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	6"ø	0 - 125	24X24 LOUVERED FACE
C	TITUS TDC-AA	8"ø	130 - 200	24X24 LOUVERED FACE
D	TITUS TDC-AA	10"ø	205 - 325	24X24 LOUVERED FACE
E	TITUS PAS-AA	14"ø	330 - 600	24X24 PERFORATED FACE
F	TITUS CT-480	48" X 3"	0 - 200	LINEAR BAR DIFFUSER
G	TITUS CT-480	48" X 4"	205 - 500	LINEAR BAR DIFFUSER
H	TITUS 272RL	8X6	0 - 200	SIDEWALL REGISTER

RETURN GRILLE SCHEDULE

A/100 DESIGNATES LABEL FOR GRILLE TYPE
DESIGNATES CFM QUANTITY FOR GRILLE

FILTER SHALL BE PROVIDED AT UNIT.

	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
1	TITUS 350FL	24X24	1500 - 2250	LOUVER FACE
2	TITUS 350FL	12x12	0 - 500	LOUVER FACE
3	TITUS CT-480	48" X 4"	205 - 500	LINEAR BAR GRILLE
4	TITUS CT-480	48" X 6"	505 - 700	CEILING REGISTER *

* GRILLE "4" SHALL HAVE BORDER TYPE 1 FOR DRYWALL MOUNTING.

SPECIFIC MECHANICAL NOTES

1. SUPPLY FLEX DUCT SHALL ROUTE UP IN-BETWEEN JOIST SPACE. COORDINATE FINAL ROUTING IN FIELD PRIOR TO CONSTRUCTION.
2. RETURN AIR DUCT SHALL ROUTE UP IN-BETWEEN JOIST SPACE. COORDINATE FINAL ROUTING IN FIELD PRIOR TO CONSTRUCTION.
3. RETURN AIR DUCT SHALL ROUTE DOWN PAST BEAM TO ADJACENT JOIST SPACE. DUCT SHALL OFFSET IN-BETWEEN JOIST AS INDICATED.
4. SUPPLY AIR DUCT SHALL ROUTE DOWN PAST BEAM TO ADJACENT JOIST SPACE. DUCT SHALL OFFSET IN-BETWEEN JOIST AS INDICATED.
5. SUPPLY AIR FLEX DUCT DOWN TO ADJACENT JOIST SPACE. OFFSET BETWEEN JOIST AS INDICATED.
6. SUPPLY DUCT RUNNING BELOW RETURN DUCT IN THIS AREA.
7. REFER TO SHEET M1.2 FOR SECTIONS.

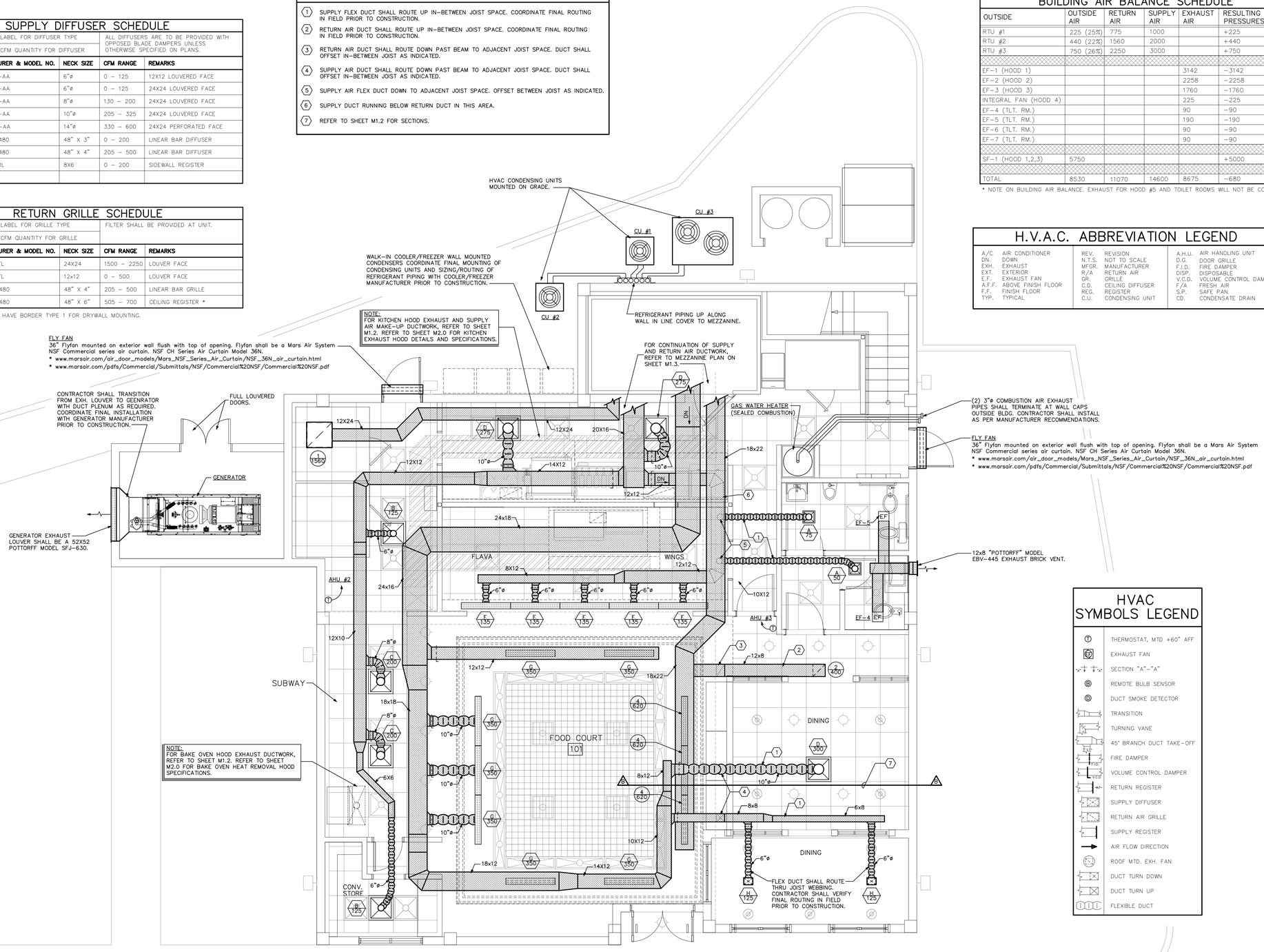
BUILDING AIR BALANCE SCHEDULE

OUTSIDE	OUTSIDE AIR	RETURN AIR	SUPPLY AIR	EXHAUST AIR	RESULTING PRESSURES
RTU #1	225 (25%)	775	1000		+225
RTU #2	440 (22%)	1560	2000		+440
RTU #3	750 (26%)	2250	3000		+750
EF-1 (HOOD 1)				3142	-3142
EF-2 (HOOD 2)				2258	-2258
EF-3 (HOOD 3)				1760	-1760
INTEGRAL FAN (HOOD 4)				225	-225
EF-4 (TLT. RM.)				90	-90
EF-5 (TLT. RM.)				190	-190
EF-6 (TLT. RM.)				90	-90
EF-7 (TLT. RM.)				90	-90
SF-1 (HOOD 1,2,3)	5750				+5000
TOTAL	8530	11070	14600	8675	-680

* NOTE ON BUILDING AIR BALANCE. EXHAUST FOR HOOD #5 AND TOILET ROOMS WILL NOT BE CONSTANT.

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

- THERMOSTAT, MTD +60" AFF
- EXHAUST FAN
- SECTION "A"-"A"
- REMOTE BULB SENSOR
- DUCT SMOKE DETECTOR
- TRANSITION
- TURNING VANE
- 45° BRANCH DUCT TAKE-OFF
- FIRE DAMPER
- VOLUME CONTROL DAMPER
- RETURN REGISTER
- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- SUPPLY REGISTER
- AIR FLOW DIRECTION
- ROOF MTD. EXH. FAN
- DUCT TURN DOWN
- DUCT TURN UP
- FLEXIBLE DUCT

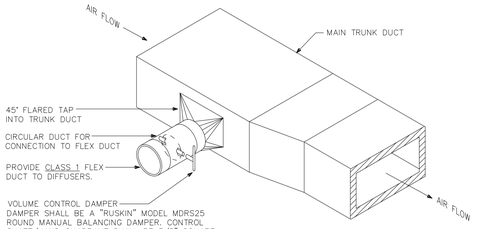
1 MAIN LEVEL FLOOR PLAN - MECHANICAL

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

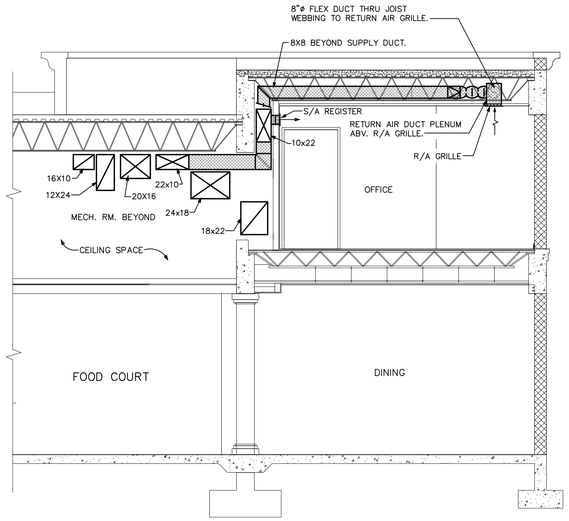
M1.1

SPECIFIC MECHANICAL NOTES

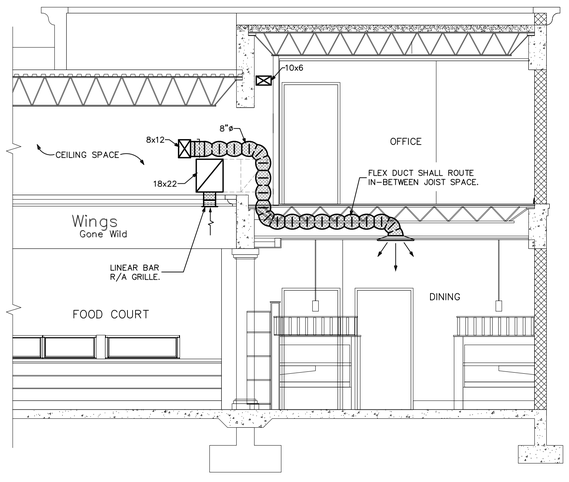
1. 30X10 HOOD EXHAUST DUCT UP THRU ROOF TO ROOF MOUNTED EXHAUST FAN.
2. 21X10 HOOD EXHAUST DUCT UP THRU ROOF TO ROOF MOUNTED EXHAUST FAN.
3. 16X10 HOOD EXHAUST DUCT UP THRU ROOF TO ROOF MOUNTED EXHAUST FAN.



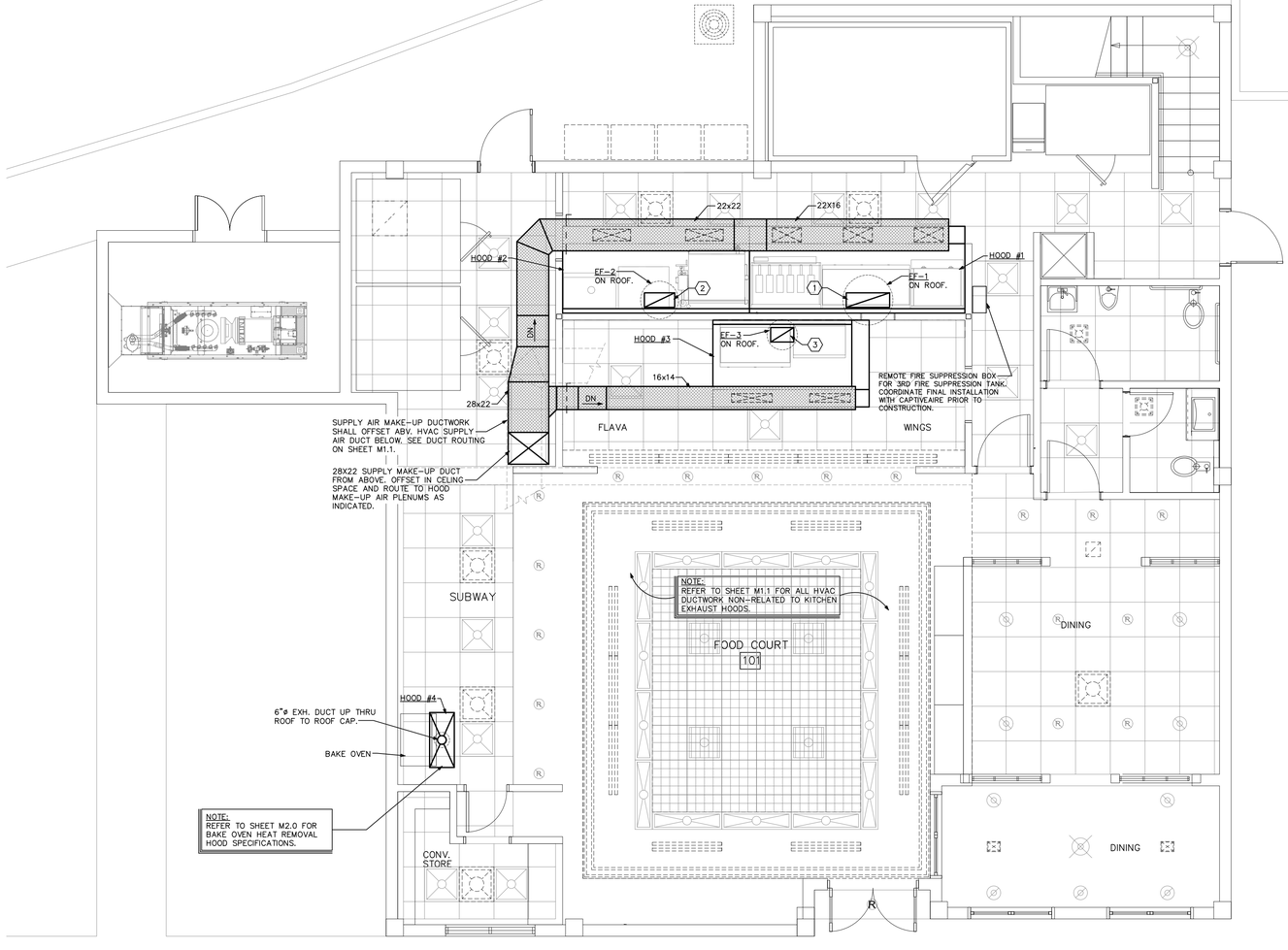
4 BRANCH DUCT DETAIL
NO SCALE



2 SECTION "A"
SCALE: 1/4"=1'-0"



3 SECTION "B"
SCALE: 1/4"=1'-0"



1 MAIN LEVEL FLOOR PLAN - MECHANICAL
SCALE: 1/4"=1'-0"

M1.2

SPLIT SYSTEM AIR CONDITIONING SCHEDULE

CONDENSING UNIT

CU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CAPACITY	SENSIBLE CAPACITY	COMP. RLA	FAN FLA	VOLTAGE	MOCP	EER/SEER
CU #1	CARRIER 24ACB336A005	33,800	26,580	9.2	1.4	208V/3ø	20A	13.0
CU #2	CARRIER 24ACB360A005	57,000	44,120	17.7	1.2	208V/3ø	40A	13.0
CU #3	CARRIER 38AUZA08A0G5	95,300	73,000	25	(2)@1.5	208V/3ø	50A	11.2

GENERAL NOTES:

* ALL RATINGS ARE AT ARI ENTERING CONDITIONS UNLESS OTHERWISE NOTED.
* PROVIDE VIBRATION ISOLATION FOR UNITS.
* EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COIL OR FILTER PRESSURE DROP.
* CONTRACTOR MAY SUBSTITUTE MANUFACTURER FOR APPROVED EQUAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ANY CLEARANCE REQUIREMENTS ARE MET FOR ANY SUBSTITUTIONS.

