SINK W/FAUCET)
COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.)

P-7 (STAINLESS STEEL 3 COMPARTMENT SINK W/FAUCET)
COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO BID.)

P-8 (HOSE BIBB - NON-FREEZE HYDRANT WITH LOCK COVER)
SHALL BE A "ZURN" Z1300 ENCASED ECOLOTROL, ANTI-SIPHON, AUTOMATIC DRAINING, NON-FREEZE WALL HYDRANT COMPLETE WITH INTEGRAL BACKFLOW PREVENTOR, COPPER CASING, ALL BRONZE INTERIOR PARTS, NON-COMBINATION 3/4 MALE PIPE THREAD INLET CONNECTION STANDARD. REGULARLY FURNISHED WITH 3/4 HOSE CONNECTION. CHROME-PLATED ROUGH CAST BRONZE BOX AND HINGED COVER. INCLUDES OPERATING KEY.
* http://content.zurn.com/web_documents/pdfs/specsheets/58867.pdf

P-9 (FLOOR MOUNTED INTERIOR CANWASH/MOP RECEPTOR)
SHALL BE A FLORESTONE #50 36X36X6" MOLDED MOP BASIN WITH 3" OUTLET. PROVIDE WITH MR-371 THREADED FAUCET WITH WALL BRACE, PAIL HOOK AND APPROVED VACUUM BREAKER, MR-370 HOSE & HOSE BRACKET, MR-372 MOP HANGER, MR-373 BUMBER GUARDS AND MR-377 STAINLESS TEEL WALL GUARD.
* http://www.florestone.com/mop_sinks/model_50-70.html
* http://www.florestone.com/mop_sinks/ms_accessories.html

P-10 (HUB DRAIN - INDIRECT WASTE FUNNEL)
SHALL BE A "ZURN" Z326, 2" PIPE CONNECTION, DURA-COATED CAST IRON BODY AND BOTTOM OUTLET. CONTRACTOR SHALL VERIFY FINAL HEIGHT OF FUNNEL WITH EQUIPMENT THAT IS UTILIZING FUNNEL DRAIN AND VERIFY PROPER CLEARANCE PRIOR TO CONSTRUCTION. COORDINATE WITH EQUIPMENT MANUFACTURER.
* http://content.zurn.com/web_documents/pdfs/specsheets/z326.pdf

P-11 (FLOOR DRAIN WITH TRAP PRIMER)
SHALL BE A JOSAM 30003-A-50 SERIES COATED CAST IRON FLOOR DRAIN WITH 1/2" TRAP PRIMER. 3"ø PIPE CONNECTION, 6"ø DRAIN TOP, STRAINER TYPE 6A. TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WE/LOC INVERTIBLE NON-PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER.
* http://www.josam.com/p/cast-iron-adjustable-round-top-floor-drain/30000-A

P-12 (FLOOR SINK W/SEDIMENT BUCKET)
SHALL BE A JOSAM 49340A-3-31 SERIES SQUARE CAST IRON 8" DEEP SUPER-FLO-SEPTOR FLOOR SINK WITH PORC-COATED INTERIOR, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER, AND CAST IRON, NON-TRAFFIC, PORC-COATED, ANTI-TILTING GRATE. WITH HALF GRATE AND ALUMINUM SEDIMENT BUCKET.
* http://www.josam.com/catalog/JOS/pl=FS/49340A

P-13 (2" STUDOR VENT - AIR ADMITTANCE VALVE)
SHALL BE A IPS CORPORATION "STUDOR MINI-VENT", 2" VENT.
* http://www.ipscorp.com/plumbing/studor/minivent

P-14 (HOT WATER RECIRCULATING PUMP W/TIMER)
SHALL BE A "GRUNDFUS" MODEL #UP1542-F, GRAINGER STOCK #2P310, INLINE CIRCULATOR PUMP, CLOSED LOOP, 1/25 HP, 1 PHASE, VOLTAGE 115, 0.74 AMPS, INLET/OUTLET FLANGED, HOUSING MATERIAL CAST IRON, MAX. TEMP. 230 F, MAX. WORKING PRESSURE 145 PSI, SHUT-OFF 15.6 FT., 2590 RPM, AUTO THERMAL PROTECTION.
* http://www.grainger.com/Grainger/GRUNDFOS-Circulator-Pump-2P310

P-15 (GAS WATER HEATER - DIRECT VENT - SEALED COMBUSTION)
SHALL BE A STATE "ULTRA FORCE" MODEL SUF60 120NE(A) GAS FIRED COMMERCIAL WATER HEATER. 120,000 BTU INPUT TO PRODUCE 138 GALLONS PER HOUR OF HOT WATER AT 100 DEGREE RISE. INSULATED GLASSLINED 100 GALLON STORAGE TANK. WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE SECTIONS 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION.
* http://www.statewaterheaters.com/lit/spec/comm-gas/SCGSS00207.pdf

P-16 (HOSE BIBB - INTERIOR W/LOCK COVER)
SHALL BE A ZURN Z1350 ENCASED MODERATE CLIMATE WALL HYDRANT FOR NARROW WALL INSTALLATION. COMPLETE WITH BRONZE BODY, ALL BRONZE INTERIOR PARTS, REPLACEABLE SEAT WASHER, SCREWDRIVER OPERATED STOP VALVE IN SUPPLY, KEY OPERATED CONTROL VALVE, AND 3/4 IP FEMALE INLET AND 3/4 MALE HOSE CONNECTION STANDARD. STAINLESS STEEL BOX AND HINGED COVER WITH CYLINDER LOCK AND "WATER" STAMPED ON COVER.
**NOTE: CAULKING OF INSIDE JOINTS BY OTHERS.
* http://content.zurn.com/web_documents/pdfs/specsheets/58877.pdf

NOTES:
1.) ALL PLUMBING FIXTURES SHALL BE AS SPECIFIED OR APPROVED EQUAL.
2.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.

GENERAL PLUMBING NOTES

1.) DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, EQUIPMENT, ETC., PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND ACCEPTABLE WORKING INSTALLATION. CONTRACTOR IS RESPONSIBLE TO INSTALL ALL FIXTURES AND EQUIPMENT IN STRICT COMPLIANCE WITH THE MANUFACTURES INSTALLATION INSTRUCTIONS. THIS REQUIREMENT IS TO SUPERSEDE ANY DETAILS OR INFORMATION CONTAINED ON THESE DRAWINGS.

2.) ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL, STATE, AND ALL LOCAL CODES AND ORDINANCES HAVING JURISDICTION.

3.) THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. ALL EXECUTION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.

4.) ALL MATERIAL SHALL BE NEW.

5.) ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.

6.) ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

7.) THE PLUMBING CONTRACTOR SHALL SECURE AND PAY ALL PERMIT FEES, INSPECTIONS, AND TESTS.

8.) ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

9.) THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) ONE YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.

10.) VERIFY LOCATION, SIZE AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

11.) ALL FIXTURES SHALL BE PROVIDED WITH READILY ACCESSIBLE STOPS.