AIR HANDLING UNIT

AHU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CFM	O/A CFM	E.S.P.	BLOWER SPEED	FAN HP	HEATER KW	VOLTAGE	NOTES
AHU #1	CARRRIER FX4CNF002005	1,200	SEE SCH.	.30"	HIGH	1/3 HP	–	208V/1ø	1 THRU 6
AHU #2	CARRRIER FX4CNF004005	2,000	SEE SCH.	.30"	HIGH	3/4 HP	–	208V/1ø	1 THRU 6
AHU #3	CARRRIER 40RUAA08A1A5	3,000	SEE SCH.	.40"	695 RPM	1 HP	–	208V/1ø	1 THRU 6

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) SIZE AND RUN REFRIGERANT PIPING AS PER MANUFACTURERS PUBLISHED RECOMMENDATIONS.
2) INSULATE REFRIGERANT SUCTION LINE WITH 3/4" ARMAFLEX OR APPROVED EQUAL.
3) INSTALL CHEMICAL DRYER AND STRAINER IN REFRIGERANT LIQUID LINE.
4) PROVIDE 5 YEAR WARRANTY ON COMPRESSOR AND 1 YEAR WARRANTY ON ALL PARTS AND LABOR.
5) HEATER SHALL BE PROVIDE WITH 24 VOLT CONTROL.
6) PROVIDE BUILT-IN DISCONNECT/CIRCUIT BREAKER IN AIR HANDLING UNIT.

OUTSIDE AIR CALCULATIONS

THE FOLLOWING IS BASED ON ASHRAE STANDARD 62.1–2007 FOR OUTSIDE AIR REQUIREMENTS

UNIT LABEL	OCCUPANCY CATAGORY	AREA	ESTIMATED MAX. OCCUPANCY	OUTSIDE AIR REQUIRED (CFM)	E_z	TOTAL
AHU–1	OFFICE	350	5 PEOPLE PER 1,000 S.F./5 CFM PER PERSON	(2 X 5) + (350 X .06) = 31 (PEOPLE, AREA, TOTAL)		
AHU–1	STORAGE	125	.12 CFM PER SQ. FT.	(N/A) + (125 X .12) = 15 (PEOPLE, AREA, TOTAL)		
				AHU #1 TOTAL = 46	0.8	46/0.8 = 57.5
AHU–2	KITCHEN	700	* 1,410 CFM REQUIRED FOR HOOD MAKE–UP AIR			
AHU–3	DINING	875	70 PEOPLE PER 1,000 S.F./7.5 CFM PER PERSON	(71 X 7.5) + (875 X .18) = 690 (PEOPLE, AREA, TOTAL)	0.8	690/0.8 = 862

* MAKE–UP AIR FROM MULTIPLE AHU'S. REFER TO BUILDING AIR BALANCE SCHEDULE ON SHEET M1.1 FOR FINAL OUTSIDE AIR CFM QUANTITIES FOR AHU'S.

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, ALL MANUFACTURERS INSTALLATION REQUIREMENTS, 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 MECHANICAL 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 ENSURE AN ORDERLY PROGRESS OF THIS WORK.
4. ALL MATERIAL SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.
5. ALL AIR CONDITIONING DUCTWORK SHALL BE OF STANDARD DUTY FOIL REINFORCED FIBERGLASS BOARD WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER OF ALL DUCTWORK. SUPPLY DUCTBOARD SHALL HAVE A MIN. OF R–6 INSULATION VALUE AND RETURN AIR DUCTBOARD SHALL HAVE A MIN. OF R–4.2 INSULATION VALUE. ALL FLEX DUCT SHALL BE "THERMOFLEX" OR APPROVED EQUAL AND SHALL HAVE EQUIVALENT INSULATION.
6. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.
7. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.
8. 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.
9. 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".
10. 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.
11. ARMAFLEX 3/4" INSULATION SHALL BE USED FOR SUCTION LINES. PRE–INSULATED REFRIGERANT LINE KITS ARE ACCEPTABLE.
12. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.
13. 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.
14. 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.
15. PROVIDE ALL NECESSARY CONTACTORS, RELAYS, ETC., FOR A COMPLETE OPERATING A/C UNIT.
16. 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.

FAN SCHEDULE

LABEL	TYPE OF UNIT – AREA SERVED	MANUFACTURER & MODEL NO.	CFM	SP	MOUNTING ARRANGEMENT	MOTOR H.P.	ENCLOSURE TYPE	RPM	VOLTAGE	NOTES
EF–1,2,3	REFER TO HOOD DETAILS AND SPECIFICATIONS ON SHEET M2.0									
EF–4	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z6	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1ø	1
EF–5	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z7	190	.125"	CEILING MOUNTED	68 WATTS	OPEN DRIP PROOF	1640	115V/1ø	1
EF–6	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z6	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1ø	1
EF–7	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z6	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1ø	1

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

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 300RL	10X6	155 – 200	SIDEWALL REGISTER
B	TITUS 300RL	18X6	405 – 500	SIDEWALL REGISTER
C	TITUS TDC–AA	8"ø	130 – 200	24X24 LOUVERED FACE

RETURN GRILLE SCHEDULE

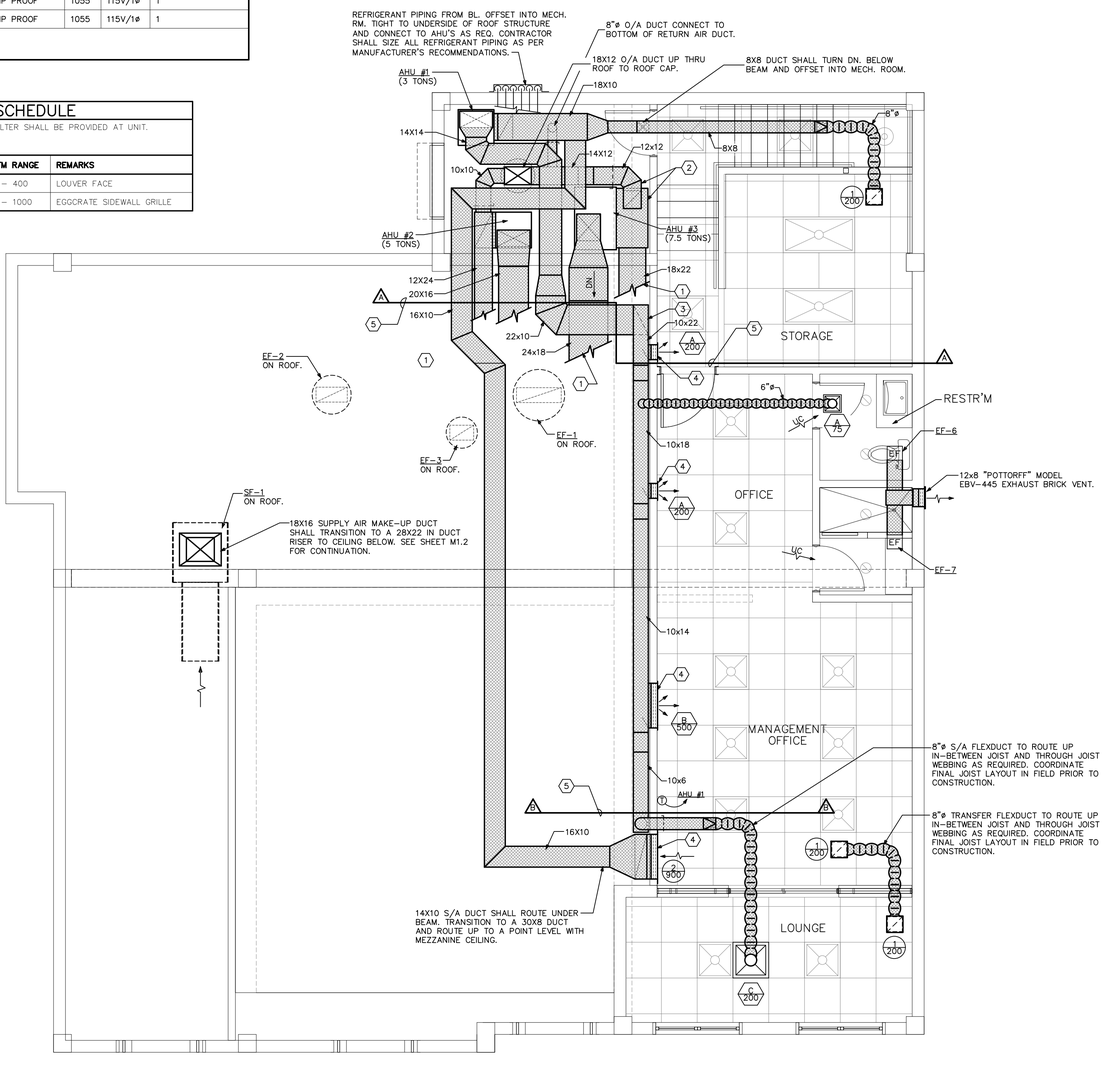
(A/100) DESIGNATES LABEL FOR GRILLE TYPE
DESIGNATES CFM QUANTITY FOR GRILLE

FILTER SHALL BE PROVIDED AT UNIT.

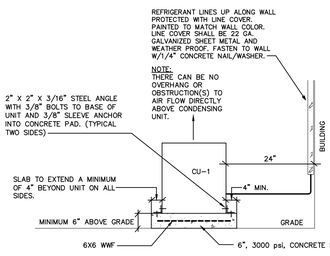
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
1	TITUS 355FL	10X10	0 – 400	LOUVER FACE
2	TITUS 355FL	30X8	0 – 1000	EGGCRATE SIDEWALL GRILLE

SPECIFIC MECHANICAL NOTES

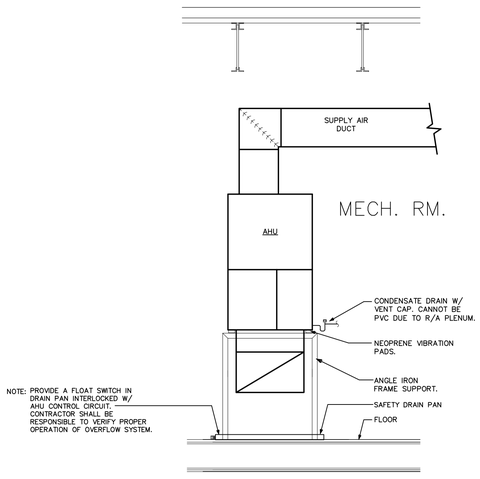
1. FOR CONTINUATION OF SUPPLY AND RETURN AIR DUCTWORK, REFER TO MEZZANINE PLAN ON SHEET M1.3.
2. SUPPLY AIR DUCTWORK AND RETURN AIR DUCT PLENUM LOCATED BELOW BEAM IN THIS AREA. CONTRACTOR SHALL COORDINATE CLEARANCES IN FIELD PRIOR TO CONSTRUCTION.
3. 20X10 S/A DUCTWORK SHALL ROUTE BELOW BEAM, TURN UP ON OTHER SIDE OF BEAM TO A POINT THAT IS LEVEL WITH MEZZANINE OFFICE CEILING.
4. TOP OF GRILLE @ 7'–6" A.F.F.
5. REFER TO SHEET M1.2 FOR SECTIONS.



1 MEZZ. LEVEL FLOOR PLAN - MECHANICAL
SCALE: 1/4"=1'–0"

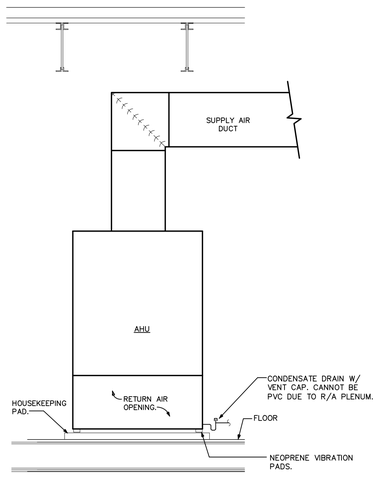


2 COND. UNIT MOUNTING DETAIL
NO SCALE



(AHU #1 & 2)

3 AHU FLOOR MOUNTING DETAIL
NO SCALE



(AHU #3)

4 AHU FLOOR MOUNTING DETAIL
NO SCALE

M1.3

NOTE:
ALL GAS PIPING BETWEEN SECONDARY REGULATOR AND APPLIANCE IS SIZED BASED ON GAS PIPING WITH AND INLET PRESSURE OF 11.0 IN. W.C., PRESSURE DROP OF 0.5 IN. W.C. AND A SPECIFIC GRAVITY OF 1.50.. GAS PIPING IS SIZED AS PER NFPA 54 TABLE 6.3(d).

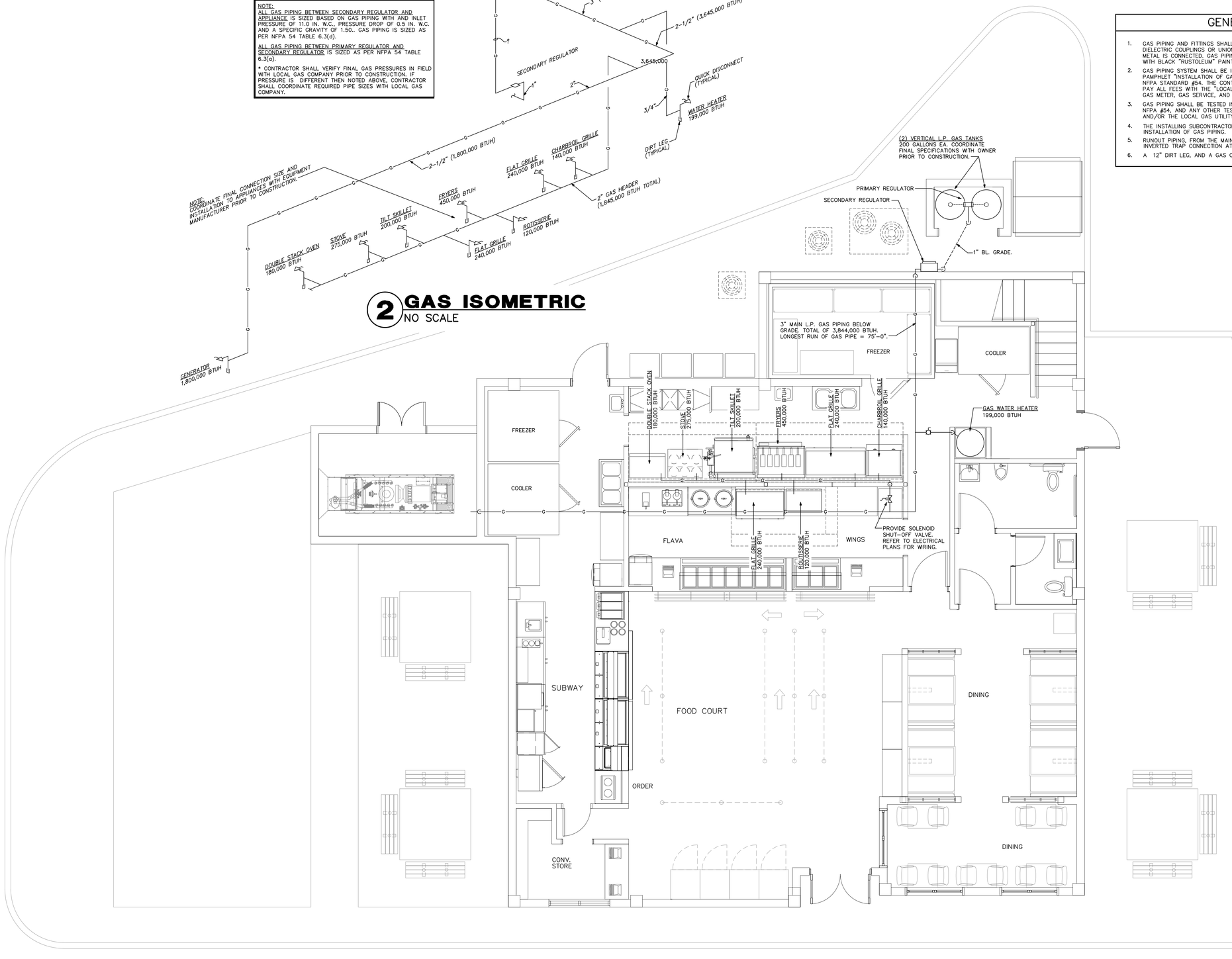
ALL GAS PIPING BETWEEN PRIMARY REGULATOR AND SECONDARY REGULATOR IS SIZED AS PER NFPA 54 TABLE 6.3(a).

* CONTRACTOR SHALL VERIFY FINAL GAS PRESSURES IN FIELD WITH LOCAL GAS COMPANY PRIOR TO CONSTRUCTION. IF PRESSURE IS DIFFERENT THEN NOTED ABOVE, CONTRACTOR SHALL COORDINATE REQUIRED PIPE SIZES WITH LOCAL GAS COMPANY.

2 GAS ISOMETRIC
NO SCALE

GENERAL 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. GAS PIPING OUTSIDE THE BUILDING SHALL BE PAINTED WITH BLACK "RUSTOLEUM" PAINT.
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.



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

HOOD INFORMATION

HOOD NO.	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM TOTAL EXH. CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG.	DIA.	CFM	S.P.	SUPPLY PLENUM TOTAL SUP. CFM	SUPPLY PLENUM RISER(S) WIDTH	LENG.	DIA.	CFM	S.P.	HOOD CONSTRUCTION	HOOD CONFIG. END TO END	ROW
1	4824 ND-2-PSP-F	12' 1.00"Nom. 12' 1.00"OD	600 Deg.	3142	10"	30"		3142	0.582"	2514						430 SS Where Exposed	LEFT	N/A
2	4824 ND-2-PSP-F	10' 6.00"Nom. 10' 6.00"OD	450 Deg.	2258	10"	21"		2258	0.481"	1806						430 SS Where Exposed	RIGHT	N/A
3	4824 ND-2-PSP-F	8' 0.00"Nom. 8' 0.00"OD	450 Deg.	1760	10"	16"		1760	0.425"	1408						430 SS Where Exposed	ALONE	N/A

* FOR SPECIFICATION OF HOOD #4 SEE SEPARATE HOOD #4 SCHEDULE ON THIS SHEET.

HOOD INFORMATION

HOOD NO.	FILTER(S) TYPE	QTY.	HEIGHT	LENGTH	LIGHT(S) QTY.	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	SWITCHES LOCATION	FIRE SYSTEM PIPING	HOOD WEIGHT
1	SS Baffle with Handles	4	16"	16"	6	Incandescent Light Fix	NO							YES	512 LBS.
2	SS Baffle with Handles	4	16"	16"	6	Incandescent Light Fix	NO							YES	475 LBS.
3	SS Baffle with Handles	3	16"	20"											
		1	16"	16"	4	Incandescent Light Fix	NO	Right	Ansul R102	3.0/3.0	33111083	1 Light 1 Fan	Outside	YES	484 LBS.
		4	16"	20"											

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	POS.	LENGTH	WIDTH	HEIGHT	RISER(S) WIDTH	LENG.	DIA.	CFM	S.P.
1	Front	148"	12"	6"	10"	20"		837	0.152"
					10"	20"		837	0.152"
					10"	20"		837	0.152"
2	Front	129"	12"	6"	8"	26"		902	0.146"
					8"	26"		902	0.146"
3	Front	108"	12"	6"	6"	28"		704	0.131"
					6"	28"		704	0.131"

HOOD OPTIONS

HOOD NO.	OPTION
1	LEFT END STANDOFF (FINISHED) 3" Wide
2	RIGHT END STANDOFF (FINISHED) 3" Wide

PREWIRE ELECTRICAL PACKAGES

NO.	TAG	PACKAGE #	LOCATION	SWITCHES LOCATION	SWITCHES QUANTITY	ROOFTOP STARTERS	OPTION	FANS CONTROLLED TYPE	ø	H.P.	VOLT	FLA
1		33111083	Utility Cabinet Right	Utility Cabinet Right	1 Light		Exhaust in Fire, Lights out in Fire	Exhaust	3	1.000	208	3.3
				Hood # 3	1 Fan							
								Exhaust	3	0.750	208	2.7
								Exhaust	3	0.500	208	1.8
								Supply	3	3.000	208	9.5

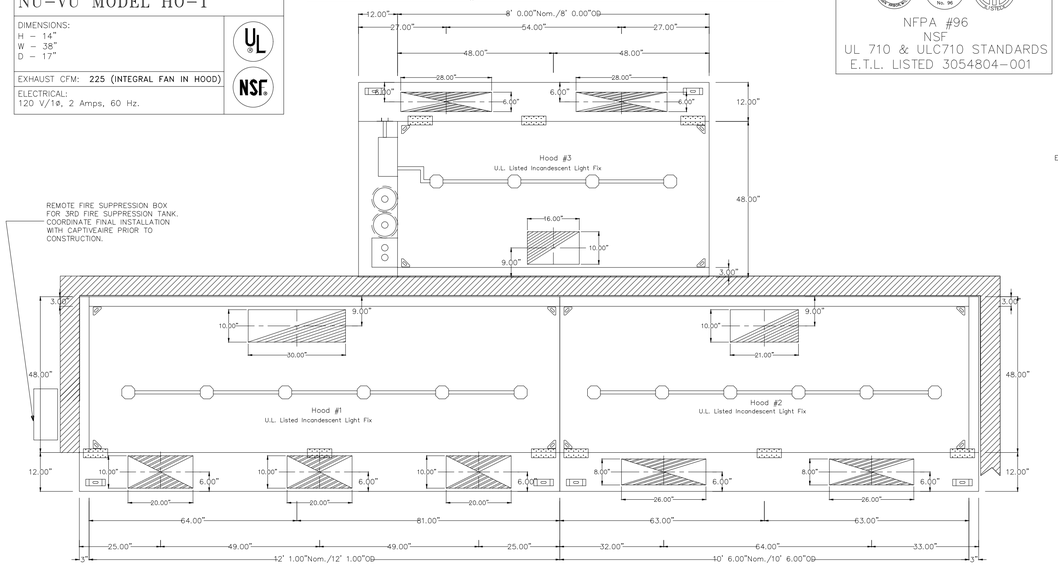
HOOD #4: (HEAT REMOVAL ONLY)
NU-VU MODEL HO-1

DIMENSIONS:
H – 14"
W – 38"
D – 17"

EXHAUST CFM: 225 (INTEGRAL FAN IN HOOD)

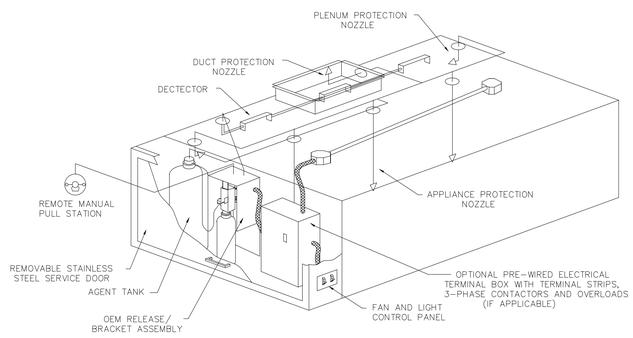
ELECTRICAL:
120 V/1ø, 2 Amps, 60 Hz.

PLAN VIEW – Hood #3 – 8' 0.00" LONG 4824ND-2-PSP-F



PLAN VIEW – Hood #1
12' 1.00" LONG 4824ND-2-PSP-F

PLAN VIEW – Hood #2
10' 6.00" LONG 4824ND-2-PSP-F



TYPICAL ANSUL R-102 SYSTEM LAYOUT

EXHAUST FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	MODEL	TAG	CFM	S.P.	RPM	H.P.	ø	VOLT	FLA	WEIGHT (LBS.)
EF-1	NCA16FA	NCA16FA		3142	0.850	1061	1.000	3	208	3.3	155.41
EF-2	NCA14FA	NCA14FA		2258	0.850	1233	0.750	3	208	2.7	123.14
EF-3	NCA14FA	NCA14FA		1760	0.850	1112	0.500	3	208	1.8	119.14

MUA FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	BLOWER	HOUSING	TAG	CFM	S.P.	RPM	H.P.	ø	VOLT	FLA	WEIGHT (LBS.)
SF-1	NSAU2-G15	G15-PB	NSAU.2MI		5750	0.550	723	3.000	3	208	9.5	360.67

FAN OPTIONS

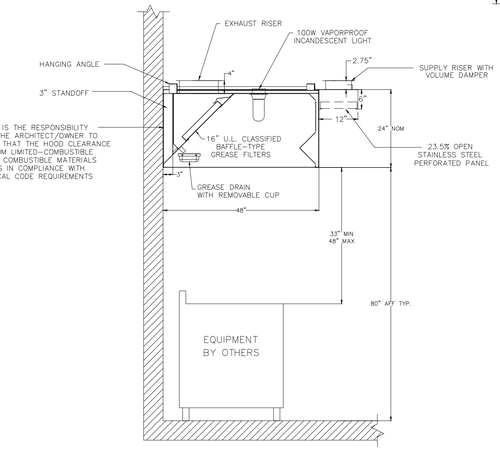
FAN UNIT NO.	OPTION (Qty. – Descr.)
EF-1	1 – Grease Box
EF-2	1 – Grease Box
EF-3	1 – Grease Box

CURB ASSEMBLIES

NO.	ON FAN	ITEM	SIZE
EF-1	# 1	Curb	26.500"W x 26.500"L x 20.000"H Vented Hinged
EF-2	# 2	Curb	23.000"W x 23.000"L x 20.000"H Vented Hinged
EF-3	# 3	Curb	23.000"W x 23.000"L x 20.000"H Vented Hinged
SF-1	# 4	Curb	32.500"W x 32.500"L x 14.000"H

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

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

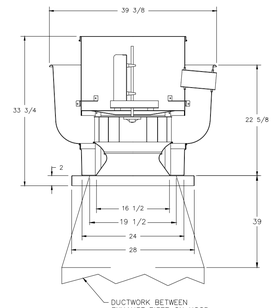


SECTION VIEW – MODEL 4824-ND-2 with PSP Accessory

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 GALVANIZED SHEET METAL. GAUGES, HANGING AND REINFORCING PER SMACNA STANDARDS.

FAN #1 NCA16FA – EXHAUST FAN

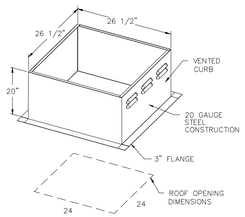


FEATURES:
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- AMCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

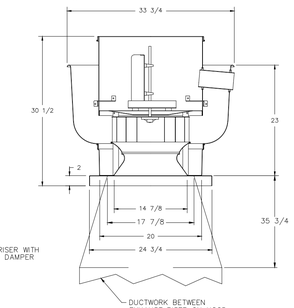
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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 #2 AND #3 NCA14FA – EXHAUST FAN



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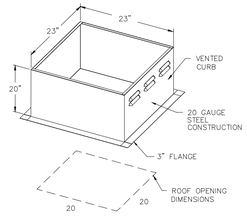
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

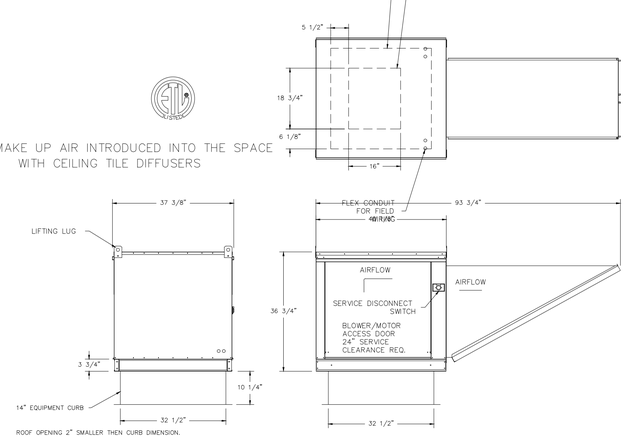
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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

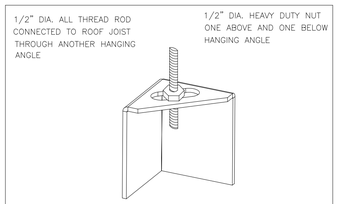


MAKE UP AIR INTRODUCED INTO THE SPACE WITH CEILING TILE DIFFUSERS



FAN #4 NSAU2-G15 – SUPPLY FAN

1. SUPPLY UNIT WITH 5
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE – RIGHT -> LEFT



*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR
HANGING ANGLE IS PRE-PUNCHED AT FACTORY

ND-2 HANGING ANGLE DETAIL

M2.0

SPECIFIC PLUMBING NOTES

1. WATER CONNECTION TO ICE MACHINE SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR ICE MACHINE SHALL BE A "WATTS" 7C 3/8".
   * http://www.watts.com/pages/_products_details.asp?pid=880
2. WATER CONNECTION TO COFFEE MACHINE SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW SHALL BE A "WATTS" 7C 3/8".
   * http://www.watts.com/pages/_products_details.asp?pid=880
3. WATER CONNECTION TO BEVERAGE MACHINE SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR BEVERAGE MACHINE SHALL BE A "WATTS" SD3 3/8".
   * http://www.watts.com/pdf/es-sd3.pdf

   WATER CONNECTION TO ICE MACHINE LOCATED ABOVE BEVERAGE MACHINE SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR ICE MACHINE SHALL BE A "WATTS" 7C 3/8".
   * http://www.watts.com/pages/_products_details.asp?pid=880
4. WATER CONNECTION TO BREAD OVEN SHALL HAVE A BACKFLOW PREVENTER. BACKFLOW FOR BEVERAGE MACHINE SHALL BE A "WATTS" CU7 1/2".
   * http://www.watts.com/pages/_products_details.asp?pid=881

GREASE TRAP CALCULATIONS FOR SEPARATOR #1

3 COMP. SINK: (SINK SIZE) 15"x21"x14"x3= 13,230 CU. IN. x 1(GAL)/231 CU. IN. = 42.9 GAL. x .75 (75 % ACTUAL WATER VOLUME) = 32.1 GAL. W/ FLOW RATE OF 2 GAL./MIN. (32.1 DIVIDED BY 2) = 16.0 G.P.M.