12.) ALL BELOW FLOOR SLAB WATER PIPING SHALL BE FLEXIBLE "TEMPRITE PEX (CROSS-LINKED POLYETHYLENE)" INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS FOUND HERE: WWW.LUBRIZOL.COM. ALL ABOVE SLAB WATER PIPING SHALL BE "FLOWGUARD GOLD CPVC" INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS FOUND HERE: WWW.FLOWGUARDGOLD.COM. ALL WATER PIPING AS SPECIFIED OR APPROVED EQUAL. ALL 2" WATER PIPING SHALL BE TYPE "L" COPPER AND TYPE "K" COPPER FOR 2 1/2" AND LARGER. (OR APPROVED EQUAL)

13.) SOIL, WASTES AND VENT PIPING SHALL BE PVC #40 DMV. WASTE AND VENT PIPING ABOVE SLAB SHALL BE PVC, IF APPROVED BY LOCAL AUTHORITIES HAVING JURISDICTION, OTHERWISE CAST IRON. PVC SHALL NOT BE INSTALLED IN A/C RETURN AIR PLENUM OR PENETRATE FIRE RATED WALLS OR FLOORS.

14.) AIR CONDITIONING CONDENSATE DRAIN PIPING SHALL BE PVC #40 OR COPPER DRAIN WASTE AND BENT PIPE AND FITTINGS. INSULATE ALL CONDENSATE PIPING EXCEPT EXTERIOR PIPING. INSTALL ALL CONDENSATE PIPING FOR AIR CONDITIONING UNITS AS REQUIRED PER LOCAL CODES.

15.) FURNISH AND INSTALL APPROVED WATER HAMMER ARRESTORS AT EACH GROUP OF FIXTURES. INSTALLATION OF WATER HAMMER ARRESTORS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE AND INSTALL AN APPROVED WATER HAMMER ARRESTOR AT EACH FIXTURE OR DEVICE THAT HAS A SOLENOID WATER CONTROL VALVE.

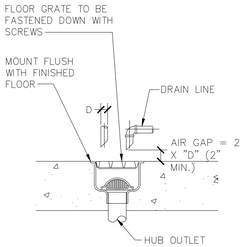
16.) PROVIDE CHROME PLATED COMBINATION COVERED PLATE AND CLEANOUT PLUG FOR ALL WALL CLEANOUTS, JOSAM 58890.

17.) INSULATE LINES AS FOLLOWS:

A.) 1-1/2" THICK ARMAFLEX PREFORMED INSULATION SHALL BE PROVIDED ON BOTH C.W. & H.W. WHEN PIPING IS LOCATED OUTSIDE OF THE INSULATED BUILDING ENVELOPE.

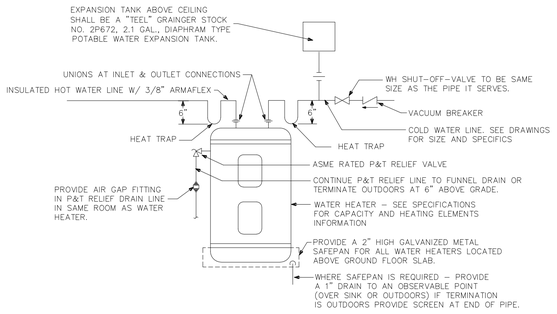
B.) 1-1/2" THICK ARMAFLEX PREFORMED INSULATION SHALL BE PROVIDED ON HW PIPING & H.W. RECIRC. PIPING, ONLY WHEN THERE IS A H.W. RECIRCULATING PIPING SYSTEM.

C.) CONDENSATE PIPING: 1/2" THICK ARMAFLEX PREFORMED OR APPROVED EQUAL.

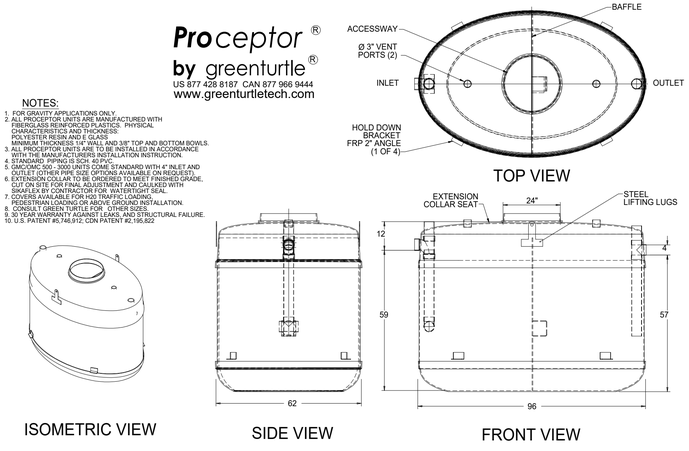


NOTE:
A. FLOOR SINK COVER FLUSH WITH TILE OR FLUSH WITH CONCRETE FLOOR IN AREA WITH NO TILE

4 FLOOR SINK CONN. DETAIL
NO SCALE



3 WATER HEATER DETAIL
NO SCALE

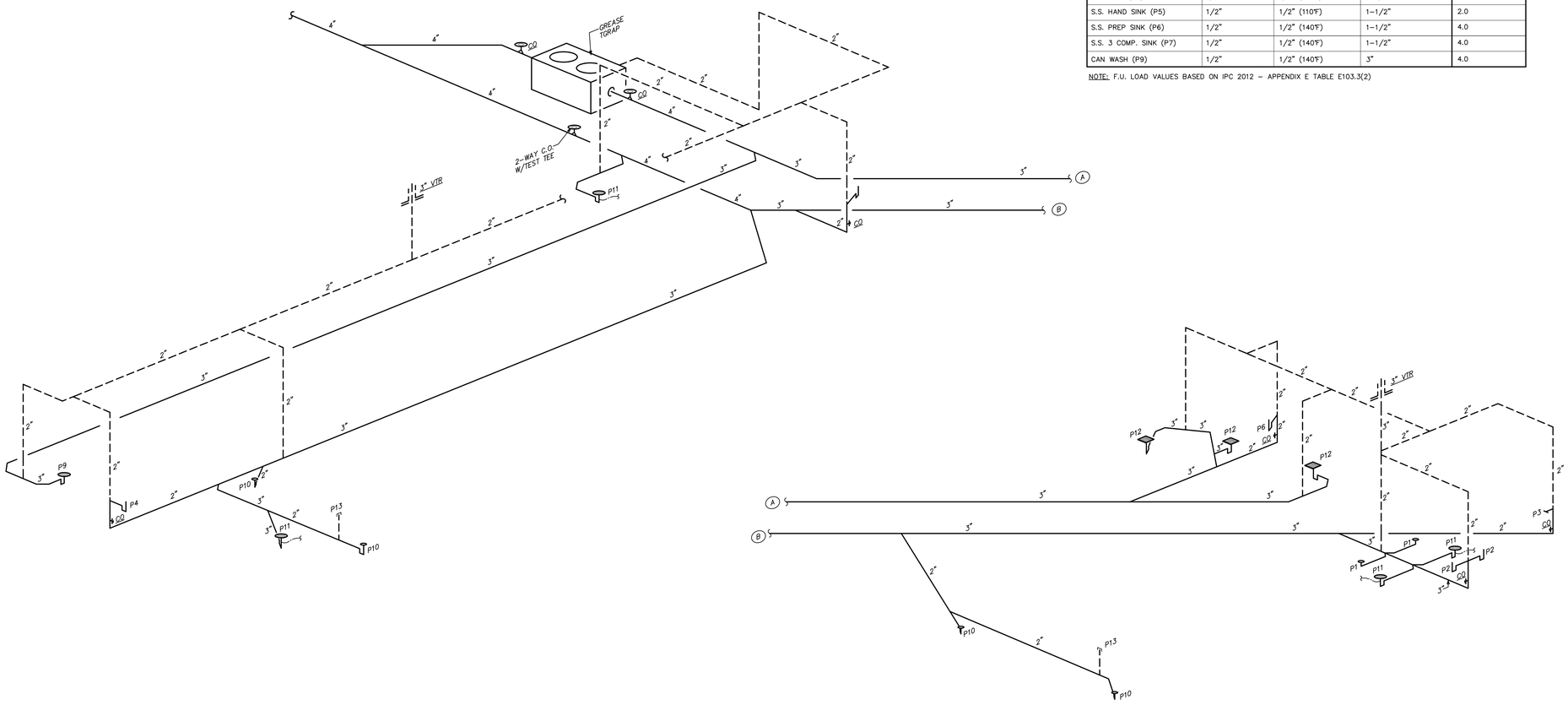


(1,000 GALLONS)