TOTAL REQUIREMENT = 16.0 G.P.M.

GREASE SEPARATOR 1

GREASE SEPARATOR SHALL BE EQUAL TO A "ROCKFORD" MODEL G.1820 ALL WELDED 1/4" STEEL SEPARATOR, 20 GPM INTERMITTENT FLOW, 3" TAPPED INLET AND OUTLET WITH A 3" TAPPED INTERNAL VENT CONNECTION. 17 GALLON LIQUID HOLDING CAPACITY WITH 70 LBS GREASY SLUDGE CAPACITY. PROVIDE INTERNAL SEPARATOR SCREEN WITH REMOVABLE FILTER SCREENS FOR SERVICE. GREASE SEPARATOR MOUNTED ON FLOOR.

GREASE TRAP CALCULATIONS FOR SEPARATOR #2

3 COMP. SINK: (SINK SIZE) 13"x18"x12"x3= 8,424 CU. IN. x 1(GAL)/231 CU. IN. = 36.4 GAL. x .75 (75 % ACTUAL WATER VOLUME) = 27.3 GAL. W/ FLOW RATE OF 2 GAL./MIN. (27.3 DIVIDED BY 2) = 13.6 G.P.M.

TOTAL REQUIREMENT = 13.6 G.P.M.

GREASE SEPARATOR 1

GREASE SEPARATOR SHALL BE EQUAL TO A "ROCKFORD" MODEL G.1815 ALL WELDED 1/4" STEEL SEPARATOR, 16 GPM INTERMITTENT FLOW, 3" TAPPED INLET AND OUTLET WITH A 3" TAPPED INTERNAL VENT CONNECTION. 10 GALLON LIQUID HOLDING CAPACITY WITH 60 LBS GREASY SLUDGE CAPACITY. PROVIDE INTERNAL SEPARATOR SCREEN WITH REMOVABLE FILTER SCREENS FOR SERVICE. GREASE SEPARATOR MOUNTED ON FLOOR.

GREASE TRAP CALCULATIONS FOR SEPARATOR #1

3 COMP. SINK: (SINK SIZE) 13"x17"x12"x2= 5,304 CU. IN. x 1(GAL)/231 CU. IN. = 22.9 GAL. x .75 (75 % ACTUAL WATER VOLUME) = 17.1 GAL. W/ FLOW RATE OF 2 GAL./MIN. (17.1 DIVIDED BY 2) = 8.5 G.P.M.
3 COMP. SINK: (SINK SIZE) 10"x14"x10"x1= 1,400 CU. IN. x 1(GAL)/231 CU. IN. = 6.0 GAL. x .75 (75 % ACTUAL WATER VOLUME) = 4.5 GAL. GAL./MIN. (4.5 DIVIDED BY 2) = 2.2 G.P.M.

TOTAL REQUIREMENT = 10.7 G.P.M.

GREASE SEPARATOR 1

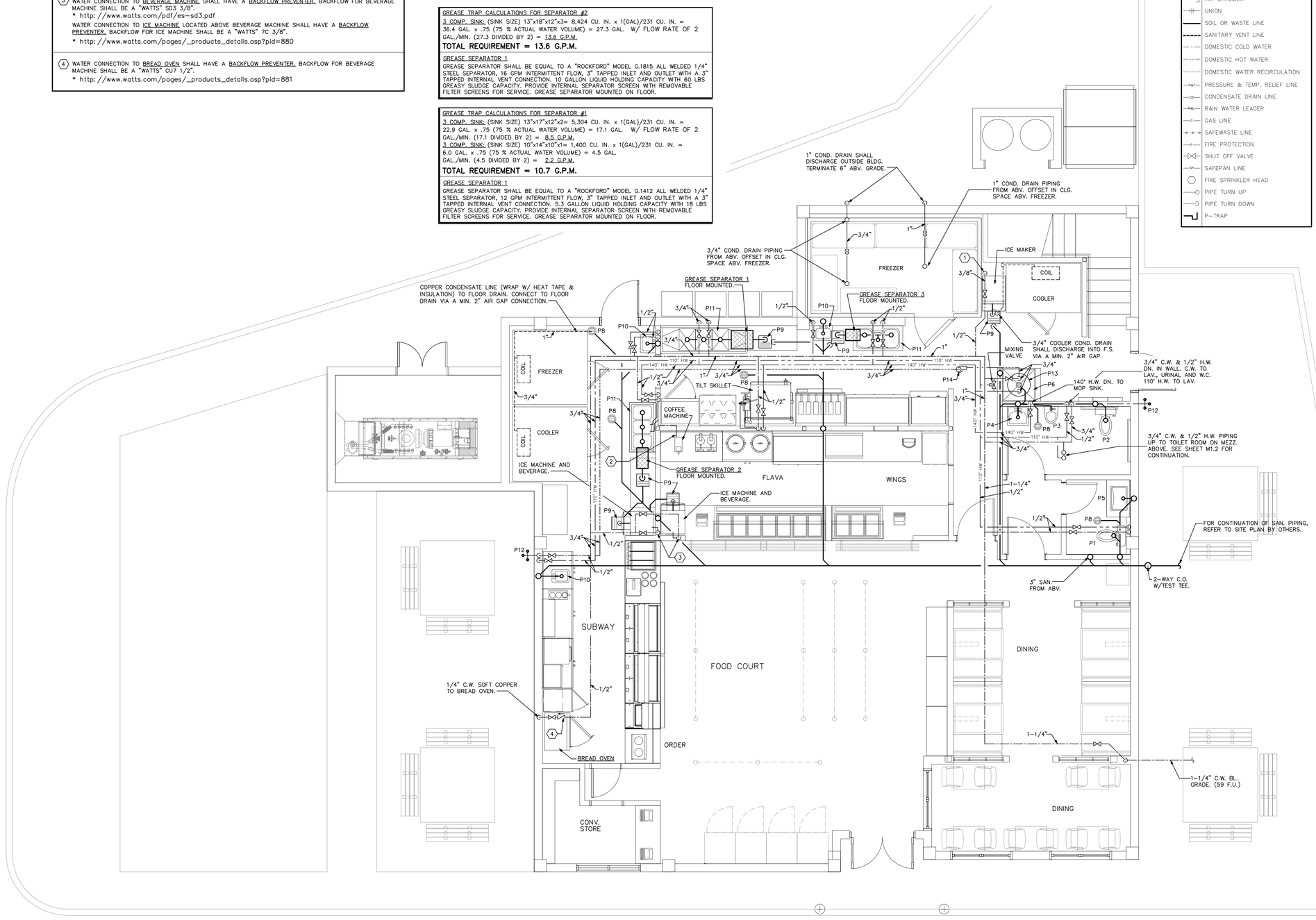
GREASE SEPARATOR SHALL BE EQUAL TO A "ROCKFORD" MODEL G.1412 ALL WELDED 1/4" STEEL SEPARATOR, 12 GPM INTERMITTENT FLOW, 3" TAPPED INLET AND OUTLET WITH A 3" TAPPED INTERNAL VENT CONNECTION. 5.3 GALLON LIQUID HOLDING CAPACITY WITH 18 LBS GREASY SLUDGE CAPACITY. PROVIDE INTERNAL SEPARATOR SCREEN WITH REMOVABLE FILTER SCREENS FOR SERVICE. GREASE SEPARATOR MOUNTED ON FLOOR.

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		

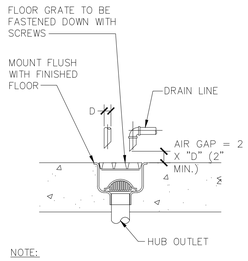
PLUMBING SYMBOLS LEGEND

- 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



1 MAIN LEVEL FLOOR PLAN - PLUMBING

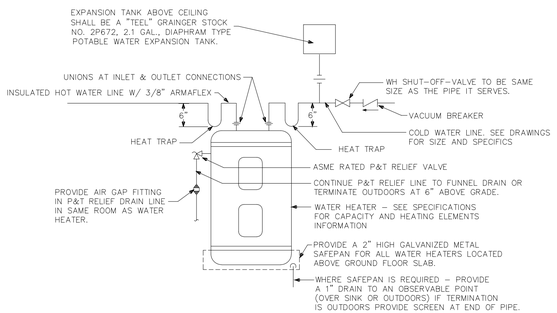
SCALE: 1/4"=1'-0"



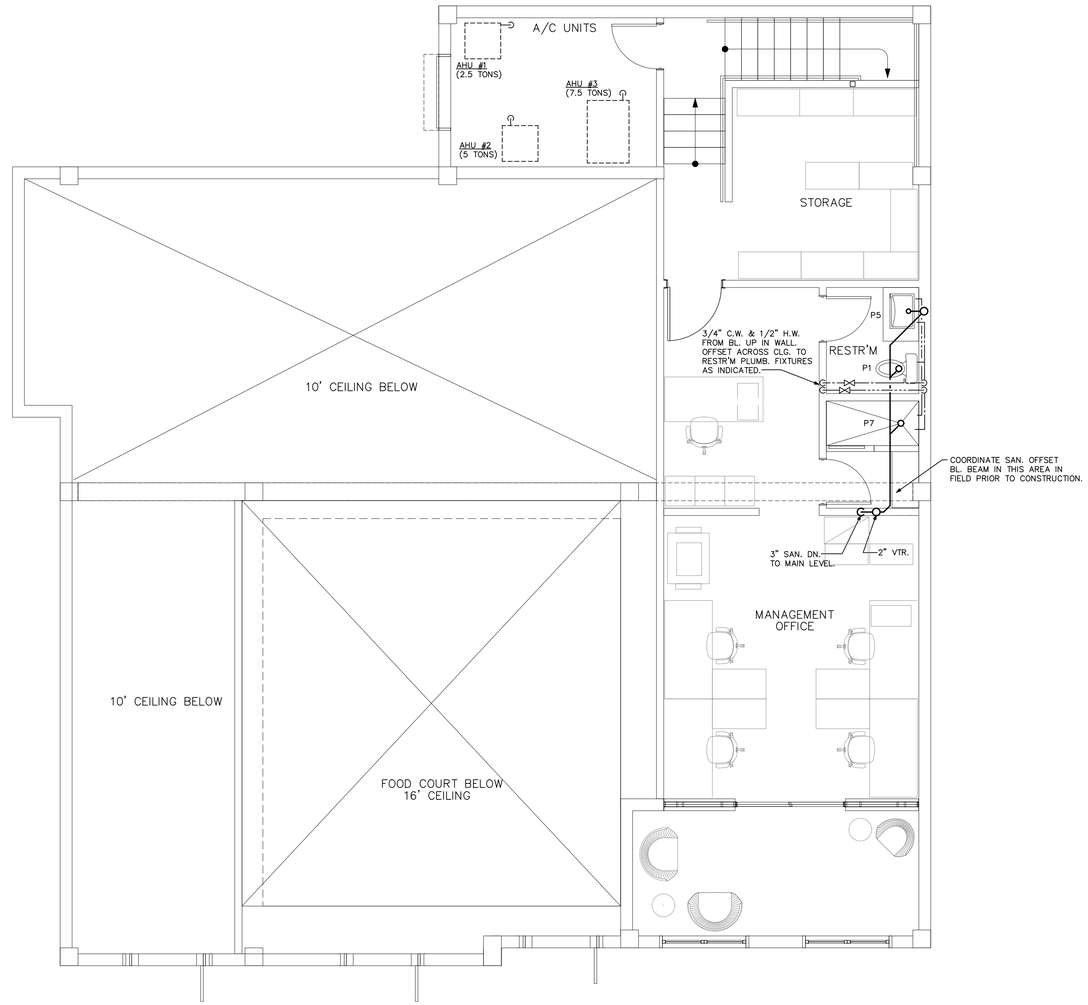
NOTE:

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

2 FLOOR SINK CONN. DETAIL
NO SCALE



3 WATER HEATER DETAIL
NO SCALE



1 MEZZ. LEVEL FLOOR PLAN - PLUMBING
SCALE: 1/4"=1'-0"

PLUMBING FIXTURE SCHEDULE

P-1 (FLOOR MOUNTED FLUSH TANK WATER CLOSET)
SHALL BE A "KOHLER" MODEL CIMARRON #K-3589, 1.6 GPF, VITREOUS CHINA, CLOSE-COUPLED TANK, FLOOR MOUNTED, FLOOR OUTLET, WITH A "KOHLER" OPEN FRONT SEAT WITH COVER MODEL K-4660.
* http://www.us.kohler.com/onlinecatalog/pdf/1095476_4.pdf

P-2 (HANDICAPPED FLOOR MOUNTED FLUSH TANK WATER CLOSET)
SHALL BE A "KOHLER" MODEL KELSTON #K-3754, 1.6 GPF, VITREOUS CHINA, CLOSE-COUPLED TANK, FLOOR MOUNTED, FLOOR OUTLET, WITH A "KOHLER" OPEN FRONT SEAT WITH COVER MODEL K-4650.
* http://www.us.kohler.com/onlinecatalog/pdf/1126366_4.pdf

P-3 (HANDICAPPED URINAL)
SHALL BE AN AMERICAN STANDARD LYNBROOK MODEL 6601.012 TOP SPUD. 0.83 GPF. FLUSH VALVE SHALL BE SLOAN ROYAL MODEL 180-1.
* http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_190.pdf

P-4 (HANDICAPPED WALL HUNG LAVATORY)
SHALL BE A "KOHLER" MODEL PINOIR #K-2035, VITREOUS CHINA, WALL MOUNT WITH CONCEALED ARMS SUPPORT. FAUCET SHALL BE A BRADLEY "AERADA 90-75 SERIES METERING FAUCET" MODEL S53-053 WITH 4" CENTERS. UNIT IS ADA COMPLIANT AND 0.5 GPM WITH A 10 SECOND OPERATING CYCLE PRODUCING UNDER .25 GALLONS PER CYCLE. PROVIDE A BRADLEY VERNATHERM THERMOSTATIC MIXING VALVE TO DELIVER TEMPERED WATER AT A TEMPERATURE NOT TO EXCEED 105 DEGREES. 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.us.kohler.com/onlinecatalog/pdf/116267_4.pdf
* http://www.bradleycorp.com/products/techdata/3000.pdf

P-5 (COUNTER TOP LAVATORY)
SHALL BE A "KOHLER" MODEL MODEL LADENA #K-2214, VITREOUS CHINA UNDER COUNTER MOUNT. PROVIDE A "KOHLER" FAUCET WITH 4" WRIST BLADE HANDLES MODEL REVIVAL #K-16102.
* http://www.us.kohler.com/onlinecatalog/pdf/106355_4.pdf
* http://www.us.kohler.com/onlinecatalog/pdf/1108233_4.pdf

P-6 (MOP RECEPTOR/CAN WASH)
SHALL BE A FLORESTONE #92 32X32X12" 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/model.php?s=mop_sinks&m=mop_sinks_model_90-92
* http://www.florestone.com/mop_sinks_accessories.php

P-7 (SHOWER MIXING VALVE)
SHALL BE A SPEAKMAN SPEAKMAN SENTINELPRO MODEL #SM-5410 CONCEALED ANTI-SCALD THERMOSTATIC/PRESSURE BALANCED SHOWER VALVE. CHROME PLATED BRASS WALL PLATE WITH METAL INDEX. CHROME PLATED METAL LEVER HANDLE. ADJUSTABLE TEMPERATURE LIMIT STOP (TLS). FACTORY SET @ 110 F°. SPEAKMAN S-2272-E2 SHOWERHEAD WITH FLOW CONTROL DEVICE REDUCES FLOW TO 2.0 GPM.
SHOWER STALL COORDINATE FINAL SPECIFICATIONS OF SHOWER STALL WITH ARCHITECT/ OWNER PRIOR TO CONSTRUCTION.
* http://www.speakmancompany.com/products/detail/SM-5410

P-8 (FLOOR DRAIN WITH TRAP PRIMER)
SHALL BE A JOSAM 30000-WT-A-49 SERIES COATED CAST IRON FLOOR DRAIN. TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEJLOC INVERTIBLE NON- PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER.
* http://www.josam.com/images/josammkt/sbmtl/s06_30000-WT-A.pdf

P-9 (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-10 (STAINLESS STEEL HAND SINK)
COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION.