1 GREASE TRAP DETAIL
NO SCALE

PLUMBING FIXTURE CONNECTION SIZES				
FIXTURE	**C.W. CONN. SIZE**	**H.W. CONNECTION SIZE**	**SANITARY BRANCH SIZE**	**F.U. LOAD VALUES**
WATER CLOSET (P1)	1/2"	–	3"	5.0
URINAL (P2)	3/4"	–	2"	5.0
LAVATORY (P3)	1/2"	1/2" (110°F)	1-1/4"	2.0
BAR SINK (P4)	1/2"	1/2" (110°F)	1-1/2"	2.0
S.S. HAND SINK (P5)	1/2"	1/2" (110°F)	1-1/2"	2.0
S.S. PREP SINK (P6)	1/2"	1/2" (140°F)	1-1/2"	4.0
S.S. 3 COMP. SINK (P7)	1/2"	1/2" (140°F)	1-1/2"	4.0
CAN WASH (P9)	1/2"	1/2" (140°F)	3"	4.0

NOTE: F.U. LOAD VALUES BASED ON IPC 2012 – APPENDIX E TABLE E103.3(2)

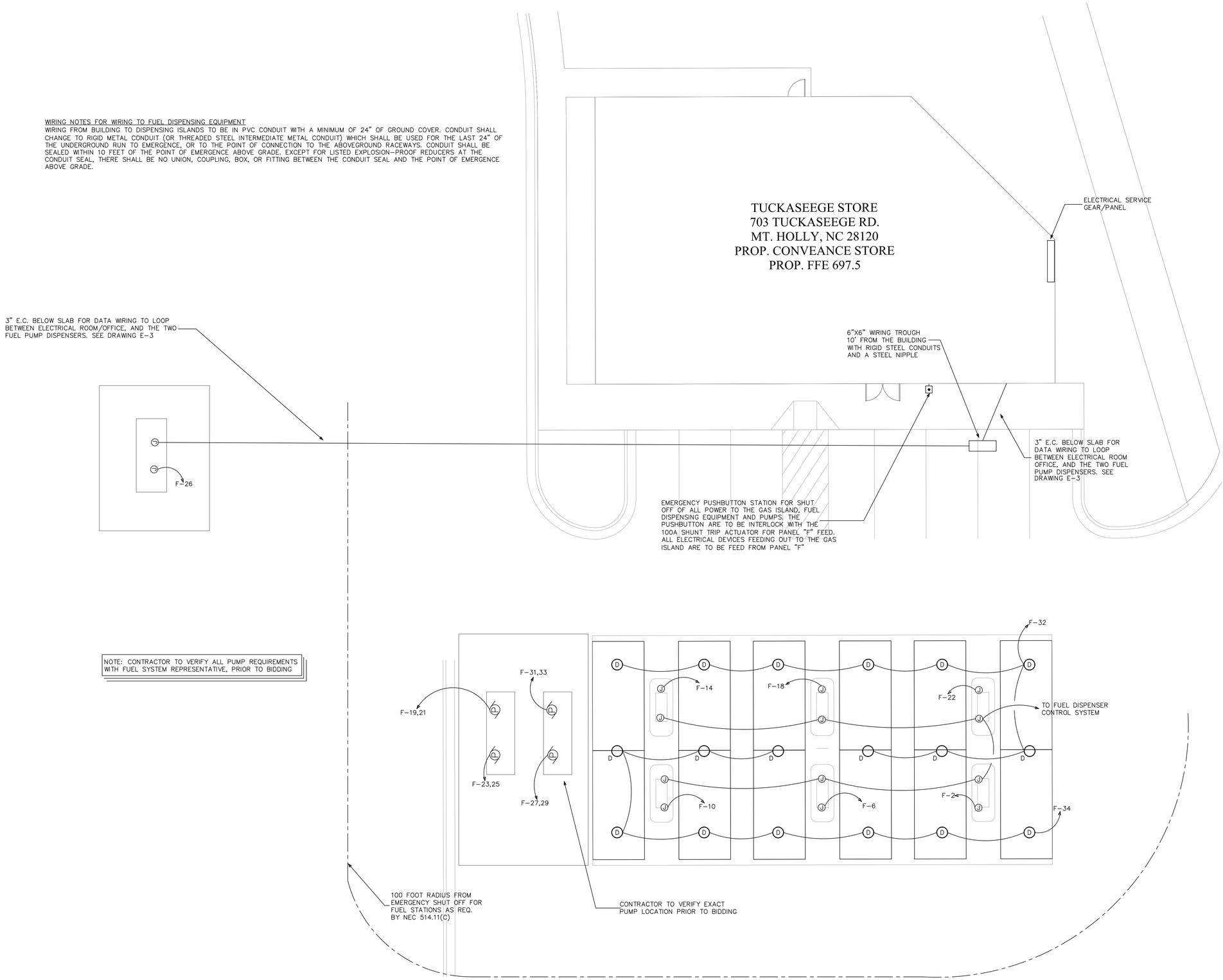


1 SANITARY ISOMETRIC
NO SCALE

WIRING NOTES FOR WIRING TO FUEL DISPENSING EQUIPMENT

WIRING FROM BUILDING TO DISPENSING ISLANDS TO BE IN PVC CONDUIT WITH A MINIMUM OF 24" OF GROUND COVER. CONDUIT SHALL CHANGE TO RIGID METAL CONDUIT (OR THREADED STEEL INTERMEDIATE METAL CONDUIT) WHICH SHALL BE USED FOR THE LAST 24" OF THE UNDERGROUND RUN TO EMERGENCE, OR TO THE POINT OF CONNECTION TO THE ABOVEGROUND RACEWAYS. CONDUIT SHALL BE SEALED WITHIN 10 FEET OF THE POINT OF EMERGENCE ABOVE GRADE. EXCEPT FOR LISTED EXPLOSION-PROOF REDUCERS AT THE CONDUIT SEAL, THERE SHALL BE NO UNION, COUPLING, BOX, OR FITTING BETWEEN THE CONDUIT SEAL AND THE POINT OF EMERGENCE ABOVE GRADE.

NOTE: CONTRACTOR TO VERIFY ALL PUMP REQUIREMENTS WITH FUEL SYSTEM REPRESENTATIVE, PRIOR TO BIDDING



1 SITE PLAN - ELECTRICAL

SCALE: 1/8"=1'-0"

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE

PRESCRIPTIVE [X] PERFORMANCE [ ] ENERGY COST BUDGET [ ]

PROVIDE A STANDARD RISER DIAGRAM WHICH INDICATES DESIGNATED POINTS FOR CHECK METERING. PROVIDE A STANDARD PANEL SCHEDULE DESCRIPTION WHICH IDENTIFIES DIFFERENT ENDUSE LOADS.