P-11 (STAINLESS STEEL 3 COMPARTMENT SINK)
COORDINATE FINAL SPECIFICATIONS WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION.

P-12 (HOSE BIBB - NARROW WALL HYDRANT - MODERATE CLIMATE)
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://www.zurn.com/operations/specdrain/pdfs/specsheets/58877.pdf

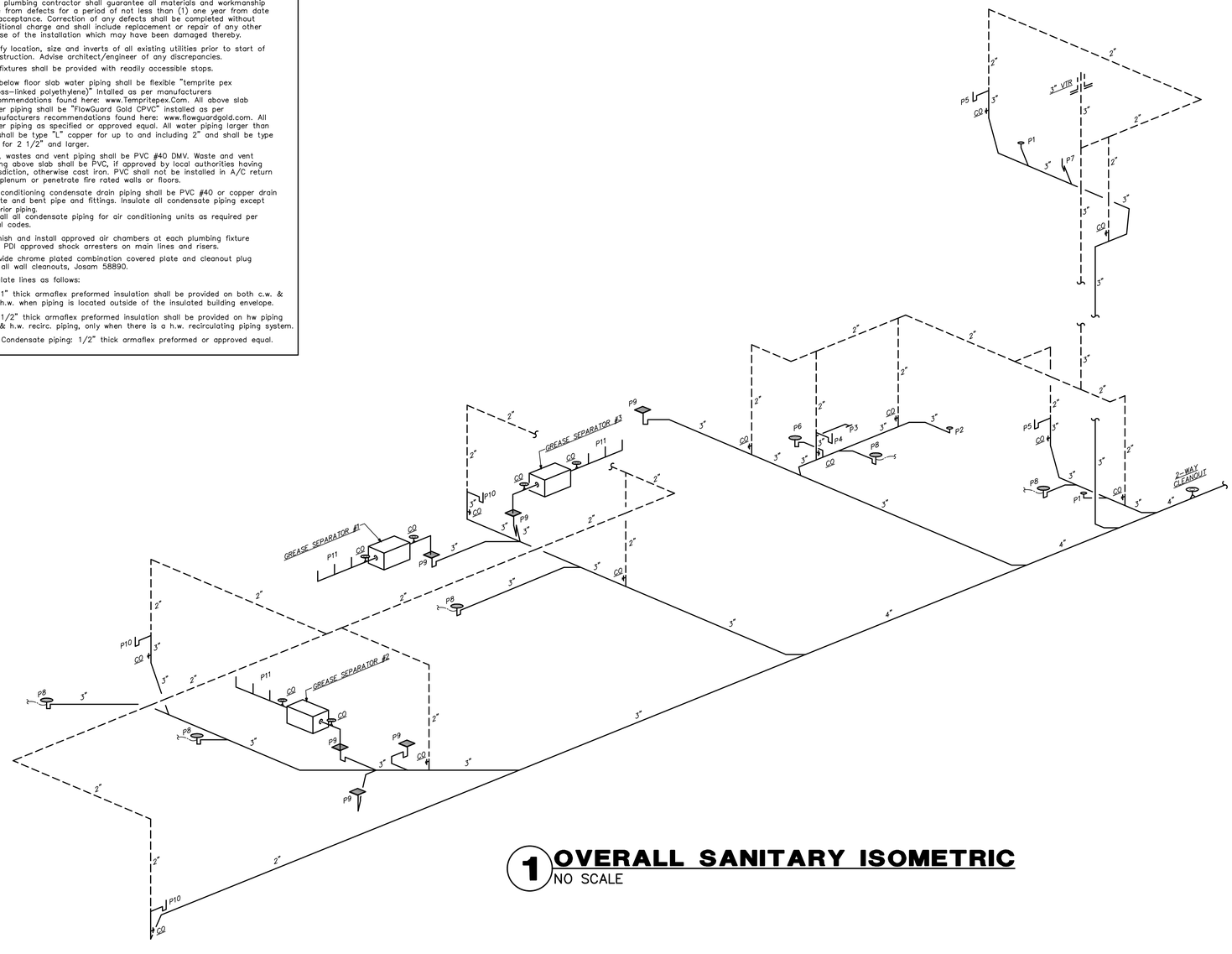
P-13 (GAS WATER HEATER - DIRECT VENT - SEALED COMBUSTION)
SHALL BE A LOCHINVAR "CHARGERPOWER DV" MODEL PNR200-080 GAS FIRED COMMERCIAL WATER HEATER. 199,000 BTU INPUT TO PRODUCE 194 GALLONS PER HOUR OF HOT WATER AT 100 DEGREE RISE. INSULATED GLASSLINED 80 GALLON STORAGE TANK. 5 YEAR LIMITED WARRANTY ON STORAGE TANK AGAINST TANK FAILURE. WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE SECTIONS 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION.
* http://lochinvar.com/_linefiles/PGR.pdf

P-14 (HOT WATER RECIRCULATING PUMP)
SHALL BE A"BELL & GOSSETT" MODEL #PL-36B, GRAINGER STOCK #4JA88, INLINE CIRCULATOR PUMP, OPEN LOOP SYSTEM, 1/6 HP, SINGLE PHASE, VOLTAGE 115, 2.10 AMPS, INLET/OUTLET FLANGED, HOUSING MATERIAL BRONZE, MAX. TEMP. 225 F, MAX. WORKING PRESSURE 150 PSI, SHUT-OFF 37 FT., 3300 RPM, IMPELLER MATERIAL NON-METALLIC, AUTO THERMAL PROTECTION, MECHANICAL SEAL CARBON/SILICON CARBIDE, WARRANTY LENGTH 1 YEAR.
* http://www.grainger.com/Grainger/BELL-GOSSETT-Circulator-Pump-4JA88?Pid=search

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.Tempritepex.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 water piping larger than 1" shall be type "L" copper for up to and including 2" and shall be type "K" for 2 1/2" and larger.
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 air chambers at each plumbing fixture and PDI approved shock arresters on main lines and risers.
16. Provide chrome plated combination covered plate and cleanout plug for all wall cleanouts, Josam 58890.
17. Insulate lines as follows:
    a.) 1" thick armaflex preformed insulation shall be provided on both c.w. & h.w. when piping is located outside of the insulated building envelope.
    b.) 1/2" 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.



1 OVERALL SANITARY ISOMETRIC
NO SCALE

P2.0

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 DRAWNGS; 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.

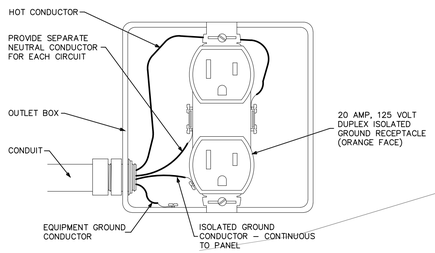
    FIXTURES WITH ADJUSTMENTS AFFECTING LIGHT DISTRIBUTION SHALL BE SET TO PROVIDE THE REQUIRED LIGHT PATTERNS PRIOR TO THE FINAL DEMONSTRATION TEST.

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.

LIGHTING FIXTURE SCHEDULE

LABEL	TYPE OF FIXTURE	FINISH	LENS TYPE	VOLTAGE	LAMP	MANUFACTURER & MODEL NO.	REMARKS
A	RECESSED 2'X2' TROFFER	WHITE	PRISMATIC	120	(3) 17W T8	LITHONIA 2SP8G-317-FWA12-MVOLT	
A1	RECESSED 2'X2' TROFFER	WHITE	PARABOLIC	120	(3) 17W T8	LITHONIA 2PM2-G-317-9-120	
B	RECESSED 2'X4' TROFFER	WHITE	PRISMATIC	120	(3) 32W T8	LITHONIA 2SP8G-332-FWA12-MVOLT	
C	RECESSED DOWNLIGHT	WHITE		120	(1) 42W TRT	GOTHAM LGFV-42TRT-6RW-T73-120	WET LOCATION LISTED
D	PENDANT STYLE LIGHT			120	MAX 75W	PROVIDED BY OWNER	
EX	EXIT COMBO SIGN	WHITE	RED	120	INCLUDED	LITHONIA LHQM	W/ BATTERY BACKUP
EX1	EMERG COMBO w/ REM HEAD	WHITE		120	INCLUDED	LITHONIA LHQM	W/ MODEL NX DUAL REMOTE HEAD. 90 MIN BATTERY
F	CANOPY LED DOWN LIGHT	WHITE	TEMPERED GLASS	120	100 LED (130W)	LSI CRR S LED 100 CW 120-240	WET LOCATION LISTED
G	CANOPY LED FOCUS LIGHT	WHITE	TEMPERED GLASS	120	30 LED (50W)	LSI CRO FO LED 30 CW 120-277	WET LOCATION LISTED
K	HID WALL PACK	BRONZE	POLYCARBONATE	120	(1) 70W MH	LITHONIA TWP-70M-120	
L	4' STRIP LIGHT	WHITE		120	(2) 32W T8	LITHONIA L-232-MVOLT	
M	RECESSED 1X4	WHITE	PARABOLIC	120	(1) 32W T8	LITHONIA CNAT-F-132-152-MVOLT	



2 I. G. RECEPTACLE DETAIL
NO SCALE

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 +47"	B	RECESSED MOUNTED LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
$O	SWITCH W/ OCCU SENSOR. WHEN ON +47"	M	OVERHEAD OCCUPANCY SENSOR
$O3	THREE-WAY SWITCH W/ OCCU SENSOR WHEN ON +47"	B	HIGHBAY HID LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE
J	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
	DISCONNECT SWITCH W/ STARTER	IG	ISOLATED GROUND
	DISCONNECT SWITCH	WP	WEATHER-PROOF
BD	FLR. MTD. FLUSH DUPLEX RECEPTACLE	BC	BELOW COUNTER
	FLR. MTD. FLUSH QUAD. RECECPTACLE	TC	TIME CLOCK – 24 HOUR
	FLR. MTD. FLUSH PHONE/DATA OUTLET	GFI	GROUND FAULT INTERRUPTER
	FLR. MTD. FLUSH COMPUTER OUTLET	AFF	ABOVE FINISHED FLOOR
SD	AREA SMOKE DETECTOR	EWC	ELECTRIC WATER COOLER
H	HEAT DETECTOR	ASW	ABOVE SHOW WINDOW
D	DUCT SMOKE DETECTOR	BSW	BELOW SHOW WINDOW
F	FIRE ALARM MAN. PULL STATION +47"	FACP	FIRE ALARM CONTROL PANEL
30	HORN WITH STROBE LIGHT, MTD. +80" # BESIDE DEVICE IS CANDELLA RATING	FAAP	FIRE ALARM ANNUNCIATOR PANEL
L30	STROBE LIGHT ONLY, MTD. +80" # BESIDE DEVICE IS CANDELLA RATING		

PANEL SCHEDULE MDP

400 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	LOAD DESCRIPTION	KEYS	WIRE AND CONDUIT C.	GND	NEUTRAL	COND.	BKR.	##
1								3480	19252	------	------								2
3	125/3	#1	#1	#6	1-1/2	CHAL	PANELBOARD 'A'	9460	16010	------	------								4
5								7120	------	17452	------	PANELBOARD 'B'	CHAL	1-1/2	#6	#1	#1	125/3	6
								11300	------	17850	------								
7								5620	------	------	13592								8
9	20/3	#12	---	#12	1/2	CHAL	CONDENSING UNIT 1	9140	1088	------	13480								10
11								0	3993	------	------								12
								2640	------	1088	------								
13								900	------	2377	------	PANELBOARD 'C'	CHAL	1-1/2	#8	#3	#3	100/3	14
15	40/3	#8	---	#10	3/4	CHAL	CONDENSING UNIT 2	0	------	------	1088								16
17								900	------	------	2606								18
								0	2268	------	------								
19								2740	2740	------	------								20
21	50/3	#8	---	#10	3/4	CHAL	CONDENSING UNIT 3	0	------	2268	------	PANELBOARD 'F'	CHAL	1-1/4	#8	#3	#3	100/2	22
23								200	------	200	------								24
								0	------	------	2268								
25							SPACE	0	------	------	1945								26
27							SPACE	0	3360	------	------	GAS PUMP **	CHAL	1/2	#12	---	#12	25/2	28
29	20/1	#12	#12	#12	1/2	CHAL	GENERATOR ROOM POWER	0	1945	------	------								30
31								0	------	3360	------								32
33	20/3	#12	---	#12	1/2	CHAL	AIR COMPRESSOR	0	------	1945	------	GAS PUMP **	CHAL	1/2	#12	---	#12	25/2	34
35								0	------	------	3360								36
								0	1945	------	------								
37	20/1	#12	#12	#12	1/2	CHAL	CANOPY LIGHTING *	1400	1400	------	------	GAS PUMP **	CHAL	1/2	#12	---	#12	25/2	38
39	20/1	#12	#12	#12	1/2	CHAL	CANOPY LIGHTING *	1400	------	1400	------								40
41	20/1	#12	#12	#12	1/2	CHAL	BOOTH/STORAGE LTS	900	------	------	900	SPACE							42

WIRE/CONDUIT KEY 1234 (1-TEMP RATING, 2-CONDUIT TYPE, 3-INSULATION, 4-WIRING TYPE)	WIRING TYPE C-CU WIRE	INSULATION H-THWN	CONDUIT TYPE A-EMT
TEMP RATING L-78-86 Deg. F.	55273	51157	43356
	149,786		