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE ____SEE SCHEDULE ON DRAWINGS
NUMBER OF LAMPS IN FIXTURE ____SEE SCHEDULE ON DRAWINGS
BALLAST TYPE USED IN FIXTURE ____SEE SCHEDULE ON DRAWINGS
NUMBER OF BALLASTS IN FIXTURE ____SEE SCHEDULE ON DRAWINGS
TOTAL WATTAGE PER FIXTURE ____SEE SCHEDULE ON DRAWINGS
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED 993.00 VS 5604.75
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED ____N/A____

EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)

MOTOR HORSEPOWER ____N/A____
NUMBER OF PHASES ____N/A____
MINIMUM EFFICIENCY ____N/A____
MOTOR TYPE ____N/A____
NUMBER OF POLES ____N/A____

DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA ENERGY CODE 2012, CHAPTER 5.

SIGNED: _____

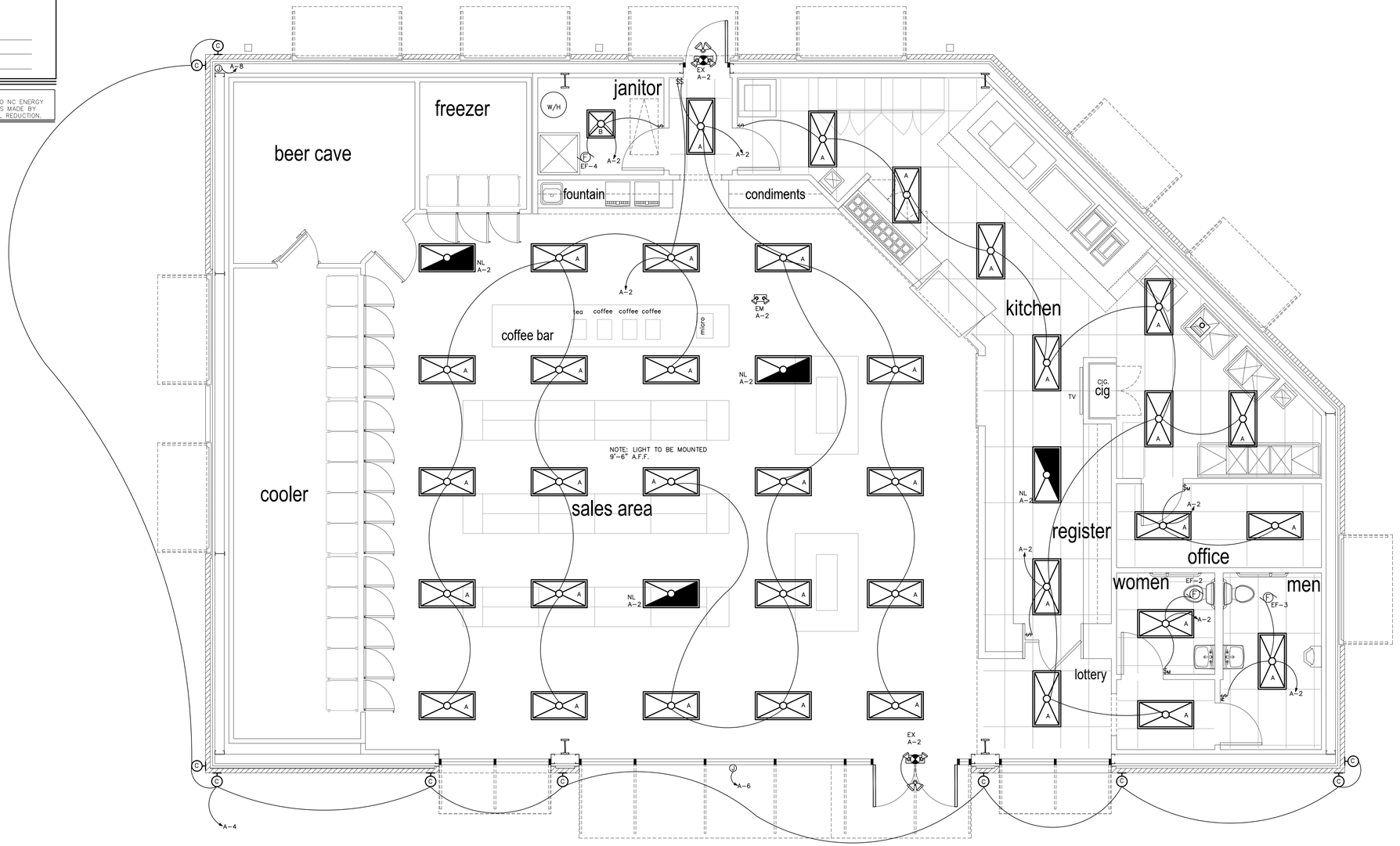
NAME: TODD W. CAREY, P.E.

TITLE: NORTH CAROLINA PROFESSIONAL ENGINEER #9079

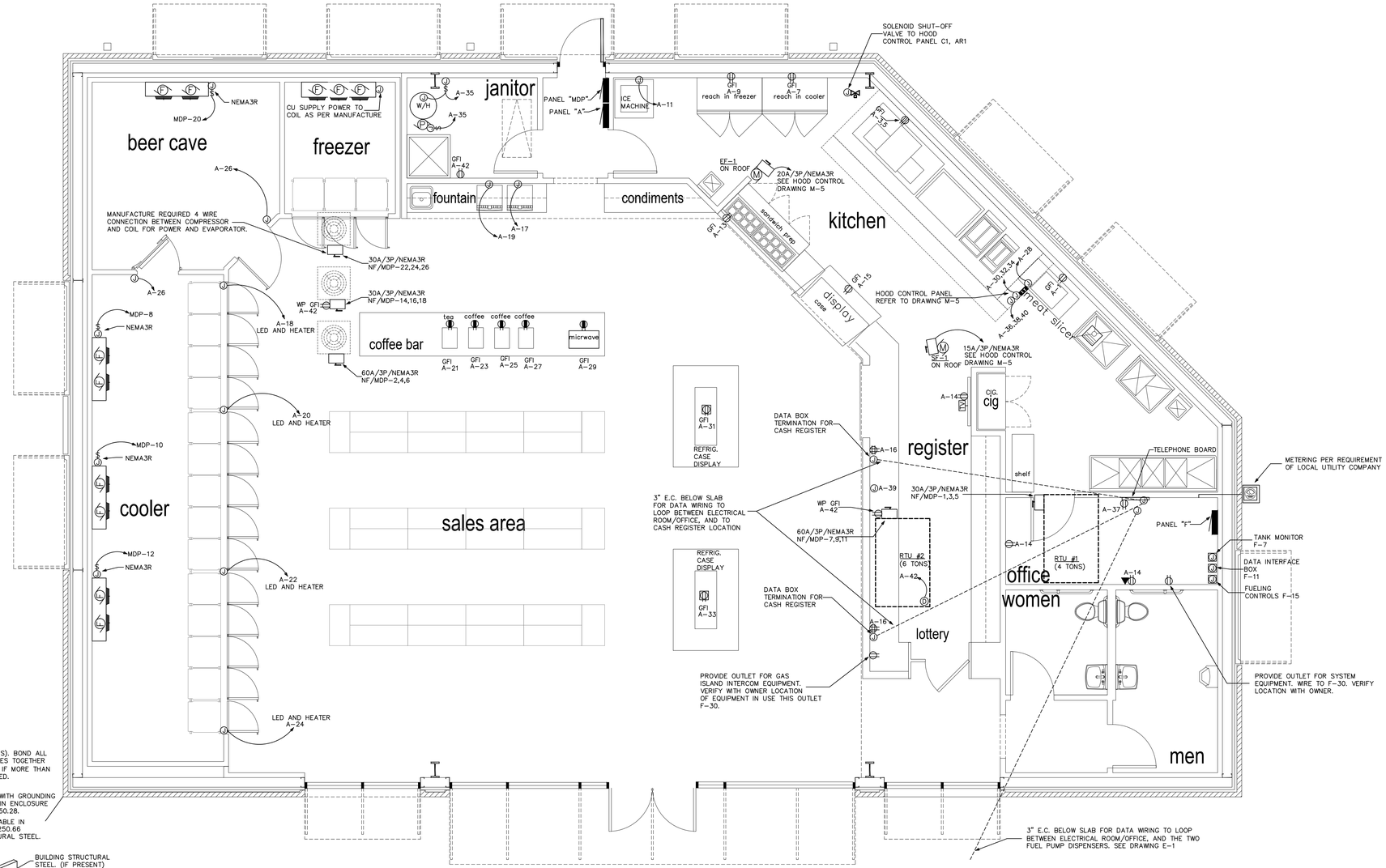
NOTE:
COMPLIANCE TO NC ENERGY SECTION 506 IS MADE BY LIGHTING LEVEL REDUCTION.