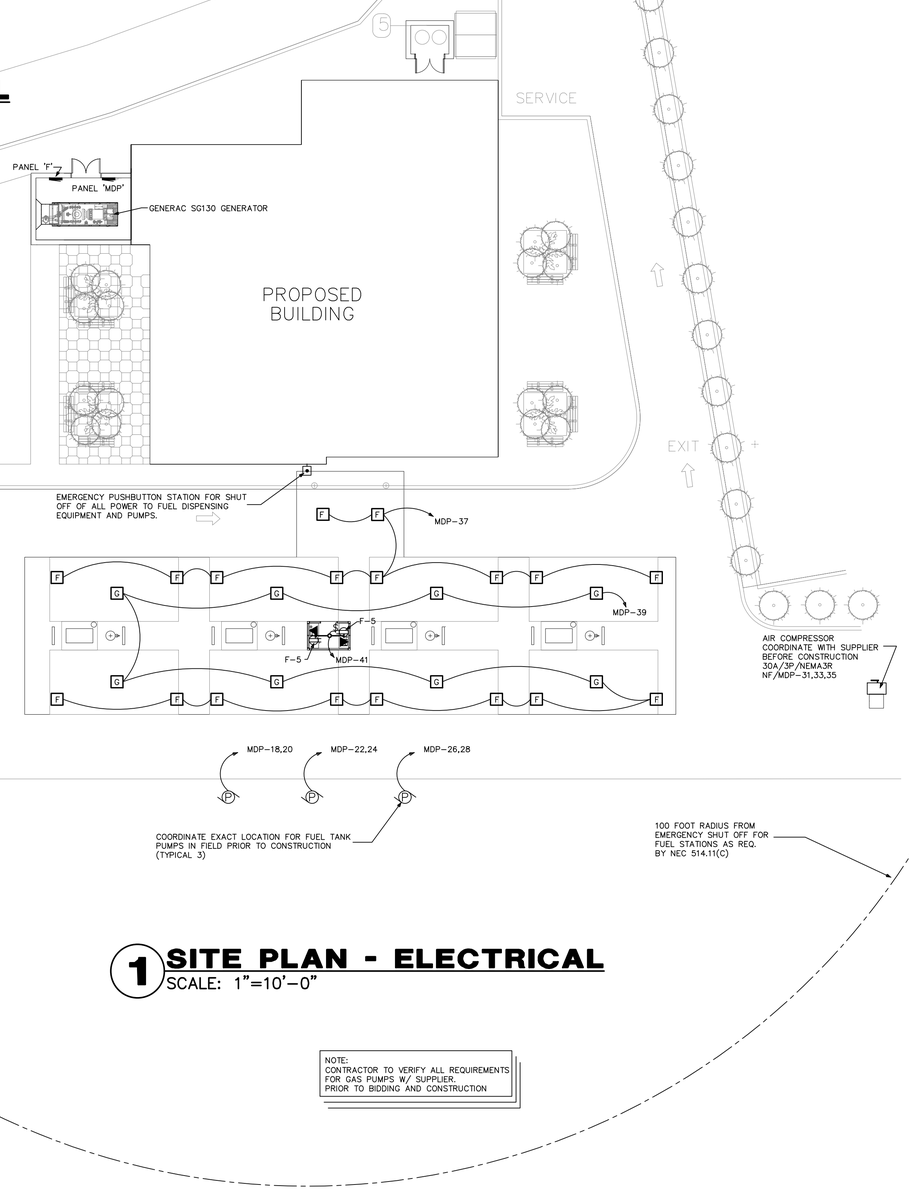
PEAK PHASE (B) UNBALANCED NEUTRAL LOAD AMPS = 174.3 AMPS
NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 416.1 AMPS

PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA

PANEL NOTES:
* - CIRCUIT TO BE CONTROLLED VIA PHOTOCELL
** - THIS CIRCUIT IS TO BE CONTROLLED BY THE FUEL EMERGENCY CUT OFF

PANEL MDP DIVERSIFICATION CALCULATIONS

RECEPTACLES (26) - 4680 VA TOTAL FIRST 10 KVA AT 100%	-	4680
LIGHTING - 6100 X 125%	-	7625
HVAC LOAD AT 100%	-	24683
MOTOR LOADS AT 100%	-	19066
PLUS 25% OF THE LARGEST MOTOR	-	2250
MISC NON-CONTINUOUS LOADS AT 100%	-	19616
MISC CONTINUOUS LOADS AT 125% 1500 X 1.25	-	1875
KITCHEN EQUIPMENT (47) 73940 X 0.65	-	48061
TOTAL DIVERSIFIED PANEL LOAD	-	128056
LOAD AT 120/208V/3-PHASE/4-WIRE	-	355.7A

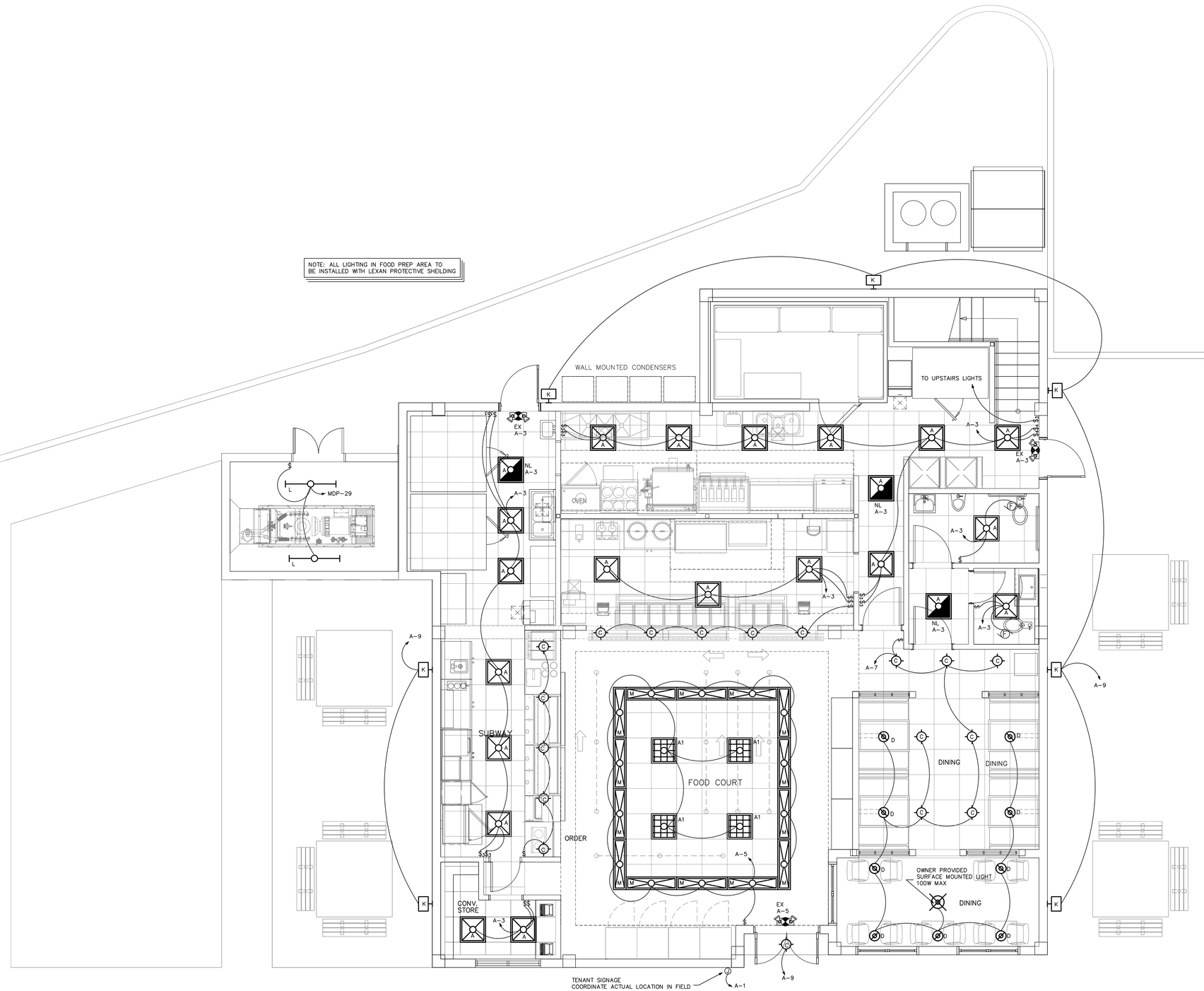


1 SITE PLAN - ELECTRICAL
SCALE: 1"=10'-0"

NOTE:
CONTRACTOR TO VERIFY ALL REQUIREMENTS FOR GAS PUMPS W/ SUPPLIER. PRIOR TO BIDDING AND CONSTRUCTION

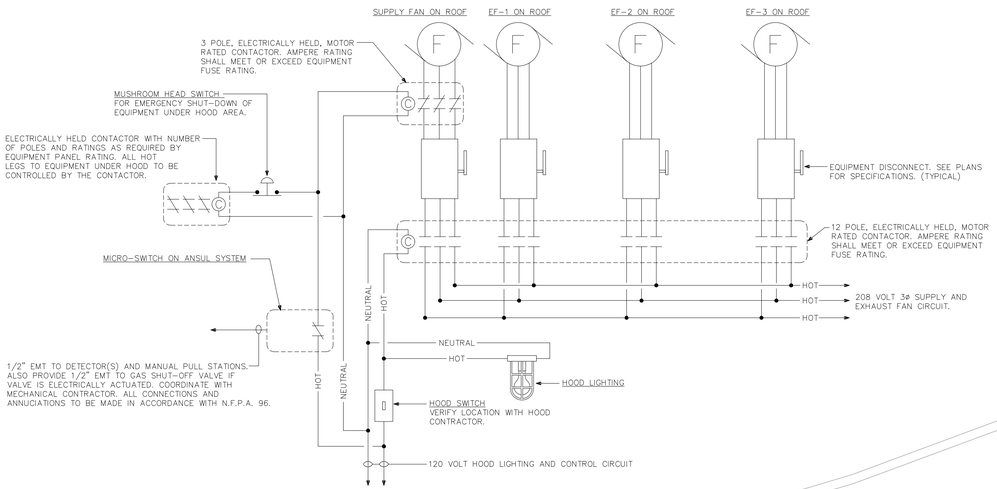
E1.1

NOTE: ALL LIGHTING IN FOOD PREP AREA TO BE INSTALLED WITH LEXAN PROTECTIVE SHEILDING

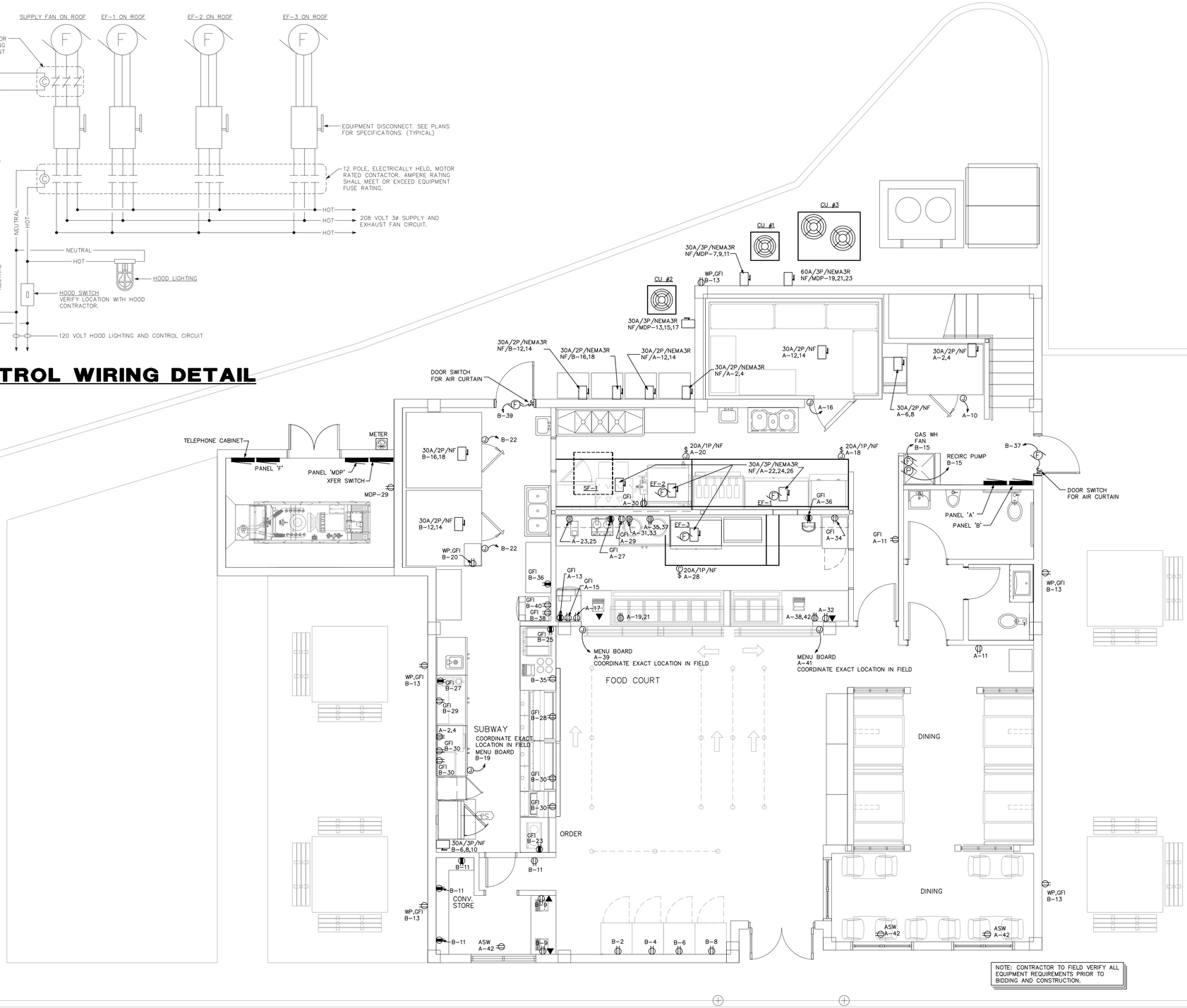


1 MAIN LEVEL FLOOR PLAN - LIGHTING

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



2 HOOD CONTROL WIRING DETAIL
NO SCALE



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

E1.3

PANEL SCHEDULE A

125 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	LOAD DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1	20/1	#10	#10	#10	1/2	CHAL	TENANT SIGNAGE ✖	1500	1500	------	------								
								0	1560	------	------								2
3	20/1	#10	#10	#10	1/2	CHAL	LIGHTING	1200	------	1200	------	WALKIN COOLER (E2)	CHAL	1/2	#10	---	#10	20/2	
								0	------	1560	------								4
5	20/1	#10	#10	#10	1/2	CHAL	LIGHTING	1200	------	------	1200								
								0	------	------	600	ICE MAKER (E7)	CHAL	1/2	#10	---	#10	20/2	6
7	20/1	#10	#10	#10	1/2	CHAL	LIGHTING	600	600	------	------								
								0	600	------	------								8
9	20/1	#10	#10	#10	1/2	CHAL	OUTSIDE LIGHTING ✖✖	900	------	900	------								
								360	------	360	------	COOLER LTS AND CONTROLS	CHAL	1/2	#10	#10	#10	20/1	10
11	20/1	#10	#10	#10	1/2	CHAL	RECEPTACLES	360	------	------	360								
								0	------	------	1560	WALKIN FREEZER (E3)	CHAL	1/2	#10	---	#10	20/2	12
13	20/1	#10	#10	#10	1/2	CHAL	ICE MACHINE (F9A)	900	900	------	------								
								0	1560	------	------								14
15	20/1	#10	#10	#10	1/2	CHAL	SODA MACHINE (F9)	900	------	900	------								
								360	------	360	------	FREEZER LTS AND CONTROLS	CHAL	1/2	#10	#10	#10	20/1	16
17	20/1	#10	#10	#10	1/2	CHAL	POS (F15)	180	------	------	180								
								900	------	------	900	HOOD CONTROLS AND LTS	CHAL	1/2	#10	#10	#10	20/1	18
19								0	2080	------	------								
21	30/2	#10	---	#10	1/2	CHAL	FOOD WARMER (F10)	900	900	------	------	HOOD CONTROLS AND LTS	CHAL	1/2	#10	#10	#10	20/1	20
								0	------	2080	------								22
23								0	------	2532	------								
	30/2	#10	---	#10	1/2	CHAL	COFFEE MAKER (F17)	0	------	------	1200								24
25								0	1200	------	2532	HOOD FANS	CHAL	1/2	#10	---	#10	30/3	
								0	2532	------	------								26
27	20/1	#10	#10	#10	1/2	CHAL	WAFFLE IRON (F13)	1500	------	1500	------								
								900	------	900	------	HOOD CONTROLS AND LTS	CHAL	1/2	#10	#10	#10	20/1	28
29	20/1	#10	#10	#10	1/2	CHAL	REFRIGERATED TABLE (F14)	900	------	------	900								
								900	------	------	900	ROTITSSERIE (F8)	CHAL	1/2	#10	#10	#10	20/1	30
31								0	2080	------	------								
33	30/2	#10	---	#10	1/2	CHAL	RICE COOKER (F16)	180	180	------	------	POS (W1)	CHAL	1/2	#10	#10	#10	20/1	32
								0	------	2080	------								
								900	------	900	------	REFRIGERATOR (W5)	CHAL	1/2	#10	#10	#10	20/1	34
35								0	------	------	2080								
37	30/2	#10	---	#10	1/2	CHAL	RICE COOKER (F16)	1200	------	------	1200	APPLIANCE (W6)	CHAL	1/2	#10	#10	#10	20/1	36
								0	2080	------	------								38
39	20/1	#10	#10	#10	1/2	CHAL	MENU BOARD	1000	------	1000	------	FOOD WARMER (W3)	CHAL	1/2	#10	---	#10	20/2	
								0	------	2080	------								40
41	20/1	#10	#10	#10	1/2	CHAL	MENU BOARD	1000	------	------	1000								
								540	------	------	540	ASW RECEPTACLES	CHAL	1/2	#10	#10	#10	20/1	42

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING
1—TEMP RATING, 2—CONDUIT TYPE, 3—INSULATION, 4—WIRING TYPE	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.