LIGHTING FIXTURE SCHEDULE

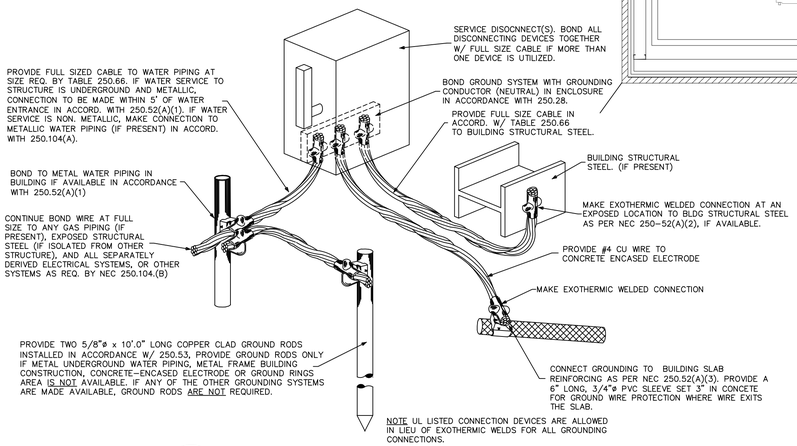
LABEL	TYPE OF FIXTURE	FINISH	LENS TYPE	VOLTAGE	LAMP	MANUFACTURER & MODEL NO.	REMARKS
A	RECESSED 2'X4' TROFFER	WHITE	LED	120	25W T8	LITHONIA 2ALL4 30L EDB LP835	FOR nLIGHT ADD N100
B	RECESSED 2'X2' TROFFER	WHITE	LED	120	18W	LITHONIA 2ALL2 20L EDB LP835	
C	WALL MOUNT LIGHT	BRONZE	LED	120	69W	LITHONIA CSXW LED 30C 700 40K T3M MVOLT PE DDBXD	
D	CANOPY LIGHTS	WHITE	LED	120	60 LED (141W)	BETALED CAN-304-SL-RS-06D-U-WH-700-43K	
EM	EMERGENCY EGRESS	WHITE		120	INCLUDED	LITHONIA ELM2 LED	W/ BATTERY BACKUP
EX	EXIT COMBO w/ REM HEAD	WHITE	RED	120	INCLUDED	LITHONIA ECR LED M6	W/ MODEL ELAT 6CS M12 DUAL REMOTE HEAD BATTERY BACKUP



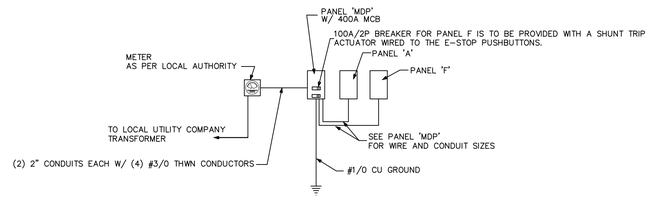
1 FLOOR PLAN - LIGHTS
SCALE: 1/4"=1'-0"



1 FLOOR PLAN - POWER
SCALE: 1/4"=1'-0"



3 GROUNDING DETAIL
NO SCALE



2 ELECTRICAL SERVICE RISER
NO SCALE

NOTE: CONTRACTOR TO VERIFY ALL SERVICE REQUIREMENTS WITH LOCAL AUTHORITY PRIOR TO BIDDING

PANEL SCHEDULE F

125 AMP, 120/208 VOLT, SINGLE PHASE, THREE WIRE, M.L.O., 22000 AMPS MINIMUM A.I.C. BRACING, FLUSH MOUNTED, TYPE NEMA 1 ENCLOSURE

##	BKR.	WIRE AND CONDUIT COND.	NEUTRAL	GND	C.	KEYS	LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LINE DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1	30/2	#12	#12	#12	1/2	CHAL	SURGE PROTECTION DEVICE	0	240	240	MPD #1	CHEL	1/2	#12	#12	#12	20/1	2
3								0	0	0								
5	20/1	#12	#12	#12	1/2	CHAL	(3) POS TERMINALS (1G)	0	900	240	MPD #2	CHEL	1/2	#12	#12	#12	20/1	6
7	20/1	#12	#12	#12	1/2	CHEL	TANK MONITOR	200	240	200	MPD #3	CHEL	1/2	#12	#12	#12	20/1	10
9	20/1	---	---	---	---	----	SWITCHED NEUTRAL BKR #7	0	0	0	SWITCHED NEUTRAL BKR #6	----	---	---	---	---	20/1	8
11	20/1	#12	#12	#12	1/2	CHEL	DATA INTERFACE BOX	240	240	200	MPD #4	CHEL	1/2	#12	#12	#12	20/1	14
13	20/1	---	---	---	---	----	SWITCHED NEUTRAL BKR #11	0	0	0	SWITCHED NEUTRAL BKR #10	----	---	---	---	---	20/1	12
15	20/1	#12	#12	#12	1/2	CHEL	FUELING CONTROLS	200	240	200	MPD #5	CHEL	1/2	#12	#12	#12	20/1	18
17	20/1	---	---	---	---	----	SWITCHED NEUTRAL BKR #15	0	0	0	SWITCHED NEUTRAL BKR #14	----	---	---	---	---	20/1	16
19	20/2	#12	---	#12	1/2	CHEL	FUEL TANK PUMP #1 2 HP	240	240	1373	MPD #6	CHEL	1/2	#12	#12	#12	20/1	22
21								0	1373	0	SWITCHED NEUTRAL BKR #18	----	---	---	---	---	20/1	20
23	20/2	#12	---	#12	1/2	CHEL	FUEL TANK PUMP #2 2 HP	240	240	1373	MPD #7	CHEL	1/2	#12	#12	#12	20/1	26
25								0	1373	0	SWITCHED NEUTRAL BKR #22	----	---	---	---	---	20/1	24
27	20/2	#12	---	#12	1/2	CHEL	FUEL TANK PUMP #3 2 HP	240	240	1373	MPD #8	CHEL	1/2	#12	#12	#12	20/1	30
29								0	1373	0	SWITCHED NEUTRAL BKR #26	----	---	---	---	---	20/1	28
31	20/2	#12	---	#12	1/2	CHEL	FUEL TANK PUMP #4 2 HP	360	360	1373	MUSIC SYSTEM/INTERCOM	CHAL	1/2	#12	#12	#12	20/1	32
33								1450	1373	1450	CANOPY LIGHTING **	CHEL	1/2	#12	#12	#12	20/1	34
35							SPACE	1450	1450	0	CANOPY LIGHTING **	CHEL	1/2	#12	#12	#12	20/1	36
37							SPACE	0	0	0	SPACE							38
39							SPACE	0	0	0	SPACE							40
41							SPACE	0	0	0	SPACE							42
								0	0	0	SPACE							

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING			
1—TEMP RATING	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.	9882	7542	PEAK PHASE (A) UNBALANCED NEUTRAL LOAD AMPS = 36.6 AMPS
2—CONDUIT TYPE			E-PVC SCH. 40		17,424		NON DIVERSIFIED LOAD AT 208 VOLT, SINGLE PHASE = 83.0 AMPS
3—INSULATION							PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
4—WIRING TYPE							REGISTERED TO - TODD W. CAREY AND ASSOCIATES

PANEL NOTES:
* - PROVIDE ISOLATED GROUND BAR FOR THIS PANEL
** - THIS CIRCUIT IS TO BE TIMECLOCK CONTROLLED.

PANEL F DIVERSIFICATION CALCULATIONS

RECEPTACLES (2) - 360 VA TOTAL		
FIRST 10 KVA AT 100%	-	360
LIGHTING - 2900 X 125%	-	3625
MOTOR LOADS AT 100%	-	10984
PLUS 25% OF THE LARGEST MOTOR	-	687
MISC NON-CONTINUOUS LOADS AT 100%	-	3180
TOTAL DIVERSIFIED PANEL LOAD	-	18836
LOAD AT 120/208V/1-PHASE/3-WIRE	-	90.6A

PANEL SCHEDULE A

100 AMP, 120/208 VOLT, THREE PHASE, FOUR WIRE, M.L.O., 10000 AMPS MINIMUM A.I.C. BRACING, FLUSH MOUNTED, TYPE NEMA 1 ENCLOSURE

##	BKR.	WIRE AND CONDUIT COND.	NEUTRAL	GND	C.	KEYS	LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LINE C	LINE DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1	20/1	#12	#12	#12	1/2	CHAL	MEAT SLICER	360	360	------	------								
3	30/2	#10	#10	#10	1/2	CHAL	PIZZA OVEN	1136	1136	------	------	LIGHTS	CHAL	1/2	#12	#12	#12	20/1	2
5								690	------	690	2808	OUTSIDE LIGHTS *	CHAL	1/2	#12	#12	#12	20/1	4
7	20/1	#12	#12	#12	1/2	CHAL	REACH IN REFRIGERATOR	1500	------	------	2808	TENANT SIGANGE **	CHAL	1/2	#12	#12	#12	20/1	6
9	20/1	#12	#12	#12	1/2	CHAL	REACH IN FREEZER	696	696	------	------								
11	20/1	#12	#12	#12	1/2	CHAL	ICE MAKER	1500	1500	1320	------	TENANT SIGANGE **	CHAL	1/2	#12	#12	#12	20/1	8
13	20/1	#12	#12	#12	1/2	CHAL	SANDWICH REFRIGERATOR	1320	------	1500	------	MONUMENT SIGANGE **	CHAL	1/2	#12	#12	#12	20/1	10
15	20/1	#12	#12	#12	1/2	CHAL	DISPLAY CASE	1920	------	------	1920								
17	20/1	#12	#12	#12	1/2	CHAL	SODA FOUNTAIN	180	------	------	180	SAFE	CHAL	1/2	#12	#12	#12	15/1	12
19	20/1	#12	#12	#12	1/2	CHAL	SODA FOUNTAIN	912	912	------	------								
21	20/1	#12	#12	#12	1/2	CHAL	TEA POT	540	540	------	------	TV/OFFICE RECEPTACLE	CHAL	1/2	#12	#12	#12	20/1	14
23	20/1	#12	#12	#12	1/2	CHAL	COFFEE POT	1785	------	1785	------								
25	20/1	#12	#12	#12	1/2	CHAL	COFFEE POT	360	------	360	------	REGISTER RECEPTACLE	CHAL	1/2	#12	#12	#12	20/1	16
27	20/1	#12	#12	#12	1/2	CHAL	COFFEE POT	360	------	------	360								
29	20/1	#12	#12	#12	1/2	CHAL	MICROWAVE	360	------	------	360	LED AND HEATER	CHAL	1/2	#12	#12	#12	20/1	18
31	20/1	#12	#12	#12	1/2	CHAL	FLOOR DISPLAY CASE	360	360	------	------								
33	20/1	#12	#12	#12	1/2	CHAL	FLOOR DISPLAY CASE	360	360	------	------	LED AND HEATER	CHAL	1/2	#12	#12	#12	20/1	20
35	15/1	#12	#12	#12	1/2	CHAL	WH / RECIRCULATING PUMP	600	------	600	------								
37	15/1	#12	#12	#12	1/2	CHAL	TELEPHONE RECEPTACLE	600	------	360	------	LED AND HEATER	CHAL	1/2	#12	#12	#12	20/1	22
39	15/1	#12	#12	#12	1/2	CHAL	GAS ISLAND LIGHTS ***	600	600	------	------								
41	15/1	#12	#12	#12	1/2	CHAL	GAS ISLAND LIGHTS ***	600	600	------	600	COOLER/BEER CAVE LIGHT	CHAL	1/2	#12	#12	#12	20/1	24
								360	------	360	------								
								600	------	600	------	HOOD CONTROL	CHAL	1/2	#12	#12	#12	15/1	26
								1200	1200	------	------								
								0	------	1200	------								28
								600	600	1272	------								30
								0	1272	------	------	EXHAUST FAN	CHAL	1/2	#12	---	#12	20/3	32
								600	------	600	------								34
								0	------	1272	------								36
								289	------	------	289								
								0	------	------	420	SUPPLY FAN	CHAL	1/2	#12	---	#12	15/3	38
								180	180	------	------								40
								0	420	------	------								
								1269	------	1269	------								
								0	------	420	------								
								1269	------	------	1269								
								540	------	------	540	SERVICE RECEPTACLE	CHAL	1/2	#12	#12	#12	20/1	42

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING			
1—TEMP RATING	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.	9536	14784	12878 PEAK PHASE (B) UNBALANCED NEUTRAL LOAD AMPS = 85.7 AMPS
2—CONDUIT TYPE					37,198		NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 103.3 AMPS
3—INSULATION							PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
4—WIRING TYPE							REGISTERED TO - TODD W. CAREY AND ASSOCIATES

PANEL NOTES:
* - CIRCUIT TO BE CONTROL VIA PHOTOCELL
** - CIRCUIT TO BE CONTROL VIA TIMECLOCK
*** - THIS CIRCUIT IS TO INTERLOCK WITH PANEL 'F' CANOPY LIGHT

PANEL A DIVERSIFICATION CALCULATIONS

RECEPTACLES (9) - 1620 VA TOTAL		
FIRST 10 KVA AT 100%	-	1620
LIGHTING - 4964 X 125%	-	6205
MOTOR LOADS AT 100%	-	5165
PLUS 25% OF THE LARGEST MOTOR	-	954
MISC NON-CONTINUOUS LOADS AT 100%	-	7320
KITCHEN EQUIPMENT (16)		
18129 X 0.65	-	11784
TOTAL DIVERSIFIED PANEL LOAD	-	33048
LOAD AT 120/208V/3-PHASE/4-WIRE	-	91.8A