19852	18352	15152
53,356		

PEAK PHASE (B) UNBALANCED NEUTRAL LOAD AMPS = 66.8 AMPS
NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 148.2 AMPS

PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA

PANEL NOTES:
✖ - CIRCUIT TO BE CONTROLLED VIA TIMECLOCK
✖✖ - CIRCUIT TO BE CONTROLLED VIA PHOTOCELL

PANEL SCHEDULE B

125 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	LOAD DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1	20/1	#12	#12	#12	1/2	CHAL	MERCHANDISER (G1)	900	900	------	------								
								0	3120	------	------								2
3	20/1	#12	#12	#12	1/2	CHAL	MERCHANDISER (G1)	900	------	900	------	RAPID OVEN (S5)	CHAL	1/2	#10	---	#10	30/2	
								0	------	3120	------								4
5	20/1	#12	#12	#12	1/2	CHAL	MERCHANDISER (G1)	900	------	------	900								
								0	------	------	2520								6
7	20/1	#12	#12	#12	1/2	CHAL	MERCHANDISER (G1)	900	900	------	------								
								0	2520	------	------								8
9	20/1	#12	#12	#12	1/2	CHAL	POS (G2)	900	------	900	------	OVEN (S3)	CHAL	1/2	#10	---	#10	25/3	
								0	------	2520	------								10
11	20/1	#12	#12	#12	1/2	CHAL	RECEPTACLES	1080	------	------	1080								
								0	------	------	910								12
13	20/1	#12	#12	#12	1/2	CHAL	SERVICE RECEPTACLES	1080	1080	------	------	COOLER (S19)	CHAL	1/2	#12	---	#12	20/2	
								0	910	------	------								14
15	20/1	#12	#12	#12	1/2	CHAL	WATER HEATER FAN	180	------	180	------								
								0	------	910	------								16
17							SPACE	0	------	------	0								
								0	------	------	910	FREEZER (S20)	CHAL	1/2	#12	---	#12	20/2	18
19	20/1	#12	#12	#12	1/2	CHAL	MENU BOARD	900	900	------	------								
								900	900	------	------	PRODFER	CHAL	1/2	#12	#12	#12	20/1	20
21	20/1	#12	#12	#12	1/2	CHAL	HOT WELL (S15)	1200	------	1200	------								
								1500	------	1500	------	COOLER/FZER LTS/ DEFROST	CHAL	1/2	#12	#12	#12	20/1	22
23	20/1	#12	#12	#12	1/2	CHAL	HOT PLATE (S15)	1200	------	------	1200								
								360	------	------	360	SOUND SYSTEM	CHAL	1/2	#12	#12	#12	20/1	24
25	20/1	#12	#12	#12	1/2	CHAL	JUICE DISPENSOR (S18)	1500	1500	------	------								
								360	360	------	------	POS SYSTEM	CHAL	1/2	#12	#12	#12	20/1	26
27	20/1	#12	#12	#12	1/2	CHAL	TEA BREWER (S12)	1500	------	1500	------								
								1000	------	1000	------	FRONT COUNTER (S10)	CHAL	1/2	#12	#12	#12	20/1	28
29	20/1	#12	#12	#12	1/2	CHAL	BACK COUNTER (S2)	1000	------	------	1000								
								1000	------	------	1000	FRONT COUNTER (S10)	CHAL	1/2	#12	#12	#12	20/1	30
31	20/1	#12	#12	#12	1/2	CHAL	BACK COUNTER (S2)	1000	1000	------	------								
								900	900	------	------	SAFE ✖/✖✖	CHAL	1/2	#12	#12	#12	20/1	32
33	20/1	#12	#12	#12	1/2	CHAL	SODA MACHINE (S14)	1000	------	1000	------								
								900	------	900	------	DISPLAY REFRIGERATOR	CHAL	1/2	#12	#12	#12	20/1	34
35	20/1	#12	#12	#12	1/2	CHAL	POS (S13)	900	------	------	900								
								900	------	------	900	SLICER	CHAL	1/2	#12	#12	#12	20/1	36
37	20/1	#12	#12	#12	1/2	CHAL	AIR CURTAIN	1500	1500	------	------								
								1500	1500	------	------	ICE MAKER (S14A)	CHAL	1/2	#12	#12	#12	20/1	38
39	20/1	#12	#12	#12	1/2	CHAL	AIR CURTAIN	1500	------	1500	------								
								900	------	900	------	REFRIGERATED CABINET	CHAL	1/2	#12	#12	#12	20/1	40
41	20/1	#12	#12	#12	1/2	CHAL	MICROWAVE (S6)	900	------	------	900								
								900	------	------	900	SLICER	CHAL	1/2	#12	#12	#12	20/1	42

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING
1—TEMP RATING, 2—CONDUIT TYPE, 3—INSULATION, 4—WIRING TYPE	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.

17990	18030	13480
49,500		

PEAK PHASE (B) UNBALANCED NEUTRAL LOAD AMPS = 95.7 AMPS
NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 137.5 AMPS

PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA

PANEL NOTES:
✖ - CIRCUIT TO BE CONTROLLED VIA TIMECLOCK
✖✖ - PROVIDE LOCKING BREAKER

PANEL A DIVERSIFICATION CALCULATIONS

RECEPTACLES (5) - 900 VA TOTAL		
FIRST 10 KVA AT 100%	-	900
LIGHTING - 3900 X 125%	-	4875
MOTOR LOADS AT 100%	-	7596
PLUS 25% OF THE LARGEST MOTOR	-	954
MISC NON-CONTINUOUS LOADS AT 100%	-	4760
MISC CONTINUOUS LOADS AT 125%		
1500 X 1.25	-	1875
KITCHEN EQUIPMENT (19)		
34700 X 0.65	-	22555
TOTAL DIVERSIFIED PANEL LOAD	-	43515
LOAD AT 120/208V/3-PHASE/4-WIRE	-	120.9A

PANEL B DIVERSIFICATION CALCULATIONS

RECEPTACLES (16) - 2880 VA TOTAL		
FIRST 10 KVA AT 100%	-	2880
MOTOR LOADS AT 100%	-	180
PLUS 25% OF THE LARGEST MOTOR	-	45
MISC NON-CONTINUOUS LOADS AT 100%	-	6300
MISC CONTINUOUS LOADS AT 125%		
900 X 1.25	-	1125
KITCHEN EQUIPMENT (28)		
39240 X 0.65	-	25506
TOTAL DIVERSIFIED PANEL LOAD	-	36036
LOAD AT 120/208V/3-PHASE/4-WIRE	-	100.1A

PANEL SCHEDULE C

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	LOAD DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1	20/1	#12	#12	#12	1/2	CHAL	UPSTAIRS LIGHTS	1200	1200	------	------								
								0	562	------	------								2
3	20/1	#12	#12	#12	1/2	CHAL	DUCT DETECTORS	360	------	360	------	AIR HANDLER 1	CHAL	1/2	#12	---	#12	20/2	
								0	------	562	------								4
5	20/1	#12	#12	#12	1/2	CHAL	RECEPTACLES	360	------	------	360								
								0	------	------	791								6
7	20/1	#12	#12	#12	1/2	CHAL	COPIER	900	900	------	------	AIR HANDLER 2	CHAL	1/2	#12	---	#12	20/2	
								0	791	------	------								8
9	20/1	#12	#12	#12	1/2	CHAL	RECEPTACLES	360	------	360	------								
								0	------	915	------								10
11	20/1	#12	#12	#12	1/2	CHAL	RECEPTACLES	360	------	------	360								
								0	------	------	915	AIR HANDLER 3	CHAL	1/2	#12	---	#12	20/2	12
13	20/1	#12	#12	#12	1/2	CHAL	SAFE ✖	180	180	------	------								
								0	0	------	------	SPACE							14
15	20/1	#12	#12	#12	1/2	CHAL	SAFE ✖	180	------	180	------								
								0	------	0	------	SPACE							16
17	20/1	#12	#12	#12	1/2	CHAL	SAFE ✖	180	------	------	180								
								0	------	------	0	SPACE							18
19	20/1	#12	#12	#12	1/2	CHAL	RECEPTACLES	360	360	------	------								
								0	0	------	------	SPACE							20
21	20/1	#12	#12	#12	1/2	CHAL	RECEPTACLES	360	------	360	------								
								0	------	0	------	SPACE							22
23							SPACE	0	------	------	0								
								0	------	------	0	SPACE							24

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING
1—TEMP RATING, 2—CONDUIT TYPE, 3—INSULATION, 4—WIRING TYPE	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.

3993	2737	2606
9,336		

PEAK PHASE (A) UNBALANCED NEUTRAL LOAD AMPS = 22. AMPS
NON DIVERSIFIED LOAD AT 208 VOLT, THREE PHASE = 25.9 AMPS

PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA

PANEL NOTES:
✖ - PROVIDE LOCK OUT BREAKER

PANEL C DIVERSIFICATION CALCULATIONS

RECEPTACLES (15) - 2700 VA TOTAL		
FIRST 10 KVA AT 100%	-	2700
LIGHTING - 1200 X 125%	-	1500
HVAC LOAD AT 100%	-	4534
PLUS 25% OF THE LARGEST MOTOR	-	458
MISC NON-CONTINUOUS LOADS AT 100%	-	900
TOTAL DIVERSIFIED PANEL LOAD	-	10092
LOAD AT 120/208V/3-PHASE/4-WIRE	-	28.0A

PANEL SCHEDULE F

100 AMP, 120/208 VOLT, SINGLE PHASE, THREE 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	LOAD DESCRIPTION	WIRE AND CONDUIT KEYS	C.	GND	NEUTRAL	COND.	BKR.	##
1								0	0	------								
3	30/2	#12	#12	#12	1/2	CHAL	SURGE PROTECTION DEVICE	240	240	------	MPD #1 ✖✖	CHAL	1/2	#12	#12	#12	20/1	2
								0	------	0								
5	20/1	#12	#12	#12	1/2	CHAL	(2) POS TERMINALS (IG)	900	900	------								
								0	------	0	SWITCHED NEUTRAL BKR #2	----	---	---	---	---	20/1	4
7	20/1	#12	#12	#12	1/2	CHAL	TANK MONITOR	240	240	------	MPD #2 ✖✖	CHAL	1/2	#12	#12	#12	20/1	6
								200	------	200								
9	20/1	#12	#12	#12	1/2	CHAL	DATA INTERFACE BOX	0	------	0	SWITCHED NEUTRAL BKR #6	----	---	---	---	---	20/1	8
								200	200	------								
11	20/1	---	---	---	---	-----	SWITCHED NEUTRAL BKR #9	240	240	------	MPD #3 ✖✖	CHAL	1/2	#12	#12	#12	20/1	10
								0	------	0								
13	20/1	#12	#12	#12	1/2	CHAL	MPD #6 ✖✖	240	------	240								
								240	240	------	MPD #4 ✖✖	CHAL	1/2	#12	#12	#12	20/1	12
15	20/1	---	---	---	---	-----	SWITCHED NEUTRAL BKR #13	0	------	0								
								0	------	0	SWITCHED NEUTRAL BKR #14	----	---	---	---	---	20/1	14
17	20/1	#12	#12	#12	1/2	CHAL	FUELING CONTROLS ✖✖	200	200	------								
								240	240	------	MPD #5 ✖✖	CHAL	1/2	#12	#12	#12	20/1	16
19	20/1	---	---	---	---	-----	SWITCHED NEUTRAL BKR #17	0	------	0								
								0	------	0	SWITCHED NEUTRAL BKR #18	----	---	---	---	---	20/1	18

WIRE/CONDUIT KEY 1234	WIRING TYPE	INSULATION	CONDUIT TYPE	TEMP RATING
1—TEMP RATING, 2—CONDUIT TYPE, 3—INSULATION, 4—WIRING TYPE	C-CU WIRE	H-THWN	A-EMT	L-78-86 Deg. F.