PANEL SCHEDULE MDP

400 AMP, 120/208 VOLT, THREE PHASE, FOUR WIRE, 400A. M.C.B., 22000 AMPS MINIMUM A.I.C. BRACING, FLUSH MOUNTED, TYPE NEMA 1 ENCLOSURE

##	BKR.	WIRE AND CONDUIT COND.	NEUTRAL	GND	C.	KEYS	LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LINE C	LINE DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1								0	2376	------	------								
3	30/3	#12	---	#12	1/2	CHAL	RTU UNIT #1	0	3000	------	------								2
5								0	------	2376	------								
7								0	------	3000	------	COOLER CONDENSING UNIT	CHAL	1/2	#10	---	#10	35/3	4
9	50/3	#10	---	#10	1/2	CHAL	RTU UNIT #2	0	------	------	2376								
11								0	------	------	3000								6
13								0	3432	------	------								
15	100/3	#2	#2	#8	1-1/4	CHAL	PANELBOARD 'A'	180	180	------	------	COOLER COIL 1/15 HP	CHAL	1/2	#12	#12	#12	20/1	8
17								0	------	3432	------								
19								180	------	180	------	COOLER COIL 1/15 HP	CHAL	1/2	#12	#12	#12	20/1	10
21								0	------	------	3432								
23								180	------	------	180	COOLER COIL 1/15 HP	CHAL	1/2	#12	#12	#12	20/1	12
25	125/2	#1	#1	#6	1-1/4	CHAL	FUEL SYSTEMS PANEL 'F' *	7844	9536	------	------								
27								0	1800	------	------								14
29								10284	------	14784	------								
31								0	------	1800	------	BEER COOER CONDENSING UNT	CHAL	1/2	#12	---	#12	20/3	16
33								8378	------	------	12878								
35								0	------	------	1800								18
37								4390	9882	------	------								
39								180	180	------	------	BEER COOLER COIL 1/15 HP	CHAL	1/2	#12	#12	#12	20/1	20
41								2050	------	7542	------								
								0	------	2268	------								22
							SPACE	0	------	------	0								
							SPACE	0	------	------	2268	FREEZER CONDENSING UNT	CHAL	1/2	#12	---	#12	25/3	24
							SPACE	0	------	------	------								
							SPACE	0	2268	------	------								26
							SPACE	0	------	0	------								
							SPACE	0	------	0	------	SPACE							28
							SPACE	0	------	------	0								
							SPACE	0	------	------	0	SPACE							30
							SPACE	0	0	------	------								
							SPACE	0	0	------	------	SPACE							32
							SPACE	0	------	0	------								
							SPACE	0	------	0	------	SPACE							34
							SPACE	0	------	------	0								
							SPACE	0	------	------	0	SPACE							36
							SPACE	0	0	------	------								
							SPACE	0	0	------	------	SPACE							38
							SPACE	0	------	0	------								
							SPACE	0	------	0	------	SPACE							40
							SPACE	0	------	------	0								
							SPACE	0	------	------	0	SPACE							42

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING			
1—TEMP RATING	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.	38654	35382	25934 PEAK PHASE (A) UNBALANCED NEUTRAL LOAD AMPS = 105. AMPS
2—CONDUIT TYPE					93,970		NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 261. AMPS
3—INSULATION							PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
4—WIRING TYPE							REGISTERED TO - TODD W. CAREY AND ASSOCIATES

PANEL NOTES:
* - THIS CIRCUIT BREAKER TO HAVE SHUNT TRIP ACTUATOR WIRED TO THE GAS ISLAND E-STOP PUSHBUTTON

PANEL MDP DIVERSIFICATION CALCULATIONS

RECEPTACLES (11) - 1980 VA TOTAL		
FIRST 10 KVA AT 100%	-	1980
LIGHTING - 7864 X 125%	-	9830
HVAC LOAD AT 100%	-	17424
MOTOR LOADS AT 100%	-	38073
PLUS 25% OF THE LARGEST MOTOR	-	2250
MISC NON-CONTINUOUS LOADS AT 100%	-	10500
KITCHEN EQUIPMENT (16)		
18129 X 0.65	-	11784
TOTAL DIVERSIFIED PANEL LOAD	-	91841
LOAD AT 120/208V/3-PHASE/4-WIRE	-	259.1A

ELECTRICAL NOTES:

1. GENERAL: ALL WORK SHALL CONFORM TO THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL LOCAL JURISDICTIONAL CODES.

   THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND ANY APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, THE CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM, AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL THE OWNER HAS DIRECTED THE CORRECTIVE ACTION TO BE TAKEN.

   THE CONTRACTOR SHALL COORDINATE THE PROPOSED LOCATIONS OF ALL ELECTRICAL MATERIALS AND EQUIPMENT WITH THE REPRESENTATIVES OF THE OTHER TRADES INVOLVED BEFORE STARTING INSTALLATION OF THOSE ITEMS.

   COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES, CONDUIT, AND SLEEVES TO BE SET IN CAST-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.

   UNLESS OTHERWISE SPECIFIED ON THE PLANS, ALL SPECS ARE NOT INTENDED TO BE PROPRIETARY, SUBSTITUTIONS WILL BE ACCEPTABLE FOR EQUAL RATED AND LISTED UNITS.

2. SCOPE: EXCEPT WHERE OTHERWISE SPECIFICALLY INDICATED ON THE DRAWINGS BY "FUTURE", "BY OTHERS", OR BY A SIMILAR NOTATION, IT IS THE INTENT THAT THE CONTRACTOR FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TOOLS NECESSARY TO PROVIDE ALL SYSTEMS IN COMPLETE AND OPERATING CONDITION.

3. EXCAVATE AS NECESSARY FOR THE INSTALLATION OF ELECTRICAL MATERIALS AND EQUIPMENT. VERIFY THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES OR STRUCTURES BEFORE EXCAVATING AND EXERCISE CARE TO AVOID DAMAGE TO SUCH ITEMS DURING EXCAVATION. BACKFILL WITH EARTH FREE OF LARGE CLODS, LARGE STONES AND FOREIGN DEBRIS, DEPOSITED IN 6" LAYERS AND COMPACTED TO A DENSITY OF NOT LESS THAN THAT OF THE SURROUNDING UNDISTURBED MATERIAL.

4. MATERIALS: THE MATERIALS AND EQUIPMENT FURNISHED SHALL BE AS INDICATED ON THE DRAWINGS; SUBSTITUTIONS SHALL NOT BE MADE EXCEPT WHERE EXPRESSLY APPROVED BY THE OWNER OR HIS REPRESENTATIVE PRIOR TO STARTING INSTALLATION OF THE ITEMS. THE ELECTRICAL MATERIALS AND EQUIPMENT FURNISHED SHALL BE LISTED OR LABELED BY UNDERWRITERS LABORATORIES OR OTHER RECOGNIZED TESTING ORGANIZATION, AND SHALL BE ACCEPTABLE TO THE LOCAL BUILDING AUTHORITY.