2740	200
2,940	

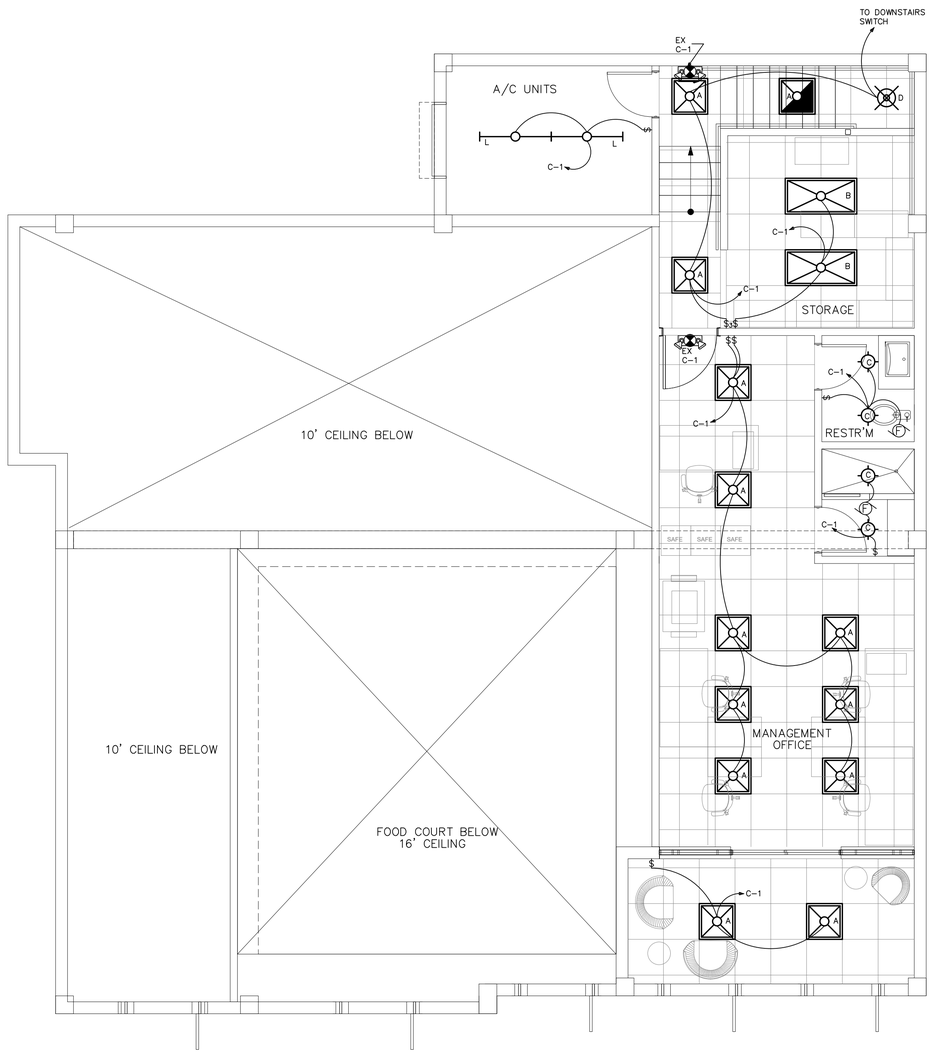
PEAK PHASE (A) UNBALANCED NEUTRAL LOAD AMPS = 22.8 AMPS
NON DIVERSIFIED LOAD AT 208 VOLT, SINGLE PHASE = 14.1 AMPS

PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001
REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CAROLINAS, PA

PANEL NOTES:
✖ - PROVIDE ISOLATED GROUND BAR FOR THIS PANEL
✖✖ - THIS CIRCUIT IS TO BE CONTROLLED BY THE FUEL EMERGENCY CUT OFF

PANEL F DIVERSIFICATION CALCULATIONS

MISC NON-CONTINUOUS LOADS AT 100%	-	2940
TOTAL DIVERSIFIED PANEL LOAD	-	2940
LOAD AT 120/208V/1-PHASE/3-WIRE	-	14.1A



1 MEZZANINE FLOOR PLAN - ELECTRICAL

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

E1.4

EMERGENCY GENERATOR SPECIFICATIONS

1. SPECIFICATION:

IT IS THE INTENT OF THIS SPECIFICATION TO SECURE AN EMERGENCY GENERATOR SYSTEM THAT HAS BEEN PROTOTYPE TESTED, FACTORY BUILT, PRODUCTION TESTED, SITE TESTED, OF THE LATEST COMMERCIAL DESIGN, TOGETHER WITH ALL ACCESSORIES NECESSARY FOR A COMPLETE INSTALLATION AS SHOWN ON THE PLANS AND DRAWINGS, AND SPECIFICATIONS HEREIN. THE EQUIPMENT SUPPLIED AND INSTALLED SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, ALONG WITH ALL APPLICABLE LOCAL CODES AND REGULATIONS. ALL EQUIPMENT SHALL BE NEW, OF CURRENT PRODUCTION OF A NATIONAL FIRM WHICH MANUFACTURES THE GENERATOR AND CONTROLS, TRANSFER SWITCH, AND ASSEMBLES THE STANDBY GENERATOR SETS AS A MATCHED UNIT SO THAT THERE IS ONE-SOURCE RESPONSIBILITY FOR WARRANTY, PARTS, AND SERVICE THROUGH A LOCAL REPRESENTATIVE WITH FACTORY-TRAINED SERVICEMEN.

2. SUBMITTAL

SUBMITTAL SHALL INCLUDE PROTOTYPE TEST CERTIFICATION AND SPECIFICATION SHEETS SHOWING ALL STANDARD AND OPTIONAL ACCESSORIES TO BE SUPPLIED, SCHEMATIC WIRING DIAGRAMS, DIMENSION DRAWINGS, AND INTERCONNECTION DIAGRAMS IDENTIFYING EACH REQUIRED INTERCONNECTION BETWEEN GENERATOR SET, THE TRANSFER SWITCH, AND THE REMOTE ANNUNCIATOR PANEL.

3. TESTING

THERE SHALL BE THREE TESTS: A DESIGN PROTOTYPE TEST, FINAL PRODUCTION TEST, AND SITE TEST.

PROTOTYPE TEST PROGRAMS SHALL INCLUDE THE REQUIREMENTS OF NFPA 110 AND THE FOLLOWING: MAXIMUM KW; MAXIMUM MOTOR STARTING(KVA) AT 30% INSTANTANEOUS VOLTAGE DIP; ALTERNATOR TEMPERATURE RISE BY EMBEDDED THERMOCOUPLE AND RESISTANCE METHOD PER NEMA MG1-22.40 AND 16.40; GOVERNOR SPEED REGULATION UNDER S.S. AND TRANSIENT CONDITIONS; VOLTAGE REGULATION AND GENERATOR TRANSIENT RESPONSE; FUEL CONSUMPTION AT 25%, 50%, 75%, AND 100% OF RATED LOAD; TORSIONAL ANALYSIS TO VERIFY THAT CIRCUIT TOS; ALTERNATOR COOLING AIR FLOW; TORSIONAL ANALYSIS TESTING TO VERIFY THAT THE GENERATOR SET IS FREE OF HARMFUL TORSIONAL STRESSES; ENDURANCE TESTING; COMPLETE FINAL PRODUCTION TEST WITH VARIOUS LOADS AND EXHAUST SYSTEM IN PLACE. TEST SHALL INCLUDE: SINGLE STEP PICKUP; TRANSIENT AND STEADY STATE GOVERNING, SAFETY SHUTDOWN DEVICE TESTING; VOLTAGE REGULATION; RATED POWER; MAXIMUM POWER;

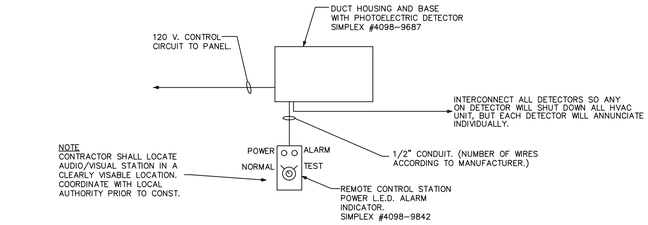
SITE TEST: AN INSTALLATION CHECK, START-UP, AND BUILDING LOAD TEST SHALL BE PERFORMED BY THE MANUFACTURER'S LOCAL REPRESENTATIVE. ARCHITECT/ENGINEER, REGULAR OPERATORS AND THE MAINTENANCE STAFF SHALL BE NOTIFIED OF THE TIME AND DATE OF THE SITE TEST. THE TEST SHALL INCLUDE: FUEL, LUBRICATING OIL, AND ANTIFREEZE SHALL BE CHECKED FOR CONFORMITY TO THE MANUFACTURER'S RECOMMENDATIONS, UNDER THE ENVIROMENTAL CONDITIONS PRESENT AND EXPECTED. ACCESSORIES CHECK SHALL IN-- CLUDE, BUT NOT BE LIMITED TO, BLOCK HEATERS, BATTERY CHARGER, GENERATOR STRIP HEATERS, REMOTE ANNUNCIATOR; UNDER START-UP MODE: CHECK FOR EXHAUST LEAKS, PATH OF EXHAUST PASSES AWAY FROM THE BUILDING, COOLING AIR FLOW, MOVEMENT DURING STARTING AND STOPPING, VIBRATION DURING RUNNING, NORMAL AND EMERGENCY LINE-TO- LINE VOLTAGE, AND PHASE ROTATION. AUTOMATIC START-UP TEST BY MEANS OF SIMULATED POWER OUTAGE TO TEST REMOTE-AUTOMATIC STARTING, TRANSFER OF THE LOAD, AND AUTO- MATIC SHUTDOWN. PRIOR TO THIS TEST, ALL TRANSFER SWITCH TIMERS SHALL BE SET FOR PROPER SYSTEM COORDINATION. ENGINE COOLANT TEMPERATURE, OIL PRESSURE, AND BATTERY CHARGE LIVEL ALONG WITH GENERATOR VOLTAGE, AMPERES, AND FREQUENCY SHALL BE MONITORED THROUGHOUT THE TEST. THE EXTERNAL LOAD BANK SHALL BE CONNECTED TO THE SYSTEM IF SUFFICIENT BUILDING LOAD IS UNAVAILABLE TO LOAD THE GENERATOR TO THE NAMEPLATE KW RATING.

4. WARRANTY AND MAINTENANCE

THE EMERGENCY GENERATOR SYSTEM SHALL BE WARRANTED BY THE MANUFACTURER FOR ONE YEAR OR 2,000 HOURS, WHICHEVER COMES FIRST, FROM THE DATE OF FINAL ACCEPTANCE. OPTIONAL TWO YEAR AND FIVE YEAR WARRANTIES SHALL BE AVAILABLE UPON REQUEST. THE SERVICE CONTRACT SHALL INCLUDE THE FURNISHING OF FACTORY TRAINED PERSONNEL AND MAINTAIN A 24-HOUR PARTS AND SERVICE CAPABILITY AND SHOW AT TIME OF SUBMITTAL THAT THEY ARE REGULARLY ENGAGED IN A MAINTENANCE CONTRACT PROGRAM TO SEMI-ANNUALLY INSPECT AND TEST RUN THE ENGINE TO PERFORM MANUFACTURERS RECOMMENDED PREVENTIVE MAINTENANCE SERVICE ON THE EQUIPMENT FURNISHED. THIS SERVICE CONTRACT SHALL INCLUDE OPERATION OF THE EQUIPMENT UNDER SIMULATED POWER FAILURE CONDITIONS, ADJUSTMENT OF GENERATOR AND TRANSFER SWITCH CONTROLS AS REQUIRED AND CERTIFICATION IN THE OWNER'S MAINTENANCE LOG OF REPAIRS MADE AND PROPER FUNCTIONING OF ALL ENGINE AND AUXILIARY SYSTEMS. THIS SERVICE CONTRACT SHALL BE PROVIDED AT NO ADDITIONAL CHARGE FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE. AT THE OWNER'S OPTION, THE SERVICE CONTRACT SHALL BE RENEWABLE ON A YEAR-TO-YEAR BASIS THEREAFTER WITH COSTS BEING PAID BY THE OWNER.

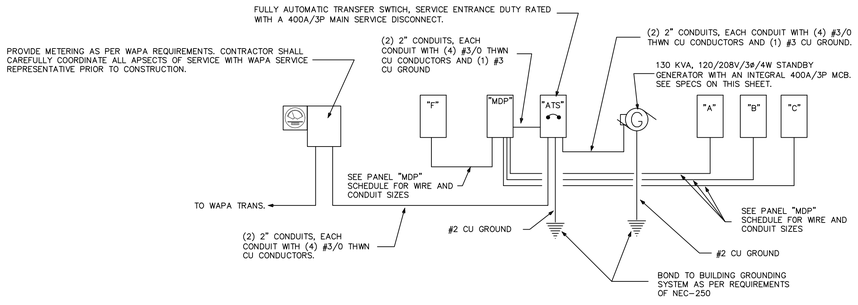
5. ACCEPTABLE MANUFACTURERS SHALL BE LIMITED TO THE FOLLOWING: KOHLER, GENERAC, KATOLIGHT, OLYMPIAN & CATERPILLAR.

FOR THIS PROJECT THE EMERGENCY GENERATOR SHALL BE GENERAC 130 KVA/120/208V/3ø/4W MODEL NUMBER SD130 LP ENGINE POWERED W/120/208V. 3-PHASE WITH GENERAC FULLY AUTOMATIC TRANSFER SWITCH. RESIDENTIAL GRADE SILENCER EXHAUST CAP, BATTERY, BATTERY RACK AND CABLES, EQUALIZE/FLOAT TYPE CHARGER, HEAVY DUTY AIR CLEANER, AIR CLEANER RESTRICTION INDICATOR, 1% VOLTAGE REGULATION, DECISION MONITOR - REMOTE ANNUNCIATOR PANEL, OVER VOLTAGE PROTECTION, PRE-HIGH ENGINE TEMPERATURE SENDER AND LAMP, PRE-OIL PRESSURE SENDER AND LAMP, AND LOW WATER LEVEL SENDER AND LAMP. THE COMPLETE INSTALLATION SHALL COMPLY WITH NFPA 37.

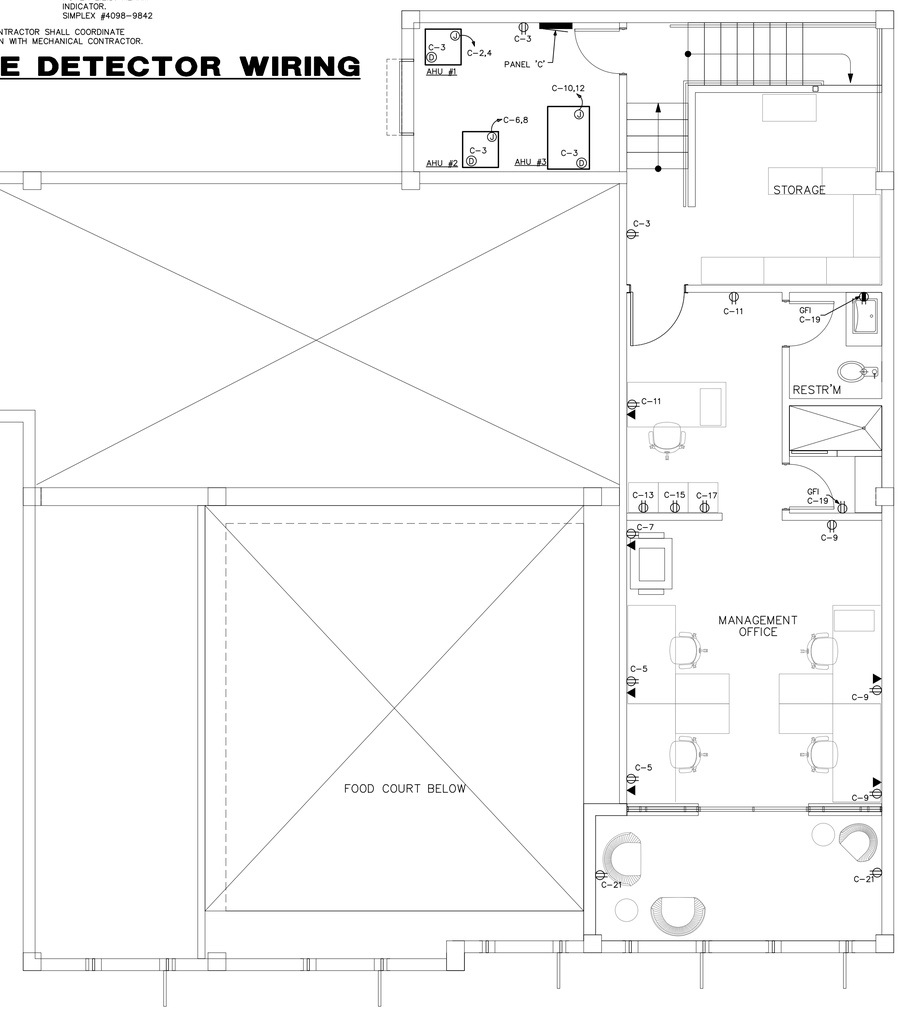


NOTE: ELECTRICAL CONTRACTOR SHALL COORDINATE A/C SHUT DOWN WITH MECHANICAL CONTRACTOR.

2 DUCT SMOKE DETECTOR WIRING
NO SCALE



3 ELECTRICAL SERVICE RISER
NO SCALE



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

E1.5