5. GROUNDING: GROUNDING SHALL BE IN ACCORDANCE WITH ARTICLE 250, NEC.

6. SHARED NEUTRAL CONDUCTORS SHALL NOT BE ALLOWED UNLESS INSTALLED IN ACCORDANCE WITH NEC-210.4

7. CONDUITS: PROVIDE CONDUITS WHERE CALLED FOR ON PANEL SCHEDULES: ELECTRICAL METALLIC TUBING (EMT) SHALL BE INSTALLED ONLY IN DRY LOCATIONS, IN CONCRETE ABOVE GRADE, AND WHERE NOT SUBJECT TO PHYSICAL DAMAGE.

   CONDUITS INSTALLED UNDERGROUND SHALL BE POLYVINYLCHLORIDE (PVC) AND SHALL NOT BE SMALLER THAN 3/4" TRADE SIZE. WHERE PVC CONDUIT IS INSTALLED UNDERGROUND, ELBOWS TURNING UP AND CONDUIT EMERGING ABOVE GRADE SHALL BE RSC. THE TOPS OF CONDUITS SHALL NOT BE LESS THAN 24" BELOW FINISHED GRADE. PVC CONDUIT INSTALLED ABOVE GRADE OR DIRECT-BURIED IN EARTH SHALL BE NEMA TC2 TYPE EPC-40-PVC (SCHEDULE 40) EXCEPT THAT WHERE UNDER AREAS SUBJECT TO HEAVY VEHICULAR TRAFFIC, IT SHALL BE NEMA TC2 TYPE EPC-80-PVC (SCHEDULE 80).

   ALL ARMOR CLAD CABLE (AC CABLE) WIRING SHALL MEET OR EXCEED ALL NEC, OSHA AND HUD STANDARDS.

8. CONDUCTORS: CONDUCTORS SHALL BE AS SCHEDULED ON PANEL SCHEDULES. ALL POWER CONDUCTORS SHALL NOT BE SMALLER THAN #14 AWG (CU), OR #12 AWG (AL), CONTROL CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #18 AWG CU. CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET WITHOUT SPLICES EXCEPT WITHIN WIREWAY OR JUNCTION BOXES. MARK CONDUCTORS IN PANELS, PULL BOXES OR WIREWAYS AND TERMINAL STRIP TERMINALS FOR IDENTIFICATION OF CIRCUITS.

   CONDUCTORS SHALL BE JOINED USING COMPRESSION SPLICES, EXCEPT THAT CONDUCTORS #10 AND SMALLER MAY BE JOINED USING WIRE NUT TYPE CONNECTORS. CONDUCTORS SHALL BE TERMINATED USING COMPRESSION OR PRESSURE TYPE TERMINAL LUGS, OR IN PRESSURE TERMINALS. COMPRESSION SPLICES USED ON CONDUCTORS #10 AWG. AND SMALLER, SHALL BE THE SELF-INSULATED TYPE; OTHER SPLICES SHALL BE INSULATED USING 3M #33+ OR #88 PLASTIC TAPE. SPLICES IN WET LOCATIONS SHALL BE INSULATED WITH ELECTRICAL TAPE AND ENCAPSULATED WITH SCOTCHCAST OR EQUAL POTTING COMPOUND.

9. PROVIDE AND INSTALL JUNCTION AND PULL BOXES WHERE INDICATED AND WHERE NECESSARY TO TERMINATE, TAP OFF, OR REDIRECT MULTIPLE CONDUIT RUNS, OF SIZE INDICATED OR AS REQUIRED BY NEC. WHERE FEEDER SPLICES ARE TO BE MADE, INSTALL BOXES LARGE ENOUGH TO PROVIDE AMPLE WORK SPACE.

10. LIGHTING FIXTURES: LIGHTING FIXTURES SHALL BE AS INDICATED ON THE DRAWINGS, AND SHALL BE INSTALLED COMPLETE WITH LAMPS.

    FIXTURES WITH ADJUSTMENTS AFFECTING LIGHT DISTRIBUTION SHALL BE SET TO PROVIDE THE REQUIRED LIGHT PATTERNS PRIOR TO THE FINAL DEMONSTRATION TEST.

11. TESTS: AFTER EACH SYSTEM HAS BEEN COMPLETED, A FUNCTIONAL TEST SHALL BE PERFORMED TO DEMONSTRATE THAT THE SYSTEM OPERATES IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS. THE TEST SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE OWNER OR HIS REPRESENTATIVE.

12. TERMINALS: ALL ELECTRICAL EQUIPMENT FURNISHED ON THIS PROJECT IS TO HAVE TERMINALS RATED FOR 75° C. OPERATION.

ELECTRICAL SYMBOLS LEGEND

NOTE - NOT ALL SYMBOLS MAY BE USED ON PROJECT

SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION
	DUPLEX RECEPTACLE, MTD. +18" AFF	T	TRANSFORMER - SIZE AS NOTED
	240 VOLT RECEPTACLE (HT. AS REQ.)		PANEL - SIZE AS NOTED
	QUADRUPLEX RECEPTACLE, MTD. +18"		MOMENTARY CONTACT PUSH BUTTON
	COUNTERTOP HT. RECEPTACLE +42"	F	F-FAN; M-MOTOR; P-PUMP
$	SINGLE POLE SWITCH, MTD +47"		SPECIAL OUTLET - AS REQUIRED
$3	THREE-WAY SWITCH, MTD +47"	B-2	CKT. HOMERUN (B INDICATES PANEL) "2" DESIGNATES CIRCUIT NUMBER
$M	MANUAL STARTER SWITCH		EXIT SIGN; ONE SIDED, OR TWO SIDED
$D	DIMMER SWITCH, MTD +47"		EMERGENCY LIGHTING
$L	SWITCH W/ ILLUM WHEN ON MTD +47"	B	RECESSED MOUNTED LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
$O3	THREE-WAY SWITCH W/ OCCU SENSOR MTD. +47"	M	OVERHEAD OCCUPANCY SENSOR
$O	SWITCH W/ OCCU SENSOR. MTD. +47"	B	HIGHBAY HID LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
	JUNCTION BOX, FLUSH IF POSSIBLE	B	FLUORESCENT LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
	TELEPHONE / DATA OUTLET +18"	B NL	FLUORESCENT LIGHTING NIGHT LIGHT B DESIGNATES FIXTURE TYPE
	DED. COMPUTER TERM. OUTLET +18"	B	FLUORESCENT STRIP LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
SRC	DISCONNECT SWITCH W/ STARTER	B	LED LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
IG	DISCONNECT SWITCH	IG	ISOLATED GROUND
	FLR. MTD. FLUSH DUPLEX RECEPTACLE	WP	WEATHER-PROOF
	FLR. MTD. FLUSH QUAD. RECEPTACLE	BC	BELOW COUNTER
	FLR. MTD. FLUSH PHONE/DATA OUTLET	TC	TIME CLOCK - 24 HOUR
	FLR. MTD. FLUSH COMPUTER OUTLET	GFI	GROUND FAULT INTERRUPTER
SD	AREA SMOKE DETECTOR	AFF	ABOVE FINISHED FLOOR
H	HEAT DETECTOR	EWC	ELECTRIC WATER COOLER
D	DUCT SMOKE DETECTOR	ASW	ABOVE SHOW WINDOW
F	FIRE ALARM MAN. PULL STATION +47"	BSW	BELOW SHOW WINDOW
30	HORN WITH STROBE LIGHT, MTD. +80" # BESIDE DEVICE IS CANDELLA RATING	FACP	FIRE ALARM CONTROL PANEL
L30	STROBE LIGHT ONLY, MTD. +80" # BESIDE DEVICE IS CANDELLA RATING	FAAP	FIRE ALARM ANNUNCIATOR PANEL